

T- IND.
658.784.
SILVA



Escuela Superior Politécnica del Litoral

**Facultad de Ingeniería en Mecánica y Ciencias de la
Producción**

Administración De Inventarios En Una Empresa De Productos Plásticos

TESIS DE GRADO

Previa a la Obtención del Título de:

INGENIERA INDUSTRIAL

Presentada Por:

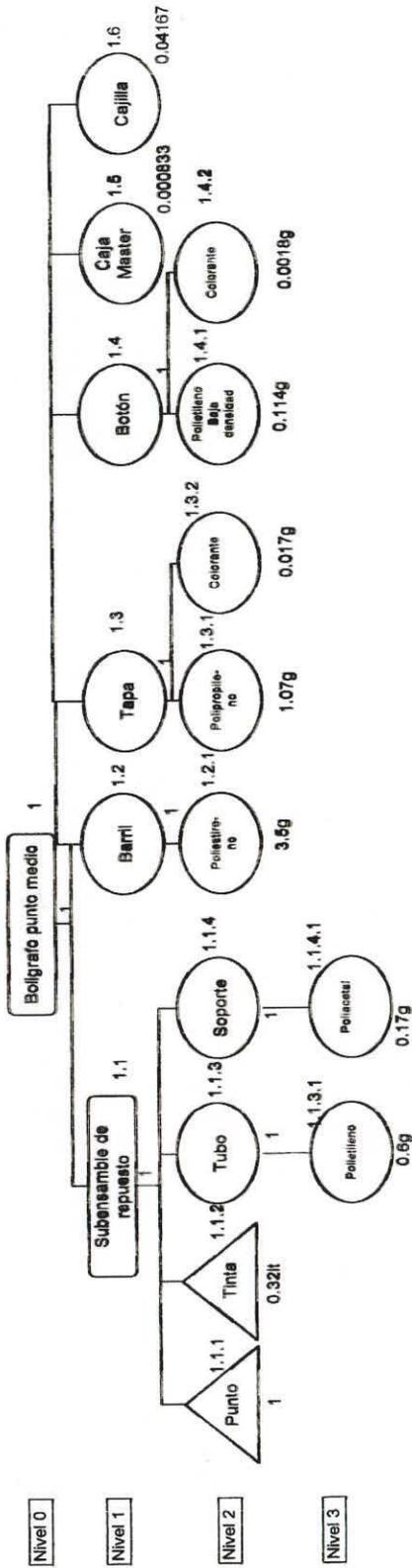
Jessica Jacqueline / Silva Brito

Guayaquil - Ecuador

Año - 2004

ANEXOS

APENDICE 1
LISTA DE MATERIALES PARA BOLIGRAFO PUNTO MEDIO



APENDICE 3
VENTAS EN UNIDADES AÑO 2001

PRODUCTO	Ene-01	Feb-01	Mar-01	Abr-01	May-01	Jun-01	Jul-01	Ago-01	Sep-01	Oct-01	Nov-01	Dic-01
1	287,386	172,080	468,115	545,664	439,930	276,586	294,106	566,142	570,643	178,848	184,944	411,264
2	476,054	508,245	468,288	477,792	781,398	592,143	165,120	373,794	721,299	720,739	402,100	341,728
3	48,586	88,079	112,253	61,008	93,466	740	48,931	7,221	57,581	38,016	34,992	31,008
4	69,632	67,360	57,856	57,535	74,683	34,640	51,048	71,280	22,744	62,835	44,811	30,310
5	0	14,192	2,339	1,812	1,755	37,334	4,279	77,041	1,025	460	299	169
6	59,386	29,442	12,171	40,366	105,669	39,756	30,442	16,959	26,147	64,795	35,267	13,812
7	0	1,000	12,808	2,133	6,766	3,039	4,898	2,933	9,330	12,328	26,794	16,109
8	10,054	11,168	28,512	7,168	3,936	192	3,552	0	0	0	0	0
9	2,496	1,344	3,936	3,571	5,280	1,104	0	15,552	11,328	1,920	5,280	6,360
10	307	82,102	5,827	14,560	13,448	7,232	24,896	46,038	9,027	2,160	1,360	100
11	400	9,562	1,845	1,332	1,587	398	400	4,147	7,330	7,333	15,136	11,007
12	17,818	16,387	16,877	7,325	8,842	6,230	9,638	17,526	7,998	3,842	48	0
13	5,443	8,294	12,768	12,720	7,200	8,054	7,661	15,725	11,318	7,142	624	1,512
14	17,971	64,042	85,171	36,749	21,907	25,152	120,077	207,379	56,890	10,627	2,064	0
15	2,867	1,572	8,809	3,978	12,674	5,269	12,566	8,910	16,830	14,401	16,114	22,456
16	3,533	6,317	10,541	9,811	8,150	5,088	3,283	14,525	11,918	5,453	1,210	1,212
17	37,180	62,736	82,992	70,675	40,051	32,054	35,424	43,718	21,773	15,917	9,754	6,528
18	45,120	38,400	24,960	132,920	130,400	118,800	38,400	73,280	73,920	66,560	38,560	30,000
19	0	0	534	534	13,000	200	898	1,328	4,533	733	13,632	133
20	34,588	61,960	37,196	41,808	54,136	30,672	56,064	31,536	777,326	48,536	58,106	73,160
21	5,731	13,884	3,703	9,859	5,904	0	9,970	8,958	13,435	10,848	11,635	16,056
22	2,436	3,878	7,853	8,218	5,069	19	3,514	9,734	10,310	3,338	0	144
23	2,813	5,184	10,598	5,818	4,493	5,165	6,442	11,952	8,794	1,805	278	2,328
24	1,440	38,237	35,539	22,138	11,587	15,955	58,070	22,118	30,346	4,925	9,677	12,000
25	4,147	16,546	20,537	16,630	15,458	8,246	21,994	12,778	2,825	8,062	0	225
26	2,304	7,902	9,386	9,898	10,170	1,909	6,880	9,262	2,142	400	354	444
27	2,630	7,507	14,765	6,096	10,195	3,715	2,870	0	8,006	2,822	3,341	3,480
28	2,304	3,341	7,488	4,896	3,398	3,456	5,856	8,246	7,843	0	278	2,208
29	2,240	1,120	13,920	4,000	0	7,968	4,320	9,560	1,440	9,600	4,480	400
30	4,838	0	4,838	3,974	1,786	2,534	6,307	3,802	5,069	1,133	0	1,788



PRODUCTO	Ene-01	Feb-01	Mar-01	Abr-01	May-01	Jun-01	Jul-01	Ago-01	Sep-01	Oct-01	Nov-01	Dic-01
31	2,419	2,467	5,587	4,493	3,043	461	3,062	6,682	5,011	0	259	1,356
32	0	106,445	24,730	24,883	20,736	0	78,797	105,283	17,779	0	4,147	0
33	2,998	4,074	2,796	4,124	11,878	3,264	3,487	3,775	4,540	4,731	2,674	3,780
34	972	3,028	3,821	2,803	1,037	960	2,986	4,781	4,896	1,290	0	144
35	2,078	2,817	4,202	3,572	5,649	2,534	6,594	3,685	9,488	8,150	3,366	5,052
36	3,226	0	3,226	2,880	1,613	886	5,558	3,226	4,205	1,642	0	4,824
37	4,608	7,747	3,398	0	0	0	0	10,003	0	0	442	0
38	1,891	13,303	13,046	10,080	6,912	4,493	2,592	8,813	8,467	1,728	2,074	3,960
39	226	296	322	795	0	687	1,160	664	512	448	448	318
40	3,629	10,022	13,522	10,714	3,110	4,435	2,592	4,838	11,405	1,901	3,456	1,548
41	2,419	1,190	4,694	5,040	1,267	0	5,875	1,613	115	1,574	1,920	1,476
42	2,765	6,989	3,130	0	0	0	0	9,514	0	0	211	0
43	2,333	0	27,202	3,100	127	4,334	0	2,199	1,640	0	0	0
44	4,915	2,189	7,728	4,262	5,990	1,325	5,645	2,074	3,072	2,266	2,150	0
45	0	0	12,614	5,414	3,802	1,498	16,704	27,072	20,390	4,032	403	0
46	2,419	0	2,419	2,582	2,015	1,498	2,909	2,534	3,226	960	0	3,732
47	4,925	0	2,187	2,117	1,375	639	1,006	4,002	0	278	633	2,016
48	2,851	5,995	6,298	5,958	2,419	480	1,229	986	3,533	4,102	1,962	4,632
49	1,459	2,227	2,957	3,279	1,248	269	1,075	1,882	883	0	0	0
50	0	0	3,000	1,027	887	866	1,590	800	1,798	987	3,373	22,256
51	2,131	5,674	2,266	0	0	0	0	5,741	0	0	230	0
52	1,267	1,766	883	806	403	1,555	4,339	3,552	0	749	634	3,780
53	0	0	0	2,592	9,120	346	1,210	403	442	432	630	6,768
54	2,851	6,216	1,578	4,960	2,008	285	787	909	3,184	3,027	1,974	4,272
55	2,035	8,467	6,394	8,640	5,184	0	2,074	5,184	5,357	346	2,246	1,296
56	2,851	3,619	0	4,403	2,838	77	4,320	1,334	96	4,678	2,995	1,202
57	200	400	2,150	2,592	3,230	998	2,160	1,479	3,769	578	197	2,259
58	770	136	3,930	5,904	637	346	2,333	2,938	0	0	3,629	0
59	173	7,265	2,128	3,871	3,461	2,124	8,520	12,662	1,380	1,740	890	750
60	7,344	8,496	9,936	3,576	2,592	864	4,080	6,768	3,744	1,152	720	0
61	0	0	2,851	8,000	0	518	400	1,598	1,200	1,389	695	7,387
62	8,506	2,362	3,523	2,074	912	4,493	1,123	3,936	1,670	1,354	998	324
63	2,419	0	2,419	806	691	173	2,218	1,498	1,382	1,267	0	1,068



POLITECNICA DEL LITORAL
BIBLIOTECA "GONZALO ZEVALLOS"
E.L.M.C.P.

PRODUCTO	Ene-01	Feb-01	Mar-01	Abr-01	May-01	Jun-01	Jul-01	Ago-01	Sep-01	Oct-01	Nov-01	Dic-01
64	100	9,769	3,252	0	4,266	40	5,536	134	1,880	4,189	5,598	11,315
65	2,399	3,267	9,965	13,190	10,998	2,399	16,130	5,036	4,060	0	0	0
66	1,152	1,037	2,592	1,901	749	0	1,238	2,832	2,074	0	58	48
67	300	220	8,900	4,098	16,793	1,242	2,162	24,880	11,195	1,510	20,524	5,612
68	2,074	0	21,734	1,613	1,382	1,920	6,950	10,090	14,594	480	0	0
69	1,597	2,765	7,603	1,805	1,670	346	806	1,190	979	461	230	0
70	1,450	2,765	6,854	2,150	1,267	230	1,037	1,555	771	576	115	144
71	120	0	0	738	0	554	216	1,169	0	470	936	46
72	235	461	979	259	490	922	922	864	310	134	101	0
73	0	0	0	3,686	1,728	461	1,613	0	864	374	758	3,744
74	922	1,709	384	634	230	1,555	1,978	3,033	0	566	230	900
75	5,904	7,200	5,472	5,136	864	1,152	3,024	6,480	3,168	576	576	0
76	8,928	9,792	1,968	0	0	0	0	8,520	5,904	2,304	720	1,260
77	509	1,430	5,123	3,264	1,152	115	1,958	1,382	806	0	402	0
78	0	39	0	0	399	0	720	1,034	604	160	1,238	2,136
79	96	160	3,694	284	500	291	808	789	220	240	138	72
80	1,075	1,901	6,221	6,509	1,661	1,382	1,843	5,702	1,968	0	115	0
81	0	461	3,859	1,267	403	383	403	0	0	0	0	1,008
82	0	0	0	0	1,158	395	400	1,200	6,716	3,110	2,855	2,281
83	1,315	2,246	6,566	5,472	2,064	1,210	2,899	3,974	173	0	115	0
84	0	0	800	5,988	0	200	2,812	1,199	3,554	40	398	1,284
85	5,322	0	0	0	13,109	0	0	10,387	0	795	0	830
86	394	240	720	0	173	480	377	9,684	269	480	120	216
87	0	0	3,812	1,600	400	200	2,932	8,733	5,232	3,199	798	3,571
88	5,203	1,757	2,160	1,382	576	3,014	0	2,765	1,622	454	912	262
89	0	0	0	934	800	192	1,600	0	5,322	2,946	2,165	0
90	400	0	1,000	6,105	0	0	0	0	0	0	0	0
91	730	653	1,766	1,382	269	269	193	77	0	0	154	0
92	576	1,075	250	115	230	288	2,170	1,190	845	319	144	636
93	614	1,267	3,226	1,229	1,498	230	576	922	691	115	115	1,008
94	1,123	1,114	1,152	0	0	0	0	2,813	0	0	115	0
95	1,853	1,382	4,838	4,147	1,382	1,037	1,574	2,246	0	0	58	0
96	4,008	0	920	0	4,115	1,198	0	1,598	2,000	9,000	80	17,413



POLITECNICA DEL LITORAL
BIBLIOTECA "GONZALO ZEVALLOS"
E. I. M. C. P.

PRODUCTO	Ene-01	Feb-01	Mar-01	Abr-01	May-01	Jun-01	Jul-01	Ago-01	Sep-01	Oct-01	Nov-01	Dic-01
97	0	275	66	0	2,646	2,033	0	7,786	199	3,807	2,479	3,960
98	3,988	640	0	0	0	0	0	771	1,891	242	200	590
99	4,032	0	4,032	0	0	0	0	0	0	0	0	0
100	100	400	2,400	0	0	0	1,598	2,381	9,953	1,559	2,380	84
101	3,149	1,373	1,378	950	403	1,574	835	2,006	1,248	509	739	36
102	163	499	3,280	1,421	1,037	115	1,037	403	461	0	230	0
103	106	316	709	470	120	400	1,060	360	250	370	220	200
104	379	660	482	600	640	720	920	280	360	820	280	600
105	0	0	400	0	1,198	0	0	1,640	434	3,072	600	2,386
106	2,880	0	3,225	0	2,534	0	0	0	0	0	0	0
107	0	0	0	0	262	40	3,994	400	0	400	80	16,289
108	2,304	1,690	1,728	634	230	1,440	269	1,910	960	739	662	36
109	154	259	275	196	97	160	140	5,069	80	100	1,705	72
110	730	180	998	538	384	77	307	269	192	115	77	48
111	115	922	2,544	1,190	806	0	922	346	346	0	346	0
112	0	0	0	1,012	319	798	355	480	0	560	0	350
113	120	178	395	318	91	200	158	100	50	160	120	50
114	0	0	0	400	200	2,400	4,800	96	800	6,112	1,572	0
115	77	458	1,029	658	276	0	120	592	330	218	0	0
116	0	0	0	200	3,782	880	8,524	1,600	886	0	0	0
117	2,880	0	2,880	0	0	0	0	0	0	0	0	0
118	0	0	0	800	200	0	0	0	1,066	264	4,134	9,526
119	230	691	19	230	0	115	893	240	672	115	115	1,356
120	2,094	0	0	4,720	0	0	0	0	0	0	0	0
121	749	307	653	346	230	0	346	422	307	154	115	0
122	0	0	0	0	0	0	6,480	7,258	0	0	346	0
123	62	421	998	499	307	77	269	154	77	0	77	0
124	0	0	2,412	2,520	5,700	650	0	0	0	0	0	0
125	0	0	0	240	0	880	640	0	160	0	840	750
126	66	0	0	4,000	0	38	1,295	134	365	3,742	2,593	0
127	0	1,399	1,008	46	0	0	1,440	288	0	0	0	0
128	0	0	4,400	1,469	0	0	0	0	833	1,582	0	0
129	0	796	400	0	600	0	0	800	1,860	3,449	200	1,000

PRODUCTO	Ene-01	Feb-01	Mar-01	Abr-01	May-01	Jun-01	Jul-01	Ago-01	Sep-01	Oct-01	Nov-01	Dic-01
130	0	80	740	0	116	0	2,006	0	11,446	200	280	4,739
131	0	200	0	0	0	0	264	1,986	0	2,679	0	2,878
132	188	0	200	0	2,952	0	781	0	0	596	614	0
133	0	2,986	195	560	2,550	0	200	2,762	800	4,849	900	1,620
134	269	95	777	647	278	180	109	37	80	120	20	0
135	2,880	0	922	0	922	0	0	576	0	0	0	0
136	0	0	0	1,978	0	0	0	0	1,391	592	200	1,616
137	394	116	850	367	295	60	159	58	140	100	0	0
138	0	0	12,800	1,271	198	0	583	1,879	1,410	400	5,438	276
139	115	373	601	0	0	0	660	100	410	90	80	0
140	730	538	9	60	0	0	819	56	12	0	0	0
141	730	422	57	3	0	20	812	60	77	0	20	0
142	0	0	0	0	0	0	0	806	2,822	0	0	1,008
143	3,932	76	240	0	529	0	787	0	8,000	800	80	0
144	0	0	0	709	166	40	320	22	150	80	8	0
145	730	0	730	192	115	0	77	269	154	115	38	0
146	0	0	0	0	200	400	0	200	398	0	0	4,101
147	2,880	0	461	0	922	0	0	0	0	0	0	0
148	62	246	0	52	18	160	720	220	60	120	20	73
149	0	2,183	239	560	3,750	0	0	760	1,333	529	577	4,271
150	0	0	0	689	178	80	160	120	110	80	0	0
151	0	331	437	110	0	80	895	264	0	80	0	0
152	0	0	998	600	8,662	1,118	798	2,000	0	0	1,598	4,440
153	0	0	0	620	0	80	140	40	160	65	268	0
154	1,613	0	1,613	0	0	0	0	0	0	0	0	0
155	58	398	16	0	80	40	184	260	320	160	80	48
156	0	591	198	0	0	0	2,665	1,700	0	0	0	0
157	643	230	499	115	77	0	115	115	115	77	125	0
158	0	39	0	0	1,067	0	1,600	0	1,608	7,970	80	0
159	730	538	0	80	0	0	151	120	77	0	20	48
160	0	0	0	182	800	2,000	0	4,796	0	0	0	0
161	0	0	0	0	0	0	2,280	3,464	0	0	0	0
162	0	0	576	115	269	77	77	115	77	182	192	0

PRODUCTO	Ene-01	Feb-01	Mar-01	Abr-01	May-01	Jun-01	Jul-01	Ago-01	Sep-01	Oct-01	Nov-01	Dic-01
163	48	144	764	401	20	0	102	80	105	59	0	0
164	730	230	346	154	77	0	0	77	192	77	38	0
165	48	440	384	154	77	77	77	115	77	0	134	0
166	396	1,594	1,000	800	1,354	479	851	2,396	850	5,288	80	1,255
167	0	1,340	0	480	4,141	0	0	760	716	1,600	1,100	433
168	701	240	346	192	77	0	38	77	38	77	38	0
169	566	240	422	38	77	0	48	77	230	77	0	0
170	0	0	0	459	80	0	100	0	60	79	288	0
171	653	240	346	115	77	0	38	77	77	77	38	0
172	0	2,256	3,600	1,830	800	0	4,000	778	795	0	200	125
173	0	0	423	260	100	60	295	160	5	100	40	0
174	0	0	0	0	0	0	199	298	2,071	200	0	1,417
175	5,050	0	0	0	0	0	0	0	0	0	0	0
176	0	326	277	280	0	80	293	20	40	80	0	0
177	0	0	0	0	2,000	0	240	599	894	0	0	0
178	0	1,920	64	80	0	0	160	0	0	0	0	0
179	67	231	314	100	60	20	180	196	45	100	0	0
180	0	0	6,400	774	0	408	973	120	150	931	1,811	955
181	0	0	0	0	0	0	999	0	0	0	0	0
182	29	0	622	380	14	0	100	18	60	0	20	0
183	2,510	0	0	1,490	0	0	0	2,000	798	1,224	0	355
184	0	0	400	2,200	53	50	0	0	4,882	3,476	533	557
185	0	100	0	2,000	0	0	194	0	266	803	1,808	0
186	1,647	0	0	2,340	0	0	0	0	0	4,000	0	15
187	0	0	0	0	2,478	0	0	200	0	0	398	2,410
188	1,600	1,133	2,034	0	0	40	0	0	79	0	0	100
189	115	230	346	115	77	0	38	77	115	77	96	0
190	62	102	6	40	140	40	160	40	140	120	20	73
191	0	1,189	1,500	1,189	0	0	0	0	0	1,600	80	2,312
192	58	169	279	20	40	20	140	120	34	120	0	0
193	706	120	600	280	0	50	533	396	0	6,977	90	0
194	806	0	806	0	0	0	0	0	0	0	0	0
195	0	50	0	381	2,550	0	0	492	0	1,600	99	1,000

APENDICE 4
VENTAS EN DOLARES 2001

PRODUCTO	Ene-01	Feb-01	Mar-01	Abr-01	May-01	Jun-01	Jul-01	Ago-01	Sep-01	Oct-01	Nov-01	Dic-01
1	29,372.42	17,514.93	47,692.64	53,385.50	41,093.48	26,435.82	28,021.16	52,708.29	50,559.38	16,811.70	17,828.16	28,777.46
2	69,660.50	67,014.59	65,010.18	67,523.02	80,936.98	80,169.19	25,138.38	51,432.88	103,815.94	104,936.17	59,738.61	39,976.93
3	34,431.33	47,053.85	63,813.97	42,372.94	64,777.67	701.82	33,900.86	6,138.66	40,006.68	28,443.31	24,291.66	17,226.76
4	21,273.07	21,520.30	18,211.20	18,653.90	24,261.84	11,113.57	16,642.36	21,554.77	7,241.66	20,174.62	13,555.14	7,286.68
5	0.00	12,020.38	2,124.04	1,728.98	1,489.82	25,909.64	3,730.02	53,281.29	891.02	444.35	297.06	135.20
6	20,784.96	9,524.58	3,884.06	13,046.83	28,407.32	11,109.37	7,864.59	4,797.99	6,798.86	18,686.82	8,901.66	2,919.66
7	0.00	280.00	3,006.01	492.36	132.90	594.37	993.20	680.50	2,217.88	2,820.11	5,494.86	2,784.78
8	2,559.22	2,831.98	7,136.99	1,814.44	620.17	51.84	829.67	0.00	0.00	0.00	0.00	0.00
9	673.92	338.96	986.39	98.05	1,258.58	415.64	0.00	3,680.85	18,643.98	466.58	1,244.23	639.44
10	48.88	9,812.45	768.54	1,834.13	1,643.55	98.38	3,069.70	5,476.65	1,136.39	315.64	200.10	13.43
11	0.00	2,625.60	573.78	345.02	365.06	108.50	108.80	1,070.03	1,781.40	1,544.42	2,545.42	1,743.96
12	8,300.15	7,583.60	7,868.80	3,417.38	4,128.34	2,905.30	4,457.94	8,156.46	3,765.52	1,800.11	26.31	0.00
13	2,315.40	3,562.77	5,442.00	5,421.62	3,069.54	3,428.10	3,259.54	6,681.23	4,838.20	3,056.48	263.10	545.24
14	1,520.68	5,610.11	6,783.38	2,960.71	1,703.85	1,951.05	8,779.87	14,247.22	4,255.27	707.90	166.50	0.00
15	1,514.17	767.98	4,394.82	2,516.58	8,201.98	2,964.20	8,320.94	3,995.25	9,789.03	7,831.29	9,057.94	10,700.07
16	1,508.27	2,712.16	4,494.23	4,178.31	3,476.15	2,176.63	1,400.25	6,174.98	5,096.71	2,339.03	511.76	422.58
17	5,175.45	8,127.90	10,585.14	9,036.64	5,157.23	4,076.78	4,141.86	450.00	2,609.95	1,914.94	1,173.00	676.78
18	2,458.85	2,080.70	1,361.26	7,164.31	6,994.22	6,373.74	2,117.95	4,036.42	3,981.54	3,578.99	2,114.07	1,337.09
19	0.00	0.00	120.46	149.41	2,850.40	50.40	307.14	332.00	1,025.62	150.02	2,777.40	24.34
20	5,435.63	9,308.70	5,234.97	6,574.25	7,633.64	4,458.18	7,854.96	4,870.28	11,853.17	7,407.66	8,627.21	8,789.18
21	1,547.42	3,748.68	989.86	2,770.97	1,655.58	0.00	2,804.01	2,485.97	3,646.74	2,912.80	3,137.81	3,488.54
22	1,042.54	1,669.96	3,351.48	3,507.41	2,156.42	8.15	1,496.04	4,137.55	4,398.44	1,417.91	0.00	52.99
23	1,043.62	1,931.83	3,912.30	2,169.31	1,673.07	1,928.18	2,480.78	4,449.10	3,303.35	673.44	104.27	700.89
24	182.53	4,169.76	3,178.66	2,546.84	1,100.02	1,653.22	4,568.97	1,290.24	3,571.54	624.96	967.74	643.20
25	995.33	3,599.93	4,387.68	3,449.10	3,266.16	1,735.00	4,882.07	2,777.24	619.30	221.19	0.00	43.20
26	967.68	3,074.90	1,118.73	3,730.09	3,808.73	735.53	2,846.29	3,728.65	825.06	175.28	150.67	154.54
27	1,551.94	4,259.38	8,252.56	3,398.46	4,871.32	2,039.09	1,563.30	0.00	4,365.74	1,563.30	1,835.18	1,052.50
28	854.27	1,251.20	27,886.89	1,818.40	1,258.34	1,304.30	2,251.46	3,080.83	2,948.98	0.00	120.40	661.90
29	963.20	481.60	5,807.02	1,720.00	0.00	3,422.11	1,836.98	3,830.80	619.20	4,128.00	1,788.84	137.60
30	1,446.68	0.00	1,446.68	1,693.71	758.55	1,076.15	1,919.96	988.42	2,124.21	492.74	0.00	609.06
31	903.90	919.54	2,068.57	1,662.44	1,130.73	177.23	1,132.82	2,464.10	1,850.32	0.00	96.59	405.57
32	0.00	6,280.00	1,547.14	1,268.17	1,209.62	0.00	3,403.58	4,370.66	770.89	0.00	170.03	0.00
33	986.69	1,334.61	925.68	1,354.88	3,019.67	1,071.28	1,149.58	1,238.46	1,372.32	1,560.94	887.47	995.73
34	416.81	1,338.38	1,598.63	1,195.74	440.26	411.72	1,273.88	2,030.05	2,078.97	547.60	0.00	52.99
35	644.94	977.51	1,518.78	1,546.62	1,855.06	781.82	2,457.78	1,271.25	2,568.70	2,557.95	992.16	1,333.38
36	964.46	0.00	984.46	1,231.05	684.81	374.34	1,594.29	838.66	1,757.33	708.80	0.00	1,387.62
37	1,956.66	3,622.10	1,443.78	0.00	0.00	0.00	0.00	4,494.46	0.00	0.00	1,060.15	0.00





PRODUCTO	Ene-01	Feb-01	Mar-01	Abr-01	May-01	Jun-01	Jul-01	Ago-01	Sep-01	Oct-01	Nov-01	Dic-01
38	283.82	1,878.62	1,816.62	1,428.34	969.70	626.08	366.97	1,232.99	1,185.00	247.42	291.29	441.31
39	425.41	622.75	676.06	1,672.64	0.00	1,444.40	2,438.78	1,262.08	1,069.90	916.86	908.93	506.35
40	544.56	1,400.07	1,788.54	1,516.34	430.94	618.10	375.04	682.27	1,587.76	271.35	482.74	174.14
41	1,237.98	625.49	2,274.87	2,471.15	633.62	0.00	2,788.02	760.37	63.36	739.93	943.30	547.22
42	1,178.06	3,296.71	1,329.58	0.00	0.00	0.00	0.00	4,292.45	0.00	0.00	961.92	0.00
43	716.41	0.00	10,834.39	1,401.62	54.23	1,678.94	0.00	875.36	788.16	0.00	0.00	0.00
44	1,769.47	787.97	2,756.06	1,633.22	2,156.54	476.93	2,032.13	360.50	1,105.92	815.62	774.14	0.00
45	0.00	0.00	1,445.16	608.27	414.74	1,65.90	1,743.90	2,775.55	2,103.69	414.74	41.47	0.00
46	723.34	0.00	723.34	1,105.37	856.66	636.91	911.06	658.94	1,321.95	407.64	0.00	1,185.06
47	2,817.49	0.00	2,044.22	1,740.93	1,033.69	594.15	833.79	1,947.82	0.00	236.64	468.42	661.25
48	920.16	2,013.50	2,126.23	1,983.13	747.32	152.02	425.46	345.37	1,239.44	1,438.85	688.62	1,300.74
49	1,093.54	1,670.40	2,216.74	2,276.92	806.45	172.81	691.25	1,209.68	576.03	0.00	0.00	0.00
50	0.00	0.00	1,202.40	356.38	422.87	454.63	630.00	268.80	643.91	349.10	1,161.62	5,845.36
51	904.95	2,677.80	962.70	0.00	0.00	0.00	0.00	2,547.15	0.00	0.00	477.33	0.00
52	471.42	732.79	335.56	304.84	152.42	584.46	1,704.57	1,392.22	0.00	325.82	288.61	1,148.93
53	0.00	0.00	0.00	1,362.26	4,168.51	162.94	609.10	190.10	208.20	203.67	234.62	1,682.34
54	920.16	2,055.09	1,910.60	1,666.38	596.17	94.90	270.65	318.68	1,117.36	1,062.09	692.86	1,199.86
55	305.42	1,188.77	896.11	1,240.78	726.45	0.00	295.10	730.08	754.10	51.84	319.19	143.56
56	920.16	1,175.09	0.00	1,498.27	893.82	21.57	1,480.46	467.92	33.70	1,641.45	1,051.20	339.23
57	114.80	218.40	736.89	1,005.59	1,120.80	334.77	587.52	445.51	1,095.94	195.44	61.40	643.82
58	346.86	76.21	2,236.93	2,083.58	246.25	138.24	779.22	1,036.86	0.00	0.00	1,273.86	0.00
59	30.87	1,298.91	380.88	693.69	619.48	380.68	1,522.64	2,265.14	247.44	313.42	160.04	108.59
60	1,038.72	1,219.93	1,353.72	522.74	388.97	122.20	593.19	977.25	544.06	162.94	101.83	0.00
61	0.00	0.00	1,580.65	2,240.00	0.00	188.70	196.00	479.91	416.00	649.82	256.54	2,100.88
62	2,010.90	674.74	852.69	465.45	202.85	962.81	217.48	973.28	371.36	287.38	240.74	62.86
63	723.34	0.00	723.34	342.40	293.49	66.68	613.49	389.38	586.98	542.15	0.00	364.48
64	21.62	2,551.65	712.31	0.00	1,288.58	10.64	1,427.43	33.66	498.24	997.35	1,145.93	2,193.22
65	387.02	470.23	1,820.45	2,000.34	1,870.82	373.05	3,135.10	876.07	687.60	0.00	0.00	0.00
66	428.91	382.82	959.84	705.37	276.46	0.00	459.92	1,042.41	765.64	0.00	21.27	15.38
67	38.40	28.16	1,359.20	876.64	2,732.04	308.37	589.38	3,642.76	2,064.80	379.78	3,374.90	1,089.14
68	248.14	0.00	2,321.09	2,16.11	155.52	257.28	802.56	1,266.24	1,689.76	64.32	0.00	0.00
69	445.61	961.15	2,642.42	625.41	572.74	118.50	276.50	414.74	342.33	158.00	92.16	0.00
70	501.22	961.15	2,376.05	750.49	434.50	79.00	355.50	546.41	237.00	210.68	46.06	46.08
71	215.96	0.00	0.00	1,533.81	0.00	754.62	408.80	1,575.66	0.00	653.98	1,305.22	49.46
72	224.12	454.38	1,013.83	246.54	481.77	891.42	862.90	816.09	246.53	168.85	121.42	0.00
73	0.00	0.00	0.00	1,988.71	814.63	217.25	827.36	0.00	407.34	176.51	373.70	985.13
74	347.96	711.88	142.97	239.26	85.07	584.46	777.42	1,204.18	0.00	251.39	88.61	341.53
75	635.05	1,033.49	777.34	746.78	135.78	162.94	434.50	921.83	463.80	81.47	81.47	0.00
76	1,262.76	1,403.23	272.24	0.00	0.00	0.00	0.00	1,229.86	857.56	325.87	101.83	142.57
77	183.17	443.88	1,629.78	1,025.01	355.50	41.47	604.34	432.52	248.95	0.00	124.14	0.00



POLITECNICA DEL LITORAL
BIBLIOTECA "GONZALO ZEVALLOS"

PRODUCTO	Ene-01	Feb-01	Mar-01	Abr-01	May-01	Jun-01	Jul-01	Ago-01	Sep-01	Oct-01	Nov-01	Dic-01
118	0.00	0.00	0.00	192.00	40.00	0.00	0.00	0.00	233.20	52.73	803.45	1,696.41
119	85.06	296.11	7.68	85.07	0.00	42.54	367.21	102.82	236.75	42.54	42.53	338.12
120	657.60	0.00	0.00	1,872.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
121	569.09	232.87	496.13	262.66	175.10	0.00	262.66	321.02	233.47	116.74	87.55	0.00
122	0.00	0.00	0.00	0.00	0.00	0.00	1,118.90	1,246.78	0.00	0.00	63.94	0.00
123	62.71	414.65	755.28	379.39	233.47	58.37	204.29	116.74	58.37	0.00	58.37	0.00
124	0.00	0.00	482.76	504.00	1,140.00	130.08	0.00	0.00	0.00	0.00	0.00	0.00
125	0.00	0.00	0.00	129.00	0.00	457.60	341.20	0.00	78.80	0.00	391.41	266.61
126	14.36	0.00	0.00	850.00	0.00	10.22	414.46	33.66	85.09	821.04	588.80	0.00
127	0.00	652.96	481.15	21.77	0.00	0.00	687.36	137.28	0.00	0.00	0.00	0.00
128	0.00	0.00	970.00	282.01	0.00	0.00	0.00	0.00	192.02	538.02	0.00	0.00
129	0.00	178.30	92.80	0.00	142.40	0.00	0.00	179.20	424.58	753.40	49.60	156.40
130	0.00	16.00	116.32	0.00	23.82	0.00	407.54	0.00	179.50	33.60	70.72	552.54
131	0.00	78.40	0.00	0.00	0.00	0.00	151.45	700.18	0.00	910.93	0.00	718.35
132	146.64	0.00	102.20	0.00	1,153.39	0.00	238.88	0.00	0.00	217.39	187.22	0.00
133	0.00	518.87	48.97	173.60	443.89	0.00	43.20	563.36	153.60	849.66	167.20	372.66
134	195.94	67.57	587.82	469.74	199.03	127.20	77.78	24.66	56.24	83.04	12.08	0.00
135	635.90	0.00	203.49	0.00	203.49	0.00	0.00	114.62	0.00	0.00	0.00	0.00
136	0.00	0.00	0.00	1,014.92	0.00	0.00	0.00	0.00	562.61	269.36	72.80	464.94
137	288.42	83.92	622.10	267.62	215.54	44.16	115.90	43.09	100.40	69.64	0.00	0.00
138	0.00	0.00	1,979.83	324.73	50.00	0.00	177.91	354.58	288.38	124.00	1,079.29	52.14
139	73.17	226.47	380.46	0.00	0.00	0.00	417.12	63.99	259.25	57.01	50.56	0.00
140	554.49	408.58	8.80	60.00	0.00	0.00	819.20	57.25	12.72	0.00	0.00	0.00
141	554.50	321.02	56.66	4.00	0.00	20.00	812.00	61.25	77.82	0.00	20.00	0.00
142	0.00	0.00	0.00	0.00	0.00	0.00	0.00	276.50	967.74	0.00	0.00	276.50
143	668.44	12.92	40.32	0.00	98.74	0.00	165.31	0.00	1,088.00	134.40	14.72	0.00
144	0.00	0.00	0.00	589.72	139.49	33.28	266.24	18.01	124.97	66.56	6.66	0.00
145	554.50	0.00	554.50	145.92	87.55	0.00	58.37	204.29	116.74	87.55	29.18	0.00
146	0.00	0.00	0.00	0.00	72.80	200.00	0.00	79.80	153.08	0.00	0.00	1,537.30
147	635.90	0.00	101.74	0.00	203.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00
148	55.18	217.89	0.00	45.76	16.19	140.80	633.60	193.60	52.80	105.60	17.60	51.39
149	0.00	479.62	51.66	173.60	647.71	0.00	0.00	229.60	185.61	85.76	97.38	786.87
150	0.00	0.00	0.00	573.08	147.77	86.56	133.12	99.84	91.69	66.56	0.00	0.00
151	0.00	341.25	436.80	110.20	0.00	80.00	695.20	264.00	0.00	80.00	0.00	0.00
152	0.00	0.00	229.63	102.30	1,359.38	259.63	183.45	460.00	0.00	0.00	367.63	696.93
153	0.00	0.00	0.00	515.84	0.00	66.56	116.48	33.28	133.12	53.94	117.06	0.00
154	483.03	0.00	483.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
155	50.69	351.38	14.08	0.00	70.40	35.20	161.92	228.80	281.60	140.80	75.20	33.79
156	0.00	234.45	87.14	0.00	0.00	0.00	970.18	530.40	0.00	0.00	0.00	0.00
157	488.83	175.10	379.40	87.55	58.37	0.00	87.55	87.55	87.55	58.37	94.86	0.00



VENTAS EN UNIDADES AÑO 2002

PRODUCTO	Ene-02	Feb-02	Mar-02	Abr-02	May-02	Jun-02	Jul-02	Ago-02	Sep-02	Oct-02	Nov-02	Dic-02
1	359,232	215,100	585,144	682,080	549,912	345,732	367,632	707,677	713,304	223,560	231,180	411,264
2	595,068	635,306	585,360	597,240	976,748	740,179	206,400	467,243	901,624	900,924	502,625	341,728
3	60,732	110,099	140,316	76,260	116,832	925	61,164	9,026	71,976	47,520	43,740	31,008
4	87,040	84,200	72,320	71,919	93,354	43,300	63,810	89,100	28,430	78,544	56,014	30,310
5	0	17,740	2,924	2,265	2,194	46,668	5,349	96,301	1,281	575	374	169
6	74,232	36,803	15,214	50,458	132,086	49,695	38,053	21,199	32,684	80,994	44,084	13,812
7	0	1,250	16,010	2,666	8,457	3,799	6,123	3,666	11,663	15,410	33,493	16,109
8	12,568	13,960	35,640	8,960	4,920	240	4,440	0	0	0	0	0
9	3,120	1,680	4,920	4,464	6,600	1,380	0	19,440	14,160	2,400	6,600	6,360
10	384	102,628	7,284	18,200	16,810	9,040	31,120	57,548	11,284	2,700	1,700	100
11	500	11,952	2,306	1,665	1,984	498	500	5,184	9,163	9,166	18,920	11,007
12	22,272	20,484	21,096	9,156	11,052	7,788	12,048	21,907	9,997	4,802	60	0
13	6,804	10,368	15,960	15,900	9,000	10,068	9,576	19,656	14,148	8,928	780	1,512
14	22,464	80,052	106,464	45,936	27,384	31,440	150,096	259,224	71,112	13,284	2,580	0
15	3,584	1,965	11,011	4,972	15,843	6,586	15,708	11,137	21,037	18,001	20,143	22,456
16	4,416	7,896	13,176	12,264	10,188	6,360	4,104	18,156	14,897	6,816	1,512	1,212
17	46,475	78,420	103,740	88,344	50,064	40,068	44,280	54,648	27,216	19,896	12,192	6,528
18	56,400	48,000	31,200	166,150	163,000	148,500	48,000	91,600	92,400	83,200	48,200	30,000
19	0	0	667	667	16,250	250	1,122	1,660	5,666	916	17,040	133
20	43,235	77,450	46,495	52,260	67,670	38,340	70,080	39,420	971,658	60,670	72,632	73,160
21	7,164	17,355	4,629	12,324	7,380	0	12,462	11,198	16,794	13,560	14,544	16,056
22	3,045	4,848	9,816	10,272	6,336	24	4,392	12,168	12,888	4,172	0	144
23	3,516	6,480	13,248	7,272	5,616	6,456	8,052	14,940	10,992	2,256	348	2,328
24	1,800	47,796	44,424	27,672	14,484	19,944	72,588	27,648	37,932	6,156	12,096	12,000
25	5,184	20,682	25,671	20,787	19,323	10,308	27,493	15,972	3,531	10,077	0	225
26	2,880	9,878	11,733	12,372	12,712	2,386	8,600	11,577	2,677	500	442	444
27	3,288	9,384	18,456	7,620	12,744	4,644	3,588	0	10,008	3,528	4,176	3,480
28	2,880	4,176	9,360	6,120	4,248	4,320	7,320	10,308	9,804	0	348	2,208
29	2,800	1,400	17,400	5,000	0	9,960	5,400	11,950	1,800	12,000	5,600	400
30	6,048	0	6,048	4,968	2,232	3,168	7,884	4,752	6,336	1,416	0	1,788
31	3,024	3,084	6,984	5,616	3,804	576	3,828	8,352	6,264	0	324	1,356

TOTAL



POLITECNICA DEL LITORAL
BIBLIOTECA "GONZALO RIVALLLOS"
F.I.M.C.P.

PRODUCTO	Ene-02	Feb-02	Mar-02	Abr-02	May-02	Jun-02	Jul-02	Ago-02	Sep-02	Oct-02	Nov-02	Dic-02
32	0	133,056	30,912	31,104	25,920	0	98,496	131,604	22,224	0	5,184	0
33	3,748	5,093	3,495	5,155	14,848	4,080	4,359	4,719	5,675	5,914	3,342	3,780
34	1,215	3,785	4,776	3,504	1,296	1,200	3,732	5,976	6,120	1,612	0	144
35	2,597	3,521	5,253	4,465	7,061	3,167	8,242	4,606	11,860	10,188	4,208	5,052
36	4,032	0	4,032	3,600	2,016	1,108	6,948	4,032	5,256	2,052	0	4,824
37	5,760	9,684	4,248	0	0	0	0	12,504	0	0	552	0
38	2,364	16,629	16,308	12,600	8,640	5,616	3,240	11,016	10,584	2,160	2,592	3,960
39	283	370	402	994	0	859	1,450	830	640	560	560	318
40	4,536	12,528	16,902	13,392	3,888	5,544	3,240	6,048	14,256	2,376	4,320	1,548
41	3,024	1,488	5,868	6,300	1,584	0	7,344	2,016	144	1,968	2,400	1,476
42	3,456	8,736	3,912	0	0	0	0	11,892	0	0	264	0
43	2,916	0	34,002	3,875	159	5,418	0	2,749	2,050	0	0	0
44	6,144	2,736	9,660	5,328	7,488	1,656	7,056	2,592	3,840	2,832	2,688	0
45	0	0	15,768	6,768	4,752	1,872	20,880	33,840	25,488	5,040	504	0
46	3,024	0	3,024	3,228	2,519	1,872	3,636	3,168	4,032	1,200	0	3,732
47	6,156	0	2,734	2,646	1,719	799	1,257	5,003	0	348	791	2,016
48	3,564	7,494	7,872	7,448	3,024	600	1,536	1,232	4,416	5,128	2,452	4,632
49	1,824	2,784	3,696	4,099	1,560	336	1,344	2,352	1,104	0	0	0
50	0	0	3,750	1,284	1,109	1,083	1,988	1,000	2,247	1,234	4,216	22,256
51	2,664	7,092	2,832	0	0	0	0	7,176	0	0	288	0
52	1,584	2,208	1,104	1,008	504	1,944	5,424	4,440	0	936	792	3,780
53	0	0	0	3,240	11,400	432	1,512	504	552	540	787	6,768
54	3,564	7,770	1,972	6,200	2,510	356	984	1,136	3,980	3,784	2,468	4,272
55	2,544	10,584	7,992	10,800	6,480	0	2,592	6,480	6,696	432	2,808	1,296
56	3,564	4,524	0	5,504	3,548	96	5,400	1,668	120	5,848	3,744	1,202
57	250	500	2,687	3,240	4,037	1,248	2,700	1,849	4,711	722	246	2,259
58	962	170	4,912	7,380	796	432	2,916	3,672	0	0	4,536	0
59	216	9,081	2,658	4,839	4,326	2,655	10,650	15,828	1,725	2,175	1,113	750
60	9,180	10,620	12,420	4,470	3,240	1,080	5,100	8,460	4,680	1,440	900	0
61	0	0	3,564	10,000	0	648	500	1,997	1,500	1,736	869	7,387
62	10,632	2,952	4,404	2,592	1,140	5,616	1,404	4,920	2,088	1,692	1,248	324
63	3,024	0	3,024	1,008	864	216	2,772	1,872	1,728	1,584	0	1,068



POLITECNICA DEL LITORAL

PRODUCTO	Ene-02	Feb-02	Mar-02	Abr-02	May-02	Jun-02	Jul-02	Ago-02	Sep-02	Oct-02	Nov-02	Dic-02
64	125	12,211	4,065	0	5,333	50	6,920	167	2,350	5,236	6,997	11,315
65	2,999	4,084	12,456	16,487	13,748	2,999	20,163	6,295	5,075	0	0	0
66	1,440	1,296	3,240	2,376	936	0	1,548	3,540	2,592	0	72	48
67	375	275	11,125	5,123	20,991	1,553	2,702	30,850	13,994	1,888	25,655	5,612
68	2,592	0	27,168	2,016	1,728	2,400	8,688	12,612	18,243	600	0	0
69	1,996	3,456	9,504	2,256	2,088	432	1,008	1,488	1,224	576	288	0
70	1,812	3,456	8,568	2,688	1,584	288	1,296	1,944	964	720	144	144
71	150	0	0	922	0	693	270	1,461	0	588	1,170	46
72	294	576	1,224	324	612	1,152	1,152	1,080	388	168	126	0
73	0	0	0	4,608	2,160	576	2,016	0	1,080	468	947	3,744
74	1,152	2,136	480	792	288	1,944	2,472	3,791	0	708	288	900
75	7,380	9,000	6,840	6,420	1,080	1,440	3,780	8,100	3,960	720	720	0
76	11,160	12,240	2,460	0	0	0	0	10,650	7,380	2,880	900	1,260
77	636	1,788	6,404	4,080	1,440	144	2,448	1,728	1,008	0	503	0
78	0	49	0	0	499	0	900	1,292	755	200	1,547	2,136
79	120	200	4,617	355	625	364	1,010	986	275	300	172	72
80	1,344	2,376	7,776	8,136	2,076	1,728	2,304	7,128	2,460	0	144	0
81	0	576	4,824	1,584	504	479	504	0	0	0	0	1,008
82	0	0	0	0	1,448	494	500	1,500	8,395	3,887	3,569	2,281
83	1,644	2,808	8,208	6,840	2,580	1,512	3,624	4,968	216	0	144	0
84	0	0	1,000	7,485	0	250	3,515	1,499	4,442	50	498	1,284
85	6,652	0	0	0	16,386	0	0	12,984	0	994	0	830
86	492	300	900	0	216	600	471	12,105	336	600	150	216
87	0	0	4,765	2,000	500	250	3,665	10,916	6,540	3,999	997	3,571
88	6,504	2,196	2,700	1,728	720	3,768	0	3,456	2,028	568	1,140	252
89	0	0	0	1,167	1,000	240	2,000	0	6,653	3,683	2,706	0
90	500	0	1,250	7,631	0	0	0	0	0	0	0	0
91	912	816	2,208	1,728	336	336	241	96	0	0	192	0
92	720	1,344	312	144	288	360	2,712	1,488	1,056	399	180	636
93	768	1,584	4,032	1,536	1,872	288	720	1,152	864	144	144	1,008
94	1,404	1,392	1,440	0	0	0	0	3,516	0	0	144	0
95	2,316	1,728	6,048	5,184	1,728	1,296	1,968	2,808	0	0	72	0

BIBLIOTECA GENERAL DE VALLOS



POLITECNICA DEL LITORAL
BIBLIOTECA DON BALBUENA ZAVALLA

PRODUCTO	Ene-02	Feb-02	Mar-02	Abr-02	May-02	Jun-02	Jul-02	Ago-02	Sep-02	Oct-02	Nov-02	Dic-02
96	5,010	0	1,150	0	5,144	1,497	0	1,998	2,500	11,250	100	17,413
97	0	344	83	0	3,308	2,541	0	9,733	249	4,759	3,099	3,960
98	4,985	800	0	0	0	0	0	964	2,364	302	250	590
99	5,040	0	5,040	0	0	0	0	0	0	0	0	0
100	125	500	3,000	0	0	0	1,998	2,976	12,441	1,949	2,975	84
101	3,936	1,716	1,722	1,188	504	1,968	1,044	2,508	1,560	636	924	36
102	204	624	4,100	1,776	1,296	144	1,296	504	576	0	287	0
103	132	395	886	587	150	500	1,325	450	312	462	275	200
104	474	825	603	750	800	900	1,150	350	450	1,025	350	600
105	0	0	500	0	1,497	0	0	2,050	542	3,840	750	2,386
106	3,600	0	4,031	0	3,168	0	0	0	0	0	0	0
107	0	0	0	0	328	50	4,992	500	0	500	100	16,289
108	2,880	2,112	2,160	792	288	1,800	336	2,388	1,200	924	828	36
109	192	324	344	245	121	200	175	6,336	100	125	2,131	72
110	912	225	1,248	672	480	96	384	336	240	144	96	48
111	144	1,152	3,180	1,488	1,008	0	1,152	432	432	0	432	0
112	0	0	0	1,265	399	997	444	600	0	700	0	350
113	150	223	494	398	114	250	197	125	62	200	150	50
114	0	0	0	500	250	3,000	6,000	120	1,000	7,640	1,965	0
115	96	573	1,286	823	345	0	150	740	412	272	0	0
116	0	0	0	250	4,727	1,100	10,655	2,000	1,108	0	0	0
117	3,600	0	3,600	0	0	0	0	0	0	0	0	0
118	0	0	0	1,000	250	0	0	0	1,333	330	5,168	9,526
119	288	864	24	288	0	144	1,116	300	840	144	144	1,356
120	2,618	0	0	5,900	0	0	0	0	0	0	0	0
121	936	384	816	432	288	0	432	528	384	192	144	0
122	0	0	0	0	0	0	8,100	9,072	0	0	432	0
123	78	526	1,248	624	384	96	336	192	96	0	96	0
124	0	0	3,015	3,150	7,125	813	0	0	0	0	0	0
125	0	0	0	300	0	1,100	800	0	200	0	1,050	750
126	83	0	0	5,000	0	48	1,619	167	456	4,677	3,241	0
127	0	1,749	1,260	57	0	0	1,800	360	0	0	0	0



POLITECNICA DEL LITORAL
BIBLIOTECA GONZALO ZEVALLLOS

PRODUCTO	Ene-02	Feb-02	Mar-02	Abr-02	May-02	Jun-02	Jul-02	Ago-02	Sep-02	Oct-02	Nov-02	Dic-02
128	0	0	5,500	1,836	0	0	0	0	1,041	1,978	0	0
129	0	995	500	0	750	0	0	1,000	2,325	4,311	250	1,000
130	0	100	925	0	145	0	2,508	0	14,308	250	350	4,739
131	0	250	0	0	0	0	330	2,483	0	3,349	0	2,878
132	235	0	250	0	3,690	0	976	0	0	745	768	0
133	0	3,732	244	700	3,188	0	250	3,440	1,000	6,061	1,125	1,620
134	336	119	971	809	347	225	136	46	100	150	25	0
135	3,600	0	1,152	0	1,152	0	0	720	0	0	0	0
136	0	0	0	2,473	0	0	0	0	1,739	740	250	1,616
137	492	145	1,063	459	369	75	199	73	175	125	0	0
138	0	0	16,000	1,589	248	0	729	2,349	1,763	500	6,797	276
139	144	466	751	0	0	0	825	125	512	112	100	0
140	912	672	11	75	0	0	1,024	70	15	0	0	0
141	912	528	71	4	0	25	1,015	75	96	0	25	0
142	0	0	0	0	0	0	0	1,008	3,528	0	0	1,008
143	4,915	95	300	0	661	0	984	0	10,000	1,000	100	0
144	0	0	0	886	208	50	400	27	187	100	10	0
145	912	0	912	240	144	0	96	336	192	144	48	0
146	0	0	0	0	250	500	0	250	497	0	0	4,101
147	3,600	0	576	0	1,152	0	0	0	0	0	0	0
148	78	308	0	65	23	200	900	275	75	150	25	73
149	0	2,729	299	700	4,687	0	0	950	1,666	661	721	4,271
150	0	0	0	861	222	100	200	150	137	100	0	0
151	0	414	546	137	0	100	869	330	0	100	0	0
152	0	0	1,248	750	10,828	1,398	997	2,500	0	0	1,998	4,440
153	0	0	0	775	0	100	175	50	200	81	335	0
154	2,016	0	2,016	0	0	0	0	0	0	0	0	0
155	72	498	20	0	100	50	230	325	400	200	100	48
156	0	739	247	0	0	0	3,331	2,125	0	0	0	0
157	804	288	624	144	96	0	144	144	144	96	156	0
158	0	49	0	0	1,334	0	2,000	0	2,010	9,963	100	0
159	912	672	0	100	0	0	189	150	96	0	25	48



BIBLIOTECA "RONALDO ESPINOSA"

PRODUCTO	Ene-02	Feb-02	Mar-02	Abr-02	May-02	Jun-02	Jul-02	Ago-02	Sep-02	Oct-02	Nov-02	Dic-02
160	0	0	0	227	1,000	2,500	0	5,995	0	0	0	0
161	0	0	0	0	0	0	2,850	4,330	0	0	0	0
162	0	0	720	144	336	96	96	144	96	228	240	0
163	60	180	955	501	25	0	127	100	131	74	0	0
164	912	288	432	192	96	0	0	96	240	96	48	0
165	60	550	480	192	96	96	96	144	96	0	168	0
166	495	1,993	1,250	1,000	1,692	599	1,064	2,995	1,063	6,610	100	1,255
167	0	1,675	0	600	5,176	0	0	950	895	2,000	1,375	433
168	876	300	432	240	96	0	48	96	48	96	48	0
169	708	300	528	48	96	0	60	96	288	96	0	0
170	0	0	0	574	100	0	125	0	75	99	360	0
171	816	300	432	144	96	0	48	96	96	96	48	0
172	0	2,820	4,500	2,287	1,000	0	5,000	973	994	0	250	125
173	0	0	529	325	125	75	369	200	6	125	50	0
174	0	0	0	0	0	0	249	373	2,589	250	0	1,417
175	6,312	0	0	0	0	0	0	0	0	0	0	0
176	0	408	346	350	0	100	366	25	50	100	0	0
177	0	0	0	0	2,500	0	300	749	1,118	0	0	0
178	0	2,400	80	100	0	0	200	0	0	0	0	0
179	84	289	392	125	75	25	225	245	56	125	0	0
180	0	0	8,000	967	0	510	1,216	150	187	1,164	2,264	955
181	0	0	0	0	0	0	1,249	0	0	0	0	0
182	36	0	777	475	18	0	125	22	75	0	25	0
183	3,138	0	0	1,862	0	0	0	2,500	997	1,530	0	355
184	0	0	500	2,750	66	63	0	0	6,102	4,345	666	557
185	0	125	0	2,500	0	0	243	0	333	1,004	2,260	0
186	2,059	0	0	2,925	0	0	0	0	0	5,000	0	15
187	0	0	0	0	3,097	0	0	250	0	0	497	2,410
188	2,000	1,416	2,543	0	0	50	0	0	99	0	0	100
189	144	288	432	144	96	0	48	96	144	96	120	0
190	78	128	7	50	175	50	200	50	175	150	25	73
191	0	1,486	1,875	1,486	0	0	0	0	0	2,000	100	2,312



POLITECNICA DEL LITORAL
BIBLIOTECA "GONZALO ZEVALLOS"
F.I.M.C.P.

VENTAS EN DOLARES 2002

PRODUCTO	Ene-02	Feb-02	Mar-02	Abr-02	May-02	Jun-02	Jul-02	Ago-02	Sep-02	Oct-02	Nov-02	Dic-02
1	36,715.52	21,893.66	59,615.80	66,731.88	51,366.85	33,044.78	35,026.47	65,885.36	63,199.22	21,014.63	22,285.20	35,971.82
2	87,075.63	83,768.24	81,262.73	84,403.77	101,171.22	100,211.49	31,422.97	84,291.10	129,769.93	131,170.21	73,423.26	49,971.16
3	43,039.16	58,817.31	79,767.46	52,986.17	80,972.09	877.27	42,376.08	7,673.33	50,008.35	33,054.14	30,364.57	21,533.45
4	26,591.34	26,900.37	22,764.00	23,317.37	30,327.00	13,891.96	20,802.95	26,943.46	9,052.07	25,218.27	16,943.93	9,107.10
5	0.00	15,025.47	2,655.05	2,161.23	1,862.27	32,387.05	4,662.92	66,601.61	1,113.77	555.44	371.32	169.00
6	25,981.20	11,905.73	4,855.07	16,308.54	35,509.15	13,886.71	9,830.74	5,997.49	8,499.58	20,856.53	11,127.08	3,649.57
7	0.00	350.00	3,757.51	615.48	166.13	742.96	1,241.50	850.63	2,772.35	3,525.14	6,868.58	3,480.98
8	3,199.02	3,539.98	8,921.24	2,288.05	775.21	64.80	1,037.09	0.00	0.00	0.00	0.00	0.00
9	842.40	423.70	1,232.99	122.56	1,573.23	519.55	0.00	4,601.06	23,304.98	583.23	1,555.29	799.30
10	61.10	12,265.56	960.68	2,292.66	2,054.44	122.98	3,874.62	6,845.81	1,420.49	394.55	250.13	16.79
11	0.00	3,282.00	717.22	431.27	456.32	135.63	136.00	1,337.54	2,201.75	1,930.52	3,181.77	2,179.58
12	10,375.19	9,479.50	9,836.00	4,271.73	5,160.42	3,631.62	5,572.42	10,195.58	4,706.90	2,250.14	32.89	0.00
13	2,894.25	4,453.46	6,802.50	6,777.02	3,836.92	4,285.12	4,074.42	8,351.54	6,047.75	3,820.60	328.87	681.55
14	1,900.85	7,012.64	4,479.22	3,700.89	2,129.81	2,313.81	10,974.84	17,809.02	5,319.09	884.87	208.13	0.00
15	1,892.71	959.97	5,493.52	3,145.73	10,252.48	3,705.26	10,401.18	4,994.06	12,211.29	9,789.11	11,322.42	13,375.09
16	1,885.34	3,390.20	5,617.79	5,222.89	4,345.19	2,720.79	1,750.31	7,718.72	6,370.89	2,923.79	639.70	528.23
17	6,489.31	10,159.87	13,231.43	11,295.80	6,446.54	5,095.95	5,177.07	562.50	3,262.44	2,393.67	1,466.25	845.97
18	3,073.56	2,600.88	1,701.56	8,955.39	8,742.78	7,967.17	2,647.44	5,045.53	4,989.43	4,473.74	2,642.59	1,871.36
19	0.00	0.00	150.58	186.76	3,563.00	63.00	363.92	415.00	1,282.03	187.52	3,471.75	30.43
20	6,794.54	11,635.88	6,543.71	8,217.81	9,542.05	5,572.72	9,818.70	6,087.85	139,816.46	9,259.57	10,784.01	10,986.47
21	1,934.28	4,685.85	1,249.83	3,463.71	2,069.48	0.00	3,505.01	3,107.46	4,558.43	3,641.00	3,922.26	4,360.67
22	1,303.17	2,087.45	4,189.35	4,384.28	2,895.52	10.19	1,870.05	5,171.94	5,498.05	1,772.39	0.00	66.24
23	1,304.52	2,414.79	4,890.37	2,711.64	2,091.34	2,410.22	3,100.97	5,561.37	4,129.19	841.80	130.34	876.11
24	228.16	5,212.20	3,973.32	3,183.68	1,375.02	2,066.52	5,711.21	1,612.80	4,464.42	781.20	1,209.68	804.00
25	1,244.16	4,499.91	5,484.60	4,311.38	4,082.70	2,166.25	6,102.59	3,471.55	766.62	276.49	0.00	54.00
26	1,209.60	3,843.62	1,398.41	4,662.61	4,760.91	919.41	3,557.86	4,658.31	1,031.32	219.10	188.34	193.18
27	1,939.92	5,324.22	10,315.73	4,248.07	6,089.15	2,548.86	1,954.13	0.00	5,457.18	1,954.12	2,293.97	1,315.62
28	1,067.84	1,564.00	34,611.11	2,273.00	1,572.93	1,630.38	2,814.32	3,851.04	3,686.10	0.00	150.50	827.37
29	1,204.00	602.00	7,258.78	2,150.00	0.00	4,277.64	2,296.20	4,788.50	774.00	5,160.00	2,236.05	172.00
30	1,808.35	0.00	1,808.35	2,117.14	948.19	1,345.19	2,399.95	1,235.52	2,655.26	615.93	0.00	761.32
31	1,129.87	1,149.43	2,585.71	2,078.05	1,413.41	221.54	1,416.02	3,080.12	2,312.90	0.00	120.74	506.96
32	0.00	7,650.00	1,933.63	1,585.21	1,512.03	0.00	4,254.48	5,463.33	963.61	0.00	212.54	0.00
33	1,233.36	1,668.26	1,157.10	1,693.60	3,774.59	1,339.10	1,436.98	1,548.08	1,715.40	1,951.18	1,109.34	1,244.66
34	521.01	1,672.98	1,998.29	1,494.68	550.32	514.65	1,592.35	2,537.56	2,598.71	684.50	0.00	66.24
35	806.18	1,221.89	1,898.47	1,933.28	2,318.83	939.78	3,072.23	1,589.06	3,210.87	3,197.44	1,240.20	1,666.72
36	1,205.57	0.00	1,205.57	1,538.81	856.01	467.93	1,982.86	1,048.32	2,196.66	866.00	0.00	1,734.52
37	2,445.82	4,527.63	1,804.72	0.00	0.00	0.00	0.00	5,618.07	0.00	0.00	1,325.19	0.00
38	354.78	2,348.28	2,270.77	1,785.43	1,212.13	782.60	458.71	1,541.24	1,481.25	309.28	364.11	551.64

PRODUCTO	Ene-02	Feb-02	Mar-02	Abr-02	May-02	Jun-02	Jul-02	Ago-02	Sep-02	Oct-02	Nov-02	Dic-02
39	531.76	778.44	845.07	2,090.80	0.00	1,805.50	3,048.48	1,577.60	1,337.38	1,146.08	1,136.16	632.94
40	680.70	1,750.09	2,235.68	1,895.43	538.68	772.63	468.80	852.84	1,984.70	339.19	603.43	217.67
41	1,547.48	781.86	2,843.59	3,088.94	792.03	0.00	3,485.02	950.46	79.20	924.91	1,179.12	684.02
42	1,472.58	4,123.39	1,661.97	0.00	0.00	0.00	0.00	5,365.56	0.00	0.00	1,202.40	0.00
43	895.51	0.00	13,542.99	1,752.03	67.79	2,098.68	0.00	1,094.23	985.20	0.00	0.00	0.00
44	2,211.84	984.96	3,447.58	1,916.52	2,695.68	596.16	2,540.16	475.63	1,392.40	1,019.52	967.68	0.00
45	0.00	0.00	1,806.45	760.34	518.42	207.37	2,179.88	3,469.44	2,629.61	518.43	51.84	0.00
46	904.18	0.00	904.18	1,381.71	1,069.57	794.89	1,138.83	823.68	1,652.44	509.55	0.00	1,481.33
47	3,521.86	0.00	2,555.28	2,176.16	1,292.11	742.69	1,042.24	2,434.77	0.00	295.80	585.53	826.56
48	1,150.20	2,516.87	2,657.79	2,478.91	934.15	190.02	531.82	431.71	1,549.30	1,798.56	860.77	1,625.93
49	1,368.92	2,086.00	2,770.92	2,846.15	1,008.06	216.01	864.06	1,512.10	720.04	0.00	0.00	0.00
50	0.00	0.00	1,503.00	445.48	528.59	568.29	787.50	336.00	804.99	436.37	1,452.02	7,306.70
51	1,131.19	3,347.25	1,203.38	0.00	0.00	0.00	0.00	3,183.94	0.00	0.00	596.66	0.00
52	589.28	915.99	419.45	381.05	190.53	730.58	2,130.71	1,740.27	0.00	407.28	360.76	1,436.16
53	0.00	0.00	0.00	1,702.83	5,210.64	203.67	761.37	237.62	260.25	254.59	293.27	2,102.93
54	1,150.20	2,568.86	2,398.25	2,082.98	745.21	118.63	338.31	398.35	1,396.70	1,327.61	866.08	1,499.83
55	381.78	1,485.96	1,120.14	1,550.97	908.06	0.00	368.87	912.60	942.62	64.80	398.99	179.45
56	1,150.20	1,488.86	0.00	1,872.84	1,104.78	26.96	1,863.07	584.90	42.12	2,051.81	1,314.00	424.04
57	143.50	273.00	921.11	1,256.99	1,401.00	418.46	734.40	556.89	1,369.92	244.30	76.75	804.78
58	433.57	95.26	2,796.16	2,604.48	307.81	172.80	974.03	1,296.07	0.00	0.00	1,592.32	0.00
59	38.59	1,623.64	476.10	867.11	774.35	475.85	1,903.30	2,831.43	309.30	391.78	200.05	135.74
60	1,298.40	1,524.91	1,692.15	653.43	483.71	152.75	741.49	1,221.56	680.07	203.67	127.29	0.00
61	0.00	0.00	1,975.81	2,800.00	0.00	235.87	245.00	599.51	520.00	812.27	320.68	2,626.10
62	2,513.62	843.43	1,065.86	581.81	253.56	1,203.51	271.83	1,216.60	464.20	371.73	300.93	78.97
63	904.18	0.00	904.18	428.00	368.86	83.35	766.86	486.72	733.73	677.69	0.00	455.60
64	27.03	3,189.58	880.39	0.00	1,610.72	13.30	1,784.29	42.08	622.80	1,246.69	1,432.41	2,741.52
65	483.78	587.79	2,275.58	2,500.43	2,338.52	466.31	3,918.98	1,095.09	859.50	0.00	0.00	0.00
66	536.14	478.52	1,199.80	881.71	345.58	0.00	574.90	1,303.01	957.05	0.00	26.59	19.20
67	48.00	35.20	1,699.00	1,095.80	3,415.05	385.46	736.72	4,553.45	2,581.00	474.73	4,218.63	1,361.42
68	310.18	0.00	2,901.36	270.14	194.40	321.60	1,009.20	1,582.80	2,112.20	80.40	0.00	0.00
69	557.01	1,201.44	3,303.02	781.76	715.83	148.12	345.62	518.43	427.91	197.50	115.20	0.00
70	626.52	1,201.44	2,970.06	938.11	543.12	96.75	444.37	683.01	296.25	263.33	57.60	57.60
71	269.20	0.00	0.00	1,917.26	0.00	943.27	511.00	1,969.57	0.00	817.47	1,631.52	61.92
72	280.15	567.98	1,267.29	308.18	602.21	1,101.78	1,078.62	1,020.11	308.16	211.06	151.78	0.00
73	0.00	0.00	0.00	2,460.89	1,018.35	271.56	1,034.20	0.00	509.18	220.64	487.13	1,231.41
74	434.20	899.85	178.71	299.08	108.34	730.58	971.77	1,505.23	0.00	314.24	110.76	426.91
75	1,043.81	1,291.86	971.68	933.48	169.72	203.67	543.12	1,152.29	579.75	101.84	101.84	0.00
76	1,578.45	1,754.04	340.30	0.00	0.00	0.00	0.00	1,537.33	1,071.95	407.34	127.29	178.21
77	228.96	554.85	2,037.23	1,281.26	444.37	51.84	755.43	540.65	311.06	0.00	155.17	0.00

PRODUCTO	Ene-02	Feb-02	Mar-02	Abr-02	May-02	Jun-02	Jul-02	Ago-02	Sep-02	Oct-02	Nov-02	Dic-02
78	0.00	104.86	0.00	0.00	670.66	0.00	38.02	941.68	477.16	126.40	1,032.32	1,349.95
79	123.74	207.25	4,755.45	367.20	643.80	375.15	1,041.75	1,017.30	283.55	308.20	177.16	74.30
80	229.19	403.92	1,300.95	1,383.12	352.92	293.76	391.68	1,211.76	412.20	0.00	24.48	0.00
81	0.00	518.40	3,758.61	1,296.05	388.83	263.83	388.83	0.00	0.00	0.00	0.00	777.65
82	0.00	0.00	0.00	0.00	826.05	231.69	217.00	616.00	3,419.63	1,544.03	1,317.29	789.19
83	279.48	477.36	1,390.95	1,162.80	438.60	257.04	616.08	844.56	36.72	0.00	24.48	0.00
84	0.00	0.00	504.00	2,663.71	0.00	113.75	1,219.98	526.39	2,021.67	19.95	172.42	536.81
85	1,698.06	0.00	0.00	0.00	3,919.39	0.00	0.00	3,171.20	0.00	341.37	0.00	272.02
86	187.62	116.12	343.63	0.00	82.08	229.40	182.19	4,154.44	128.99	228.80	57.20	82.37
87	0.00	0.00	1,242.86	516.00	165.00	66.50	1,049.11	1,818.33	1,872.50	1,270.73	422.37	1,067.73
88	1,577.10	668.96	641.90	387.16	158.87	813.58	0.00	814.99	455.37	108.43	277.79	63.14
89	0.00	0.00	0.00	400.07	399.00	109.20	658.00	0.00	1,915.02	1,088.07	812.04	0.00
90	440.00	0.00	732.50	4,900.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
91	693.12	620.16	1,678.08	1,313.28	255.36	255.36	183.16	72.96	0.00	0.00	145.92	0.00
92	270.27	595.89	115.94	53.17	106.34	137.19	1,074.59	586.34	380.14	106.34	72.00	236.64
93	259.53	543.12	1,422.98	526.66	641.87	98.75	246.87	411.45	312.70	57.60	57.60	239.90
94	595.18	653.93	624.92	0.00	0.00	0.00	0.00	1,630.50	0.00	0.00	530.42	0.00
95	393.70	293.76	1,017.67	881.28	293.76	220.32	334.56	477.36	0.00	0.00	12.24	0.00
96	851.70	0.00	191.60	0.00	886.62	251.50	0.00	359.66	360.00	1,912.00	16.40	2,516.82
97	0.00	95.11	24.98	0.00	1,122.28	667.36	0.00	2,328.83	66.23	1,172.02	895.14	1,090.67
98	2,711.84	672.00	0.00	0.00	0.00	0.00	0.00	484.51	953.01	142.54	154.00	278.48
99	1,509.48	0.00	1,509.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	27.03	109.94	675.00	0.00	0.00	0.00	799.20	1,004.40	3,050.86	490.13	742.93	22.93
101	950.78	508.18	409.74	261.16	111.57	427.84	235.74	587.53	347.36	151.52	213.23	16.95
102	73.44	372.78	1,530.77	548.06	399.94	51.84	399.84	155.53	177.75	0.00	86.51	0.00
103	83.90	250.96	560.61	370.90	94.50	315.40	837.53	272.45	197.46	291.96	173.35	126.00
104	217.07	378.45	276.78	344.25	367.20	413.10	527.85	159.15	204.85	470.48	160.65	275.40
105	0.00	0.00	360.00	0.00	710.94	0.00	0.00	867.00	325.20	1,408.14	357.15	911.51
106	794.88	0.00	890.27	0.00	699.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00
107	0.00	0.00	0.00	0.00	116.44	13.30	1,347.84	126.00	0.00	126.00	25.90	3,866.84
108	674.82	636.06	517.26	176.50	61.72	385.74	32.23	583.04	270.22	213.24	186.57	16.82
109	95.23	159.65	163.48	122.50	59.25	99.00	87.00	2,280.86	49.80	62.10	767.02	28.22
110	639.12	220.50	944.10	510.72	364.80	72.96	291.84	255.36	182.40	109.44	72.96	36.48
111	51.84	355.50	1,013.83	459.18	311.06	0.00	355.50	133.31	133.31	0.00	133.31	0.00
112	0.00	0.00	0.00	999.35	291.73	679.94	327.75	462.20	0.00	504.40	0.00	221.20
113	210.82	306.29	671.85	550.03	171.23	403.60	291.90	178.95	88.68	316.90	214.50	71.50
114	0.00	0.00	0.00	100.00	50.00	620.00	1,440.00	21.60	247.50	1,278.08	405.98	0.00
115	96.00	564.18	1,256.32	813.22	339.40	0.00	150.00	727.40	402.92	272.00	0.00	0.00
116	0.00	0.00	0.00	66.50	981.61	220.00	2,858.40	472.50	277.00	0.00	0.00	0.00

PRODUCTO	Ene-02	Feb-02	Mar-02	Abr-02	May-02	Jun-02	Jul-02	Ago-02	Sep-02	Oct-02	Nov-02	Dic-02
117	1,078.20	0.00	1,078.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
118	0.00	0.00	0.00	240.00	50.00	0.00	0.00	0.00	291.50	65.91	1,004.31	2,120.51
119	106.33	370.14	6.60	106.34	0.00	53.17	459.01	128.52	295.94	53.17	53.16	422.65
120	822.00	0.00	0.00	2,340.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
121	711.36	291.08	620.16	328.32	218.88	0.00	328.32	401.28	291.84	145.92	109.44	0.00
122	0.00	0.00	0.00	0.00	0.00	0.00	1,398.63	1,558.47	0.00	0.00	79.92	0.00
123	78.39	518.31	944.10	474.24	291.84	72.96	255.36	145.92	72.96	0.00	72.96	0.00
124	0.00	0.00	603.45	630.00	1,425.00	162.60	0.00	0.00	0.00	0.00	0.00	0.00
125	0.00	0.00	0.00	161.25	0.00	572.00	426.50	0.00	96.00	0.00	489.26	333.26
126	17.95	0.00	0.00	1,062.50	0.00	12.77	518.08	42.08	106.36	1,026.30	736.00	0.00
127	0.00	816.20	601.44	27.21	0.00	0.00	859.20	171.60	0.00	0.00	0.00	0.00
128	0.00	0.00	1,212.50	352.51	0.00	0.00	0.00	0.00	240.02	672.52	0.00	0.00
129	0.00	222.88	116.00	0.00	178.00	0.00	0.00	224.00	530.73	941.75	62.00	195.50
130	0.00	20.00	145.40	0.00	29.78	0.00	509.42	0.00	224.38	42.00	88.40	690.67
131	0.00	98.00	0.00	0.00	0.00	0.00	189.31	875.23	0.00	1,138.66	0.00	897.94
132	183.30	0.00	127.75	0.00	1,441.74	0.00	298.60	0.00	0.00	271.74	234.03	0.00
133	0.00	648.59	62.46	217.00	554.86	0.00	54.00	704.20	192.00	1,062.08	209.00	485.82
134	244.92	84.46	709.77	587.17	248.79	159.00	97.22	30.82	70.30	103.80	15.10	0.00
135	794.88	0.00	254.36	0.00	254.36	0.00	0.00	143.28	0.00	0.00	0.00	0.00
136	0.00	0.00	0.00	1,268.65	0.00	0.00	0.00	0.00	703.26	336.70	91.00	581.17
137	360.53	104.90	777.62	334.52	269.43	55.20	144.88	53.86	125.50	87.05	0.00	0.00
138	0.00	0.00	2,474.79	405.91	62.50	0.00	222.39	443.23	360.47	155.00	1,349.11	65.18
139	91.46	283.09	475.58	0.00	0.00	0.00	521.40	79.99	324.06	71.26	63.20	0.00
140	693.11	510.72	11.00	75.00	0.00	0.00	1,024.00	71.56	15.90	0.00	0.00	0.00
141	693.12	401.28	70.82	5.00	0.00	25.00	1,015.00	76.56	97.26	0.00	25.00	0.00
142	0.00	0.00	0.00	0.00	0.00	0.00	0.00	345.62	1,209.68	0.00	0.00	345.62
143	835.55	16.15	50.40	0.00	123.42	0.00	206.64	0.00	1,360.00	168.00	18.40	0.00
144	0.00	0.00	0.00	737.15	174.36	41.60	332.80	22.51	156.21	83.20	8.32	0.00
145	693.12	0.00	693.12	182.40	109.44	0.00	72.96	255.36	145.92	109.44	36.48	0.00
146	0.00	0.00	0.00	0.00	91.00	250.00	0.00	99.75	191.35	0.00	0.00	1,921.63
147	794.88	0.00	127.18	0.00	254.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00
148	68.97	272.36	0.00	57.20	20.24	176.00	792.00	242.00	66.00	132.00	22.00	64.24
149	0.00	598.53	64.58	217.00	809.64	0.00	0.00	287.00	232.01	107.20	121.72	983.59
150	0.00	0.00	0.00	716.35	184.71	83.20	166.40	124.80	114.61	83.20	0.00	0.00
151	0.00	426.56	546.00	137.75	0.00	100.00	869.00	330.00	0.00	100.00	0.00	0.00
152	0.00	0.00	287.04	127.88	1,699.23	324.54	229.31	575.00	0.00	0.00	459.54	871.16
153	0.00	0.00	0.00	644.80	0.00	83.20	145.60	41.60	166.40	67.43	146.32	0.00
154	603.79	0.00	603.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
155	63.36	439.23	17.60	0.00	88.00	44.00	202.40	286.00	352.00	176.00	94.00	42.24

APENDICE 5
CLASIFICACION ABC

PRODUCTO	Costo Unitario	Venta Total Unidades	Consumo Total \$	Porcentaje del total	Porcentaje Acumulado	Clasificación Artículo
2	0.0579	7,450,445	431,381	16.1293%	16.13%	A
1	0.0683	5,391,817	368,261	13.7693%	29.90%	A
3	0.3200	769,598	246,271	9.2081%	39.11%	A
4	0.1667	798,341	133,083	4.9760%	44.08%	A
5	0.6000	175,840	105,504	3.9448%	48.03%	A
6	0.1691	589,314	99,653	3.7260%	51.75%	A
7	0.6380	118,646	75,696	2.8303%	54.58%	A
8	0.7970	80,728	64,340	2.4057%	56.99%	A
9	0.7970	71,124	56,686	2.1195%	59.11%	A
11	0.6380	72,845	46,475	1.7377%	60.85%	A
12	0.2950	140,662	41,495	1.5515%	62.40%	A
13	0.3348	122,700	41,080	1.5360%	63.93%	A
14	0.0427	810,036	34,589	1.2933%	65.23%	A
15	0.2224	152,443	33,903	1.2676%	66.49%	A
16	0.3348	100,997	33,814	1.2643%	67.76%	A
17	0.0587	571,871	33,569	1.2551%	69.01%	A
18	0.0304	1,006,650	30,602	1.1442%	70.16%	A
19	0.6380	44,371	28,309	1.0585%	71.22%	A
20	0.0379	717,112	27,179	1.0162%	72.23%	A
21	0.1800	133,466	24,024	0.8983%	73.13%	A
22	0.3348	68,105	22,802	0.8526%	73.98%	A
23	0.2794	81,504	22,772	0.8515%	74.84%	A
24	0.0651	324,540	21,128	0.7900%	75.63%	A
10	0.0800	258,798	20,704	0.7741%	76.40%	A
25	0.1297	159,253	20,655	0.7723%	77.17%	A
26	0.2658	76,201	20,254	0.7573%	77.93%	A
27	0.2452	80,916	19,841	0.7418%	78.67%	A
28	0.2794	61,092	17,069	0.6382%	79.31%	A
29	0.2109	73,710	15,545	0.5812%	79.89%	A
30	0.2915	44,640	13,013	0.4865%	80.38%	A
31	0.2794	43,212	12,073	0.4514%	80.83%	B
32	0.0242	478,500	11,580	0.4330%	81.26%	B
33	0.1798	64,208	11,545	0.4317%	81.69%	E
34	0.3348	33,360	11,169	0.4176%	82.11%	B
35	0.1574	70,220	11,053	0.4133%	82.52%	B
36	0.2915	37,900	11,048	0.4131%	82.94%	B
37	0.3366	32,748	11,023	0.4121%	83.35%	B
38	0.1103	95,709	10,557	0.3947%	83.74%	B
39	1.4496	7,266	10,533	0.3938%	84.14%	B
40	0.1103	88,578	9,770	0.3653%	84.50%	B
41	0.2905	33,612	9,764	0.3651%	84.87%	B
42	0.3366	28,260	9,512	0.3557%	85.22%	B
43	0.1824	51,169	9,333	0.3490%	85.57%	B
44	0.1699	52,020	8,838	0.3305%	85.90%	B
45	0.0767	114,912	8,814	0.3295%	86.23%	B
46	0.2915	29,435	8,580	0.3208%	86.55%	B
47	0.3621	23,469	8,498	0.3177%	86.87%	B



PRODUCTO	Costo Unitario	Venta Total Unidades	Consumo Total \$	Porcentaje del total	Porcentaje Acumulado	Clasificación Artículo
48	0.1700	49,398	8,398	0.3140%	87.19%	
49	0.4137	19,099	7,901	0.2954%	87.48%	
50	0.1824	40,167	7,326	0.2739%	87.75%	
51	0.3366	20,052	6,750	0.2524%	88.01%	
52	0.2844	23,724	6,747	0.2523%	88.26%	
53	0.2601	25,735	6,694	0.2503%	88.51%	
54	0.1700	38,996	6,629	0.2479%	88.76%	
55	0.1103	58,704	6,475	0.2421%	89.00%	
56	0.1787	35,218	6,293	0.2353%	89.23%	
57	0.2532	24,449	6,190	0.2315%	89.47%	
58	0.2272	25,776	5,856	0.2190%	89.69%	
59	0.1000	56,016	5,602	0.2094%	89.89%	
60	0.0850	61,590	5,235	0.1957%	90.09%	
61	0.1824	28,201	5,144	0.1923%	90.28%	
62	0.1300	39,012	5,072	0.1896%	90.47%	
63	0.2915	17,160	5,002	0.1870%	90.66%	
64	0.0902	54,769	4,940	0.1847%	90.84%	
65	0.0575	84,306	4,848	0.1813%	91.03%	
66	0.2794	17,088	4,774	0.1785%	91.20%	
67	0.0395	120,143	4,746	0.1774%	91.38%	
68	0.0623	76,047	4,738	0.1771%	91.56%	
69	0.1904	24,316	4,630	0.1731%	91.73%	
70	0.1904	23,608	4,495	0.1681%	91.90%	
71	0.8422	5,300	4,464	0.1669%	92.07%	
72	0.6145	7,096	4,360	0.1630%	92.23%	
73	0.2726	15,599	4,252	0.1590%	92.39%	
74	0.2844	14,951	4,252	0.1590%	92.55%	
75	0.0850	49,440	4,202	0.1571%	92.70%	
76	0.0850	48,930	4,159	0.1555%	92.86%	
77	0.2060	20,179	4,157	0.1554%	93.02%	
78	0.5541	7,376	4,088	0.1529%	93.17%	
79	0.4491	9,096	4,085	0.1527%	93.32%	
80	0.1145	35,472	4,062	0.1519%	93.47%	
81	0.4244	9,479	4,023	0.1504%	93.62%	
82	0.1809	22,074	3,993	0.1493%	93.77%	
83	0.1145	32,544	3,726	0.1393%	93.91%	
84	0.1824	20,023	3,652	0.1366%	94.05%	
85	0.0902	37,846	3,414	0.1276%	94.18%	
86	0.2069	16,386	3,390	0.1268%	94.30%	
87	0.0902	37,203	3,356	0.1255%	94.43%	
88	0.1300	25,060	3,256	0.1218%	94.55%	
89	0.1824	17,449	3,183	0.1190%	94.67%	
90	0.3262	9,381	3,079	0.1151%	94.78%	
91	0.4245	6,865	2,914	0.1090%	94.89%	
92	0.2844	9,639	2,741	0.1025%	95.00%	
93	0.1904	14,112	2,667	0.1005%	95.10%	
94	0.3366	7,896	2,658	0.0994%	95.20%	
95	0.1145	23,148	2,650	0.0991%	95.29%	
96	0.0575	46,062	2,649	0.0990%	95.39%	
97	0.0902	28,076	2,532	0.0947%	95.49%	



PRODUCTO	Costo Unitario	Venta Total Unidades	Consumo Total \$	Porcentaje del total	Porcentaje Acumulado	Clasificación Artículo
98	0.2440	10,255	2,502	0.0936%	95.58%	B
99	0.2354	10,080	2,373	0.0887%	95.67%	B
100	0.0902	26,048	2,350	0.0878%	95.76%	B
101	0.1300	17,742	2,306	0.0862%	95.84%	B
102	0.2060	10,807	2,226	0.0832%	95.93%	B
103	0.3750	5,674	2,128	0.0796%	96.01%	C
104	0.2556	8,277	2,116	0.0791%	96.09%	C
105	0.1824	11,565	2,109	0.0788%	96.17%	C
106	0.1904	10,799	2,056	0.0769%	96.24%	C
107	0.0902	22,759	2,053	0.0768%	96.32%	C
108	0.1300	15,744	2,047	0.0765%	96.40%	C
109	0.1936	10,365	2,009	0.0751%	96.47%	C
110	0.4034	4,881	1,969	0.0736%	96.54%	C
111	0.2060	9,420	1,941	0.0726%	96.62%	C
112	0.4006	4,755	1,905	0.0712%	96.69%	C
113	0.7842	2,413	1,892	0.0708%	96.76%	C
114	0.0902	20,475	1,847	0.0691%	96.83%	C
115	0.3926	4,697	1,844	0.0689%	96.90%	C
116	0.0902	19,840	1,790	0.0669%	96.96%	C
117	0.2354	7,200	1,695	0.0634%	97.03%	C
118	0.0902	17,607	1,588	0.0594%	97.09%	C
119	0.2844	5,508	1,566	0.0586%	97.15%	C
120	0.1824	8,518	1,554	0.0581%	97.20%	C
121	0.3393	4,536	1,539	0.0575%	97.26%	C
122	0.0863	17,604	1,519	0.0568%	97.32%	C
123	0.4034	3,676	1,483	0.0554%	97.37%	C
124	0.1040	14,103	1,467	0.0548%	97.43%	C
125	0.3348	4,200	1,406	0.0526%	97.48%	C
126	0.0902	15,291	1,379	0.0516%	97.53%	C
127	0.2617	5,226	1,368	0.0511%	97.58%	C
128	0.1307	10,355	1,353	0.0506%	97.63%	C
129	0.1206	11,131	1,342	0.0502%	97.68%	C
130	0.0575	23,325	1,341	0.0501%	97.73%	C
131	0.1420	9,290	1,319	0.0493%	97.78%	C
132	0.1971	6,664	1,313	0.0491%	97.83%	C
133	0.0595	21,360	1,271	0.0475%	97.88%	C
134	0.3878	3,264	1,266	0.0473%	97.93%	C
135	0.1904	6,624	1,261	0.0472%	97.97%	C
136	0.1824	6,818	1,244	0.0463%	98.02%	C
137	0.3878	3,175	1,231	0.0460%	98.07%	C
138	0.0395	30,251	1,195	0.0447%	98.11%	C
139	0.3750	3,035	1,138	0.0426%	98.15%	C
140	0.4034	2,779	1,121	0.0419%	98.20%	C
141	0.4034	2,751	1,110	0.0415%	98.24%	C
142	0.1947	5,544	1,079	0.0404%	98.28%	C
143	0.0575	18,055	1,038	0.0388%	98.32%	C
144	0.5541	1,868	1,035	0.0387%	98.36%	C
145	0.3393	3,024	1,026	0.0384%	98.39%	C
146	0.1824	5,598	1,021	0.0382%	98.43%	C
147	0.1904	5,328	1,014	0.0379%	98.47%	C



PRODUCTO	Costo Unitario	Venta Total Unidades	Consumo Total \$	Porcentaje del total	Porcentaje Acumulado	Clasificación Artículo
148	0.4615	2,172	1,002	0.0375%	98.54%	BIBLIOTECA 'CONCEPCION ZEVALLOS'
149	0.0595	16,684	993	0.0371%	98.54%	P.I.M.C.P.
150	0.5541	1,770	981	0.0367%	98.58%	C
151	0.3926	2,496	980	0.0366%	98.62%	C
152	0.0395	24,159	954	0.0357%	98.65%	C
153	0.5541	1,716	951	0.0356%	98.69%	C
154	0.2354	4,032	949	0.0355%	98.72%	C
155	0.4615	2,043	943	0.0353%	98.76%	C
156	0.1420	6,442	915	0.0342%	98.79%	C
157	0.3393	2,640	896	0.0335%	98.83%	C
158	0.0575	15,456	889	0.0332%	98.86%	C
159	0.4034	2,192	884	0.0331%	98.89%	C
160	0.0902	9,722	877	0.0328%	98.93%	C
161	0.1216	7,180	873	0.0326%	98.96%	C
162	0.4034	2,100	847	0.0317%	98.99%	C
163	0.3926	2,153	845	0.0316%	99.02%	C
164	0.3393	2,400	814	0.0304%	99.05%	C
165	0.4034	1,978	798	0.0298%	99.08%	C
166	0.0395	20,116	795	0.0297%	99.11%	C
167	0.0595	13,104	780	0.0292%	99.14%	C
168	0.3393	2,280	774	0.0289%	99.17%	C
169	0.3393	2,220	753	0.0282%	99.20%	C
170	0.5541	1,333	739	0.0276%	99.23%	C
171	0.3393	2,172	737	0.0276%	99.25%	C
172	0.0395	17,949	709	0.0265%	99.28%	C
173	0.3926	1,804	708	0.0265%	99.31%	C
174	0.1420	4,878	693	0.0259%	99.33%	C
175	0.1095	6,312	691	0.0258%	99.36%	C
176	0.3926	1,745	685	0.0256%	99.38%	C
177	0.1420	4,667	663	0.0248%	99.41%	C
178	0.2354	2,780	654	0.0245%	99.43%	C
179	0.3926	1,641	644	0.0241%	99.46%	C
180	0.0395	15,413	609	0.0228%	99.48%	C
181	0.4822	1,249	602	0.0225%	99.50%	C
182	0.3878	1,553	602	0.0225%	99.53%	C
183	0.0575	10,382	597	0.0223%	99.55%	C
184	0.0395	15,049	594	0.0222%	99.57%	C
185	0.0902	6,465	583	0.0218%	99.59%	C
186	0.0575	9,999	575	0.0215%	99.61%	C
187	0.0902	6,254	564	0.0211%	99.63%	C
188	0.0902	6,208	560	0.0209%	99.66%	C
189	0.3393	1,608	546	0.0204%	99.68%	C
190	0.4615	1,161	536	0.0200%	99.70%	C
191	0.0575	9,259	532	0.0199%	99.72%	C
192	0.3926	1,250	491	0.0183%	99.73%	C
193	0.0395	12,189	481	0.0180%	99.75%	C
194	0.2354	2,016	475	0.0177%	99.77%	C
195	0.0575	7,465	429	0.0160%	99.79%	C
196	0.1095	3,828	419	0.0157%	99.80%	C
197	0.0395	10,563	417	0.0156%	99.82%	C



PRODUCTO	Costo Unitario	Venta Total Unidades	Consumo Total \$	Porcentaje del total	Porcentaje Acumulado	Clasificación Artículo
198	0.1420	2,825	401	0.0150%	99.83%	C
199	0.0395	9,942	393	0.0147%	99.85%	C
200	0.2794	1,396	390	0.0146%	99.86%	C
201	0.4034	917	370	0.0138%	99.88%	C
202	0.4615	730	337	0.0126%	99.89%	C
203	0.0575	5,622	323	0.0121%	99.90%	C
204	0.0395	8,076	319	0.0119%	99.91%	C
205	0.2060	1,356	279	0.0104%	99.92%	C
206	0.0395	6,539	258	0.0097%	99.93%	C
207	0.4034	589	238	0.0089%	99.94%	C
208	0.0395	5,886	232	0.0087%	99.95%	C
209	0.0575	3,236	186	0.0070%	99.96%	C
210	0.3926	400	157	0.0059%	99.96%	C
211	0.3366	400	135	0.0050%	99.97%	C
212	0.1824	737	134	0.0050%	99.97%	C
213	0.0902	1,325	120	0.0045%	99.98%	C
214	0.0395	2,984	118	0.0044%	99.98%	C
215	0.1343	797	107	0.0040%	99.99%	C
216	0.0395	2,591	102	0.0038%	99.99%	C
217	0.9769	98	96	0.0036%	99.99%	C
218	0.0395	1,518	60	0.0022%	100.00%	C
219	0.5200	100	52	0.0019%	100.00%	C
220	0.2015	144	29	0.0011%	100.00%	C
221	0.2617	96	25	0.0009%	100.00%	C
222	0.0395	469	19	0.0007%	100.00%	C
223	0.3878	12	5	0.0002%	100.00%	C
Total Acumulado Anu:		24,253,937.00	2,674,517.11	100.00%		

ANEXOS 6
PROBLEMAS PARA CALCULO DE IMPORTACIONES
CALCULO PROGNOSTICO CON METODO PROBABILISTICO

MES	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12	E13	E14	E15	E16	E17	E18	E19	E20	E21	E22	E23	E24	E25	E26	E27	E28	E29	E30		
Ene-52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Feb-52	308.432	605.245	103.118	81.577	6.888	42.093	5.103	20.723	3.240	30.760	4.813	21.294	11.024	89.660	5.520	70.212	45.200	222	53.727	18.503	7.748	3.340	17.178	18.164	10.378	5.772	7.200	4.032	0	0	0	0
Mar-52	484.189	605.909	109.162	71.146	7.643	34.158	6.847	19.820	4.248	31.620	5.305	18.412	10.716	87.743	6.863	11.132	60.148	61.743	545	58.748	14.838	3.912	9.000	30.964	22.395	11.329	11.800	6.592	7.932	3.932	0	0
Abr-52	609.712	718.783	131.138	71.148	5.461	16.597	3.529	14.288	1.481	15.000	1.701	21.693	9.040	30.817	4.181	8.005	35.077	51.184	67	61.640	8.898	3.884	7.788	10.282	6.629	4.305	3.645	4.134	1.594	0	0	0
May-52	824.805	811.875	111.172	61.172	5.105	11.877	3.891	10.100	3.460	10.100	1.842	28.175	8.828	10.100	4.859	8.771	49.450	64.417	176	71.859	5.277	3.533	5.008	11.943	8.183	5.950	3.992	4.251	2.180	0	0	0
Jun-52	824.805	811.875	111.172	61.172	5.105	11.877	3.891	10.100	3.460	10.100	1.842	28.175	8.828	10.100	4.859	8.771	49.450	64.417	176	71.859	5.277	3.533	5.008	11.943	8.183	5.950	3.992	4.251	2.180	0	0	0
Jul-52	448.256	646.039	100.699	60.760	6.429	68.281	2.066	12.128	3.098	11.382	1.811	18.545	8.866	35.261	5.538	6.832	46.818	61.796	1.600	63.158	2.238	2.207	13.977	10.743	6.840	6.131	4.415	3.217	0	0	0	0
Ago-52	404.149	662.078	69.700	63.177	2.698	11.858	1.908	11.858	1.908	13.386	1.650	17.898	6.027	17.056	6.532	6.162	34.668	71.338	1.600	74.302	3.492	3.492	16.939	12.418	8.900	8.977	4.007	4.513	2.312	0	0	0
Sep-52	448.256	646.039	100.699	60.760	6.429	68.281	2.066	12.128	3.098	11.382	1.811	18.545	8.866	35.261	5.538	6.832	46.818	61.796	1.600	63.158	2.238	2.207	13.977	10.743	6.840	6.131	4.415	3.217	0	0	0	0
Oct-52	448.256	646.039	100.699	60.760	6.429	68.281	2.066	12.128	3.098	11.382	1.811	18.545	8.866	35.261	5.538	6.832	46.818	61.796	1.600	63.158	2.238	2.207	13.977	10.743	6.840	6.131	4.415	3.217	0	0	0	0
Nov-52	448.256	646.039	100.699	60.760	6.429	68.281	2.066	12.128	3.098	11.382	1.811	18.545	8.866	35.261	5.538	6.832	46.818	61.796	1.600	63.158	2.238	2.207	13.977	10.743	6.840	6.131	4.415	3.217	0	0	0	0
Dic-52	308.432	605.245	103.118	81.577	6.888	42.093	5.103	20.723	3.240	30.760	4.813	21.294	11.024	89.660	5.520	70.212	45.200	222	53.727	18.503	7.748	3.340	17.178	18.164	10.378	5.772	7.200	4.032	0	0	0	0

CALCULO PROGNOSTICO CON METODO SUAVIZACION EXPONENCIAL R = 0.1

MES	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12	E13	E14	E15	E16	E17	E18	E19	E20	E21	E22	E23	E24	E25	E26	E27	E28	E29	E30		
Ene-52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Feb-52	308.232	605.068	102.732	81.040	7.423	12.268	3.120	384	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Mar-52	448.119	605.902	109.162	71.146	5.461	16.597	3.529	14.288	1.481	15.000	1.701	21.693	9.040	30.817	4.181	8.005	35.077	51.184	67	61.640	8.898	3.884	7.788	10.282	6.629	4.305	3.645	4.134	1.594	0	0	0
Abr-52	609.712	718.783	131.138	71.148	5.461	16.597	3.529	14.288	1.481	15.000	1.701	21.693	9.040	30.817	4.181	8.005	35.077	51.184	67	61.640	8.898	3.884	7.788	10.282	6.629	4.305	3.645	4.134	1.594	0	0	0
May-52	824.805	811.875	111.172	61.172	5.105	11.877	3.891	10.100	3.460	10.100	1.842	28.175	8.828	10.100	4.859	8.771	49.450	64.417	176	71.859	5.277	3.533	5.008	11.943	8.183	5.950	3.992	4.251	2.180	0	0	0
Jun-52	824.805	811.875	111.172	61.172	5.105	11.877	3.891	10.100	3.460	10.100	1.842	28.175	8.828	10.100	4.859	8.771	49.450	64.417	176	71.859	5.277	3.533	5.008	11.943	8.183	5.950	3.992	4.251	2.180	0	0	0
Jul-52	448.256	646.039	100.699	60.760	6.429	68.281	2.066	12.128	3.098	11.382	1.811	18.545	8.866	35.261	5.538	6.832	46.818	61.796	1.600	63.158	2.238	2.207	13.977	10.743	6.840	6.131	4.415	3.217	0	0	0	0
Ago-52	404.149	662.078	69.700	63.177	2.698	11.858	1.908	11.858	1.908	13.386	1.650	17.898	6.027	17.056	6.532	6.162	34.668	71.338	1.600	74.302	3.492	3.492	16.939	12.418	8.900	8.977	4.007	4.513	2.312	0	0	0
Sep-52	448.256	646.039	100.699	60.760	6.429	68.281	2.066	12.128	3.098	11.382	1.811	18.545	8.866	35.261	5.538	6.832	46.818	61.796	1.600	63.158	2.238	2.207	13.977	10.743	6.840	6.131	4.415	3.217	0	0	0	0
Oct-52	448.256	646.039	100.699	60.760	6.429	68.281	2.066	12.128	3.098	11.382	1.811	18.545	8.866	35.261	5.538	6.832	46.818	61.796	1.600	63.158	2.238	2.207	13.977	10.743	6.840	6.131	4.415	3.217	0	0	0	0
Nov-52	448.256	646.039	100.699	60.760	6.429	68.281	2.066	12.128	3.098	11.382	1.811	18.545	8.866	35.261	5.538	6.832	46.818	61.796	1.600	63.158	2.238	2.207	13.977	10.743	6.840	6.131	4.415	3.217	0	0	0	0
Dic-52	308.232	605.068	102.732	81.040	7.423	12.268	3.120	384	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

CALCULO PROGNOSTICO CON METODO SUAVIZACION EXPONENCIAL R = 0.4

MES	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12	E13	E14	E15	E16	E17	E18	E19	E20	E21	E22	E23	E24	E25	E26	E27	E28	E29	E30		
Ene-52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Feb-52	308.232	605.068	102.732	81.040	7.423	12.268	3.120	384	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mar-52	448.119	605.902	109.162	71.146	5.461	16.597	3.529	14.288	1.481	15.000	1.701	21.693	9.040	30.817	4.181	8.005	35.077	51.184	67	61.640	8.898	3.884	7.788	10.282	6.629	4.305	3.645	4.134	1.594	0	0	0
Abr-52	609.712	718.783	131.138	71.148	5.461	16.597	3.529	14.288	1.481	15.000	1.701	21.693	9.040	30.817	4.181	8.005	35.077	51.184	67	61.640	8.898	3.884	7.788	10.282	6.629	4.305	3.645	4.134	1.594	0	0	0
May-52	824.805	811.875	111.172	61.172	5.105	11.877	3.891	10.100	3.460	10.100	1.842	28.175	8.828	10.100	4.859	8.771	49.450	64.417	176	71.859	5.277	3.533	5.008	11.943	8.183	5.950	3.992	4.251	2.180	0	0	0
Jun-52	824.805	811.875	111.172	61.172	5.105	11.877	3.891	10.100	3.460	10.100	1.842	28.175	8.828	10.100	4.859	8.771	49.450	64.417	176	71.859	5.277	3.533	5.008	11.943	8.183	5.950	3.992	4.251	2.180	0	0	0
Jul-52	448.256	646.039	100.699	60.760	6.429	68.281	2.066	12.128	3.098	11.382	1.811	18.545	8.866	35.261	5.538	6.832	46.818	61.796	1.600	63.158	2.238	2.207	13.977	10.743	6.840	6.131	4.415	3.217	0	0	0	0
Ago-52	404.149	662.078	69.700	63.177	2.698	11.858	1.908	11.858	1.908	13.386	1.650	17.898	6.027	17.056	6.532	6.162	34.668	71.338	1.600	74.302	3.492	3.492	16.939	12.4								



ESPOL
1958
POLITECNICA DEL LITORAL
R.D. 1072
CAROLAZO REVALLOS
C.A.

CÁLCULOS PROYECTORES CON MÉTODO TRIANGULAR (19.611.0.1)

MES	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20	#21	#22	#23	#24	#25	#26	#27	#28	#29	#30	
Ene-52	304,720	587,223	61,068	30,370	14	73,374	0	12,761	3,108	390	608	22,815	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	
Feb-52	181,715	644,152	110,841	85,841	1,377	39,331	1,278	14,451	14,451	10,114	11,452	20,408	10,420	78,492	0,597	0,597	78,492	0,597	0,597	78,492	0,597	0,597	78,492	0,597	0,597	78,492	0,597	0,597	78,492	0,597	0,597
Mar-52	271,311	677,171	150,810	101,810	4,850	33,212	35,726	6,952	17,516	10,114	11,452	21,244	16,321	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597
Abr-52	109,724	623,028	84,933	71,709	2,890	45,073	4,851	11,464	6,667	18,410	8,650	16,817	10,399	87,733	0,597	0,597	87,733	0,597	0,597	87,733	0,597	0,597	87,733	0,597	0,597	87,733	0,597	0,597	87,733	0,597	0,597
May-52	366,865	679,721	119,271	92,772	2,971	49,173	6,899	4,813	11,464	10,114	11,452	21,244	16,321	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597
Jun-52	305,432	679,721	119,271	92,772	2,971	49,173	6,899	4,813	11,464	10,114	11,452	21,244	16,321	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597
Jul-52	305,432	679,721	119,271	92,772	2,971	49,173	6,899	4,813	11,464	10,114	11,452	21,244	16,321	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597
Ago-52	245,674	684,544	101,190	76,680	3,164	28,020	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650
Sep-52	269,141	684,544	101,190	76,680	3,164	28,020	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650
Oct-52	218,134	638,658	82,880	65,848	4,718	46,610	31,441	-9,775	6,666	387	19,659	380	315	-3,068	1,102	1,359	9,326	-9,228	10,994	13,338	13,674	0	0	0	0	0	0	0	0	0	

CÁLCULOS PROYECTORES CON MÉTODO TRIANGULAR (19.611.0.1)

MES	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20	#21	#22	#23	#24	#25	#26	#27	#28	#29	#30
Ene-52	304,720	604,223	61,068	30,370	14	73,374	0	12,761	3,108	390	608	22,815	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	
Feb-52	181,715	644,152	110,841	85,841	1,377	39,331	1,278	14,451	14,451	10,114	11,452	20,408	10,420	78,492	0,597	0,597	78,492	0,597	0,597	78,492	0,597	0,597	78,492	0,597	0,597	78,492	0,597	0,597	78,492	0,597
Mar-52	271,311	677,171	150,810	101,810	4,850	33,212	35,726	6,952	17,516	10,114	11,452	21,244	16,321	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597
Abr-52	109,724	623,028	84,933	71,709	2,890	45,073	4,851	11,464	6,667	18,410	8,650	16,817	10,399	87,733	0,597	0,597	87,733	0,597	0,597	87,733	0,597	0,597	87,733	0,597	0,597	87,733	0,597	0,597	87,733	0,597
May-52	366,865	679,721	119,271	92,772	2,971	49,173	6,899	4,813	11,464	10,114	11,452	21,244	16,321	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597
Jun-52	305,432	679,721	119,271	92,772	2,971	49,173	6,899	4,813	11,464	10,114	11,452	21,244	16,321	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597
Jul-52	305,432	679,721	119,271	92,772	2,971	49,173	6,899	4,813	11,464	10,114	11,452	21,244	16,321	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597
Ago-52	245,674	684,544	101,190	76,680	3,164	28,020	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650
Sep-52	269,141	684,544	101,190	76,680	3,164	28,020	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650
Oct-52	218,134	638,658	82,880	65,848	4,718	46,610	31,441	-9,775	6,666	387	19,659	380	315	-3,068	1,102	1,359	9,326	-9,228	10,994	13,338	13,674	0	0	0	0	0	0	0	0	

CÁLCULOS PROYECTORES CON MÉTODO TRIANGULAR (19.611.0.1)

MES	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20	#21	#22	#23	#24	#25	#26	#27	#28	#29	#30
Ene-52	304,720	604,223	61,068	30,370	14	73,374	0	12,761	3,108	390	608	22,815	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	
Feb-52	181,715	644,152	110,841	85,841	1,377	39,331	1,278	14,451	14,451	10,114	11,452	20,408	10,420	78,492	0,597	0,597	78,492	0,597	0,597	78,492	0,597	0,597	78,492	0,597	0,597	78,492	0,597	0,597	78,492	0,597
Mar-52	271,311	677,171	150,810	101,810	4,850	33,212	35,726	6,952	17,516	10,114	11,452	21,244	16,321	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597
Abr-52	109,724	623,028	84,933	71,709	2,890	45,073	4,851	11,464	6,667	18,410	8,650	16,817	10,399	87,733	0,597	0,597	87,733	0,597	0,597	87,733	0,597	0,597	87,733	0,597	0,597	87,733	0,597	0,597	87,733	0,597
May-52	366,865	679,721	119,271	92,772	2,971	49,173	6,899	4,813	11,464	10,114	11,452	21,244	16,321	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597
Jun-52	305,432	679,721	119,271	92,772	2,971	49,173	6,899	4,813	11,464	10,114	11,452	21,244	16,321	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597
Jul-52	305,432	679,721	119,271	92,772	2,971	49,173	6,899	4,813	11,464	10,114	11,452	21,244	16,321	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597	0,597	111,668	0,597
Ago-52	245,674	684,544	101,190	76,680	3,164	28,020	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	
Sep-52	269,141	684,544	101,190	76,680	3,164	28,020	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	11,650	
Oct-52	218,134	638,658	82,880	65,848	4,718	46,610	31,441	-9,775	6,666	387	19,659	380	315	-3,068	1,102	1,359	9,326	-9,228	10,994	13,338	13,674	0	0	0	0	0	0	0	0	

CÁLCULOS PROYECTORES CON MÉTODO TRIANGULAR (19.611.0.1)

MES	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20	#21	#22	#2
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CÁLCULO PROYECTOS CON MÉTODOS WATERBERG

MESE	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20	#21	#22	#23	#24	#25	#26	#27	#28	#29	#30					
ENE-01	112,039	812,039	316,726	56,653	14,952	28,904	1,067	10,653	4,071	65,247	15,140	16,710	8,259	68,249	1,652	67,324	62,054	39,193	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
FEB-01	147,626	668,579	172,113	50,777	16,810	33,641	27,130	10,971	10,653	68,249	15,140	16,710	8,259	68,249	1,652	67,324	62,054	39,193	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
MAR-01	478,844	469,532	112,350	50,878	7,673	11,638	13,626	27,431	10,971	10,653	68,249	15,140	16,710	8,259	68,249	1,652	67,324	62,054	39,193	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
ABR-01	545,324	474,652	50,337	56,449	1,877	39,339	2,186	6,647	3,611	15,116	1,265	7,855	12,453	37,587	4,059	33,528	27,033	13,088	291	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
MAY-01	438,485	778,252	31,909	74,268	1,778	104,295	1,878	3,898	3,273	13,859	1,921	6,095	12,711	22,007	1,324	20,683	13,314	191	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
JUN-01	278,445	105,079	7,950	30,814	3,011	50,473	3,811	10,971	10,653	68,249	15,140	16,710	8,259	68,249	1,652	67,324	62,054	39,193	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
JUL-01	601,710	371,236	7,203	72,026	17,183	3,822	0	14,322	44,720	4,110	17,842	10,747	208,348	8,356	14,816	35,164	37,833	176	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
AUG-01	972,402	244,652	30,988	22,626	1,620	26,414	2,336	0	11,325	2,151	7,203	17,842	16,801	18,021	21,659	17,842	16,801	18,021	21,659	17,842	16,801	18,021	21,659	17,842	16,801	18,021	21,659	17,842	16,801	18,021	21,659	17,842	16,801	18,021	21,659
SEPT-01	106,959	692,333	34,984	3,960	35,284	3,960	0	2,292	1,950	1,850	16,651	46	2,208	10,128	1,210	9,907	10,128	1,210	9,907	10,128	1,210	9,907	10,128	1,210	9,907	10,128	1,210	9,907	10,128	1,210	9,907	10,128	1,210	9,907	10,128
OCT-01	392,822	273,147	24,773	2,103	1,818	13,135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
NOV-01	648,642	569,352	10,581	56,660	17,842	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
DIC-01	806,814	806,814	109,814	17,842	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ENE-02	486,634	716,054	116,940	15,203	2,867	6,812	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
FEB-02	346,965	254,033	67,184	33,743	3,307	17,793	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MAR-02	506,944	392,944	9,944	3,307	32,644	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ABR-02	224,515	892,715	47,616	78,666	816	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MAY-02	231,181	801,577	374	44,074	33,331	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
JUN-02	410,781	341,314	30,384	16,119	0	6,829	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

CÁLCULO PROYECTOS CON MÉTODOS WATERBERG

MESE	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20	#21	#22	#23	#24	#25	#26	#27	#28	#29	#30					
ENE-01	176,781	317,039	88,108	67,108	15,154	29,178	1,006	10,451	4,115	65,247	15,140	16,710	8,259	68,249	1,652	67,324	62,054	39,193	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
FEB-01	478,844	469,532	112,350	50,878	7,673	11,638	13,626	27,431	10,971	10,653	68,249	15,140	16,710	8,259	68,249	1,652	67,324	62,054	39,193	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MAR-01	545,324	474,652	50,337	56,449	1,877	39,339	2,186	6,647	3,611	15,116	1,265	7,855	12,453	37,587	4,059	33,528	27,033	13,088	291	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ABR-01	438,485	778,252	31,909	74,268	1,778	104,295	1,878	3,898	3,273	13,859	1,921	6,095	12,711	22,007	1,324	20,683	13,314	191	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MAY-01	278,445	105,079	7,950	30,814	3,011	50,473	3,811	10,971	10,653	68,249	15,140	16,710	8,259	68,249	1,652	67,324	62,054	39,193	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
JUN-01	601,710	371,236	7,203	72,026	17,183	3,822	0	14,322	44,720	4,110	17,842	10,747	208,348	8,356	14,816	35,164	37,833	176	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
JUL-01	972,402	244,652	30,988	22,626	1,620	26,414	2,336	0	11,325	2,151	7,203	17,842	16,801	18,021	21,659	17,842	16,801	18,021	21,659	17,842	16,801	18,021	21,659	17,842	16,801	18,021	21,659	17,842	16,801	18,021	21,659	17,842	16,801	18,021	21,659
AGOST-01	106,959	692,333	34,984	3,960	35,284	3,960	0	2,292	1,950	1,850	16,651	46	2,208	10,128	1,210	9,907	10,128	1,210	9,907	10,128	1,210	9,907	10,128	1,210	9,907	10,128	1,210	9,907	10,128	1,210	9,907	10,128	1,210	9,907	10,128
SEPT-01	392,822	273,147	24,773	2,103	1,818	13,135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
OCT-01	648,642	569,352	10,581	56,660	17,842	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
NOV-01	486,634	716,054	116,940	15,203	2,867	6,812	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
DIC-01	346,965	254,033	67,184	33,743	3,307	17,793	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ENE-02	506,944	392,944	9,944	3,307	32,644	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
FEB-02	224,515	892,715	47,616	78,666	816	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MAR-02	231,181	801,577	374	44,074	33,331	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ABR-02	410,781	341,314	30,384	16,119	0	6,829	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

CÁLCULO PROYECTOS CON MÉTODOS WATERBERG

MESE	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20	#21	#22	#23	#24	#25	#26	#27	#28	#29	#30			
ENE-01	176,781	317,039	88,108	67,108	15,154	29,178	1,006	10,451	4,115	65,247	15,140	16,710	8,259	68,249	1,652	67,324	62,054	39,193	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FEB-01	478,844	469,532	112,350	50,878	7,673	11,638	13,626	27,431	10,971	10,653	68																						



CÁLCULO DE PROYECTOS CON MÉTODO WINTERER C.O.B. 10.1.0.4.0

MES	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	09	08	07	06	05	04	03	02	01	00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
ENE-01	174,885	412,078	612,533	812,988	1,013,443	1,213,898	1,414,353	1,614,808	1,815,263	2,015,718	2,216,173	2,416,628	2,617,083	2,817,538	3,017,993	3,218,448	3,418,903	3,619,358	3,819,813	4,019,268	4,219,723	4,419,178	4,618,633	4,818,088	5,017,543	5,216,998	5,416,453	5,615,908	5,815,363	6,014,818	6,214,273	6,413,728	6,613,183	6,812,638	7,012,093	7,211,548	7,410,993	7,610,448	7,809,903	8,009,358	8,208,813	8,408,268	8,607,723	8,807,178	9,006,633	9,206,088	9,405,543	9,604,998	9,804,453	10,003,908	10,203,363	10,402,818	10,602,273	10,801,728	11,001,183	11,200,638	11,400,093	11,600,548	11,800,003	12,000,458	12,200,913	12,400,368	12,600,823	12,800,278	13,000,733	13,200,188	13,400,643	13,600,098	13,800,553	14,000,008	14,200,463	14,400,918	14,600,373	14,800,828	15,000,283	15,200,738	15,400,193	15,600,648	15,800,103	16,000,558	16,200,013	16,400,468	16,600,923	16,800,378	17,000,833	17,200,288	17,400,743	17,600,198	17,800,653	18,000,108	18,200,563	18,400,018	18,600,473	18,800,928	19,000,383	19,200,838	19,400,293	19,600,748	19,800,203	20,000,658	20,200,113	20,400,568	20,600,023	20,800,478	21,000,933	21,200,388	21,400,843	21,600,298	21,800,753	22,000,208	22,200,663	22,400,118	22,600,573	22,800,028	23,000,483	23,200,938	23,400,393	23,600,848	23,800,303	24,000,758	24,200,213	24,400,668	24,600,123	24,800,578	25,000,033	25,200,488	25,400,943	25,600,398	25,800,853	26,000,308	26,200,763	26,400,218	26,600,673	26,800,128	27,000,583	27,200,038	27,400,493	27,600,948	27,800,403	28,000,858	28,200,313	28,400,768	28,600,223	28,800,678	29,000,133	29,200,588	29,400,043	29,600,498	29,800,953	30,000,408	30,200,863	30,400,318	30,600,773	30,800,228	31,000,683	31,200,138	31,400,593	31,600,048	31,800,503	32,000,958	32,200,413	32,400,868	32,600,323	32,800,778	33,000,233	33,200,688	33,400,143	33,600,598	33,800,053	34,000,508	34,200,963	34,400,418	34,600,873	34,800,328	35,000,783	35,200,238	35,400,693	35,600,148	35,800,603	36,000,058	36,200,513	36,400,968	36,600,423	36,800,878	37,000,333	37,200,788	37,400,243	37,600,698	37,800,153	38,000,608	38,200,063	38,400,518	38,600,973	38,800,428	39,000,883	39,200,338	39,400,793	39,600,248	39,800,703	40,000,158	40,200,613	40,400,068	40,600,523	40,800,978	41,000,433	41,200,888	41,400,343	41,600,798	41,800,253	42,000,708	42,200,163	42,400,618	42,600,073	42,800,528	43,000,983	43,200,438	43,400,893	43,600,348	43,800,803	44,000,258	44,200,713	44,400,168	44,600,623	44,800,078	45,000,533	45,200,988	45,400,443	45,600,898	45,800,353	46,000,808	46,200,263	46,400,718	46,600,173	46,800,628	47,000,083	47,200,538	47,400,993	47,600,448	47,800,903	48,000,358	48,200,813	48,400,268	48,600,723	48,800,178	49,000,633	49,200,088	49,400,543	49,600,998	49,800,453	50,000,908	50,200,363	50,400,818	50,600,273	50,800,728	51,000,183	51,200,638	51,400,093	51,600,548	51,800,003	52,000,458	52,200,913	52,400,368	52,600,823	52,800,278	53,000,733	53,200,188	53,400,643	53,600,098	53,800,553	54,000,008	54,200,463	54,400,918	54,600,373	54,800,828	55,000,283	55,200,738	55,400,193	55,600,648	55,800,103	56,000,558	56,200,013	56,400,468	56,600,923	56,800,378	57,000,833	57,200,288	57,400,743	57,600,198	57,800,653	58,000,108	58,200,563	58,400,018	58,600,473	58,800,928	59,000,383	59,200,838	59,400,293	59,600,748	59,800,203	60,000,658	60,200,113	60,400,568	60,600,023	60,800,478	61,000,933	61,200,388	61,400,843	61,600,298	61,800,753	62,000,208	62,200,663	62,400,118	62,600,573	62,800,028	63,000,483	63,200,938	63,400,393	63,600,848	63,800,303	64,000,758	64,200,213	64,400,668	64,600,123	64,800,578	65,000,033	65,200,488	65,400,943	65,600,398	65,800,853	66,000,308	66,200,763	66,400,218	66,600,673	66,800,128	67,000,583	67,200,038	67,400,493	67,600,948	67,800,403	68,000,858	68,200,313	68,400,768	68,600,223	68,800,678	69,000,133	69,200,588	69,400,043	69,600,498	69,800,953	70,000,408	70,200,863	70,400,318	70,600,773	70,800,228	71,000,683	71,200,138	71,400,593	71,600,048	71,800,503	72,000,958	72,200,413	72,400,868	72,600,323	72,800,778	73,000,233	73,200,688	73,400,143	73,600,598	73,800,053	74,000,508	74,200,963	74,400,418	74,600,873	74,800,328	75,000,783	75,200,238	75,400,693	75,600,148	75,800,603	76,000,058	76,200,513	76,400,968	76,600,423	76,800,878	77,000,333	77,200,788	77,400,243	77,600,698	77,800,153	78,000,608	78,200,063	78,400,518	78,600,973	78,800,428	79,000,883	79,200,338	79,400,793	79,600,248	79,800,703	80,000,158	80,200,613	80,400,068	80,600,523	80,800,978	81,000,433	81,200,888	81,400,343	81,600,798	81,800,253	82,000,708	82,200,163	82,400,618	82,600,073	82,800,528	83,000,983	83,200,438	83,400,893	83,600,348	83,800,803	84,000,258	84,200,713	84,400,168	84,600,623	84,800,078	85,000,533	85,200,988	85,400,443	85,600,898	85,800,353	86,000,808	86,200,263	86,400,718	86,600,173	86,800,628	87,000,083	87,200,538	87,400,993	87,600,448	87,800,903	88,000,358	88,200,813	88,400,268	88,600,723	88,800,178	89,000,633	89,200,088	89,400,543	89,600,998	89,800,453	90,000,908	90,200,363	90,400,818	90,600,273	90,800,728	91,000,183	91,200,638	91,400,093	91,600,548	91,800,003	92,000,458	92,200,913	92,400,368	92,600,823	92,800,278	93,000,733	93,200,188	93,400,643	93,600,098	93,800,553	94,000,008	94,200,463	94,400,918	94,600,373	94,800,828	95,000,283	95,200,738	95,400,193	95,600,648	95,800,103	96,000,558	96,200,013	96,400,468	96,600,923	96,800,378	97,000,833	97,200,288	97,400,743	97,600,198	97,800,653	98,000,108	98,200,563	98,400,018	98,600,473	98,800,928	99,000,383	99,200,838	99,400,293	99,600,748	99,800,203	100,000,658	100,200,113	100,400,568	100,600,023	100,800,478	101,000,933	101,200,388	101,400,843	101,600,298	101,800,753	102,000,208	102,200,663	102,400,118	102,600,573	102,800,028	103,000,483	103,200,938	103,400,393	103,600,848	103,800,303	104,000,758	104,200,213	104,400,668	104,600,123	104,800,578	105,000,033	105,200,488	105,400,943	105,600,398	105,800,853	106,000,308	106,200,763	106,400,218	106,600,673	106,800,128	107,000,583	107,200,038	107,400,493	107,600,948	107,800,403	108,000,858	108,200,313	108,400,768	108,600,223	108,800,678	109,000,133	109,200,588	109,400,043	109,600,498	109,800,953	110,000,408	110,200,863	110,400,318	110,600,773	110,800,228	111,000,683	111,200,138	111,400,593	111,600,048	111,800,503	112,000,958	112,200,413	112,400,868	112,600,323	112,800,778	113,000,233	113,200,688	113,400,143	113,600,598	113,800,053	114,000,508	114,200,963	114,400,418	114,600,873	114,800,328	115,000,783	115,200,238	115,400,693	115,600,148	115,800,603	116,000,058	116,200,513	116,400,968	116,600,423	116,800,878	117,000,333	117,200,788	117,400,243	117,600,698	117,800,153	118,000,608	118,200,063	118,400,518	118,600,973	118,800,428	119,000,883	119,200,338	119,400,793	119,600,248	119,800,703	120,000,158	120,200,613	120,400,068	120,600,523	120,800,978	121,000,433	121,200,888	121,400,343	121,600,798	121,800,253	122,000,708	122,200,163	122,400,618	122,600,073	122,800,528	123,000,983	123,200,438	123,400,893	123,600,348	123,800,803	124,000,258	124,200,713	124,400,168	124,600,623	124,800,078	125,000,533	125,200,988	125,400,443	125,600,898	125,800,353	126,000,808	126,200,263	126,400,718	126,600,173	126,800,628	127,000,083	127,200,538	127,400,993	127,600,448	127,800,903	128,000,358	128,200,813	128,400,268	128,600,723	128,800,178	129,000,633	129,200,088	129,400,543	129,600,998	129,800,453	130,000,908	130,200,363	130,400,818	130,600,273	130,800,728	131,000,183	131,200,638	131,400,093	131,600,548	131,800,003	132,000,458	132,200,913	132,400,368	132,600,823	132,800,278	133,000,733	133,200,188	133,400,643	133,600,098	133,800,553	134,000,008	134,200,463	134,400,918	134,600,373	134,800,828	135,000,283	135,200,738	135,400,193	135,600,648	135,800,103	136,000,558	136,200,013	136,400,468	136,600,923	136,800,378	137,000,833	137,200,288	137,400,743	137,600,198	137,800,653	138,000,108	138,200,563	138,400,018	138,600,473	138,800,928	139,000,383	139,200,838	139,400,293	139,600,748	139,800,203	140,000,658	140,200,113	140,400,568	140,600,023	140,800,478	141,000,933	141,200,388	141,400,843	141,600,298	141,800,753	142,000,208	142,200,663	142,400,118	142,600,573	142,800,028	143,000,483	143,200,938	143,400,393	143,600,848	143,800,303	144,000,758	144,200,213	144,400,668	144,600,123	144,800,578	145,000,033	145,200,488	145,400,943	145,600,398	145,800,853	146,000,308	146,200,763	146,400,218	146,600,673	146,800,128	147,000,5

APENDICE 7
ERRORES DE PRONOSTICOS

METODO DE PRONOSTICO	#1				#2				#3				#4			
	EMA	EMRC	PAME	EMA	EMRC	PAME	EMA	EMRC	PAME	EMA	EMRC	PAME	EMA	EMRC	PAME	
Promedio Móvil	214982.7733	241410.8018	58.87%	291650.5926	343351.6921	68.65%	304857.7333	44099.83841	1271.30%	25829.2	26473.7452	44.46%				
Suavización	167195.9063	199060.2901	41.30%	194887.5658	243395.2055	43.98%	33777.57384	42146.53573	777.69%	21800.9429	27015.62527	46.53%				
Exponencial $\alpha=0.1$	180320.7603	210260.0766	49.45%	208845.8622	272724.036	49.06%	34080.74162	49228.66721	991.12%	22759.08981	28147.91314	45.14%				
Suavización	173949.4162	225955.0664	47.63%	229560.3457	292432.6932	53.25%	43717.21314	51151.11797	1097.59%	28974.89477	34804.28405	55.21%				
Método Tendencia $\alpha=0.10, \beta=0.1$	180549.0377	201569.8317	47.83%	200279.3001	257180.5718	38.92%	35817.3328	44889.07332	860.85%	22925.71527	29073.45684	52.11%				
Método Tendencia $\alpha=0.10, \beta=0.4$	196020.3337	215313.5845	54.53%	192603.3945	244922.8746	46.30%	39462.77345	48045.40451	973.07%	22306.78762	27487.5531	45.83%				
Método Tendencia $\alpha=0.10, \beta=0.9$	262948.4251	229658.2825	59.32%	198378.1495	251358.5856	47.80%	40149.44491	51990.27492	1116.69%	22014.75002	27727.11605	40.23%				
Método Tendencia $\alpha=0.4, \beta=0.1$	182654.3063	217780.9061	52.42%	214295.736	274525.7194	50.44%	34897.92076	45616.80688	1075.90%	23335.01186	28925.80308	45.23%				
Método Tendencia $\alpha=0.4, \beta=0.4$	210435.9065	235883.394	59.65%	234033.8432	306937.2329	55.62%	37880.45862	50297.44355	1186.01%	23826.61176	30011.7581	43.38%				
Método Tendencia $\alpha=0.9, \beta=0.1$	25251.31814	271061.4766	67.67%	274118.6255	352769.6717	62.37%	41994.25111	55354.4431	1176.58%	25844.81428	31848.5321	47.19%				
Método Tendencia $\alpha=0.9, \beta=0.4$	179457.6873	237141.6078	49.72%	230340.5019	312968.1891	55.12%	44857.55603	53024.25958	1141.58%	30303.65126	37350.0709	56.98%				
Método Tendencia $\alpha=0.9, \beta=0.1$	214612.5433	271773.4967	59.28%	295610.311	360396.7349	62.24%	50016.66154	60249.40655	1159.89%	34455.30655	42132.86295	63.82%				
Winters $\alpha=0.1, \beta=0.10, \gamma=0.1$	286343.1015	322694.67	78.32%	338617.5398	403606.364	68.55%	62651.05452	75435.77983	1243.71%	43017.75112	53021.20663	79.66%				
Winters $\alpha=0.1, \beta=0.1, \gamma=0.4$	6067.525998	56987.092.89	1.57%	6010.62977	6887594.71	1.04%	3774453533	344841.8781	0.73%	3800.830896	17690064.25	6.37%				
Winters $\alpha=0.1, \beta=0.1, \gamma=0.9$	659116.6643	66268116.68	1.71%	6388701935	7584191.22	1.11%	3972713062	352615.692	0.76%	3771.654637	17732295.66	6.31%				
Winters $\alpha=0.1, \beta=0.4, \gamma=0.1$	748403.931	89006948.04	1.95%	7869238192	10036219.2	1.36%	4435984557	382436.8783	0.83%	3722.033603	1783258.98	6.21%				
Winters $\alpha=0.1, \beta=0.4, \gamma=0.4$	89188081.26	47131167.32	1.43%	3526275429	2291080.91	0.62%	3198371247	259008.8338	0.88%	1453.651464	323250.27	2.60%				
Winters $\alpha=0.1, \beta=0.4, \gamma=0.9$	6270.61214	538386931.26	1.50%	4330051088	2981081.424	0.77%	3384045859	27461.5707	0.60%	1462.516902	3282979.303	2.61%				
Winters $\alpha=0.1, \beta=0.9, \gamma=0.1$	7540326381	72444056.67	1.75%	62891056012	5609581.36	1.11%	3923331678	318612.5732	0.69%	1476.9167	3473798.845	2.62%				
Winters $\alpha=0.1, \beta=0.9, \gamma=0.4$	4334.211163	28796154.32	0.96%	1948456988	868693.841	0.37%	2575891903	265640.924	0.43%	918.608265	1516347.662	1.57%				
Winters $\alpha=0.1, \beta=0.9, \gamma=0.9$	4305180.027	2817789.47	1.00%	2270362886	782774.951	0.45%	2546141408	191221.8529	0.41%	885.4918532	1435580.081	1.52%				



POLITECNICA DEL LITORAL
BIBLIOTECA 'GONZALO ZEVALLOS'
F.I.M.C.P.

METODO DE PRONOSTICO	#1			#2			#3			#4		
	EMA	EMRC	PAME	EMA	EMRC	PAME	EMA	EMRC	PAME	EMA	EMRC	PAME
Winters $\alpha=0.1, \beta=0.9, x=0.1$	4543.450365	36376172.95	1.109%	3694.661437	24813784.23	0.73%	275.4100569	185404.9874	0.41%	875.131536	1423762.205	1.51%
Winters $\alpha=0.4, \beta=0.1, x=0.1$	2482.777405	9730497.395	0.61%	2051.983022	8058386.481	0.38%	220.3607364	131192.3509	0.24%	1011.856299	1293040.752	1.39%
Winters $\alpha=0.4, \beta=0.1, x=0.1$	2485.184889	10858429.69	0.69%	2460.235584	9470012.791	0.41%	223.5523128	125907.6757	0.30%	1005.573823	1287278.113	1.1%
Winters $\alpha=0.4, \beta=0.1, x=0.1$	3029.805593	15882822.7	0.80%	3342.413874	19827494.3	1.05%	242.9048373	128540.0778	0.38%	694.6068827	1342340.551	1.01%
Winters $\alpha=0.4, \beta=0.1, x=0.1$	1827.33644	5355094.465	0.47%	1507.225966	3716483.293	0.28%	192.6955016	110491.4476	0.30%	423.3133425	381971.7727	0.1%
Winters $\alpha=0.4, \beta=0.4, x=0.4$	1720.482986	5317480.92	0.32%	1582.644482	4175886.008	0.31%	189.2481108	50533.0917	0.20%	603.7211636	357434.6888	0.48%
Winters $\alpha=0.4, \beta=0.4, x=0.4$	1505.382545	9019334.395	0.55%	2480.490104	14245945.43	0.67%	194.5735921	81897.9982	0.30%	612.2822852	388190.0196	0.48%
Winters $\alpha=0.4, \beta=0.9, x=0.1$	1452.962821	3714939.737	0.34%	1383.826807	3080255.408	0.27%	161.7792723	70375.808	0.20%	338.4927335	22131.5815	0.9%
Winters $\alpha=0.4, \beta=0.9, x=0.4$	1563.335025	4103437.259	0.40%	1845.238991	5342942.017	0.39%	165.8912542	59175.37526	0.28%	334.5552058	214962.5211	0.51%
Winters $\alpha=0.4, \beta=0.9, x=0.9$	2250.726516	8809295.823	0.69%	3301.319161	20445712.45	0.69%	179.4133421	56627.18637	0.31%	370.771367	284754.4234	0.99%
Winters $\alpha=0.9, \beta=0.1, x=0.1$	1467.647642	3936962.832	0.31%	1342.201847	2393678.943	0.20%	143.4189938	5917.47073	0.20%	467.0817735	310218.4525	0.9%
Winters $\alpha=0.9, \beta=0.4, x=0.4$	1631.008263	4225311.12	0.35%	1692.542231	4394195.056	0.49%	139.3443226	55922.64461	0.20%	462.3152618	307169.4662	0.38%
Winters $\alpha=0.9, \beta=0.1, x=0.9$	1934.74077	6893079.611	0.50%	2718.456135	1731161.65	0.27%	148.6839269	48378.75584	0.2%	489.17644	380412.5689	0.61%
Winters $\alpha=0.9, \beta=0.4, x=0.1$	1149.542685	3599114.794	0.26%	902.417096	1741306.717	0.21%	110.7828373	4672.87714	0.10%	257.1713461	148331.5433	0.69%
Winters $\alpha=0.9, \beta=0.4, x=0.4$	1285.833918	4180480.9	0.34%	1526.770118	4330220.157	0.32%	109.1733063	33490.90915	0.23%	276.0929522	146436.5862	0.11%
Winters $\alpha=0.9, \beta=0.4, x=0.9$	1873.08407	5991233.137	0.51%	2800.121275	2102422.75	0.34%	131.8668553	41019.50206	0.20%	339.9735614	24253.8661	0.10%
Winters $\alpha=0.9, \beta=0.1, x=0.1$	1218.331501	5660335.454	0.27%	1073.063168	3040409.241	0.24%	111.5211356	36912.16571	0.27%	222.2717867	156175.7866	0.39%
Winters $\alpha=0.9, \beta=0.4, x=0.4$	1255.119545	7244256.098	0.42%	1908.340243	714522.031	0.39%	111.6688112	28738.72811	0.27%	266.0925615	161190.3038	0.38%
Winters $\alpha=0.9, \beta=0.9, x=0.9$	2717.780162	15065685.5	0.71%	3490.124985	32792820.84	0.68%	156.9769189	48968.01875	0.32%	351.4469667	316342.346	0.60%

METODO DE PROGNOSTICO	#5			#6			#7			#8		
	EMA	EMRC	PAME	EMA	EMRC	PAME	EMA	EMRC	PAME	EMA	EMRC	PAME
Promedio Móvil	28779.55226	37662.12481	2162.41%	35037.84	41790.62421	87.63%	7814.692133	10924.68346	18088935.96%	6421.73	9265.584592	6247.1118%
Smoothing	18733.8692	31710.99822	1243.32%	34827.34924	38156.11626	115.87%	7984887725	11081.69297	6049213.34%	9635.736828	10801.81176	3878865.40%
Exponential $\alpha=0.1$	24488.27406	33652.33338	1841.47%	35445.89842	41033.20849	101.01%	7416842146	10236.81935	12736306.26%	7719.377862	10191.13819	1188670.86%
Exponential $\alpha=0.4$	27152.7663	31532.25844	942.90%	40692.83149	46843.21075	97.53%	8748874694	10758.01948	12265395.86%	6900.195944	10825.67632	377383.40%
Exponential $\alpha=0.9$	26149.36489	31914.32738	1733.75%	35845.45077	38931.34453	119.53%	7491.420914	10591.70751	7985327.23%	10213.76894	11312.34931	4095912.09%
Método Tendencia $\alpha=0.1, \beta=0.1$	23794.41844	33244.19039	2861.04%	33200.21147	38453.64254	100.87%	6693.766715	9983.967699	11950002.86%	10033.52477	11358.01478	4107687.06%
Método Tendencia $\alpha=0.1, \beta=0.9$	27741.21932	35666.99634	3905.14%	31487.67977	39467.91557	89.23%	6891.3036	10059.39257	14602815.97%	10362.34632	12638.73256	2333680.24%
Método Tendencia $\alpha=0.4, \beta=0.1$	26376.65735	34710.93036	2250.64%	36046.02478	42189.40417	160.37%	7709.400531	10479.25912	14754269.89%	7838.547793	10580.35603	881859.47%
Método Tendencia $\alpha=0.4, \beta=0.4$	28782.57824	37019.54756	2313.18%	38245.14505	45778.67775	109.45%	8690.729781	11511.1694	17712680.97%	8845.019012	11616.98349	1557717.00%
Método Tendencia $\alpha=0.4, \beta=0.9$	31146.18568	40051.63695	2605.35%	45358.47529	53567.91396	114.11%	10244.99948	13424.1346	21621490.21%	9750.980157	12092.45544	1986357.89%
Método Tendencia $\alpha=0.9, \beta=0.1$	28400.65481	43371.66453	1035.60%	42486.47496	49054.0861	99.32%	5067.157502	11242.1748	13176059.35%	7345.862177	11303.96485	565732.02%
Método Tendencia $\alpha=0.9, \beta=0.4$	33460.23388	49406.3533	1796.20%	46901.82253	55860.43878	102.35%	9736.619149	13233.03745	12744500.61%	7599.904669	12501.91008	626996.18%
Método Tendencia $\alpha=0.9, \beta=0.9$	45337.62946	63325.99886	2830.66%	52895.68435	60860.93375	110.31%	10555.38651	13791.73802	6375228.53%	9396.708558	15012.26879	778077.46%
Winters $\alpha=0.1, \beta=0.1, \gamma=0.1$	1953.489023	17696.99614	14.01%	4273.316237	285988.473	9.60%	1258.246981	2989.631064	14.10%	765.7240532	2346601.191	13.83%
Winters $\alpha=0.1, \beta=0.1, \gamma=0.4$	1975.210341	17967.05186	14.13%	4255.897952	2863377.33	9.55%	1272.524376	3032832.238	14.33%	787.2466964	2416329.074	14.18%
Winters $\alpha=0.1, \beta=0.1, \gamma=0.9$	2008.847522	18448.24315	14.33%	4223.915112	2875460.47	9.41%	1296.84523	3119838.246	14.74%	812.0865849	2525850.665	14.47%
Winters $\alpha=0.1, \beta=0.4, \gamma=0.1$	1083.245131	70630.6036	7.32%	1677.075109	5885803.505	4.05%	667.5901036	874601.0812	7.34%	448.3158002	690187.5633	6.51%
Winters $\alpha=0.1, \beta=0.4, \gamma=0.4$	1098.178161	71535.15384	7.35%	1693.958497	5885491.9	4.06%	667.301838	850461.7071	7.41%	445.3760143	687969.8929	6.43%
Winters $\alpha=0.1, \beta=0.4, \gamma=0.9$	1124.126468	7314484.097	7.42%	1721.795432	5977746.47	4.08%	667.2835271	822186.9015	7.64%	439.9877899	700388.6332	6.30%
Winters $\alpha=0.1, \beta=0.9, \gamma=0.1$	753.210806	2772076.066	4.90%	1126.124144	3346714.118	2.52%	315.4852796	172361.7755	4.92%	261.0771491	265769.1198	3.67%
Winters $\alpha=0.1, \beta=0.9, \gamma=0.4$	748.1780002	2876175.486	4.94%	1115.837229	3269791.903	2.50%	321.3860951	188343.7927	5.03%	262.3323045	278339.7545	4.53%

METODO DE PRONOSTICO	#5			#6			#7			#8		
	EMA	EMRC	PAVE									
Winers $\alpha=0.1, \beta=0.9, x=0.9$	705.629158	2265221.61	5.04%	1116.382894	3254079.215	2.50%	331.7689831	245054.8388	5.32%	297.1848667	37541.1921	4.80%
Winers $\alpha=0.4, \beta=0.9, x=0.1$	483.5456074	1526230.886	3.48%	1111.15843	2287813.03	2.59%	263.8205711	162975.6892	3.50%	270.8898369	265982.1436	4.58%
Winers $\alpha=0.4, \beta=0.9, x=0.4$	487.5093207	1501273.076	3.50%	1119.410903	2328464.468	2.54%	265.6498351	165663.4338	3.54%	281.6704222	300585.0029	4.17%
Winers $\alpha=0.4, \beta=0.9, x=0.9$	494.2674295	1463248.07	3.54%	1133.818604	2443379.169	2.52%	268.8362336	174757.0033	3.83%	299.803027	367755.8329	4.19%
Winers $\alpha=0.4, \beta=0.9, x=0.1$	176.721311	146746.865	1.54%	432.9221542	678563.0476	0.78%	91.5703677	36813.79784	1.51%	193.6494139	169521.2211	1.82%
Winers $\alpha=0.4, \beta=0.9, x=0.4$	162.6764104	127452.7847	1.53%	439.7008491	708111.713	0.95%	88.55856122	42832.34396	1.57%	212.5149	198008.6274	1.99%
Winers $\alpha=0.4, \beta=0.9, x=0.9$	149.3950419	107326.0656	1.58%	454.9283078	807612.2139	0.78%	110.3475263	58826.73374	1.95%	243.4292312	23217.475	2.17%
Winers $\alpha=0.4, \beta=0.9, x=0.1$	103.2455	51808.9506	0.96%	248.2682767	350252.3062	0.71%	59.82834955	21922.36918	1.01%	154.2891372	129703.3074	1.28%
Winers $\alpha=0.4, \beta=0.9, x=0.4$	118.9827074	59437.67067	1.06%	272.231591	200873.833	0.70%	70.92242486	26012.79468	1.26%	165.0880965	144855.433	1.35%
Winers $\alpha=0.4, \beta=0.9, x=0.9$	147.359248	84367.58378	1.28%	343.7589985	350716.207	0.78%	102.5325249	39017.57613	1.86%	188.291649	177038.4336	1.52%
Winers $\alpha=0.9, \beta=0.1, x=0.1$	240.9011394	319297.0644	1.56%	487.2739285	439617.9723	1.14%	108.102129	28744.1022	1.55%	151.1691237	91321.84975	1.83%
Winers $\alpha=0.9, \beta=0.1, x=0.4$	248.2308631	318469.9082	1.57%	498.8226596	477539.6612	1.13%	106.6331412	27741.73981	1.62%	155.8472311	99120.64866	1.83%
Winers $\alpha=0.9, \beta=0.1, x=0.9$	260.7281184	324436.93	1.71%	535.3484147	589886.3461	1.17%	104.0743744	26372.42025	1.98%	179.6010578	119803.116	1.90%
Winers $\alpha=0.9, \beta=0.1, x=0.1$	112.3313473	69441.98329	0.65%	168.1935445	67683.20855	0.49%	31.73498878	6275.297166	0.68%	104.4096212	51301.3467	0.88%
Winers $\alpha=0.9, \beta=0.1, x=0.4$	122.3490717	75457.35704	0.74%	197.94728	83690.27948	0.53%	30.61664538	4743.185147	0.87%	110.5349284	52256.53995	0.93%
Winers $\alpha=0.9, \beta=0.1, x=0.9$	141.0436714	95900.81482	0.90%	238.7623025	166328.25	0.63%	28.68082393	3007.87252	1.19%	120.7999811	64101.27365	1.02%
Winers $\alpha=0.9, \beta=0.1, x=0.1$	116.2553239	97691.84295	0.47%	110.8394103	35243.83771	0.38%	19.33928701	841.1704833	0.53%	57.78680424	17348.95479	0.65%
Winers $\alpha=0.9, \beta=0.1, x=0.4$	132.6544058	107956.9229	0.62%	142.7624495	42292.58631	0.45%	27.20440719	2191.994268	0.86%	60.20168711	22205.33772	0.75%
Winers $\alpha=0.9, \beta=0.1, x=0.9$	162.7670997	141233.0156	0.92%	205.1291234	119691.3453	0.59%	52.17342899	11478.89781	1.53%	109.5860465	53708.41264	1.05%

MÉTODO DE PRONÓSTICO	#9			#10			#11			#12		
	EMA	EMRC	PAME	EMA	EMRC	PAME	EMA	EMRC	PAME	EMA	EMRC	PAME
Pronóstico Móvil	5316.786667	6977.166051	41.8901.69%	18472.88667	21692.98769	841.05%	4937.933333	6242.944401	318.56%	9429.506533	11290.6637	49532086.82%
Survivencia	3891.483295	5837.56537	283786.7.4%	20604.84545	33801.91647	1.556.98%	4918.525427	6779.001713	148.80%	9420.171365	10611.23119	121569383.55%
Exponencial $\alpha=1$	4228.464729	6155.011831	29.1546.92%	34636.95139	35274.219	1242.41%	4883.095654	6349.401169	262.44%	7544.882622	9601.385174	50362890.89%
Survivencia	4504.50267	7504.423989	1.6831.34%	23773.62082	41929.76076	363.30%	5051.911322	6563.250278	249.57%	6834.462281	9893.325026	4976078.46%
Exponencial $\alpha=0.9$												
Método Tendencia $\alpha=10, \beta=0.1$	3865.023611	5779.528435	3.08326.91%	22802.51997	34499.45005	2297.29%	4781.69702	6509.390172	181.65%	9824.092875	10978.11471	116221477.58%
Método Tendencia $\alpha=10, \beta=0.4$	4323.195627	5925.808879	3.35768.42%	26640.16885	37112.49993	3399.49%	4688.930971	6252.202087	258.04%	8594.406699	10175.91083	61011529.09%
Método Tendencia $\alpha=10, \beta=0.9$	4976.261995	6296.991025	3.41533.60%	28935.07787	37931.06536	2296.93%	4997.889	6481.752277	337.04%	7196.971322	10335.94872	18790359.09%
Método Tendencia $\alpha=0.4, \beta=0.1$	4532.092637	6342.025255	31.6012.36%	26660.64975	36324.00635	1383.31%	5210.326788	6532.497827	307.87%	7564.113545	9948.620619	34537073.52%
Método Tendencia $\alpha=0.4, \beta=0.4$	4964.568288	6878.128922	34.2316.57%	28934.72044	38538.17021	597.59%	6087.949476	7324.074531	375.89%	7505.426857	10639.64938	18074830.34%
Método Tendencia $\alpha=0.4, \beta=0.9$	4951.442308	7715.407431	3.45772.22%	34802.96622	44297.22719	831.76%	6827.078319	8425.563618	419.44%	8583.875402	12293.53669	5389452.84%
Método Tendencia $\alpha=0.9, \beta=0.1$	4792.266488	7339.569117	1.48207.94%	26687.75755	43841.34141	272.07%	5262.876751	6862.204891	266.21%	7061.954197	10314.71385	8168208.03%
Método Tendencia $\alpha=0.9, \beta=0.4$	5719.648385	8403.840705	69680.83%	31095.57679	50128.17229	876.35%	5860.272239	7512.01963	283.33%	7721.203213	11078.36332	31693624.23%
Método Tendencia $\alpha=0.9, \beta=0.9$	7559.21838	10414.10126	1.6607.96%	40960.19435	63167.38618	745.48%	6514.717289	8469.922113	265.47%	8083.722983	11480.68559	44983431.95%
Método Tendencia $\alpha=0.1, \beta=0.1$	301.2428662	18121.69407	5.60%	2618.435141	22367060.24	13.65%	686.2093178	95157.1044	12.74%	1544.966141	39481.303	15.08%
Método Tendencia $\alpha=0.1, \beta=0.4$	1988.614892	14083046.29	30.34%	2618.649702	22368831.36	13.65%	695.1775034	966673.066	12.96%	1546.039493	3945374.292	15.09%
Método Tendencia $\alpha=0.1, \beta=0.9$	2048.797726	14794816.72	31.37%	2619.007339	22371785.45	13.65%	710.7783156	998829.8807	13.34%	1547.819713	3940922.303	15.11%
Método Tendencia $\alpha=0.4, \beta=0.1$	1324.339797	6542971.569	20.58%	1256.943874	4232788.988	7.17%	367.2036988	267683.8121	6.69%	620.2198452	744240.8241	6.58%
Método Tendencia $\alpha=0.4, \beta=0.4$	1340.721361	6727843.887	20.86%	1257.0809335	4233382.448	7.17%	366.3494633	258680.0205	6.77%	620.0875145	742784.012	6.58%
Método Tendencia $\alpha=0.4, \beta=0.9$	1375.394952	7033809.639	21.54%	1257.3093944	4234373.66	7.17%	365.3038547	249301.273	6.99%	619.8615517	740605.1967	6.58%
Método Tendencia $\alpha=0.9, \beta=0.1$	706.5822267	2032165.266	11.97%	1052.352697	2617864.591	4.80%	152.028854	41014.97433	4.50%	472.0880812	392079.6468	4.23%
Método Tendencia $\alpha=0.9, \beta=0.4$	718.3951235	2100009.855	12.28%	1052.60244	2618465.199	4.80%	159.4576142	47993.27274	4.50%	473.2422872	395051.1176	4.23%

METODO DE PRONOSTICO	#9			#10			#11			#12		
	EMA	EMRC	PAME	EMA	EMRC	PAME	EMA	EMRC	PAME	EMA	EMRC	PAME
Winters $\alpha=0.1, \beta=0.9, \gamma=0.9$	741.1584794	2222910.766	12.58%	1052.083352	2649468.385	4.80%	183.7436741	72019.1688	4.86%	475.1668816	400295.7841	4.25%
Winters $\alpha=0.4, \beta=0.9, \gamma=0.9$	676.4108556	1508049.907	11.24%	658.7921731	1342350.735	3.41%	143.0272102	48753.69296	3.15%	409.4988815	268728.5083	3.95%
Winters $\alpha=0.1, \gamma=0.1$	684.406544	1546591.34	11.44%	658.9815015	1343414.188	3.41%	148.64568	54396.10892	3.19%	409.8575673	269304.3833	3.95%
Winters $\alpha=0.4, \beta=0.1, \gamma=0.9$	702.6733768	1613848.055	11.92%	659.2970805	1345188.87	3.41%	159.996992	69805.56272	3.46%	410.4494285	270429.6492	3.95%
Winters $\alpha=0.4, \beta=0.4, \gamma=0.1$	227.173672	173582.9189	5.66%	367.654558	576620.9593	1.51%	46.36416584	9913.85018	1.49%	161.0393359	8571.485689	1.49%
Winters $\alpha=0.4, \beta=0.4, \gamma=0.4$	228.5487361	177001.6379	5.25%	367.6004536	577193.2706	1.51%	51.26915843	16601.38275	1.43%	162.8244773	87233.29137	1.49%
Winters $\alpha=0.4, \beta=0.4, \gamma=0.9$	238.1042244	184364.7592	5.58%	367.58792	578150.0075	1.51%	76.39106996	35387.90275	1.77%	167.153617	89947.10849	1.51%
Winters $\alpha=0.4, \beta=0.9, \gamma=0.1$	160.1435667	94221.70497	3.27%	281.9769982	488185.258	0.99%	37.4109617	9099.289579	0.92%	138.1624411	63969.74451	1.05%
Winters $\alpha=0.4, \beta=0.9, \gamma=0.4$	164.9472369	97091.4215	3.48%	281.9733555	488875.8424	0.99%	50.76352961	16834.4226	1.18%	139.1370059	65135.36599	1.05%
Winters $\alpha=0.4, \beta=0.9, \gamma=0.9$	177.7107824	102889.0978	3.91%	281.9672838	490030.1939	0.99%	79.1418501	38734.9739	1.70%	140.7536042	67273.46706	1.07%
Winters $\alpha=0.9, \beta=0.1, \gamma=0.1$	283.2220006	237074.6554	5.08%	349.3047384	575383.8179	1.53%	69.02138021	14166.38525	1.41%	187.8864879	740221.8841	1.75%
Winters $\alpha=0.9, \beta=0.1, \gamma=0.4$	286.5305557	240356.7302	5.24%	349.5764963	576195.0153	1.53%	81.17746198	23878.37807	1.53%	188.2354223	70785.88765	1.75%
Winters $\alpha=0.9, \beta=0.1, \gamma=0.9$	292.5742696	246610.4411	5.52%	350.0294715	577718.0825	1.52%	102.5513485	51484.30253	1.81%	188.8114675	72257.99498	1.75%
Winters $\alpha=0.9, \beta=0.4, \gamma=0.1$	81.81584341	23866.55424	2.00%	271.169226	500017.898	0.70%	30.13933865	8741.615031	0.62%	96.72897938	36298.47252	0.70%
Winters $\alpha=0.9, \beta=0.4, \gamma=0.4$	81.81584341	23866.55424	2.00%	271.169226	500017.898	0.70%	30.13933865	8741.615031	0.62%	96.72897938	36298.47252	0.70%
Winters $\alpha=0.9, \beta=0.4, \gamma=0.9$	83.58191977	23628.77834	2.31%	270.913433	501270.533	0.70%	73.97575854	51079.52335	1.10%	101.109333	35705.65312	0.71%
Winters $\alpha=0.9, \beta=0.9, \gamma=0.1$	42.04524871	7211.108223	1.17%	271.918671	526430.0956	0.51%	31.35857574	8968.88754	0.49%	78.72654725	28773.87054	0.51%
Winters $\alpha=0.9, \beta=0.9, \gamma=0.4$	46.05208183	7434.548322	1.36%	271.7515663	526687.681	0.51%	52.71653051	22303.31729	0.80%	79.99593102	29653.24897	0.52%
Winters $\alpha=0.9, \beta=0.9, \gamma=0.9$	53.92223877	8813.026196	1.70%	271.4731774	527126.7317	0.51%	91.36988761	69938.7635	1.42%	83.99837073	31442.93867	0.54%



METODO DE PRONOSTICO	#1.3			#1.4			#1.5			#1.6		
	EMA	EMRC	PAME	EMA	EMRC	PAME	EMA	EMRC	PAME	EMA	EMRC	PAME
Promedio Móvil	5658.08	6652.024948	2.17.10%	79236.07987	97083.38442	289920600.71%	5686.03333	7303.20196	64.75%	5833.32	6695.860388	179.80%
Suavizaci6n	4695.594514	6049.958564	1.67.59%	57211.05586	80792.77496	474873433.50%	7603.924943	8773.552668	63.48%	5028.757902	5982.337983	115.66%
Exponencial $\alpha=0.1$	4802.72352	5771.333304	180.90%	65924.34764	80579.78407	398461568.31%	5673.091177	7132.743962	66.62%	4898.226958	5782.07502	128.17%
Exponencial $\alpha=0.4$	4452.816087	5543.642967	126.16%	59451.43331	78906.36328	36705927.83%	6685.483843	8121.342638	86.43%	4436.871219	5687.031442	83.73%
Método Tendencia $\alpha=0.10, \beta=0.1$	4995.891588	6352.839768	201.74%	62952.83344	82500.53686	633818531.32%	7021.947028	8126.567293	64.29%	5484.630914	6154.369291	144.78%
Método Tendencia $\alpha=0.10, \beta=0.4$	5663.842833	7093.655182	248.55%	74517.43499	89466.14477	913594417.53%	5946.554276	7561.55034	66.50%	6145.33352	6799.884127	187.88%
Método Tendencia $\alpha=0.10, \beta=0.9$	6196.761785	7430.703837	269.60%	83492.19781	96076.80871	1061192724.02%	4847.544103	7681.194207	68.63%	6252.07784	7154.199679	205.93%
Método Tendencia $\alpha=0.4, \beta=0.1$	5248.19731	6052.766972	198.91%	71177.94498	84274.7376	462922709.09%	5329.968725	7208.651796	70.60%	5178.018213	6041.660471	143.26%
Método Tendencia $\alpha=0.4, \beta=0.4$	5692.0463	6368.651966	190.47%	79760.03921	91592.07674	308934176.76%	5324.676071	7469.750113	77.00%	5677.718174	6379.341747	144.46%
Método Tendencia $\alpha=0.4, \beta=0.9$	5812.93582	7277.915806	172.59%	92573.40889	107312.19	205068000.39%	5888.781801	7638.915669	82.00%	6432.083865	7364.512721	139.98%
Método Tendencia $\alpha=0.9, \beta=0.1$	4718.736289	5809.361542	131.82%	61230.95382	82748.40047	15713395.41%	6857.880372	8444.94831	91.80%	4788.927717	5959.660973	84.90%
Método Tendencia $\alpha=0.9, \beta=0.4$	5646.969839	6505.792535	140.20%	68562.83914	93308.38373	281143514.81%	7602.01871	9211.696278	102.08%	5557.963728	6727.170941	97.78%
Método Tendencia $\alpha=0.9, \beta=0.9$	6228.76845	7076.538251	123.80%	71556.6144	105441.1439	249499149.01%	9637.027199	11104.115	122.56%	5958.497964	7593.454564	103.46%
Winters $\alpha=0.1, \beta=0.10, \gamma=0.1$	337.3854478	165023.4778	3.63%	5443.770569	66931959.09	8.79%	1089.018269	1597088.833	9.50%	447.6559105	300639.2149	5.80%
Winters $\alpha=0.1, \beta=0.1, \gamma=0.4$	344.2986915	170879.6044	3.69%	5508.214032	6814217.25	8.87%	1103.671298	1640355.249	9.71%	454.5887255	308314.7468	5.87%
Winters $\alpha=0.1, \beta=0.1, \gamma=0.9$	355.9815647	182403.3809	3.80%	5617.432256	70323864.82	9.01%	1129.245685	1727295.523	10.68%	466.3302841	322806.3052	5.99%
Winters $\alpha=0.1, \beta=0.4, \gamma=0.1$	217.9219985	73336.91712	2.44%	3065.600443	27376156.93	4.85%	620.7779329	568198.1721	5.18%	255.0658383	114548.4627	3.45%
Winters $\alpha=0.1, \beta=0.4, \gamma=0.4$	222.5516427	76934.97024	2.46%	3108.537027	27845324	4.88%	623.1437942	566269.4646	5.20%	259.7544064	118539.7997	3.48%
Winters $\alpha=0.1, \beta=0.4, \gamma=0.9$	231.2768846	84596.38063	2.51%	3179.767368	28277403.78	4.94%	633.2932582	573771.0604	5.50%	267.7110567	126656.4297	3.53%
Winters $\alpha=0.1, \beta=0.9, \gamma=0.1$	175.9210406	46622.16639	1.65%	2259.901476	11691.349.03	3.26%	333.7997368	167788.255	3.48%	199.1645512	63637.53208	2.33%
Winters $\alpha=0.1, \beta=0.9, \gamma=0.4$	174.4889054	45979.75721	1.66%	2261.117784	11032876.22	3.29%	329.4711759	161955.4225	3.58%	197.4395519	62653.08159	2.34%



METODO DE PRONOSTICO	#13			#14			#15			#16		
	EMA	EMRC	PAAR	EMA	EMRC	PAAR	EMA	EMRC	PAAR	EMA	EMRC	PAAR
Winters $\alpha=0.1, \beta=0.9, \gamma=0.9$	173.5016596	46905.09309	1.71%	2195.864858	101.26520436	3.50%	342.5684435	1775461.514	3.88%	195.2561219	62910.85361	2.40%
Winters $\alpha=0.4, \beta=0.1, \gamma=0.1$	91.10073385	17940.27917	1.01%	1361.309679	587287.98	2.19%	231.0917955	104657.0556	2.35%	110.9857382	28980.50127	1.46%
Winters $\alpha=0.4, \beta=0.1, \gamma=0.4$	93.25302745	18974.02213	1.02%	1386.628733	5924540.266	2.21%	228.5267749	102692.5543	2.30%	113.7019381	301.80.2354	1.48%
Winters $\alpha=0.4, \beta=0.1, \gamma=0.9$	99.32935746	21543.83454	1.07%	1429.628085	6070795.038	2.23%	233.9280301	102352.498	2.21%	118.6182049	32806.66329	1.52%
Winters $\alpha=0.9, \beta=0.1, \gamma=0.1$	65.05722775	8225.457104	0.67%	667.8978519	1137389.265	1.06%	861.5033284	18489.47315	1.09%	68.3563363	10641.56421	0.70%
Winters $\alpha=0.4, \beta=0.1, \gamma=0.1$	63.39463817	8357.832495	0.60%	638.4172198	1169613.135	1.03%	79.38723463	18708.40668	1.14%	65.53586991	10826.05865	0.78%
Winters $\alpha=0.4, \beta=0.1, \gamma=0.4$	62.33514157	9665.282769	0.62%	611.0029296	1324018.533	1.06%	99.58674939	23939.74872	1.32%	63.24069877	12076.73017	0.80%
Winters $\alpha=0.4, \beta=0.1, \gamma=0.9$	47.43959385	5062.95239	0.42%	535.2954188	879224.6005	0.67%	57.44216501	8322.827128	0.73%	44.89139173	5750.938691	0.50%
Winters $\alpha=0.4, \beta=0.9, \gamma=0.1$	47.80306776	5202.97919	0.44%	553.2130873	980592.637	0.72%	66.9578848	10570.37647	0.93%	44.27535901	5866.42663	0.54%
Winters $\alpha=0.4, \beta=0.9, \gamma=0.4$	53.93052784	6600.732524	0.54%	640.6212258	1245036.557	0.86%	104.5108811	20247.53658	1.52%	50.06326552	7052.77566	0.69%
Winters $\alpha=0.9, \beta=0.1, \gamma=0.1$	51.30371836	6197.736346	0.49%	711.328748	1592633.552	0.99%	94.3084035	16222.37319	1.05%	56.20707611	8262.53385	0.67%
Winters $\alpha=0.4, \beta=0.1, \gamma=0.1$	52.89837471	6443.591686	0.51%	733.3679976	1642642.024	1.00%	93.93967676	15147.29219	1.19%	57.78180831	8482.803928	0.69%
Winters $\alpha=0.9, \beta=0.1, \gamma=0.4$	59.77742536	7698.450602	0.59%	789.6295439	1797825.923	1.10%	93.93192869	14382.89107	1.45%	63.80359094	9509.521037	0.79%
Winters $\alpha=0.9, \beta=0.1, \gamma=0.9$	40.3128491	4177.977584	0.34%	472.2415742	749402.0093	0.50%	34.34691148	2708.70531	0.52%	37.65919586	3978.876651	0.40%
Winters $\alpha=0.9, \beta=0.4, \gamma=0.1$	41.15892392	4342.281655	0.36%	497.770892	796939.0317	0.53%	36.8498905	2608.902489	0.60%	38.58832716	4091.942076	0.41%
Winters $\alpha=0.9, \beta=0.4, \gamma=0.4$	47.9084139	5804.22458	0.45%	561.2467016	977630.3851	0.66%	43.43136113	3972.289246	1.01%	44.08925577	5233.874785	0.54%
Winters $\alpha=0.9, \beta=0.9, \gamma=0.1$	38.76510588	5376.826033	0.31%	465.3769597	929024.6112	0.40%	29.30420725	1717.507098	0.44%	34.06257482	4454.989305	0.35%
Winters $\alpha=0.9, \beta=0.9, \gamma=0.4$	42.99640032	5807.101315	0.36%	513.9962705	1012283.071	0.48%	41.11528647	2872.01409	0.73%	38.243931	4949.332399	0.41%
Winters $\alpha=0.9, \beta=0.9, \gamma=0.9$	61.21373784	8986.389318	0.54%	643.2461444	1339950.657	0.69%	65.73856939	8667.920664	1.33%	53.94743882	7613.632252	0.61%

METODO DE PRONOSTICO	#17			#18			#19			#20		
	EMA	EMRC	PAMIE	EMA	EMRC	PAMIE	EMA	EMRC	PAMIE	EMA	EMRC	PAMIE
Promedio Movil	23707.43333	26608.02146	88.72%	47884.66667	62527.15318	66.92%	6529.411333	8038.992877	503388.83%	12808.66667	15008.00717	23.15%
Suavizacion	25480.8903	29396.29003	116.23%	38897.97339	52875.44847	50.93%	3842.044253	6655.064372	212408.34%	15200.61498	17961.12115	23.66%
Exponencial $\alpha=0.1$	24220.82856	26748.3357	83.66%	37622.56829	51663.89538	55.80%	5126.299361	7215.408739	353520.71%	15022.94141	17702.07513	25.89%
Exponencial $\alpha=0.4$	20008.39038	24398.46852	52.30%	35353.02044	52449.77865	52.73%	6075.843954	9000.440257	117261.37%	20304.98928	23073.98367	36.48%
Exponencial $\alpha=0.9$	29135.26017	32511.40459	139.10%	41720.82815	54497.65551	60.29%	4027.735856	6601.014834	293452.59%	13624.84419	16070.18442	22.67%
Método Tendencia $\alpha=0.1, \beta=0.1$	33268.4478	35403.49626	149.89%	51232.12241	60585.25648	78.10%	4503.892176	6646.562601	458802.46%	12968.84845	15889.63882	22.87%
Método Tendencia $\alpha=0.1, \beta=0.4$	35922.13895	37086.02325	129.35%	59434.32589	66918.42918	91.63%	4864.494507	6874.005811	547356.05%	13007.67561	16284.64724	24.02%
Método Tendencia $\alpha=0.1, \beta=0.9$	25122.23449	28394.97274	81.86%	41194.70626	54170.12747	63.01%	5421.820004	7381.677942	415479.54%	15285.43839	17838.2894	27.49%
Método Tendencia $\alpha=0.4, \beta=0.1$	24039.9765	31156.78018	53.48%	43438.19636	58597.84324	64.35%	5977.457256	7883.847332	447465.25%	16248.51835	18960.65422	29.72%
Método Tendencia $\alpha=0.4, \beta=0.4$	24603.82646	32933.06714	48.92%	44818.71187	66515.96246	60.28%	6807.35514	8987.800005	544401.83%	18035.4098	21056.60278	32.60%
Método Tendencia $\alpha=0.4, \beta=0.9$	20370.29297	25545.02274	46.66%	36833.23576	54913.89747	54.90%	6348.68386	9407.61948	116830.32%	20980.40891	24071.67928	38.23%
Método Tendencia $\alpha=0.9, \beta=0.1$	21203.19677	27250.23785	44.32%	44888.31209	61835.73683	59.01%	7155.855762	10741.58303	7848.55%	24142.16482	27440.39046	44.04%
Método Tendencia $\alpha=0.9, \beta=0.4$	23246.2339	28634.89007	55.00%	54938.85517	72552.22209	65.24%	9995.250812	13647.46338	498604.97%	31861.69189	35406.69762	58.45%
Método Tendencia $\alpha=0.9, \beta=0.9$	386.8354191	288001.7158	0.96%	2652.308061	10307487.38	3.46%	482.1865662	845694.8815	14.08%	1332.031954	2417893.35	2.57%
Winters $\alpha=0.1, \beta=0.1, \gamma=0.1$	388.96953	288605.9827	0.97%	2721.45365	10956316.08	3.55%	487.6465351	865061.4604	14.28%	1388.99521	2630657.099	2.70%
Winters $\alpha=0.1, \beta=0.1, \gamma=0.4$	392.5234225	289797.5863	0.97%	2839.10747	12275781.28	3.70%	497.1027697	901926.2163	14.63%	1500.766181	3165894.667	2.94%
Winters $\alpha=0.1, \beta=0.1, \gamma=0.9$	268.0396918	142931.2025	0.69%	1802.140979	4856345.228	2.36%	253.7186771	263107.4725	7.33%	1035.924737	1270865.232	1.94%
Winters $\alpha=0.4, \beta=0.1, \gamma=0.1$	269.9982502	142718.4227	0.69%	1860.352435	5378487.73	2.39%	257.1972299	269964.8845	7.39%	1066.904049	1370055.402	2.02%
Winters $\alpha=0.4, \beta=0.1, \gamma=0.4$	273.3215878	142574.3835	0.61%	1992.838718	6461614.767	2.52%	263.3830024	284709.9451	7.53%	1196.384311	1720748.414	2.31%
Winters $\alpha=0.4, \beta=0.1, \gamma=0.9$	222.7494578	106981.0149	0.46%	1430.733764	3999130.594	1.60%	148.2085059	128535.7648	4.92%	674.3037823	606393.757	1.31%
Winters $\alpha=0.1, \beta=0.9, \gamma=0.1$	226.9054286	109107.0901	0.47%	1408.106662	3921582.341	1.62%	144.9547025	129426.0821	5.00%	698.3315056	651893.8392	1.37%

METODO DE PRONOSTICO	#17			#18			#19			#20		
	EMA	EMRC	PAVE									
Winners $\alpha=0.1, \beta=0.9, \gamma=0.9$	233.8285153	112846.3043	0.49%	1396.972935	401.4137141	1.71%	1501.974353	135714.3754	5.23%	802.9610227	976326.3335	1.57%
Winners $\alpha=0.4, \beta=0.1, \gamma=0.1$	198.2244231	87562.49175	0.40%	728.1948854	1268313.559	0.97%	107.5606541	65122.78923	3.49%	405.1863838	239460.5407	0.81%
Winners $\alpha=0.4, \beta=0.1, \gamma=0.4$	200.8563185	88669.41689	0.40%	728.4312831	1323624.561	0.99%	106.9982464	65239.76527	3.53%	443.0794954	302358.0634	0.87%
Winners $\alpha=0.4, \beta=0.1, \gamma=0.9$	205.2406788	90633.91593	0.41%	790.7843845	1478435.773	1.11%	106.0243435	65662.1755	3.74%	540.5627664	530870.1525	1.05%
Winners $\alpha=0.4, \beta=0.4, \gamma=0.1$	174.4560266	67930.89762	0.34%	491.0734724	565916.1814	0.58%	41.56047212	18013.93745	1.52%	254.3570114	106846.9079	0.50%
Winners $\alpha=0.4, \beta=0.4, \gamma=0.4$	177.3096652	69709.69502	0.34%	461.1251712	507686.0599	0.58%	37.26159709	15913.54601	1.51%	265.9786213	161962.0554	0.52%
Winners $\alpha=0.4, \beta=0.4, \gamma=0.9$	182.0633052	72821.95391	0.35%	442.1602453	494710.9119	0.65%	34.41835602	12862.71442	1.83%	365.8029491	404222.8473	0.70%
Winners $\alpha=0.4, \beta=0.9, \gamma=0.1$	150.2851077	54003.01912	0.30%	278.3692237	169782.8626	0.41%	16.85099263	1507.10676	1.60%	194.0881012	73171.82635	0.37%
Winners $\alpha=0.4, \beta=0.9, \gamma=0.4$	153.1056778	55625.44949	0.31%	290.8544971	156551.5266	0.43%	14.92687115	656.225828	1.20%	252.6007543	147674.3167	0.48%
Winners $\alpha=0.4, \beta=0.9, \gamma=0.9$	157.8042475	58494.16978	0.31%	395.6826086	261735.791	0.65%	18.70154419	1032.560254	1.69%	428.5190735	449927.4975	0.80%
Winners $\alpha=0.9, \beta=0.1, \gamma=0.1$	147.648772	48389.60252	0.29%	356.297362	281102.5361	0.47%	42.20709752	10279.5767	1.55%	203.0876478	73770.41185	0.41%
Winners $\alpha=0.9, \beta=0.1, \gamma=0.4$	149.5612606	49391.50813	0.29%	374.332728	276498.4269	0.52%	40.40576417	9491.709658	1.60%	267.288655	150360.2973	0.51%
Winners $\alpha=0.9, \beta=0.1, \gamma=0.9$	152.747329	51204.5052	0.29%	425.5416147	326480.771	0.61%	37.28607212	8206.071093	1.91%	376.7428	460238.5784	0.68%
Winners $\alpha=0.9, \beta=0.4, \gamma=0.1$	129.196101	47908.85226	0.28%	217.5628022	98850.95655	0.33%	9.396036019	616.5256428	0.67%	145.7135738	53536.69356	0.20%
Winners $\alpha=0.9, \beta=0.4, \gamma=0.4$	131.2571361	49134.96908	0.28%	237.1038208	111153.4566	0.38%	8.598776648	408.1696236	0.83%	212.3332017	142105.841	0.30%
Winners $\alpha=0.9, \beta=0.4, \gamma=0.9$	134.9641328	51378.63029	0.29%	295.5664195	216295.528	0.51%	7.24540027	281.7780869	1.11%	365.4812087	537344.2226	0.65%
Winners $\alpha=0.9, \beta=0.9, \gamma=0.1$	138.5793829	63718.45926	0.30%	187.6920536	110324.5015	0.30%	4.278050322	46.4538562	0.51%	145.4115363	58174.57898	0.28%
Winners $\alpha=0.9, \beta=0.9, \gamma=0.4$	141.9171835	65311.49048	0.30%	255.7092023	147973.6223	0.41%	5.095226235	59.59721714	0.79%	264.1346254	188874.1512	0.49%
Winners $\alpha=0.9, \beta=0.9, \gamma=0.9$	147.472745	68856.87729	0.31%	395.8658786	331787.3012	0.66%	7.071231559	113.2212198	1.56%	468.8274876	797411.1435	0.84%





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POLITECNICA DEL LITORAL
BIBLIOTECA "GONZALO ZEVALA"
E.I.M.C.P.

METODO DE PRONOSTICO	#21			#22			#23			#24		
	EMA	EMRC	PAME	EMA	EMRC	PAME	EMA	EMRC	PAME	EMA	EMRC	PAME
Promedio Móvil	421.42	5131.268362	811120.07%	5336.956667	6258.870379	978343.93%	4002.72	5139.513042	334.53%	16647.2	23115.2348	150.87%
Survivación	51.58 637726	5781.906285	682336.96%	4200.678865	4976.03372	473801.93%	4101.764681	4973.158523	204.70%	20443.42597	26638.39986	133.27%
Exponencial $\alpha=0.1$	5084.774103	5838.048601	750388.61%	4337.641049	5048.673712	624176.28%	3554.456905	4752.060119	225.36%	18536.70915	21301.38999	144.81%
Survivación	58.16 870466	7035.726356	650810.58%	4104.957862	4860.17989	421410.50%	3807.597609	4580.500744	137.45%	18804.49127	26026.89688	125.01%
Exponencial $\alpha=0.9$	4854.963441	5463.283887	745240.90%	4487.719512	5100.350992	577208.17%	4241.980022	5140.473591	250.87%	21388.81142	27029.76466	183.90%
Método Tendencia $\alpha=0.10, \beta=0.1$	4693.846678	5419.363423	813324.28%	4944.107355	5513.816879	740025.26%	4521.472091	5722.360665	325.58%	25161.04429	30070.7613	277.30%
Método Tendencia $\alpha=0.10, \beta=0.9$	4779.115853	5642.908597	902279.71%	5094.533952	5770.529808	837008.20%	4734.770372	6056.628171	369.91%	28764.30326	31652.42803	291.63%
Método Tendencia $\alpha=0.4, \beta=0.1$	4956.946378	5960.48174	803183.97%	5865.811119	6839.737447	810438.25%	3775.115401	4978.559017	253.65%	21059.0531	25283.91945	170.47%
Método Tendencia $\alpha=0.4, \beta=0.4$	5387.12576	6539.701802	835431.83%	5019.668804	5706.499576	726161.96%	4269.934763	5280.407433	255.20%	21511.02696	25967.69363	130.03%
Método Tendencia $\alpha=0.9, \beta=0.2$	6694.517742	7450.691444	749503.39%	5865.811119	6839.737447	810438.25%	5271.373366	6083.486759	253.75%	22744.87136	28707.60449	140.15%
Método Tendencia $\alpha=0.9, \beta=0.1$	6050.963687	7351.065615	657410.20%	4191.686157	5106.251304	424975.94%	4029.972768	4800.286603	137.63%	19937.93726	27157.08019	129.65%
Método Tendencia $\alpha=0.1, \beta=0.4$	6829.297195	8326.117062	589694.94%	4980.234945	5784.950401	304119.10%	4573.594712	5398.492588	96.49%	24579.74157	30624.35095	136.90%
Método Tendencia $\alpha=0.9, \beta=0.9$	8743.601562	10488.85672	478248.06%	5511.170273	6246.859932	144191.43%	5096.46172	6045.821231	222.39%	30445.99127	37481.2332	170.72%
Winters $\alpha=0.1, \beta=0.10, \gamma=0.1$	365.7526471	195707.4797	3.78%	292.0562425	150700.2098	5.62%	366.1805228	205095.1806	5.92%	3179.782871	16321541.76	12.95%
Winters $\alpha=0.1, \beta=0.1, \gamma=0.4$	377.0596012	208004.7934	3.93%	296.0848741	154417.3682	5.69%	371.5107526	209986.9533	5.98%	3207.185825	16320751.63	13.02%
Winters $\alpha=0.1, \beta=0.1, \gamma=0.9$	396.610308	337902.2892	4.18%	303.9771425	161379.8556	5.81%	380.5262184	219148.7307	6.10%	3233.48437	16875083.39	13.14%
Winters $\alpha=0.1, \beta=0.4, \gamma=0.1$	248.5837789	82916.54818	2.50%	167.0145879	58381.74245	3.37%	209.7944089	77226.92676	3.51%	1617.700082	4961080.316	6.87%
Winters $\alpha=0.1, \beta=0.4, \gamma=0.4$	251.4436876	86030.72993	2.57%	170.0248707	60259.14169	3.40%	213.2439905	79847.96733	3.53%	1634.020843	5064004.777	6.84%
Winters $\alpha=0.1, \beta=0.4, \gamma=0.9$	272.2298482	101066.0429	2.91%	175.127123	64047.01757	3.44%	219.0900034	85091.35531	3.58%	1663.603079	5253400.361	6.87%
Winters $\alpha=0.1, \beta=0.9, \gamma=0.1$	143.7822194	30103.78435	1.69%	131.0585465	31555.77239	2.27%	168.0233875	44065.09135	2.36%	1280.893888	2966557.371	4.57%
Winters $\alpha=0.1, \beta=0.9, \gamma=0.4$	149.7294595	33538.87593	1.76%	129.8224338	31094.58708	2.29%	166.8767904	43431.30156	2.38%	1277.24805	2948047.833	4.56%



POLITECNICO DEL LITORAL
 "MIGUEL ANTONIO ZEVALLOS"
 P.A.M.C.P.

METODO DE PRONOSTICO	#21			#22			#23			#24		
	EMA	EMRC	PAME	EMA	EMRC	PAME	EMA	EMRC	PAME	EMA	EMRC	PAME
Winters $\alpha=0.1, \beta=0.9, \gamma=0.9$	175.01-11.425	53018.07555	2.60%	128.0091168	31201.27943	2.31%	165.0969333	43479.42551	2.43%	1271.077448	2937054.1609	4.63%
Winters $\alpha=0.4, \beta=0.1, \gamma=0.1$	92.48161695	15513.61224	1.03%	73.2996264	14527.33799	1.43%	92.15864037	19398.19069	1.49%	774.5213558	1282718.402	3.22%
Winters $\alpha=0.4, \beta=0.1, \gamma=0.4$	101.3200284	19693.3791	1.11%	75.10803696	15079.33155	1.44%	94.34987033	20300.81404	1.51%	790.7892321	1333377.541	3.24%
Winters $\alpha=0.4, \beta=0.1, \gamma=0.9$	123.9837208	33798.93389	1.31%	78.17689301	16295.67631	1.47%	98.13638934	22256.94134	1.53%	818.2783984	1430059.874	3.26%
Winters $\alpha=0.4, \beta=0.1, \gamma=0.1$	49.46771724	5525.037013	0.59%	46.09480502	5545.971393	0.73%	56.27279213	7390.682756	0.80%	397.3198608	431288.7309	1.43%
Winters $\alpha=0.4, \beta=0.4, \gamma=0.4$	54.65430532	9581.411296	0.62%	44.25281101	5623.535126	0.76%	54.17303374	7699.905888	0.79%	388.5743849	457923.0378	1.41%
Winters $\alpha=0.4, \beta=0.4, \gamma=0.9$	82.47825144	25176.10302	0.80%	42.72895462	6146.714741	0.79%	52.66899748	8828.548226	0.81%	375.9847007	519223.3801	1.43%
Winters $\alpha=0.4, \beta=0.1, \gamma=0.1$	39.70867385	4201.341301	0.41%	32.97948984	3131.637546	0.50%	39.68990304	4759.774937	0.51%	301.3252762	325385.6713	0.91%
Winters $\alpha=0.4, \beta=0.9, \gamma=0.4$	53.89025697	9061.723628	0.50%	32.0020546	3111.725242	0.52%	39.80444403	5053.880663	0.54%	310.6983861	364205.7778	0.93%
Winters $\alpha=0.4, \beta=0.9, \gamma=0.9$	89.17985351	27322.528	0.95%	34.30927544	3469.527687	0.64%	45.33644784	6168.912067	0.66%	348.7566702	448240.584	1.05%
Winters $\alpha=0.9, \beta=0.1, \gamma=0.1$	46.32709014	4908.949091	0.49%	37.60512879	4026.754105	0.66%	46.95295818	5834.789313	0.68%	370.2303074	315879.2363	1.45%
Winters $\alpha=0.9, \beta=0.1, \gamma=0.4$	61.74328457	10765.73513	0.61%	38.2504797	4063.615118	0.67%	48.17238206	6010.125741	0.69%	385.817605	349359.5208	1.45%
Winters $\alpha=0.9, \beta=0.1, \gamma=0.9$	89.26231726	32405.10923	0.81%	41.76052318	4352.608493	0.76%	52.80613693	6677.809693	0.79%	412.7152179	423443.4043	1.30%
Winters $\alpha=0.9, \beta=0.4, \gamma=0.1$	32.01420957	3475.955379	0.33%	26.2997411	1907.597022	0.40%	33.64263909	3153.516891	0.41%	208.132848	177566.2533	0.63%
Winters $\alpha=0.9, \beta=0.4, \gamma=0.4$	50.254717	10100.04814	0.45%	26.66073672	1893.988051	0.43%	34.34321061	3203.236069	0.44%	216.7224527	201371.8501	0.67%
Winters $\alpha=0.9, \beta=0.4, \gamma=0.9$	86.10584463	37555.89155	0.73%	29.70871333	2210.531518	0.51%	38.55652198	3823.929373	0.53%	248.7075596	266976.3817	0.76%
Winters $\alpha=0.9, \beta=0.1, \gamma=0.1$	35.03956046	3954.796137	0.31%	24.19634829	2060.624746	0.34%	30.60807278	3303.411518	0.35%	170.1957526	139807.898	0.47%
Winters $\alpha=0.9, \beta=0.4, \gamma=0.4$	62.2958327	13517.22791	0.55%	26.77247404	2229.497467	0.40%	33.36920408	3589.818266	0.41%	189.1644319	168508.6244	0.54%
Winters $\alpha=0.9, \beta=0.9, \gamma=0.9$	110.6501677	55295.79801	0.97%	36.63970359	3218.067127	0.58%	44.98200101	5213.98965	0.59%	236.0009295	261408.0622	0.68%

METODO DE PRONOSTICO	#25			#26			#27		
	EMA	EMRC	PAME	EMA	EMRC	PAME	EMA	EMRC	PAME
Promedio Móvil	6897.97	8018.497795	986252.79%	3990.766667	4846.763549	337.30%	3196.153333	4566.316201	699243.86%
Suavización Exponencial $\alpha=0.1$	9423.657709	11071.80034	973095.04%	5251.548685	5649.81667	330.44%	4304.712716	5654.649584	489781.72%
Exponencial $\alpha=0.4$	8070.375155	9615.095774	963270.02%	4511.891787	5052.563378	291.14%	4517.919102	5556.46947	537157.16%
Suavización Exponencial $\alpha=0.9$	8196.691447	9512.868417	796483.12%	4511.891787	5052.563378	291.14%	4949.278603	6095.333082	314261.94%
Método Tendencia $\alpha=0.10, \beta=0.1$	10446.8285	11777.4791	1278857.48%	5725.120737	6025.710082	431.93%	4871.018931	5878.479376	597546.52%
Método Tendencia $\alpha=0.10, \beta=0.4$	12564.3137	13724.46067	1776593.74%	6351.325508	6963.843176	584.27%	5605.543187	6563.001184	811169.23%
Método Tendencia $\alpha=0.10, \beta=0.9$	12748.70872	14559.1984	1899001.90%	6517.099612	7412.438803	604.68%	5572.214222	7085.246329	1037860.34%
Método Tendencia $\alpha=0.4, \beta=0.1$	8678.382783	10134.12618	1052845.69%	4492.872468	5325.629404	315.58%	4766.295449	5816.348222	612880.08%
Método Tendencia $\alpha=0.4, \beta=0.4$	8822.890002	10401.59484	663967.59%	4418.825698	5613.711985	244.22%	5170.77956	6414.339091	570168.67%
Método Tendencia $\alpha=0.4, \beta=0.9$	9349.452023	10634.50886	169892.76%	4621.288705	5869.723347	237.31%	5657.381523	7255.447552	140641.68%
Método Tendencia $\alpha=0.9, \beta=0.1$	8734.189506	9922.076408	772448.69%	3770.493979	5161.456906	151.21%	5109.11304	6369.021675	296801.51%
Método Tendencia $\alpha=0.9, \beta=0.4$	9868.056085	11042.55111	608414.25%	4459.433088	5748.786987	197.91%	5562.074792	7181.224367	125782.36%
Método Tendencia $\alpha=0.9, \beta=0.9$	9868.056085	11042.55111	608414.25%	5274.077657	6849.638726	254.45%	6835.434307	8872.579762	53713.54%
Winters $\alpha=0.1, \beta=0.10, \gamma=0.1$	952.7350964	1453164.346	7.95%	402.9248428	286905.2315	6.99%	390.7742028	265637.366	6.43%
Winters $\alpha=0.1, \beta=0.1, \gamma=0.4$	956.694254	1461793.914	7.97%	403.6010976	287574.199	7.00%	393.9172778	268792.1835	6.46%
Winters $\alpha=0.1, \beta=0.1, \gamma=0.9$	963.3249476	1476615.99	8.00%	404.7297885	288702.4578	7.01%	399.1920995	274414.0257	6.52%
Winters $\alpha=0.1, \beta=0.4, \gamma=0.1$	484.5980689	422949.3219	4.46%	202.1310092	81928.10562	4.02%	196.0619687	63501.20469	3.75%
Winters $\alpha=0.1, \beta=0.4, \gamma=0.4$	487.6893833	428711.9996	4.47%	202.6826894	82399.75841	4.02%	198.1155853	65665.80295	3.77%
Winters $\alpha=0.1, \beta=0.4, \gamma=0.9$	492.8634432	438712.7675	4.48%	203.6032888	83198.05399	4.02%	201.5645276	69634.28152	3.79%
Winters $\alpha=0.1, \beta=0.9, \gamma=0.1$	455.9440545	356406.0589	3.01%	201.8078322	75457.3533	2.71%	175.7005932	62457.52411	2.53%
Winters $\alpha=0.1, \beta=0.9, \gamma=0.4$	456.3460439	356887.335	3.01%	201.920809	75516.12085	2.71%	176.82276014	63619.72743	2.54%

METODO DE PRONOSTICO	#25			#26			#27		
	EMA	EMRC	PAME	EMA	EMRC	PAME	EMA	EMRC	PAME
Winters $\alpha=0.1, \beta=0.9, \gamma=0.9$	457.255048	358067.9895	3.02%	202.1091592	75623.30809	2.71%	179.0075746	65881.94646	2.55%
Winters $\alpha=0.4, \beta=0.1, \gamma=0.1$	246.2066628	1291.5418603	1.99%	105.3040814	27563.18085	1.76%	96.50225557	23635.94698	1.62%
Winters $\alpha=0.4, \beta=0.1, \gamma=0.4$	248.4716471	131587.3403	2.09%	105.6917468	27740.2087	1.76%	98.49878003	24812.22273	1.63%
Winters $\alpha=0.4, \beta=0.1, \gamma=0.9$	252.2627729	133860.9769	2.00%	106.3388353	28041.452	1.76%	101.8822231	26959.83503	1.61%
Winters $\alpha=0.4, \beta=0.4, \gamma=0.1$	159.3435893	64200.341	1.09%	74.14820234	14367.4259	0.92%	68.6049719	14662.8879	0.86%
Winters $\alpha=0.4, \beta=0.4, \gamma=0.4$	158.2352676	64852.78999	1.00%	73.95323025	14380.245	0.92%	67.90121176	14982.67266	0.85%
Winters $\alpha=0.4, \beta=0.4, \gamma=0.9$	156.5039773	66230.77397	0.99%	73.62773085	14409.65725	0.91%	66.79947665	15749.05584	0.85%
Winters $\alpha=0.4, \beta=0.9, \gamma=0.1$	113.7718357	38933.69447	0.64%	51.49486792	7406.75518	0.60%	46.17396582	8471.426286	0.56%
Winters $\alpha=0.4, \beta=0.9, \gamma=0.4$	112.9093148	39670.0753	0.64%	51.22121572	7408.416655	0.60%	44.85854486	8612.802831	0.55%
Winters $\alpha=0.4, \beta=0.9, \gamma=0.9$	112.3404301	41231.05703	0.64%	50.76482713	7420.700323	0.59%	43.86322015	9110.662491	0.57%
Winters $\alpha=0.1, \gamma=0.1$	120.359654	36036.84239	0.91%	54.0141057	8253.075353	0.81%	44.27803773	7129.592096	0.74%
Winters $\alpha=0.9, \beta=0.1, \gamma=0.4$	121.9027513	36776.21888	0.91%	54.16137383	8256.327622	0.81%	45.38290297	7325.031038	0.75%
Winters $\alpha=0.9, \beta=0.1, \gamma=0.9$	124.4861272	38279.00131	0.91%	54.5622953	8349.312867	0.81%	47.23939033	7814.485519	0.75%
Winters $\alpha=0.9, \beta=0.4, \gamma=0.1$	87.39534014	20659.69479	0.36%	41.72634414	4363.434618	0.48%	30.52883909	3724.550172	0.45%
Winters $\alpha=0.9, \beta=0.4, \gamma=0.4$	85.98983986	20848.74667	0.49%	41.45911556	4354.272306	0.48%	29.33018579	3655.990776	0.44%
Winters $\alpha=0.9, \beta=0.4, \gamma=0.9$	84.65144145	21556.44901	0.49%	41.01330548	4350.122223	0.47%	29.81110962	3783.52186	0.46%
Winters $\alpha=0.9, \beta=0.9, \gamma=0.1$	68.3101351	15303.0572	0.42%	33.2721082	3724.878387	0.41%	20.02429855	1639.021955	0.39%
Winters $\alpha=0.9, \beta=0.9, \gamma=0.4$	66.70304191	15484.43216	0.40%	32.84290711	3711.512623	0.41%	18.78994742	1600.06045	0.37%
Winters $\alpha=0.9, \beta=0.9, \gamma=0.9$	66.54861577	16504.99089	0.41%	32.31696178	3709.227031	0.40%	21.47547443	2054.197085	0.42%



POLITECNICA DEL LITORAL
BIBLIOTECA "GONZALO ZEVALLOS"
R.I.M.C.P.

METODO DE PRONOSTICO	#28			#29			#30		
	EMA	EMRC	PAME	EMA	EMRC	PAME	EMA	EMRC	PAME
Promedio Móvil	3441.19333	4244.734194	914607.92%	4447.98	5083.030022	7933.168%	2530.55	3252.142011	416857.90%
Suavización	3162.581229	3813.132964	449549.70%	4444.180624	5947.510689	351871.01%	2622.461113	3127.584831	9130609.92%
Exponencial $\alpha=0.1$	2846.632736	3739.38642	708735.33%	4444.180624	5947.510689	351871.01%	2652.990811	3284.09463	829667.16%
Exponencial $\alpha=0.4$	2644.249338	3693.899173	818499.95%	7142.135393	8120.758283	507011.04%	3178.182128	3731.766473	661948.56%
Método Tendencia $\alpha=0.9$	3273.207314	3935.137446	532400.84%	4627.721716	5963.943191	381749.68%	2668.22898	3178.536501	924272.11%
Método Tendencia $\alpha=0.10, \beta=0.1$	3581.960118	4344.346942	673751.33%	5002.022926	6231.192012	445374.26%	2552.008072	3091.363131	837577.09%
Método Tendencia $\alpha=0.10, \beta=0.9$	3581.568868	4624.315762	804375.99%	5176.24411	6442.908442	543220.30%	2621.672516	3199.137988	819982.79%
Método Tendencia $\alpha=0.4, \beta=0.1$	2904.770879	3910.589224	784869.14%	5498.376625	6596.389259	648265.76%	2680.951184	3379.574262	832466.29%
Método Tendencia $\alpha=0.4, \beta=0.9$	3189.247653	4184.173933	860311.22%	5705.501985	6911.054518	806120.47%	2924.617752	3707.060021	852556.87%
Método Tendencia $\alpha=0.9, \beta=0.1$	4064.838806	4820.631155	922318.00%	6389.389737	7644.764295	1009054.49%	3333.265472	4321.027422	821402.41%
Método Tendencia $\alpha=0.9, \beta=0.9$	2822.744373	3872.593207	867251.21%	7516.856728	8488.362809	539369.66%	3333.265472	3901.990459	645855.55%
Método Tendencia $\alpha=0.1, \beta=0.9$	3496.859541	4372.061786	917643.63%	8628.657506	9743.752051	516830.41%	3748.837235	4385.930105	553544.80%
Winters $\alpha=0.1, \beta=0.10, \gamma=0.1$	3930.836913	4957.839181	869711.69%	10650.46679	12546.57865	88943.78%	4710.666374	5198.192564	659847.09%
Winters $\alpha=0.1, \beta=0.1, \gamma=0.4$	238.6052852	89496.20384	5.16%	382.5707488	277042.9425	6.83%	387.039397	242625.9477	11.33%
Winters $\alpha=0.1, \beta=0.1, \gamma=0.9$	242.594994	92033.70354	5.23%	388.8691336	385845.7149	6.93%	386.0031802	243160.9345	11.27%
Winters $\alpha=0.1, \beta=0.4, \gamma=0.1$	249.3494939	96855.62372	5.36%	399.5985591	303899.9335	7.11%	384.2227722	244317.9826	11.18%
Winters $\alpha=0.1, \beta=0.4, \gamma=0.4$	142.4389601	37084.33829	3.16%	215.0742889	89482.19314	3.91%	153.5620514	53685.89455	4.84%
Winters $\alpha=0.1, \beta=0.4, \gamma=0.9$	145.0571448	38427.50254	3.18%	218.2447477	94313.92712	3.97%	154.6123153	54073.27361	4.85%
Winters $\alpha=0.1, \beta=0.9, \gamma=0.1$	149.4997564	41176.81138	3.23%	223.670117	104532.3352	4.04%	156.3419733	55140.90146	4.86%
Winters $\alpha=0.1, \beta=0.9, \gamma=0.4$	114.594328	20366.59833	2.13%	153.6704587	54050.04132	2.65%	107.8329565	26027.79373	3.07%
Winters $\alpha=0.1, \beta=0.9, \gamma=0.9$	113.5239653	19866.77976	2.14%	152.589446	55326.97657	2.67%	107.9558455	24885.99631	3.05%

METODO DE PRONOSTICO	#28			#29			#30		
	EMA	EMRC	PAME	EMA	EMRC	PAME	EMA	EMRC	PAME
Winters $\alpha=0.1, \beta=0.9, \gamma=0.9$	111.7796712	19714.77849	2.20%	153.1710993	59951.41538	2.77%	108.1993472	26221.50841	3.03%
Winters $\alpha=0.4, \beta=0.1, \gamma=0.1$	60.81555258	8691.895025	1.32%	92.485331	24777.12501	1.71%	102.7169685	19105.72533	2.99%
Winters $\alpha=0.4, \beta=0.1, \gamma=0.4$	62.27521357	9073.860973	1.34%	94.6069118	26985.83287	1.73%	103.5427055	19395.53778	2.98%
Winters $\alpha=0.4, \beta=0.1, \gamma=0.9$	65.29704806	9960.007731	1.39%	99.67404679	31601.90853	1.82%	104.9028349	20112.74325	2.97%
Winters $\alpha=0.4, \beta=0.4, \gamma=0.1$	38.37472624	3287.515534	0.73%	51.06138329	11055.71122	0.87%	38.41363901	4917.775768	1.12%
Winters $\alpha=0.4, \beta=0.4, \gamma=0.4$	36.84979192	3411.170905	0.72%	48.92497479	12013.16544	0.86%	37.89574612	4903.240766	1.10%
Winters $\alpha=0.4, \beta=0.4, \gamma=0.9$	36.30917887	3958.365987	0.75%	49.03805349	14848.13783	0.93%	40.4871559	5128.363997	1.13%
Winters $\alpha=0.4, \beta=0.9, \gamma=0.1$	27.8681168	2171.890029	0.48%	35.09454239	6992.452756	0.56%	27.97513049	2537.6859	0.80%
Winters $\alpha=0.4, \beta=0.9, \gamma=0.4$	28.17621776	2307.94982	0.51%	36.3153359	7605.17335	0.62%	29.020747	2648.20984	0.79%
Winters $\alpha=0.4, \beta=0.9, \gamma=0.9$	32.58152298	2877.967667	0.64%	47.59594135	9838.321631	0.84%	32.36721063	3081.191594	0.85%
Winters $\alpha=0.9, \beta=0.1, \gamma=0.1$	31.51523285	2532.239963	0.62%	44.14536039	6803.841125	0.78%	45.15672997	4246.945999	1.33%
Winters $\alpha=0.9, \beta=0.1, \gamma=0.4$	32.1225182	2587.167857	0.64%	41.0680075	6700.242707	0.81%	46.86268588	4530.882805	1.32%
Winters $\alpha=0.9, \beta=0.1, \gamma=0.9$	35.38260524	2867.689135	0.73%	46.03853935	6668.953575	0.94%	49.70978634	5181.260828	1.34%
Winters $\alpha=0.9, \beta=0.4, \gamma=0.1$	23.25937458	1428.761523	0.39%	27.810635	3022.687778	0.43%	19.24924706	1161.118558	0.55%
Winters $\alpha=0.9, \beta=0.4, \gamma=0.4$	23.98327781	1447.779295	0.42%	27.79846747	2577.696433	0.50%	21.35620338	1337.801114	0.59%
Winters $\alpha=0.9, \beta=0.4, \gamma=0.9$	26.90910655	1748.235227	0.52%	28.11906203	2098.846598	0.64%	24.88070588	1813.951117	0.67%
Winters $\alpha=0.9, \beta=0.1, \gamma=0.1$	21.60979656	1585.132549	0.34%	22.06680781	1754.824385	0.35%	14.48558357	637.323411	0.42%
Winters $\alpha=0.9, \beta=0.1, \gamma=0.4$	23.99450745	1735.342556	0.49%	24.17397329	1908.840466	0.47%	17.48311222	812.1688841	0.49%
Winters $\alpha=0.9, \beta=0.9, \gamma=0.9$	137.1888926	74414.93621	3.15%	37.63983414	3768.914403	0.76%	22.52645752	1361.235709	0.61%

APENDICE B
PRONOSTICOS PARA AÑO 2003 Y 2004 PARA PRODUCTOS IMPORTADOS

MES	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15
Feb-03	267,857	791,126	137,097	104,895	22,100	45,849	1,557	17,392	2,093	127,854	14,889	25,519	12,916	99,727	2,448
Mar-03	725,629	725,894	173,993	89,736	3,628	18,878	19,865	44,225	6,105	9,038	2,861	26,177	19,804	132,102	13,662
Abr-03	842,451	737,660	94,183	88,897	2,800	62,369	3,295	11,076	5,518	22,497	2,058	11,318	19,653	56,780	6,145
May-03	676,589	1,201,745	143,732	114,966	2,702	162,664	10,414	6,060	8,128	20,702	2,443	13,611	11,084	33,723	19,509
Jun-03	423,795	907,299	1,134	53,135	57,266	60,982	4,661	295	1,693	11,094	611	9,557	12,355	38,581	8,081
Jul-03	445,962	250,361	74,113	77,464	6,499	46,202	7,450	5,377	0	37,750	608	14,612	11,625	182,264	19,106
Ago-03	861,372	568,716	10,985	108,603	117,376	25,839	4,468	0	23,694	70,148	6,318	26,704	23,959	315,962	13,573
Sep-03	865,327	1,093,773	87,302	34,543	1,556	39,711	14,169	0	17,203	13,711	11,132	12,147	17,190	86,400	25,557
Oct-03	270,333	1,089,404	57,452	95,138	696	98,105	18,663	0	2,907	3,271	11,101	5,817	10,814	16,090	21,801
Nov-03	278,677	605,886	52,717	67,646	452	53,238	40,442	0	7,970	2,053	22,846	72	942	3,116	24,323
Dic-03	494,267	410,693	37,259	36,499	203	16,632	19,395	0	7,658	120	13,253	0	1,821	0	27,038
Ene-04	537,312	890,377	91,040	130,548	0	111,283	0	18,906	4,664	579	745	33,415	10,213	33,673	5,343
Feb-04	320,168	945,617	163,841	125,608	26,462	54,901	1,864	20,829	2,506	153,108	17,827	30,560	15,467	119,417	2,931
Mar-04	865,068	865,377	207,392	107,169	4,333	22,545	23,720	52,825	7,290	10,795	3,417	31,264	23,651	157,762	16,314
Abr-04	1,001,788	877,170	111,977	105,891	3,335	74,292	3,925	13,195	6,572	26,799	2,451	13,482	23,411	67,633	7,319
May-04	802,570	1,425,498	170,466	136,600	3,210	193,271	12,372	7,201	9,656	24,599	2,903	16,173	13,169	40,068	23,178
Jun-04	501,500	1,073,648	1,341	62,979	67,872	72,279	5,524	349	2,007	13,150	724	11,329	14,644	45,728	9,577
Jul-04	526,502	295,573	87,484	91,597	7,684	54,632	8,808	6,359	0	44,639	719	17,279	13,746	215,514	22,389
Ago-04	1,014,626	669,896	12,937	128,121	138,464	30,483	5,270	0	27,950	82,758	7,453	31,504	28,264	372,740	16,011
Sep-04	1,017,035	1,285,523	102,593	40,659	1,832	46,742	16,676	0	20,248	16,139	13,101	14,299	20,234	101,697	30,080
Oct-04	317,045	1,277,637	67,370	111,739	818	115,222	21,917	0	3,414	3,841	13,037	6,832	12,701	18,898	25,603
Nov-04	326,147	709,088	61,688	79,281	529	62,394	47,392	0	9,340	2,406	26,772	85	1,104	3,652	28,503
Dic-04	577,283	479,669	43,511	42,688	238	19,452	22,681	0	8,956	141	15,498	0	2,129	0	31,619
Total	14,407,615	19,920,531	2,067,581	2,143,123	470,055	1,580,643	314,529	219,832	189,453	697,673	193,388	379,583	329,400	2,169,569	404,764





PRONOSTICOS

MES	#16	#17	#18	#19	#20	#21	#22	#23	#24	#25	#26	#27	#28	#29	#30
Feb-03	9,837	97,648	59,797	0	96,485	21,620	6,040	8,073	59,544	23,766	12,306	11,691	5,202	1,744	0
Mar-03	16,349	128,636	38,713	828	57,691	5,744	12,180	16,438	55,122	31,854	14,559	22,901	11,614	21,590	7,504
Abr-03	15,159	109,104	205,370	824	64,595	15,233	12,697	8,989	34,204	23,694	15,293	9,419	7,565	6,180	6,141
May-03	12,547	61,589	200,733	20,011	83,334	9,088	7,803	6,916	17,837	23,797	15,655	15,695	5,231	0	2,749
Jun-03	7,805	49,107	182,227	307	47,017	0	29	7,922	24,474	12,650	2,938	5,699	5,301	12,222	3,888
Jul-03	4,983	53,632	58,291	1,365	85,144	15,145	5,332	9,776	88,134	33,358	10,433	4,354	8,887	6,559	9,371
Ago-03	22,130	66,504	111,649	2,023	48,017	13,648	14,831	18,210	33,700	19,469	14,112	0	12,564	14,565	5,792
Sep-03	18,100	33,009	112,265	6,883	91,972	20,404	15,659	13,355	46,087	4,290	3,253	12,160	11,912	2,187	7,698
Oct-03	8,256	24,053	100,775	1,109	73,484	16,424	5,053	2,733	7,456	12,206	606	4,273	0	14,535	1,715
Nov-03	1,826	14,693	58,208	20,576	87,711	17,563	0	420	14,608	0	534	5,043	420	6,763	0
Dic-03	1,459	7,843	36,125	160	88,094	19,333	173	2,803	14,450	271	535	4,191	2,659	482	2,153
Ene-04	6,628	69,720	84,581	0	64,735	10,717	4,570	5,276	2,700	7,782	4,328	4,933	4,320	4,197	9,060
Feb-04	11,779	116,689	71,604	0	115,531	25,888	7,232	9,667	71,300	30,854	14,737	13,999	6,230	2,088	0
Mar-04	19,525	153,317	46,233	988	68,895	6,859	14,546	19,632	65,830	38,043	17,388	27,350	13,870	25,783	8,962
Abr-04	18,057	129,708	244,626	982	76,940	18,144	15,124	10,707	40,743	30,608	18,217	11,220	9,011	7,361	7,315
May-04	14,907	73,040	238,501	23,773	99,010	10,798	9,271	8,217	21,193	28,276	18,602	18,648	6,216	0	3,266
Jun-04	9,250	58,098	215,983	364	55,760	0	35	9,390	29,008	14,994	3,471	6,755	6,283	14,486	4,608
Jul-04	5,892	63,303	68,925	1,613	100,673	17,907	6,305	11,559	104,213	39,446	12,337	5,149	10,509	7,755	11,317
Ago-04	26,107	78,319	131,711	2,387	56,679	16,100	17,497	21,483	39,756	22,968	16,648	0	14,822	17,183	6,833
Sep-04	21,304	38,788	132,140	8,101	108,252	24,015	18,431	15,720	54,247	5,050	3,829	14,313	14,021	2,574	9,061
Oct-04	9,696	28,203	118,358	1,303	86,303	19,288	5,935	3,209	8,758	14,337	711	5,019	0	17,070	2,014
Nov-04	2,140	17,193	68,218	24,113	102,792	20,583	0	493	17,120	0	626	5,911	493	7,926	0
Dic-04	1,707	9,159	42,250	187	103,027	22,610	203	3,279	16,900	317	625	4,901	3,110	563	2,518
Total	265,443	1,481,356	2,627,283	117,898	##/##/##/##	347,110	178,948	214,267	867,384	422,029	201,731	213,624	160,241	193,814	112,167

APENDICE 9
PUNTO DE REORDEN R e INVENTARIO DE SEGURIDAD Ss

t = 1.17 meses

PRODUCTO	DEMANDA 2003 ANUAL UNIDADES	PUNTO DE REORDEN R	DEMANDA 2004 ANUAL UNIDADES	PUNTO DE REORDEN R	INVENTARIO DE SEGURIDAD
1	5,827,626	568,194	7,676,558	748,464	2,368
2	8,108,881	790,616	10,622,894	1,035,732	1,859
3	855,966	83,457	1,106,416	107,876	228
4	876,098	85,420	1,145,056	111,643	458
5	214,623	20,926	254,665	24,830	239
6	653,277	63,694	845,520	82,438	228
7	84,542	8,243	159,914	15,592	40
8	100,167	9,766	119,665	11,667	119
9	71,224	6,944	99,933	9,743	87
10	316,546	30,863	378,580	36,912	560
11	52,642	5,133	98,475	9,601	65
12	173,288	16,896	206,210	20,105	162
13	147,905	14,421	178,262	17,381	80
14	989,672	96,493	1,176,246	114,684	959
15	134,335	13,098	210,306	20,505	60
16	120,684	11,767	146,431	14,277	70
17	681,468	66,443	831,723	81,093	266
18	1,140,262	111,176	1,446,994	141,082	387
19	33,350	3,252	60,248	5,874	9
20	701,713	68,417	1,008,583	98,337	300
21	126,232	12,308	186,612	18,195	72
22	83,431	8,134	99,120	9,664	50
23	96,806	9,439	118,084	11,513	63
24	368,807	35,959	466,805	45,513	351
25	195,564	19,068	232,628	22,681	137
26	92,748	9,043	111,336	10,855	67
27	90,299	8,804	116,621	11,371	39
28	71,876	7,008	88,361	8,615	45
29	83,078	8,100	105,743	10,310	45
30	52,603	5,129	64,590	6,298	30



APENDICE 10

VARIABILIDAD DE LA DEMANDA

PRODUCTO	Costo Unitario	ΣD^2t	$(\Sigma Dt)^2$	Variabilidad V	Tipo de Demanda
1	0.0683	9.95E+12	1.95E+14	0.17	Regular
2	0.0579	1.82E+13	3.68E+14	0.14	Regular
3	0.32	2.48E+11	3.97E+12	0.44	Irregular
4	0.1667	2.02E+11	4.14E+12	0.12	Regular
5	0.6	4.22E+10	2.21E+11	3.39	Irregular
6	0.1691	1.41E+11	2.21E+12	0.47	Irregular
7	0.638	7.56E+09	9.89E+10	0.34	Irregular
8	0.797	6.30E+09	4.17E+10	2.48	Irregular
9	0.797	2.72E+09	3.44E+10	0.82	Irregular
10	0.08	5.82E+10	4.86E+11	1.75	Irregular
11	0.638	2.93E+09	3.72E+10	0.81	Irregular
12	0.295	7.99E+09	1.24E+11	0.49	Irregular
13	0.3348	5.75E+09	1.03E+11	0.28	Irregular
14	0.0427	4.19E+11	4.59E+12	1.10	Irregular
15	0.2224	8.80E+09	1.60E+11	0.26	Irregular
16	0.3348	4.20E+09	7.05E+10	0.37	Irregular
17	0.0587	1.34E+11	2.19E+12	0.40	Irregular
18	0.0304	4.02E+11	6.90E+12	0.34	Irregular
19	0.638	2.10E+09	1.39E+10	2.48	Irregular
20	0.0379	1.60E+11	3.47E+12	0.06	Regular
21	0.18	6.34E+09	1.20E+11	0.21	Regular
22	0.3348	2.25E+09	3.20E+10	0.61	Irregular
23	0.2794	2.79E+09	4.59E+10	0.40	Irregular
24	0.0651	4.86E+10	7.52E+11	0.49	Irregular
25	0.1297	1.15E+10	1.78E+11	0.48	Irregular
26	0.2658	2.84E+09	4.07E+10	0.61	Irregular
27	0.2452	3.06E+09	4.56E+10	0.54	Irregular
28	0.2794	1.61E+09	2.57E+10	0.44	Irregular
29	0.2109	2.84E+09	3.76E+10	0.74	Irregular
30	0.2915	8.24E+08	1.26E+10	0.51	Irregular

APENDICE11

CALCULOS DE EQ PARA ARTICULOS CON DEMANDA REGULAR

PRODUCTO	DEMANDA ANUAL UNIDADES 2003	COSTO UNITARIO c	2AD	$h = ic$	EOQ
1	5,827,626	0.0683	617,728,408	0.0109	237,754
2	8,108,881	0.0579	859,541,339	0.0093	304,603
4	876,098	0.1667	92,866,391	0.0267	59,007
20	701,713	0.0379	74,381,580	0.0061	110,752
21	126,232	0.1800	13,380,591	0.0288	21,555
	DEMANDA ANUAL UNIDADES 2004	COSTO UNITARIO c	2AD	$h = ic$	EOQ
1	7,676,558	0.0683	813,715,115	0.0109	272,876
2	10,622,894	0.0579	1,126,026,750	0.0093	348,638
4	1,145,056	0.1667	121,375,969	0.0267	67,459
20	1,008,583	0.0379	106,909,845	0.0061	132,779
21	186,612	0.1800	19,780,885	0.0288	26,208

A:	53
i:	0.16





APENDICE 12

CALCULOS CANTIDAD A ORDENAR PARA ARTICULOS CON
DEMANDA IRREGULAR MODELO SILVER-MEAL

	#3	#5	#6	#7	#8	#9	#10
Feb-03	137,097	22,100	45,849	1,557	17,392	2,093	14,889
Mar-03	173,993	3,628	18,878	19,865	44,225	6,105	2,861
Abr-03	94,183	2,800	62,369	3,295	11,076	5,518	2,058
May-03	143,732	2,702	162,664	10,414	6,354	8,128	2,443
Jun-03	1,134	57,266	60,982	4,661	0	1,693	611
Jul-03	74,113	6,499	46,202	7,450	5,377	0	608
Ago-03	10,985	118,932	25,839	4,468	0	23,694	6,318
Sep-03	87,302	0	39,711	14,169	0	17,203	11,132
Oct-03	57,452	1,352	98,105	18,663	0	2,907	11,101
Nov-03	52,717	0	53,238	40,442	0	7,970	22,846
Dic-03	37,259	0	16,632	19,395	0	7,658	13,253
Ene-04	91,040	0	111,283		18,906	4,664	745
Feb-04	163,841	26,462	54,901	1,864	20,829	2,506	17,827
Mar-04	207,392	4,333	22,545	23,720	52,825	7,290	3,417
Abr-04	111,977	3,335	74,292	3,925	13,195	6,572	2,451
May-04	170,466	3,210	193,271	12,372	7,550	9,656	2,903
Jun-04	1,341	67,872	72,279	5,524	0	2,007	724
Jul-04	87,484	7,684	54,632	8,808	6,359	0	719
Ago-04	12,937	140,296	30,483	5,270	0	27,950	7,453
Sep-04	102,593	0	46,742	16,676	0	20,248	13,101
Oct-04	67,370	1,585	115,222	21,917	0	3,414	13,037
Nov-04	61,688	0	62,394	47,392	0	9,340	26,772
	#11	#12	#13	#14	#15	#16	#17
Feb-03	25,519	12,916	99,727	2,448	9,837	9,837	97,648
Mar-03	26,177	19,804	132,102	13,662	16,349	16,349	128,636
Abr-03	11,318	19,653	56,780	6,145	15,159	15,159	109,104
May-03	13,611	11,084	33,723	19,509	12,547	12,547	61,589
Jun-03	9,557	12,355	38,581	8,081	7,805	7,805	49,107
Jul-03	14,612	11,625	182,264	19,106	4,983	4,983	53,632
Ago-03	26,704	23,959	315,962	13,573	22,130	22,130	66,504
Sep-03	12,147	17,190	86,400	25,557	18,100	18,100	33,009
Oct-03	5,889	11,756	19,206	21,801	8,256	8,256	24,053
Nov-03	0	0	0	24,323	1,826	1,826	14,693
Dic-03	0	12,034	0	27,038	1,459	1,459	7,843
Ene-04	33,415	0	33,673	5,343	6,628	6,628	69,720
Feb-04	30,560	15,467	119,417	2,931	11,779	11,779	116,689
Mar-04	31,264	23,651	157,762	16,314	19,525	19,525	153,317
Abr-04	13,482	23,411	67,633	7,319	18,057	18,057	129,708
May-04	16,173	13,169	40,068	23,178	14,907	14,907	73,040
Jun-04	11,329	14,644	45,728	9,577	9,250	9,250	58,098
Jul-04	17,279	13,746	215,514	22,589	5,892	5,892	63,303
Ago-04	31,504	28,264	372,740	16,011	26,107	26,107	78,319
Sep-04	14,299	20,234	101,697	30,080	21,304	21,304	38,788
Oct-04	6,917	12,701	22,549	25,603	9,696	9,696	28,203
Nov-04		1,104		28,503	2,140	2,140	17,193



	#18	#19	#22	#23	#24	RIBL	#25	#26
Feb-03	59,797	0	6,040	8,073	59,544		25,766	12,306
Mar-03	38,713	828	12,180	16,438	55,122		31,854	14,559
Abr-03	205,370	824	12,697	8,989	34,204		25,694	15,293
May-03	200,733	20,317	7,803	6,916	17,837		23,797	15,655
Jun-03	182,227	0	0	7,922	24,474		12,650	2,928
Jul-03	58,291	1,365	5,332	9,776	88,134		33,358	10,433
Ago-03	111,649	2,023	14,831	18,210	33,700		19,469	14,112
Sep-03	112,265	6,883	15,659	13,355	46,087		4,290	3,858
Oct-03	100,775	1,109	5,227	3,153	7,456		12,477	0
Nov-03	58,208	20,736	0	0	14,608		0	1,069
Dic-03	36,125	0	0	2,803	14,450		0	0
Ene-04	84,581	0	4,570	5,276	2,700		7,782	4,328
Feb-04	71,604	0	7,232	9,667	71,300		30,854	14,737
Mar-04	46,233	988	14,546	19,632	65,830		38,043	17,388
Abr-04	244,626	982	15,124	10,707	40,743		30,608	18,217
May-04	238,501	23,773	9,306	8,217	21,193		28,276	18,602
Jun-04	215,983	364	0	9,390	29,008		14,994	3,471
Jul-04	68,925	1,613	6,305	11,559	104,213		39,446	12,337
Ago-04	131,711	2,387	17,497	21,483	39,756		22,968	16,648
Sep-04	132,140	8,101	18,431	15,720	54,247		5,050	4,540
Oct-04	118,358	1,303	6,138	3,702	8,758		14,654	0
Nov-04	68,218	24,300	0	0	17,120		0	1,251
	#27	#28	#29	#30				
Feb-03	11,691	5,202	1,744	0				
Mar-03	22,901	11,614	21,590	7,504				
Abr-03	9,419	7,565	6,180	6,141				
May-03	15,695	5,231	0	2,749				
Jun-03	5,699	5,301	12,222	3,888				
Jul-03	4,354	8,887	6,559	9,571				
Ago-03	0	12,564	14,565	5,792				
Sep-03	12,160	12,332	2,187	7,698				
Oct-03	4,273	0	14,535	1,715				
Nov-03	5,043	0	7,244	0				
Dic-03	4,191	2,659	0	2,153				
Ene-04	4,933	4,320	4,197	9,060				
Feb-04	13,999	6,230	2,088	0				
Mar-04	27,350	13,870	25,783	8,962				
Abr-04	11,220	9,011	7,361	7,315				
May-04	18,648	6,216	0	3,266				
Jun-04	6,755	6,283	14,486	4,608				
Jul-04	5,149	10,509	7,755	11,317				
Ago-04	0	14,822	17,183	6,833				
Sep-04	14,313	14,513	2,574	9,061				
Oct-04	5,019	0	17,070	2,014				
Nov-04	5,911	0	8,489	0				



APENDICE 13

CALCULOS CANTIDAD A ORDENAR PARA
ARTICULOS CON DEMANDA IRREGULAR

POLITECNICA DEL LITORAL
BIBLIOTECA "GONZALO ZEVALLOS"
R.I.M.C.P.

MODELO COSTO UNITARIO MINIMO

	#3	#5	#6	#7	#8	#9	#10
Feb-03	137,097	22,100	45,849	1,557	17,392	2,093	127,854
Mar-03	173,993	3,628	18,878	19,865	44,225	6,105	9,038
Abr-03	94,183	2,800	62,369	3,295	11,076	5,518	22,497
May-03	143,732	2,702	162,664	10,414	6,060	8,128	20,702
Jun-03	75,247	57,266	60,982	4,661	5,672	1,693	11,094
Jul-03	85,098	6,499	46,202	7,450	0	0	37,750
Ago-03	10,985	117,376	25,839	4,468	0	23,694	70,148
Sep-03	87,302	2,253	39,711	14,169	0	17,203	13,711
Oct-03	57,452	0	98,105	18,663	0	2,907	5,324
Nov-03	52,717	27,118	53,238	40,442	0	7,970	0
Dic-03	37,259	0	16,632	19,395	0	7,658	153,807
Ene-04	91,040	0	111,283	0	18,906	4,664	0
Feb-04	163,841	0	54,901	1,864	20,829	2,506	0
Mar-04	207,392	4,333	22,545	23,720	52,825	7,290	10,795
Abr-04	111,977	3,335	74,292	3,925	13,195	6,572	26,799
May-04	170,466	3,210	193,271	12,372	7,201	9,656	24,599
Jun-04	1,341	67,872	72,279	5,524	349	2,007	13,150
Jul-04	87,484	7,684	54,632	8,808	6,359	0	44,639
Ago-04	12,937	138,464	30,483	5,270	0	27,950	82,758
Sep-04	102,593	1,832	46,742	16,676	0	20,248	16,139
Oct-04	67,370	1,347	115,222	21,917	0	3,414	6,248
Nov-04	61,688	0	62,394	47,392	0	9,340	0
	#11	#12	#13	#14	#15	#16	#17
Feb-03	14,889	25,519	12,916	99,727	2,448	9,837	Q
Mar-03	2,861	26,177	19,804	132,102	13,662	16,349	97,648
Abr-03	2,058	11,318	19,653	56,780	6,145	15,159	128,636
May-03	2,443	13,611	11,084	33,723	19,509	12,547	109,104
Jun-03	611	9,557	12,355	38,581	8,081	7,805	61,589
Jul-03	608	14,612	11,625	182,264	19,106	4,983	49,107
Ago-03	6,318	26,704	23,959	315,962	13,573	22,130	53,632
Sep-03	11,132	12,147	17,190	86,400	25,557	18,100	66,504
Oct-03	11,101	5,889	10,814	16,090	21,801	8,256	33,009
Nov-03	22,846	0	2,763	36,788	24,323	1,826	24,053
Dic-03	13,253	0	0	0	27,038	1,459	14,693
Ene-04	745	33,415	10,213	0	5,343	6,628	7,843
Feb-04	17,827	30,560	15,467	119,417	2,931	11,779	69,720
Mar-04	3,417	31,264	23,651	157,762	16,314	19,525	116,689
Abr-04	2,451	13,482	23,411	67,633	7,319	18,057	153,317
May-04	2,903	16,173	13,169	40,068	23,178	14,907	129,708
Jun-04	724	11,329	14,644	45,728	9,577	9,250	73,040
Jul-04	719	17,279	13,746	215,514	22,589	5,892	58,098
Ago-04	7,453	31,504	28,264	372,740	16,011	26,107	63,303

Sep-04	13,101	14,299	20,234	101,697	30,080	21,304	78,319
Oct-04	13,037	6,832	12,701	18,898	25,603	9,696	38,788
Nov-04	26,772	85	1,104	3,652	28,503	2,140	28,203
	#18	#19	#22	#23	#24	#25	#26
Feb-03	59,797	0	6,040	8,073	59,544	Q	Q
Mar-03	38,713	828	12,180	16,438	55,122	25,766	12,306
Abr-03	205,370	824	12,697	8,989	34,204	31,854	14,559
May-03	200,733	20,011	7,803	6,916	17,837	25,694	15,293
Jun-03	182,227	3,695	20,193	7,922	24,474	23,797	15,655
Jul-03	58,291	0	0	9,776	88,134	12,650	2,928
Ago-03	111,649	0	0	18,210	33,700	33,358	10,433
Sep-03	112,265	6,883	20,712	13,355	46,087	19,469	14,112
Oct-03	100,775	1,109	0	2,733	7,456	4,290	3,253
Nov-03	58,208	20,576	0	3,224	14,608	12,477	1,674
Dic-03	36,125	1,149	4,744	0	14,450	0	0
Ene-04	84,581	0	0	5,276	2,700	0	0
Feb-04	71,604	0	7,232	9,667	71,300	7,782	4,328
Mar-04	46,233	0	14,546	19,632	65,830	30,854	14,737
Abr-04	244,626	982	15,124	10,707	40,743	38,043	17,388
May-04	238,501	23,773	9,271	8,217	21,193	30,608	18,217
Jun-04	215,983	364	6,340	9,390	29,008	28,276	18,602
Jul-04	68,925	1,613	0	11,559	104,213	14,994	3,471
Ago-04	131,711	2,387	17,497	21,483	39,756	39,446	12,337
Sep-04	132,140	8,101	18,431	15,720	54,247	22,968	16,648
Oct-04	118,358	1,303	6,138	3,209	8,758	5,050	3,829
Nov-04	68,218	24,113	0	3,771	17,120	14,654	1,962
	#27	#28	#29	#30			
Feb-03	11,691	5,202	1,744	0			
Mar-03	22,901	11,614	21,590	7,504			
Abr-03	9,419	7,565	6,180	6,141			
May-03	15,695	5,231	0	2,749			
Jun-03	5,699	5,301	12,222	3,888			
Jul-03	4,354	8,887	6,559	9,571			
Ago-03	0	12,564	14,565	5,792			
Sep-03	12,160	11,912	2,187	7,698			
Oct-03	4,273	0	14,535	1,715			
Nov-03	5,043	3,079	6,763	0			
Dic-03	4,191	0	4,678	2,153			
Ene-04	4,933	4,320	4,197	9,060			
Feb-04	13,999	6,230	2,088	0			
Mar-04	27,350	13,870	25,783	8,962			
Abr-04	11,220	9,011	7,361	7,315			
May-04	18,648	6,216	0	3,266			
Jun-04	6,755	6,283	14,486	4,608			
Jul-04	5,149	10,509	7,755	11,317			
Ago-04	0	14,822	17,183	6,833			
Sep-04	14,313	14,021	2,574	9,061			
Oct-04	5,019	0	17,070	2,014			
Nov-04	5,911	3,602	7,926	0			



POLITECNICA DEL LITORAL
BIBLIOTECA "GONZALO ZEVALLOS"
F.I.M.C.P.

APENDICE 14
CALCULOS CANTIDAD A ORDENAR PARA
ARTICULOS CON DEMANDA IRREGULAR
MODELO BALANCEO PERIODO FRAGMENTADO

	#3	#5	#6	#7	#8	#9	#10
Feb-03	137,097	22,100	45,849	1,557	17,392	2,093	127,854
Mar-03	173,993	3,628	18,878	19,865	44,225	6,105	9,038
Abr-03	94,183	2,800	62,369	3,295	11,076	5,518	22,497
May-03	143,732	2,702	162,664	10,414	6,354	8,128	20,702
Jun-03	1,134	57,266	60,982	4,661	0	1,693	11,094
Jul-03	74,113	6,499	46,202	7,450	5,377	0	37,750
Ago-03	10,985	118,932	25,839	4,468	0	23,694	70,148
Sep-03	87,302	0	39,711	14,169	0	17,203	16,981
Oct-03	57,452	1,352	98,105	18,663	0	2,907	0
Nov-03	52,717	0	53,238	40,442	0	7,970	2,752
Dic-03	37,259	0	16,632	19,395	0	7,658	0
Ene-04	91,040	0	111,283	0	18,906	4,664	0
Feb-04	163,841	26,462	54,901	1,864	20,829	2,506	153,108
Mar-04	207,392	4,333	22,545	23,720	52,825	7,290	10,795
Abr-04	111,977	3,335	74,292	3,925	13,195	6,572	26,799
May-04	170,466	3,210	193,271	12,372	7,550	9,656	24,599
Jun-04	1,341	67,872	72,279	5,524	0	2,007	13,150
Jul-04	87,484	7,684	54,632	8,808	6,359	0	44,639
Ago-04	12,937	140,296	30,483	5,270	0	27,950	82,758
Sep-04	102,593	0	46,742	16,676	0	20,248	19,981
Oct-04	67,370	1,585	115,222	21,917	0	3,414	0
Nov-04	61,688	0	62,394	47,392	0	9,340	2,547
	#11	#12	#13	#14	#15	#16	#17
Feb-03	14,889	25,519	12,916	99,727	2,448	9,837	97,648
Mar-03	2,861	26,177	19,804	132,102	13,662	16,349	128,636
Abr-03	2,058	11,318	19,653	56,780	6,145	15,159	109,104
May-03	2,443	13,611	11,084	33,723	19,509	12,547	61,589
Jun-03	611	9,557	12,355	38,581	8,081	7,805	49,107
Jul-03	608	14,612	11,625	182,264	19,106	4,983	53,632
Ago-03	6,318	26,704	23,959	315,962	13,573	22,130	66,504
Sep-03	11,132	12,147	17,190	86,400	25,557	18,100	33,009
Oct-03	11,101	5,889	11,756	19,206	21,801	8,256	24,053
Nov-03	22,846	0	0	0	24,323	1,826	14,693
Dic-03	13,253	0	1,821	0	27,038	1,459	7,843
Ene-04	745	33,415	10,213	33,673	5,343	6,628	69,720
Feb-04	17,827	30,560	15,467	119,417	2,931	11,779	116,689
Mar-04	3,417	31,264	23,651	157,762	16,314	19,525	153,317
Abr-04	2,451	13,482	23,411	67,633	7,319	18,057	129,708
May-04	2,903	16,173	13,169	40,068	23,178	14,907	73,040
Jun-04	724	11,329	14,644	45,728	9,577	9,250	58,098
Jul-04	719	17,279	13,746	215,514	22,589	5,892	63,303
Ago-04	7,453	31,504	28,264	372,740	16,011	26,107	78,319
Sep-04	13,101	14,299	20,234	101,697	30,080	21,304	38,788
Oct-04	13,037	6,917	12,701	22,549	25,603	9,696	28,203
Nov-04	26,772	0	1,104	0	28,503	2,140	17,193



	#18	#19	#22	#23	#24	#25	#26
Feb-03	59,797	0	6,040	8,073	59,544	25,766	12,306
Mar-03	38,713	828	12,180	16,438	55,122	31,854	14,559
Abr-03	205,370	824	12,697	8,989	34,204	25,694	15,293
May-03	200,733	20,317	7,832	6,916	17,837	23,797	15,655
Jun-03	182,227	0	0	7,922	24,474	12,650	2,928
Jul-03	58,291	1,365	5,332	9,776	88,134	33,358	10,433
Ago-03	111,649	2,023	14,831	18,210	33,700	19,469	14,112
Sep-03	112,265	6,883	15,659	13,355	46,087	4,290	3,858
Oct-03	100,775	1,109	5,227	3,153	7,456	12,477	0
Nov-03	58,208	20,736	0	0	14,608	0	1,069
Dic-03	36,125	0	0	2,803	17,150	0	0
Ene-04	84,581	0	4,570	5,276	0	7,782	4,328
Feb-04	71,604	0	7,232	9,667	71,300	30,854	14,737
Mar-04	46,233	988	14,546	19,632	65,830	38,043	17,388
Abr-04	244,626	982	15,124	10,707	40,743	30,608	18,217
May-04	238,501	24,137	9,271	8,217	21,193	28,276	18,602
Jun-04	215,983	0	35	9,390	29,008	14,994	3,471
Jul-04	68,925	1,613	6,305	11,559	104,213	39,446	12,337
Ago-04	131,711	2,387	17,497	21,483	39,756	22,968	16,648
Sep-04	132,140	8,101	18,431	15,720	54,247	5,050	4,540
Oct-04	118,358	1,303	6,138	3,702	8,758	14,654	0
Nov-04	68,218	24,300	0	0	17,120	0	1,251
	#27	#28	#29	#30			
Feb-03	11,691	5,202	1,744	0			
Mar-03	22,901	11,614	21,590	7,504			
Abr-03	9,419	7,565	6,180	6,141			
May-03	15,695	5,231	0	2,749			
Jun-03	5,699	5,301	12,222	3,888			
Jul-03	4,354	8,887	6,559	9,571			
Ago-03	0	12,564	14,565	5,792			
Sep-03	12,160	12,332	2,187	7,698			
Oct-03	4,273	0	14,535	1,715			
Nov-03	5,043	0	7,244	0			
Dic-03	4,191	2,659	0	2,153			
Ene-04	4,933	4,320	4,197	9,060			
Feb-04	13,999	6,230	2,088	0			
Mar-04	27,350	13,870	25,783	8,962			
Abr-04	11,220	9,011	7,361	7,315			
May-04	18,648	6,216	0	3,266			
Jun-04	6,755	6,283	14,486	4,608			
Jul-04	5,149	10,509	7,755	11,317			
Ago-04	0	14,822	17,183	6,833			
Sep-04	14,313	14,513	2,574	9,061			
Oct-04	5,019	0	17,070	2,014			
Nov-04	5,911	0	8,489	0			

APENDICE 15

CANTIDADES A ORDENAR PRODUCTOS IMPORTADOS

MES	#3	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15	#16
Feb-03	137,097	22,100	45,849	1,557	17,392	2,093	127,854	14,889	25,519	12,916	12,916	2,448	9,837
Mar-03	173,993	3,628	18,878	19,865	44,225	6,105	9,038	2,861	26,177	19,804	19,804	13,662	16,349
Abr-03	94,183	2,800	62,369	3,295	11,076	5,518	22,497	2,058	11,318	19,653	19,653	6,145	15,159
May-03	143,732	2,702	162,664	10,414	6,354	8,128	20,702	2,443	13,611	11,084	11,084	19,509	12,547
Jun-03	1,134	57,266	60,982	4,661	0	1,693	11,094	611	9,557	12,355	12,355	8,081	7,805
Jul-03	74,113	6,499	46,202	7,450	5,377	0	37,750	608	14,612	11,625	11,625	19,106	4,983
Ago-03	10,985	118,932	25,839	4,468	0	23,694	70,148	6,318	26,704	23,959	23,959	13,573	22,130
Sep-03	87,302	0	39,711	14,169	0	17,203	16,981	11,132	12,147	17,190	17,190	25,557	18,100
Oct-03	57,452	1,352	98,105	18,663	0	2,907	0	11,101	5,889	11,756	11,756	21,801	8,256
Nov-03	52,717	0	53,238	40,442	0	7,970	2,752	22,846	0	0	0	24,323	1,826
Dic-03	37,259	0	16,632	19,395	0	7,658	0	13,253	0	12,034	12,034	27,038	1,459
Ene-04	91,040	0	111,283	0	18,906	4,664	0	745	33,415	0	0	5,343	6,628
Feb-04	163,841	26,462	54,901	1,864	20,829	2,506	153,108	17,827	30,560	15,467	15,467	2,931	11,779
Mar-04	207,392	4,333	22,545	23,720	52,825	7,290	10,795	3,417	31,264	23,651	23,651	16,314	19,525
Abr-04	111,977	3,335	74,292	3,925	13,195	6,572	26,799	2,451	13,482	23,411	23,411	7,319	18,057
May-04	170,466	3,210	193,271	12,372	7,550	9,656	24,599	2,903	16,173	13,169	13,169	23,178	14,907
Jun-04	1,341	67,872	72,279	5,524	0	2,007	13,150	724	11,329	14,644	14,644	9,577	9,250
Jul-04	87,484	7,684	54,632	8,808	6,359	0	44,639	719	17,279	13,746	13,746	22,589	5,892
Ago-04	12,937	140,296	30,483	5,270	0	27,950	82,758	7,453	31,504	28,264	28,264	16,011	26,107
Sep-04	102,593	0	46,742	16,676	0	20,248	19,981	13,101	14,299	20,234	20,234	30,080	21,304
Oct-04	67,370	1,585	115,222	21,917	0	3,414	0	13,037	6,917	12,701	12,701	25,603	9,696
Nov-04	61,688	0	62,394	47,392	0	9,340	2,547	26,772	0	1,104	1,104	28,503	2,140



MES	#17	#18	#19	#22	#23	#24	#25	#26	#27	#28	#29	#30
Feb-03	97,648	59,797	0	6,040	8,073	59,544	25,766	12,306	12,306	5,202	1,744	0
Mar-03	128,636	38,713	828	12,180	16,438	55,122	31,854	14,559	14,559	11,614	21,590	7,504
Abr-03	109,104	205,370	824	12,697	8,989	34,204	25,694	15,293	15,293	7,565	6,180	6,141
May-03	61,589	200,733	20,011	7,803	6,916	17,837	23,797	15,655	15,655	5,231	0	2,749
Jun-03	49,107	182,227	3,695	20,193	7,922	24,474	12,650	2,928	2,928	5,301	12,222	3,888
Jul-03	53,632	58,291	0	0	9,776	88,134	33,358	10,433	10,433	8,887	6,559	9,571
Ago-03	66,504	111,649	0	0	18,210	33,700	19,469	14,112	14,112	12,564	14,565	5,792
Sep-03	33,009	112,265	6,883	20,712	13,355	46,087	4,290	3,858	3,858	12,332	2,187	7,698
Oct-03	24,053	100,775	1,109	0	3,153	7,456	12,477	0	0	0	14,535	1,715
Nov-03	14,693	58,208	20,576	0	0	14,608	0	1,069	1,069	0	7,244	0
Dic-03	7,843	36,125	1,149	4,744	2,803	17,150	0	0	0	2,659	0	2,153
Ene-04	69,720	84,581	0	0	5,276	0	7,782	4,328	4,328	4,320	4,197	9,060
Feb-04	116,689	71,604	0	7,232	9,667	71,300	30,854	14,737	14,737	6,230	2,088	0
Mar-04	153,317	46,233	0	14,546	19,632	65,830	38,043	17,388	17,388	13,870	25,783	8,962
Abr-04	129,708	244,626	982	15,124	10,707	40,743	30,608	18,217	18,217	9,011	7,361	7,315
May-04	73,040	238,501	23,773	9,271	8,217	21,193	28,276	18,602	18,602	6,216	0	3,266
Jun-04	58,098	215,983	364	6,340	9,390	29,008	14,994	3,471	3,471	6,283	14,486	4,608
Jul-04	63,303	68,925	1,613	0	11,559	104,213	39,446	12,337	12,337	10,509	7,755	11,317
Ago-04	78,319	131,711	2,387	17,497	21,483	39,756	22,968	16,648	16,648	14,822	17,183	6,833
Sep-04	38,788	132,140	8,101	18,431	15,720	54,247	5,050	4,540	4,540	14,513	2,574	9,061
Oct-04	28,203	118,358	1,303	6,138	3,702	8,758	14,654	0	0	0	17,070	2,014
Nov-04	17,193	68,218	24,113	0	0	17,120	0	1,251	1,251	0	8,489	0

APENDICE 16
VENTAS EN UNIDADES 2001 y 2002

PRODUCTO	AZUL 1	NEGRO1	ROJO1	VERDE1	AZUL EXP 1	VERDE EXP 1	NEGRO EXP 1
Enero-01	414,898	403,869	148,762	6,326	307,757	40,061	372,902
Febrero-01	341,575	40,103	31,256	29,093	318,240	11,059	246,720
Marzo-01	365,294	679,081	365,455	3,329	615,360	18,336	439,680
Abril-01	598,541	497,694	321,341	1,858	359,424	76,090	81
Mayo-01	807,317	739,644	559,203	0	227,712	13,133	168,077
Junio-01	686,653	406,758	459,419	2,171	426,899	69,811	960,614
Julio-01	495,107	322,518	244,518	38,472	0	0	0
Agosto-01	840,169	508,130	488,890	53,798	133,584	4,682	35,585
Septiembre-01	523,011	376,464	292,158	19,061	92,794	55,642	243,264
Octubre-01	265,719	192,241	105,921	12,786	1,318,752	83,552	1,898,528
Noviembre-01	202,759	203,032	135,016	5,509	1,643,760	16,320	1,395,341
Diciembre-01	213,295	141,126	77,399	2,127	678,720	55,846	750,307





PRODUCTO	ROJO EXP 1	AZUL 2	NEGRO 2	ROJO 2	AZUL EXP 2	NEGRO EXP2	ROJO EXP2
Enero-01	160,243	383,280	292,140	294,720	0	0	0
Febrero-01	135,859	344,919	206,119	196,659	0	0	0
Marzo-01	8,640	811,146	413,860	467,700	9,331	111,840	5,875
Abril-01	0	657,640	484,340	470,640	0	0	0
Mayo-01	0	708,860	247,540	287,463	160,780	21,120	0
Junio-01	0	247,440	102,560	297,600	29,722	69,466	0
Julio-01	79,834	788,580	455,280	468,600	63,840	95,040	8,640
Agosto-01	251,154	779,518	575,983	577,613	13,133	6,566	0
Septiembre-01	230,170	563,785	411,433	399,398	57,370	88,128	27,994
Octubre-01	621,694	252,538	282,355	128,640	318,067	342,989	21,082
Noviembre-01	258,720	330,560	300,480	304,320	42,912	16,589	9,734
Diciembre-01	79,398	267,206	128,966	147,994	67,795	126,701	79,411

VENTAS EN UNIDADES 2002

PRODUCTO	AZUL 1	NEGRO1	ROJO1	VERDE1	AZUL EXP 1	VERDE EXP 1	NEGRO EXP 1	ROJO EXP 1
Enero-02	518,622	504,836	185,952	7,908	384,696	50,076	466,128	200,304
Febrero-02	426,969	50,129	39,070	36,366	397,800	13,824	308,400	169,824
Marzo-02	456,617	848,851	456,819	4,161	769,200	22,920	549,600	10,800
Abril-02	748,176	622,117	401,676	2,322	449,280	95,112	102	0
Mayo-02	1,009,146	924,555	699,004	0	284,640	16,416	210,096	0
Junio-02	858,316	508,448	574,274	2,714	533,624	87,264	1,200,768	0
Julio-02	618,884	403,148	305,648	48,090	0	0	0	99,792
Agosto-02	1,050,211	635,163	611,113	67,247	166,980	5,852	44,481	313,943
Septiembre-02	653,764	470,580	365,198	23,826	115,992	69,552	304,080	287,712
Octubre-02	332,149	240,301	132,401	15,983	1,648,440	104,440	2,373,160	777,118
Noviembre-02	253,449	253,790	168,770	6,886	2,054,700	20,400	1,744,176	323,400
Diciembre-02	266,619	176,407	96,749	2,659	848,400	69,808	937,884	99,248
Enero-03	622,346	605,803	223,142	9,490	461,635	60,091	559,354	240,365
TOTAL	7,815,268	6,244,128	4,259,816	227,651	8,115,387	615,755	8,698,228	2,522,506



PRODUCTO	AZUL 2	NEGRO 2	ROJO 2	AZUL EXP 2	NEGRO EXP2	ROJO EXP2
Enero-02	479,100	365,175	368,400	0	0	0
Febrero-02	431,149	257,649	245,824	0	0	0
Marzo-02	1,013,932	517,325	584,625	11,664	139,800	7,344
Abril-02	822,050	605,425	588,300	0	0	0
Mayo-02	886,075	309,425	359,329	200,975	26,400	0
Junio-02	309,300	128,200	372,000	37,152	86,832	0
Julio-02	985,725	569,100	585,750	79,800	118,800	10,800
Agosto-02	974,398	719,979	722,016	16,416	8,208	0
Septiembre-02	704,731	514,291	499,247	71,712	110,160	34,992
Octubre-02	315,672	352,944	160,800	397,584	428,736	26,352
Noviembre-02	413,200	375,600	380,400	53,640	20,736	12,168
Diciembre-02	334,008	161,208	184,992	84,744	158,376	99,264
Enero-03	574,920	438,210	442,080	0	0	0
TOTAL	8,244,260	5,314,531	5,493,763	953,687	1,098,048	190,920

APENDICE 17
PRONOSTICOS DE PRODUCTOS FINALES DE DEMANDA DEPENDIENTE

CALCULOS PRONOSTICOS CON METODO PROMEDIO MOVIL

MES	azul1	negro1	rojo1	verde1	azulexp1	verdexp1	negroexp1	rojoexp1	azul2	negro2	rojo2	azulexp2	negroexp2	rojoexp2
Ene-02	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb-02	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mar-02	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Abr-02	467,403	467,939	227,250	16,145	517,232	28,940	441,376	126,976	641,364	330,050	399,616	3,988	46,600	2,448
May-02	543,921	507,032	289,188	14,283	538,760	43,592	298,034	80,308	755,710	460,133	472,916	3,888	46,600	2,448
Jun-02	737,880	798,503	519,166	2,161	501,040	44,816	293,268	3,600	907,352	477,392	510,751	70,880	55,400	2,448
Jul-02	871,879	885,040	558,318	1,678	422,515	66,264	470,222	0	672,473	347,683	439,376	79,376	37,744	0
Ago-02	828,762	812,050	528,309	16,935	272,755	34,560	470,222	33,364	335,975	439,026	105,976	77,344	3,600	3,600
Sep-02	842,470	515,586	487,012	39,350	233,535	31,039	418,083	137,912	766,474	472,426	559,322	44,456	71,280	3,600
Oct-02	774,288	502,964	427,350	46,388	94,324	25,135	116,187	233,816	888,265	601,123	802,338	55,976	76,056	16,254
Nov-02	678,708	448,681	369,571	35,693	643,804	59,948	507,240	452,591	564,934	529,071	460,888	161,904	182,368	20,448
Dic-02	413,121	321,557	222,123	15,565	1,273,044	64,787	1,473,805	462,743	477,868	414,278	346,816	174,312	186,544	24,504

CALCULOS PRONOSTICOS CON METODO SUAVIZACION EXPONENCIAL $\alpha = 0.1$

MES	azul1	negro1	rojo1	verde1	azulexp1	verdexp1	negroexp1	rojoexp1	azul2	negro2	rojo2	azulexp2	negroexp2	rojoexp2
Ene-02	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb-02	518,622	504,835	180,982	7,908	384,686	50,076	486,128	200,304	479,100	365,175	389,400	0	0	0
Mar-02	509,457	459,355	171,264	10,754	398,008	46,451	450,355	197,256	474,305	354,422	356,142	0	0	0
Abr-02	504,173	498,314	193,819	10,095	424,326	44,098	480,280	178,810	528,283	370,713	378,991	1,166	18,980	734
May-02	528,573	510,634	220,005	9,317	428,821	49,189	414,282	160,748	557,646	394,184	399,922	1,050	12,682	661
Jun-02	576,630	552,050	267,906	8,386	412,603	45,821	393,845	144,874	590,469	395,708	385,062	21,042	13,964	595
Jul-02	604,709	547,717	298,542	7,818	424,705	50,055	474,838	130,207	582,370	359,957	393,476	22,853	21,251	535
Ago-02	606,207	533,250	293,232	11,846	382,235	45,050	427,084	127,165	604,705	380,871	412,703	29,368	31,008	1,562
Sep-02	650,608	543,450	330,438	17,386	363,709	41,130	388,824	145,843	641,675	414,782	443,635	27,173	28,728	1,406
Oct-02	650,923	536,153	333,914	18,039	338,237	43,972	390,349	160,030	647,960	424,733	449,196	31,827	36,860	4,764
Nov-02	615,046	506,577	313,783	17,825	467,458	50,019	578,630	221,739	614,749	417,564	420,356	63,222	76,056	6,923
Dic-02	582,486	481,298	299,384	16,751	626,182	47,057	696,085	231,905	594,595	413,358	416,351	95,764	70,524	7,448

CALCULOS PRONOSTICOS CON METODO SUAVIZACION EXPONENCIAL $\alpha = 0.4$

MES	azul1	negro1	rojo1	verde1	azulexp1	verdexp1	negroexp1	rojoexp1	azul2	negro2	rojo2	azulexp2	negroexp2	rojoexp2
Ene-02	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb-02	518,622	504,835	180,982	7,908	384,686	50,076	486,128	200,304	479,100	365,175	389,400	0	0	0
Mar-02	481,961	522,953	127,199	19,251	389,938	35,575	403,037	188,112	459,920	322,165	356,142	0	0	0
Abr-02	471,823	533,312	259,047	13,239	341,643	30,513	431,662	117,187	561,525	400,220	378,991	4,666	66,920	2,938
May-02	552,364	566,834	316,089	6,672	304,698	56,353	277,035	70,312	737,728	482,307	399,922	7,799	33,562	1,763
Jun-02	753,077	711,123	489,261	5,323	416,675	40,378	250,261	42,187	797,071	413,154	395,862	82,700	30,691	1,058
Jul-02	765,178	630,053	511,266	4,280	483,454	59,132	630,464	25,312	801,863	299,173	393,476	64,103	93,148	635
Ago-02	724,967	539,201	429,019	21,804	278,073	35,478	378,276	55,104	765,468	407,144	412,703	70,382	76,408	4,701
Sep-02	854,878	577,640	501,858	39,981	253,636	23,628	244,769	158,640	843,040	532,278	443,635	48,795	50,828	2,820
Oct-02	774,433	534,818	447,193	33,519	186,678	41,998	268,489	210,269	787,716	525,083	449,196	67,862	74,621	16,659
Nov-02	697,519	417,010	321,276	26,505	771,323	66,975	1,110,367	437,008	998,899	450,227	420,356	193,811	216,287	19,664
Dic-02	469,891	381,722	260,274	18,657	1,284,674	48,345	1,363,684	391,585	324,619	423,976	416,351	137,742	138,056	16,840



CALCULOS PRONOSTICOS CON METODO SUAVIZACION EXPONENCIAL $\alpha = 0.9$

MES	azul1	negro1	roj1	verde1	azulexp1	verdexp1	negroexp1	rojexp1	azul2	negro2	roj2	azulexp2	negroexp2	rojexp2
Ene-02	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb-02	518,622	504,836	185,952	7,908	384,690	50,076	466,128	200,304	479,100	365,176	368,400	0	0	0
Mar-02	436,134	95,600	53,768	33,520	396,480	17,448	324,173	172,872	435,944	322,165	356,142	0	0	0
Abr-02	454,569	773,526	416,513	7,097	731,920	22,373	527,097	27,007	956,133	400,229	379,991	10,438	135,820	6,810
May-02	718,815	637,258	403,160	2,790	477,545	67,838	52,797	2,701	835,468	482,307	309,922	1,050	12,592	661
Jun-02	990,113	895,825	669,420	230	303,930	23,568	104,368	270	881,013	413,154	395,862	160,952	26,018	66
Jul-02	870,469	547,166	563,789	2,471	510,655	60,893	1,100,128	27	366,471	290,173	393,478	51,535	60,651	7
Ago-02	644,045	417,562	333,462	43,628	51,065	8,069	110,013	89,616	923,800	407,144	412,703	76,974	114,885	8,721
Sep-02	1,009,654	613,402	683,348	64,875	155,389	6,076	51,034	281,530	869,339	534,279	443,685	22,472	18,886	972
Oct-02	689,361	484,862	387,013	27,931	119,832	63,204	278,775	288,094	731,192	525,083	449,198	66,788	101,033	31,990
Nov-02	367,869	284,757	167,862	17,178	1,485,589	100,316	2,163,722	728,216	357,224	456,227	420,356	304,504	395,966	26,876
Dic-02	264,891	284,887	167,679	7,315	1,988,789	28,382	1,786,131	383,882	407,602	423,978	416,361	84,726	58,258	13,639

CALCULOS PRONOSTICOS CON METODO TENDENCIA $\alpha = 0.1 \beta = 0.1$

MES	azul1	negro1	roj1	verde1	azulexp1	verdexp1	negroexp1	rojexp1	azul2	negro2	roj2	azulexp2	negroexp2	rojexp2
Ene-02	0	512,603	0	0	0	0	0	0	0	0	0	0	0	0
Feb-02	526,601	469,497	188,813	8,030	390,614	50,846	473,290	203,386	486,471	370,793	374,068	0	0	0
Mar-02	523,600	514,368	175,202	11,268	397,323	47,544	482,331	202,775	487,756	363,905	385,629	0	0	0
Abr-02	523,232	533,156	207,543	10,892	444,220	45,236	477,453	184,404	552,453	385,322	394,103	1,283	15,376	808
May-02	554,289	584,223	233,077	10,283	454,459	50,878	431,339	164,948	594,188	415,653	422,040	1,259	15,084	792
Jun-02	612,885	587,815	290,450	9,400	445,662	47,738	408,524	145,784	641,071	412,100	423,659	23,331	17,873	771
Jul-02	652,983	573,671	332,451	8,810	463,310	52,394	495,169	127,081	622,270	388,031	425,867	26,852	36,549	743
Ago-02	694,805	594,207	343,121	13,209	421,268	47,334	448,031	119,954	676,627	412,270	450,827	35,005	38,747	1,899
Sep-02	722,474	590,496	385,950	19,625	397,673	42,961	406,019	136,894	727,393	452,249	469,630	35,728	38,360	1,841
Oct-02	733,949	560,626	399,693	21,099	368,409	45,641	393,149	151,026	745,868	488,283	502,372	42,268	48,825	5,619
Nov-02	708,142	532,023	386,118	21,590	508,192	52,140	608,274	218,948	719,327	465,435	476,680	84,294	94,089	9,362
Dic-02	672,469	494,988	375,359	20,975	690,030	49,267	760,347	235,747	702,113	464,220	474,368	87,417	93,204	9,451

CALCULOS PRONOSTICOS CON METODO TENDENCIA $\alpha = 0.1 \beta = 0.4$

MES	azul1	negro1	roj1	verde1	azulexp1	verdexp1	negroexp1	rojexp1	azul2	negro2	roj2	azulexp2	negroexp2	rojexp2
Ene-02	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb-02	526,601	612,603	188,813	8,030	390,614	50,846	473,290	203,386	486,471	370,793	374,068	0	0	0
Mar-02	520,631	465,623	170,710	12,118	397,539	46,434	457,385	201,769	486,096	360,571	361,781	0	0	0
Abr-02	515,663	489,943	207,636	12,299	456,777	43,431	470,870	176,772	585,151	383,609	393,617	1,833	19,972	1,028
May-02	549,648	522,044	243,117	11,805	475,940	49,156	409,226	146,124	627,388	422,026	430,239	1,871	22,424	1,178
Jun-02	624,711	668,279	323,018	10,692	469,970	44,166	368,781	112,666	700,192	422,497	437,664	30,147	27,790	1,266
Jul-02	686,629	603,687	392,507	9,642	492,042	49,389	461,007	78,104	692,327	393,026	442,783	39,493	41,024	1,294
Ago-02	715,516	697,887	424,709	14,773	438,663	43,384	407,284	57,811	764,664	417,638	474,683	53,751	59,242	2,780
Sep-02	788,125	617,899	491,694	23,405	396,824	37,066	348,887	71,216	837,023	486,966	528,727	68,808	62,538	2,926
Oct-02	682,291	613,559	449,627	27,095	646,363	48,380	927,603	740,079	487,139	474,139	472,087	149,321	166,882	26,892
Nov-02	801,193	674,664	611,024	28,720	499,383	46,936	583,946	182,058	835,392	494,112	622,064	124,006	137,068	12,137
Dic-02	748,026	622,649	490,798	26,638	748,276	44,569	804,566	225,807	802,791	492,920	612,945	137,079	146,131	14,569



Calculos pronosticos con metodo tendencia $\alpha = 0.1$ $\beta = 0.9$

MES	azul1	negro1	rojo1	verde1	azulesp1	verdesp1	negroesp1	rojoesp1	azul2	negro2	rojo2	azulesp2	negroesp2	rojoesp2
Ene-02	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb-02	526.801	512.603	188.813	8.030	380.614	50.846	473.298	203.386	486.471	370.793	374.068	0	0	0
Mar-02	516.950	432.499	163.222	13.535	397.888	44.583	448.140	200.090	483.330	354.914	299.369	0	0	0
Abr-02	503.445	477.700	209.390	14.426	475.011	37.905	460.597	184.196	588.537	381.207	393.063	2.216	26.662	127
May-02	543.663	508.796	260.922	13.985	510.104	41.263	374.442	116.016	681.430	433.861	443.909	21.815	34.087	289
Jun-02	547.813	504.399	377.361	12.042	504.933	39.610	303.147	62.221	791.695	440.950	460.980	41.340	42.826	3.431
Jul-02	745.429	604.195	487.405	9.763	527.759	46.780	418.835	6.206	785.768	400.155	468.702	59.225	60.686	4.371
Ago-02	797.951	640.548	543.224	15.890	447.441	40.324	365.132	-22.186	873.348	423.164	507.582	61.440	85.187	5.013
Sep-02	911.056	663.582	630.118	27.672	366.613	31.983	292.479	2.128	966.632	485.710	575.463	89.242	89.250	6.342
Oct-02	0	650.484	0	0	0	0	0	0	0	0	607.438	0	0	0
Nov-02	897.372	576.752	615.927	36.646	453.497	46.065	617.032	202.199	905.627	526.908	562.173	169.443	180.141	5.783
Dic-02	784.139	486.295	539.756	35.804	806.787	45.987	982.389	307.334	802.534	518.185	627.035	186.930	192.635	8.162

Calculos pronosticos con metodo tendencia $\alpha = 0.4$ $\beta = 0.1$

MES	azul1	negro1	rojo1	verde1	azulesp1	verdesp1	negroesp1	rojoesp1	azul2	negro2	rojo2	azulesp2	negroesp2	rojoesp2
Ene-02	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb-02	426.601	512.603	188.813	8.030	390.614	50.846	473.298	203.386	486.471	370.793	374.068	0	0	0
Mar-02	490.742	316.881	125.787	20.619	399.684	35.327	407.915	191.700	469.500	326.628	323.308	0	0	0
Abr-02	479.720	540.216	268.312	14.633	568.483	29.157	470.831	113.843	714.298	411.627	433.828	6.132	61.612	3.231
May-02	600.469	585.798	337.105	9.813	537.020	56.971	269.953	58.206	785.594	505.619	519.985	3.341	40.039	2.103
Jun-02	793.654	749.234	511.737	6.900	442.150	40.558	231.029	22.572	862.734	435.765	483.802	90.561	37.169	1.342
Jul-02	851.816	670.621	569.204	4.042	488.544	60.818	642.734	260	654.371	309.051	434.128	75.225	61.607	832
Ago-02	781.629	570.634	485.662	23.019	283.585	35.791	365.182	-22.186	873.348	423.164	507.889	61.440	55.187	5.245
Sep-02	911.056	663.582	630.118	27.672	366.613	31.983	292.479	2.128	966.632	485.710	619.211	89.242	89.250	3.362
Oct-02	0	650.484	0	0	0	0	0	0	0	0	699.967	0	0	17.495
Nov-02	897.372	576.752	615.927	36.646	453.497	46.065	617.032	202.199	905.627	526.908	415.676	169.443	180.141	22.873
Dic-02	784.139	486.295	539.756	35.804	806.787	45.987	982.389	307.334	802.534	518.185	400.392	186.930	192.635	19.988

Calculos pronosticos con metodo tendencia $\alpha = 0.4$ $\beta = 0.4$

MES	azul1	negro1	rojo1	verde1	azulesp1	verdesp1	negroesp1	rojoesp1	azul2	negro2	rojo2	azulesp2	negroesp2	rojoesp2
Ene-02	0	512.603	0	0	0	0	0	0	0	0	0	0	0	0
Feb-02	526.801	281.384	188.813	8.030	380.614	50.846	473.298	203.386	486.471	370.793	374.068	0	0	0
Mar-02	478.766	524.136	125.787	24.020	400.667	30.884	398.127	187.873	462.861	313.050	307.919	0	0	0
Abr-02	458.459	606.771	268.312	17.584	614.065	21.271	469.339	96.336	789.980	414.959	449.023	6.532	78.286	4.113
May-02	609.169	828.173	337.105	10.602	587.836	56.195	200.789	7.400	885.830	541.819	556.000	4.740	56.815	2.985
Jun-02	868.610	743.415	511.737	3.662	457.732	39.306	142.686	-11.146	980.989	462.352	487.730	115.453	49.624	1.830
Jul-02	961.431	695.997	589.204	4.92	491.409	65.185	688.667	33.690	695.904	288.717	447.720	103.833	75.436	845
Ago-02	866.803	606.619	485.662	24.356	219.535	35.377	396.816	-11.142	847.595	405.768	525.289	110.061	110.649	6.166
Sep-02	1.012.047	825.393	562.740	53.199	114.798	15.109	195.190	158.060	951.909	586.609	667.627	73.467	71.149	4.053
Oct-02	863.229	338.931	502.770	48.437	31.749	37.139	195.476	269.834	867.106	601.274	622.864	73.348	94.472	21.732
Nov-02	589.119	218.627	368.776	37.260	853.670	75.081	1.371.709	613.826	572.372	505.801	392.477	265.503	289.378	59.622
Dic-02	327.465	109.024	279.357	22.041	1.701.348	55.481	1.886.490	592.266	409.076	436.748	340.296	194.921	230.139	25.890

CALCULOS PRONOSTICOS CON METODO TENDENCIA $\alpha = 0.4 \beta = 0.9$

MES	azul1	negro1	rojo1	verde1	azulexp1	verdeexp1	negroexp1	rojoexp1	azul2	negro2	rojo2	azulexp2	negroexp2	rojoexp2
Ene-02	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb-02	526.601	512.603	188.813	8.030	390.814	60.846	473.289	203.386	486.471	370.793	374.068	0	0	0
Mar-02	463.869	188.859	77.869	29.667	401.994	23.460	355.147	180.960	451.797	290.422	282.270	0	0	0
Abr-02	429.287	526.936	314.824	20.610	869.676	10.497	450.739	42.038	866.476	427.764	471.560	8.865	106.248	5.561
May-02	842.842	685.336	468.207	7.845	647.650	62.045	130.065	-60.026	1.022.535	609.355	628.630	6.327	76.928	3.983
Jun-02	1.007.368	967.470	758.775	-3.668	425.955	48.069	-45.510	-100.014	1.082.656	491.941	534.335	155.267	50.341	1.591
Jul-02	1.112.034	929.859	819.243	27.068	431.393	78.413	609.339	-88.002	622.010	218.066	424.368	136.581	72.369	-418
Ago-02	901.928	539.557	662.679	26.839	69.780	36.285	495.866	26.728	741.130	356.460	502.008	121.987	115.076	6.736
Sep-02	1.001.279	482.600	548.239	71.873	-50.303	1.153	183.201	284.623	892.048	630.722	692.290	49.872	67.998	4.263
Oct-02	777.446	380.665	375.374	63.028	-80.482	30.778	18.088	429.980	807.297	671.098	636.456	39.583	69.308	27.863
Nov-02	354.194	183.262	91.066	37.648	1.138.801	88.038	1.230.490	837.927	423.638	518.237	301.101	298.919	350.280	39.011
Dic-02	32.484	89.605	-36.995	7.706	2.350.119	66.694	2.451.259	715.977	228.944	381.760	216.875	218.043	228.827	29.123

CALCULOS PRONOSTICOS CON METODO TENDENCIA $\alpha = 0.9 \beta = 0.1$

MES	azul1	negro1	rojo1	verde1	azulexp1	verdeexp1	negroexp1	rojoexp1	azul2	negro2	rojo2	azulexp2	negroexp2	rojoexp2
Ene-02	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb-02	526.601	512.603	188.813	8.030	390.814	60.846	473.289	203.386	486.471	370.793	374.068	0	0	0
Mar-02	435.844	62.520	43.224	36.204	403.647	14.965	317.220	173.241	439.073	264.399	252.774	0	0	0
Abr-02	465.422	807.133	442.089	7.163	772.110	20.279	539.608	12.485	1.010.676	610.231	575.432	11.547	138.402	7.271
May-02	746.121	660.881	428.689	2.168	481.973	92.618	18.741	-14.434	878.064	822.672	612.184	1.185	13.966	734
Jun-02	1.033.738	942.181	719.254	-826	297.124	22.068	172.871	-15.827	923.157	339.323	387.038	198.987	26.401	14
Jul-02	910.983	568.778	623.098	1.840	623.009	84.662	1.172.400	-14.542	923.321	128.985	374.345	58.764	87.473	-59
Ago-02	656.909	409.841	343.057	47.087	18.265	4.764	85.146	85.980	962.037	644.271	684.663	82.998	125.170	10.631
Sep-02	1.055.096	624.038	614.106	70.667	131.457	2.130	13.803	308.992	1.013.626	737.414	740.690	22.583	16.881	1.023
Oct-02	701.992	483.542	367.485	29.731	95.496	66.268	286.333	305.769	748.487	651.628	534.075	70.730	108.224	34.612
Nov-02	343.942	240.350	142.448	17.341	1.610.867	108.604	2.343.372	788.364	332.846	369.885	176.215	398.246	432.722	29.452
Dic-02	229.163	129.380	152.046	6.974	2.167.984	27.243	1.631.063	386.427	386.269	372.995	356.436	90.434	60.994	14.615

CALCULOS PRONOSTICOS CON METODO TENDENCIA $\alpha = 0.9 \beta = 0.4$

MES	azul1	negro1	rojo1	verde1	azulexp1	verdeexp1	negroexp1	rojoexp1	azul2	negro2	rojo2	azulexp2	negroexp2	rojoexp2
Ene-02	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb-02	526.601	512.603	188.813	8.030	390.814	60.846	473.289	203.386	486.471	370.793	374.068	0	0	0
Mar-02	409.044	62.347	2.998	43.855	405.667	4.969	317.180	184.190	424.136	233.850	218.148	0	0	0
Abr-02	441.087	927.039	523.786	4.163	872.245	16.030	596.402	-38.079	1.164.734	655.915	639.409	14.697	176.148	9.253
May-02	817.284	712.149	482.262	-2.124	478.715	109.638	-100.424	-54.317	935.334	865.235	666.143	3.78	4.530	238
Jun-02	1.159.624	1.039.317	823.734	-4.078	221.319	14.861	133.376	-36.388	953.283	296.475	362.912	252.038	19.001	-749
Jul-02	949.051	506.429	655.818	614	532.095	96.191	1.432.622	-21.494	204.147	33.918	339.538	52.405	99.256	-678
Ago-02	593.725	321.168	271.202	68.013	-108.643	-9.582	-33.889	113.471	1.019.384	567.138	619.252	80.887	143.069	13.295
Sep-02	1.110.722	624.508	630.027	85.069	76.789	-9.238	-112.394	391.873	1.074.618	833.474	608.658	3.332	-618	147
Oct-02	841.114	451.301	349.248	26.341	63.656	76.492	289.399	395.608	704.208	557.082	614.368	69.980	116.648	42.873
Nov-02	193.473	150.769	33.668	9.529	2.011.894	128.625	2.922.665	946.410	177.161	310.741	63.248	467.967	627.445	33.422
Dic-02	99.470	169.944	83.419	-1.089	2.687.846	17.688	2.198.242	372.581	297.198	320.847	322.547	63.784	18.909	12.060

CALCULOS PRONOSTICOS CON METODO TENDENCIA $\alpha = 0.9$ $\beta = 0.9$

MES	azul1	negro1	rojo1	verde1	azulexp1	verdeexp1	negroexp1	rojoexp1	azulexp2	negroexp2	rojoexp2
Ene-02	0	0	0	0	0	0	0	0	0	0	0
Feb-02	526.601	512.803	186.913	8.030	390.614	50.846	473.299	203.386	486.471	370.793	374.088
Mar-02	384.209	-62.347	64.387	58.905	408.820	-11.692	199.077	399.241	182.995	160.439	0
Abr-02	449.904	927.039	708.444	-10.001	1.038.808	18.276	672.489	-11.480	1.412.523	669.713	787.589
May-02	962.361	712.145	487.916	-8.335	335.781	148.483	-319.294	-56.957	892.990	745.318	692.187
Jun-02	1.286.418	1.036.317	904.363	-3.507	76.078	-16.287	199.329	-5.369	894.318	133.505	206.959
Jul-02	836.313	506.425	566.406	4.457	644.606	114.873	1.953.962	4.139	-98.411	-95.076	303.923
Ago-02	389.698	321.188	79.633	81.434	-300.876	-43.595	-533.975	172.381	1.290.249	816.859	734.158
Sep-02	1.271.148	624.508	736.373	94.882	133.601	-14.123	-274.186	486.606	1.163.091	895.371	890.026
Oct-02	501.409	451.301	280.072	-409	118.954	113.931	463.827	326.217	536.401	429.728	388.590
Nov-02	-2.119	150.769	-94.689	-3.719	2.734.976	190.448	3.943.460	1.117.773	-58.211	1.68.766	-160.686
Dic-02	83.708	169.944	113.969	-3.847	2.611.369	-26.876	1.944.918	144.140	392.819	330.593	423.212

CALCULOS PRONOSTICOS CON METODO WINTERS $\alpha = 0.1$ $\beta = 0.1$ $\gamma = 0.1$

MES	azul1	negro1	rojo1	verde1	azulexp1	verdeexp1	negroexp1	rojoexp1	azulexp2	negroexp2	rojoexp2
Ene-01	0	0	0	0	0	0	0	0	0	0	0
Feb-01	343.260	39.912	31.847	29.651	324.492	11.012	250.751	135.666	348.451	206.939	197.603
Mar-01	388.013	672.274	377.666	3.478	634.432	18.137	460.283	6.370	825.087	416.907	470.888
Abr-01	804.250	490.506	335.884	1.870	373.982	74.841	84	0	672.769	487.119	474.637
May-01	816.399	726.263	590.273	0	238.660	12.857	174.074	0	728.650	249.116	290.296
Jun-01	498.323	312.699	259.754	41.708	0	0	0	77.389	810.047	456.419	470.795
Jul-01	852.913	496.827	525.619	59.050	141.995	4.545	37.208	244.269	808.732	560.677	585.185
Ago-01	631.187	366.893	315.011	20.995	98.840	63.931	254.995	223.474	585.720	414.821	404.764
Sep-01	269.634	187.209	114.395	14.112	1.408.221	80.898	1.988.875	602.877	262.665	294.677	130.384
Oct-01	205.980	197.648	145.804	6.094	1.753.200	16.793	1.461.845	250.716	343.766	302.821	308.437
Nov-01	216.650	137.395	83.912	2.346	723.841	54.041	786.876	76.925	277.816	129.892	148.971
Dic-01	526.060	491.390	200.453	8.685	407.627	48.361	484.854	183.130	487.236	367.323	372.671
Ene-02	431.896	48.678	41.838	39.855	427.997	13.347	321.288	164.166	446.032	268.705	248.04
Feb-02	459.637	821.948	487.364	4.529	810.445	22.069	569.474	10.410	1.043.739	617.364	587.992
Mar-02	750.768	601.158	425.938	2.610	470.663	91.410	105	0	842.300	603.371	689.120
Abr-02	1.008.364	892.183	756.842	0	296.571	16.769	216.672	0	904.054	307.462	356.884
May-02	856.063	490.277	601.884	2.894	953.080	83.730	1.228.641	0	314.310	127.070	370.316
Jun-02	611.415	386.818	316.345	50.608	0	0	0	95.309	991.001	659.683	677.690
Jul-02	1.043.682	613.000	634.047	70.818	171.512	5.623	45.113	301.730	984.104	711.635	716.248
Ago-02	848.624	454.447	378.964	24.935	118.619	66.899	307.330	276.768	709.656	607.698	494.472
Sep-02	328.029	232.287	156.028	16.627	1.678.931	100.670	2.391.109	748.428	317.015	348.013	169.061
Oct-02	250.764	245.931	172.621	7.123	2.094.863	19.876	1.782.489	311.827	413.975	370.102	375.921
Nov-02	263.808	170.987	98.547	2.736	857.901	67.448	940.028	96.893	333.938	198.783	182.686
Dic-02	263.808	170.987	98.547	2.736	857.901	67.448	940.028	96.893	333.938	198.783	182.686

CALCULOS PRONOSTICOS CON METODO WINTERS $\alpha = 0.1, \beta = 0.1, \gamma = 0.4$

MES	azul1	negro1	rojo1	verde1	azulexp1	negroexp1	rojoexp1	azul1	negro2	rojo2	azulexp2	negroexp2	rojoexp2
Ene-01	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb-01	345,260	40,065	32,037	30,115	329,082	11,124	254,749	137,873	350,408	208,401	198,840	0	0
Mar-01	359,862	674,829	379,566	3,504	649,125	18,239	458,463	8,582	829,086	418,458	473,448	0	6,641
Abr-01	656,851	492,173	337,443	1,982	377,825	75,417	85	0	679,555	499,660	478,846	0	0
May-01	819,364	728,357	592,428	0	240,763	12,841	175,768	0	731,092	250,221	281,438	184,871	24,278
Jun-01	687,464	399,160	490,088	2,362	453,312	68,455	1,007,014	0	265,995	103,642	301,832	34,667	81,053
Jul-01	489,536	313,303	260,368	41,851	0	0	77,928	811,841	468,776	472,037	74,965	111,575	10,214
Ago-01	854,644	496,577	526,627	59,210	142,844	4,981	37,403	810,216	582,034	566,375	15,825	7,811	0
Sep-01	531,851	367,303	315,487	21,038	95,182	54,069	295,695	224,384	415,650	405,383	65,568	105,350	33,568
Oct-01	270,206	187,358	114,513	14,132	1,409,664	81,042	1,984,505	604,578	282,821	285,927	130,528	381,137	410,970
Nov-01	250,109	197,742	145,999	6,089	1,755,915	15,810	1,484,396	251,142	343,976	303,145	308,645	51,428	19,878
Dic-01	216,711	137,413	83,659	2,349	724,083	54,064	786,324	76,978	277,806	130,036	100,018	81,087	151,557
Ene-02	522,936	489,072	199,225	8,509	401,778	47,857	477,004	189,950	494,379	384,871	370,284	0	0
Feb-02	432,051	48,691	41,854	39,878	421,868	13,355	321,597	164,317	446,192	258,817	248,200	0	0
Mar-02	459,988	821,998	487,427	4,530	810,721	22,072	569,878	10,412	1,043,867	517,431	587,662	13,684	164,014
Abr-02	750,720	601,081	425,811	2,510	470,602	81,368	105	842,230	603,289	589,053	0	0	8,619
May-02	1,009,070	591,953	736,657	0	298,388	16,759	215,413	0	903,768	307,350	358,570	230,674	30,328
Jun-02	855,677	490,068	601,636	2,892	552,535	83,655	1,228,201	0	314,179	120,999	370,134	42,218	68,674
Jul-02	811,057	385,827	316,172	50,857	0	0	95,138	990,461	568,680	577,374	89,254	132,873	12,084
Ago-02	1,042,858	612,848	633,626	70,751	171,239	5,615	45,027	301,099	983,463	710,927	715,711	18,261	9,131
Sep-02	645,917	454,155	376,710	24,808	118,405	66,791	306,688	276,111	709,104	507,110	484,053	78,922	121,244
Oct-02	328,760	232,125	135,918	16,608	1,675,605	100,412	2,385,665	746,549	316,761	347,650	158,915	433,009	456,970
Nov-02	250,569	245,453	172,469	7,115	2,090,471	19,642	1,748,247	311,105	413,622	369,895	378,957	57,831	22,355
Dic-02	263,384	170,859	98,457	2,733	856,019	67,333	937,664	95,632	333,642	158,603	182,503	60,482	169,112

CALCULOS PRONOSTICOS CON METODO WINTERS $\alpha = 0.1, \beta = 0.1, \gamma = 0.9$

MES	azul1	negro1	rojo1	verde1	azulexp1	negroexp1	rojoexp1	azul1	negro2	rojo2	azulexp2	negroexp2	rojoexp2
Ene-01	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb-01	345,616	40,397	32,358	30,647	336,987	11,317	281,698	141,703	353,713	210,882	200,935	0	0
Mar-01	372,992	679,405	382,864	3,847	654,432	18,578	487,286	8,903	835,853	422,787	477,778	10,507	6,767
Abr-01	811,252	484,983	339,815	2,003	384,608	76,403	86	0	680,268	494,028	480,587	0	0
May-01	824,382	731,880	596,071	0	244,340	13,094	178,784	0	735,390	292,088	293,388	187,825	24,658
Jun-01	700,946	400,763	492,592	2,379	458,907	69,095	1,021,248	0	297,242	104,287	303,491	35,143	82,097
Jul-01	501,594	314,322	261,460	42,097	0	0	78,885	815,145	450,081	474,140	75,760	112,735	10,380
Ago-01	897,308	497,842	528,333	59,483	143,769	4,587	37,740	247,939	812,731	584,340	588,438	15,766	7,875
Sep-01	533,244	368,007	316,241	21,112	99,773	64,305	257,442	225,969	587,803	415,787	408,449	69,022	33,892
Oct-01	270,668	187,604	114,712	14,168	1,416,629	81,288	2,004,132	607,543	263,255	285,922	130,787	362,865	412,797
Nov-01	306,327	197,909	146,161	6,099	1,760,621	15,839	1,468,846	251,886	344,332	303,542	308,998	51,576	19,936
Dic-01	216,815	137,459	83,685	2,351	725,024	54,108	787,481	77,074	278,031	130,111	150,084	81,219	151,761
Ene-02	517,741	465,281	197,162	9,483	982,052	47,019	463,980	184,673	489,811	360,257	366,310	0	0
Feb-02	432,313	46,712	41,892	39,918	472,660	13,368	322,173	164,583	446,462	299,007	248,382	0	0
Mar-02	460,076	822,085	487,561	4,532	811,202	22,077	570,038	10,416	1,044,059	517,546	587,781	13,695	164,139
Abr-02	750,598	600,979	425,865	2,609	470,465	81,345	105	842,112	603,152	588,939	0	0	8,619
May-02	1,008,574	591,563	736,345	0	298,072	16,733	215,138	0	903,365	307,161	358,570	230,649	30,328
Jun-02	855,028	486,770	601,218	2,869	551,681	83,529	1,222,708	0	313,958	120,979	369,878	42,146	68,674
Jul-02	810,453	395,309	315,879	50,502	0	0	94,844	989,548	597,886	576,704	89,049	132,573	12,041
Ago-02	1,041,634	612,055	632,821	70,639	170,767	6,603	44,883	300,007	982,380	709,586	714,799	18,209	9,106
Sep-02	647,181	453,665	376,231	24,664	118,033	66,624	306,624	274,984	708,220	506,383	493,346	79,666	120,857
Oct-02	329,278	231,856	135,728	16,575	1,669,866	100,141	2,376,194	743,298	318,331	347,035	156,687	431,450	465,321
Nov-02	250,189	245,153	172,213	7,100	2,072,860	19,987	1,740,867	305,581	413,026	369,004	374,939	57,607	22,273
Dic-02	262,850	170,644	96,304	2,727	852,767	67,137	933,561	95,162	333,143	158,296	182,192	60,114	166,438



CALCULOS PRONOSTICOS CON METODO WINTERS $\alpha = 0.1 \beta = 0.4 \gamma = 0.1$

MES	azul1	negro1	rojo1	verde1	azulexp1	negroexp1	rojoexp1	verdeexp1	azul1	negro2	rojo2	verde2	azulexp2	negroexp2	rojoexp2	verdeexp2
Ene-01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb-01	343,260	99,912	31,847	29,861	324,482	11,012	250,751	135,666	348,451	208,839	197,603	0	0	0	0	0
Mar-01	367,960	672,399	377,483	3,476	634,076	18,139	450,081	8,570	874,843	415,859	470,822	10,124	12,124	12,124	6,404	6,404
Abr-01	603,961	490,780	335,342	1,965	373,256	74,853	84	0	672,075	488,945	474,422	0	0	0	0	0
May-01	815,962	727,235	487,766	0	237,707	12,875	173,508	0	726,892	246,936	290,020	181,283	23,911	23,911	0	0
Jun-01	694,072	390,203	584,986	2,323	446,870	68,271	993,227	0	284,225	103,139	300,361	33,802	76,998	76,998	0	0
Jul-01	496,963	313,980	256,948	41,054	0	0	0	0	804,840	454,625	469,632	72,428	107,815	107,815	9,826	9,826
Ago-01	849,851	498,858	616,736	57,746	139,822	4,876	36,771	275,981	801,641	579,421	583,274	14,939	7,489	7,489	0	0
Sep-01	528,693	369,900	307,911	20,379	96,846	54,448	250,783	225,283	578,919	413,711	403,078	64,777	99,510	99,510	31,582	31,582
Oct-01	268,345	189,244	111,119	13,687	1,370,628	81,807	1,950,822	609,397	268,704	283,751	129,712	356,138	382,982	382,982	23,505	23,505
Nov-01	204,589	200,281	140,802	5,809	1,699,359	16,037	1,428,126	254,130	337,605	301,761	306,622	47,240	16,263	16,263	10,696	10,696
Dic-01	214,830	139,644	80,162	2,223	697,531	55,032	764,878	76,189	271,948	129,410	148,680	73,427	137,236	137,236	85,815	85,815
Ene-02	521,005	500,165	190,976	8,167	390,959	49,381	470,118	196,829	486,213	385,488	369,582	0	0	0	0	0
Feb-02	427,280	49,649	39,724	37,159	402,542	13,663	10,847	167,748	434,017	257,277	245,829	0	0	0	0	0
Mar-02	484,636	839,819	459,383	4,106	770,889	22,643	549,083	10,663	1,013,230	514,351	581,812	11,907	142,721	142,721	7,485	7,485
Abr-02	741,784	619,202	399,928	2,314	448,464	93,673	101	0	816,264	599,841	583,136	0	0	0	0	0
May-02	997,243	914,329	690,102	0	280,836	18,229	207,909	0	875,268	305,782	355,075	197,747	26,977	26,977	0	0
Jun-02	846,190	503,085	563,100	2,665	523,522	96,369	1,179,748	0	304,313	126,486	368,795	36,029	84,210	84,210	0	0
Jul-02	604,965	366,333	296,085	46,441	0	0	0	0	96,321	960,269	556,977	572,780	76,132	113,336	10,312	10,312
Ago-02	1,034,273	630,416	594,709	65,141	162,845	5,813	43,627	237,414	311,668	956,387	710,004	711,340	15,821	7,811	7,811	0
Sep-02	644,024	467,770	354,602	23,027	112,997	69,207	237,414	286,148	890,683	507,441	492,046	67,601	104,308	104,308	33,117	33,117
Oct-02	327,486	239,240	128,601	15,438	1,608,113	104,102	2,322,306	774,282	308,524	348,602	158,628	375,699	405,141	405,141	24,895	24,895
Nov-02	260,228	253,060	164,091	6,668	2,004,379	20,367	1,709,095	922,775	408,949	371,504	375,778	60,720	19,607	19,607	11,505	11,505
Dic-02	263,680	176,158	94,260	2,677	829,355	69,800	920,873	99,213	328,508	159,719	183,045	80,366	150,194	150,194	94,148	94,148

CALCULOS PRONOSTICOS CON METODO WINTERS $\alpha = 0.1 \beta = 0.4 \gamma = 0.4$

MES	azul1	negro1	rojo1	verde1	azulexp1	negroexp1	rojoexp1	verdeexp1	azul1	negro2	rojo2	verde2	azulexp2	negroexp2	rojoexp2	verdeexp2
Ene-01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb-01	345,260	40,093	32,037	30,115	329,082	11,124	284,749	137,873	350,405	208,401	189,840	0	0	0	0	0
Mar-01	369,747	674,934	379,328	3,600	641,910	19,296	456,042	8,688	828,703	418,323	473,293	10,264	122,849	122,849	6,526	6,526
Abr-01	605,286	492,269	336,647	1,976	378,711	75,398	84	0	674,660	489,234	476,368	0	0	0	0	0
May-01	817,865	728,855	689,430	0	239,319	12,940	174,847	0	728,667	240,795	290,905	182,602	23,981	23,981	0	0
Jun-01	695,337	399,774	485,760	2,335	448,832	65,493	696,187	0	254,672	103,369	300,953	33,961	76,364	76,364	0	0
Jul-01	497,400	314,174	256,880	41,107	0	0	0	0	77,855	805,628	455,112	470,079	72,598	108,063	9,860	9,860
Ago-01	849,844	499,869	616,766	57,752	139,839	4,678	36,775	245,678	801,672	579,438	583,291	14,942	7,471	7,471	0	0
Sep-01	528,316	369,772	307,701	20,369	96,987	64,374	250,306	224,510	376,931	413,348	402,767	64,609	96,347	96,347	31,503	31,503
Oct-01	267,980	189,040	110,874	13,663	1,943,816	807,020	268,371	283,288	179,528	383,973	381,760	23,390	23,390	23,390	0	0
Nov-01	204,139	199,991	140,849	5,794	1,692,046	15,964	1,421,081	252,763	337,021	301,082	306,922	47,023	16,181	16,181	10,622	10,622
Dic-01	214,387	139,304	79,989	2,216	893,928	64,817	780,068	64,817	271,386	128,069	148,533	73,017	136,484	136,484	85,095	85,095
Ene-02	616,683	486,932	169,346	9,058	393,129	43,664	459,487	162,308	481,319	361,787	368,290	0	0	0	0	0
Feb-02	426,677	49,695	39,656	37,071	400,940	13,623	309,142	165,960	433,329	260,760	245,392	0	0	0	0	0
Mar-02	453,946	834,823	458,840	4,167	768,041	22,592	546,782	10,817	1,011,744	513,399	590,858	11,868	142,140	142,140	7,438	7,438
Abr-02	740,798	614,569	399,372	2,309	444,985	93,751	100	0	816,231	699,860	592,290	0	0	0	0	0
May-02	996,113	913,578	699,286	0	290,050	16,197	208,685	0	874,332	305,340	364,640	167,110	28,993	28,993	0	0
Jun-02	845,424	502,739	562,566	2,651	622,345	96,293	1,176,763	0	304,045	126,316	368,438	34,934	83,993	83,993	0	0
Jul-02	604,550	396,131	295,875	46,353	0	0	0	0	96,141	969,640	558,528	572,387	79,982	113,116	10,281	10,281
Ago-02	1,033,824	630,209	594,432	65,097	162,667	6,809	43,473	311,300	954,978	709,629	711,007	19,600	7,801	7,801	0	0
Sep-02	643,686	467,696	354,718	23,019	112,834	69,163	297,231	285,984	690,535	607,309	491,933	67,656	104,238	104,238	33,083	33,083
Oct-02	327,482	239,239	128,697	15,437	1,608,024	104,101	2,322,182	774,275	308,518	348,997	158,629	375,684	405,103	405,103	24,892	24,892
Nov-02	260,268	263,093	164,117	6,669	2,008,136	20,373	1,709,837	322,927	405,711	371,577	376,841	50,742	19,607	19,607	11,512	11,512
Dic-02	263,760	176,200	94,289	2,578	829,967	69,838	921,645	99,289	328,602	159,778	183,115	80,434	150,319	150,319	94,267	94,267

CALCULOS PRONOSTICOS CON METODO WINTERS $\alpha = 0.1 \beta = 0.4 \gamma = 0.9$

MES	azul1	negro1	rojo1	verde1	azulexp1	negroexp1	rojoexp1	azul2	negro2	rojo2	azulexp2	negroexp2	rojoexp2
Ene-01	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb-01	348,618	40,397	32,268	30,547	338,987	11,317	281,698	141,703	353,713	210,882	200,035	0	0
Mar-01	372,770	879,288	362,489	3,542	864,368	18,564	466,482	8,822	835,245	422,506	477,479	10,480	6,745
Abr-01	810,220	484,780	338,857	1,894	382,686	78,278	96	0	678,779	483,119	479,710	0	0
May-01	821,762	731,567	582,285	0	242,108	13,051	177,176	0	732,207	281,283	292,405	184,902	24,277
Jun-01	697,477	400,739	487,304	2,345	462,227	68,872	1,006,812	0	265,427	103,758	301,955	34,239	60,000
Jul-01	495,141	314,835	257,278	41,198	0	0	0	78,187	808,793	456,940	470,336	72,894	108,486
Ago-01	849,886	499,870	516,818	87,761	139,871	4,576	36,783	245,877	801,726	579,467	583,130	14,847	7,474
Sep-01	627,679	369,405	307,346	20,326	96,412	54,250	249,479	223,978	677,875	412,732	402,240	64,430	69,062
Oct-01	267,386	188,698	110,729	13,920	1,368,837	81,364	1,831,856	602,901	267,825	282,503	128,210	361,943	379,604
Nov-01	203,613	199,502	140,121	5,769	1,679,404	15,894	1,408,876	250,475	269,946	304,906	46,545	18,938	10,491
Dic-01	213,983	138,901	79,686	2,205	687,687	54,460	752,237	76,959	270,435	128,489	147,944	72,302	135,175
Ene-02	509,514	491,559	186,633	7,893	370,105	47,471	441,816	184,301	474,836	355,660	360,793	0	0
Feb-02	425,389	49,477	39,546	36,920	398,169	13,654	308,701	166,998	432,166	295,883	244,952	0	0
Mar-02	462,781	837,144	457,432	4,171	763,116	22,478	542,786	10,538	1,009,232	511,784	578,244	11,772	141,128
Abr-02	739,115	613,477	398,434	2,302	442,445	93,371	100	0	813,435	897,196	580,899	0	0
May-02	994,200	912,178	687,609	0	278,692	15,142	205,518	0	872,669	304,824	383,804	195,989	25,762
Jun-02	844,129	502,145	561,660	2,645	820,311	85,990	1,171,976	0	303,560	126,060	368,829	35,770	83,616
Jul-02	603,866	395,790	295,520	48,312	0	0	0	97,828	958,578	855,757	571,687	75,720	112,734
Ago-02	1,033,063	629,860	593,963	65,022	162,367	5,801	43,381	310,680	964,286	708,984	719,441	15,569	7,783
Sep-02	643,853	467,871	354,576	23,005	1,12,826	69,141	296,914	285,702	890,286	302,066	491,740	67,775	104,117
Oct-02	327,474	239,238	129,582	15,436	1,608,866	104,100	2,321,860	774,289	309,509	348,588	158,921	375,803	405,039
Nov-02	260,336	253,149	184,181	6,662	2,008,447	20,394	1,711,121	328,191	408,915	371,701	378,892	50,779	19,630
Dic-02	263,886	176,272	94,339	2,560	831,025	69,803	922,984	99,449	328,765	169,879	183,217	80,553	160,936

CALCULOS PRONOSTICOS CON METODO WINTERS $\alpha = 0.1 \beta = 0.9 \gamma = 0.1$

MES	azul1	negro1	rojo1	verde1	azulexp1	negroexp1	rojoexp1	azul2	negro2	rojo2	azulexp2	negroexp2	rojoexp2
Ene-01	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb-01	343,280	39,912	31,847	29,851	324,492	11,012	250,761	136,666	348,451	206,839	197,603	0	0
Mar-01	367,871	672,528	377,124	3,472	833,484	18,143	449,700	8,571	824,438	415,778	470,712	10,100	6,387
Abr-01	603,490	491,227	334,298	1,967	372,107	74,852	63	0	870,948	446,863	474,072	0	0
May-01	814,245	728,769	583,778	0	236,174	12,904	172,617	0	724,275	246,657	289,588	178,286	0
Jun-01	692,207	400,719	478,238	2,293	442,030	68,556	984,810	0	252,663	102,857	299,624	32,858	76,797
Jul-01	486,026	316,797	262,172	40,115	0	0	0	78,080	797,607	463,514	467,883	69,440	103,374
Ago-01	845,759	503,072	504,742	55,980	136,970	4,620	36,192	247,668	792,137	577,836	580,814	14,115	7,058
Sep-01	525,693	373,989	299,027	19,611	94,387	56,122	246,016	227,738	570,498	412,455	401,090	60,339	92,699
Oct-01	266,608	191,657	107,387	12,990	1,330,423	83,118	1,908,603	617,500	284,358	282,816	128,991	328,676	362,314
Nov-01	203,064	203,090	135,538	5,527	1,648,127	16,302	1,394,807	297,994	331,350	300,705	304,980	43,048	16,644
Dic-01	213,248	141,578	77,014	2,110	674,608	56,988	746,340	79,468	260,661	128,856	147,954	66,584	124,451
Ene-02	517,189	407,304	183,489	7,746	378,311	50,234	459,282	200,103	475,845	364,225	367,317	0	0
Feb-02	424,363	50,304	38,262	36,410	390,613	13,886	304,104	170,468	426,171	268,485	244,437	0	0
Mar-02	451,976	849,484	444,541	4,024	751,495	22,873	639,668	10,823	997,346	513,129	578,056	11,009	13,948
Abr-02	738,665	921,919	398,707	2,240	437,864	96,133	99	0	906,398	589,063	561,231	0	0
May-02	985,235	921,219	678,264	0	277,574	16,390	205,912	0	888,679	305,828	354,631	189,894	24,943
Jun-02	846,772	605,933	558,884	2,631	521,766	87,003	1,178,167	0	303,619	126,721	367,237	35,365	82,719
Jul-02	607,180	397,837	290,859	46,608	0	0	96,978	963,477	539,331	675,031	675,031	76,532	113,917
Ago-02	1,041,583	632,386	602,316	66,189	169,036	9,833	44,066	313,168	984,204	714,796	716,352	16,048	8,023
Sep-02	850,546	468,800	362,585	23,652	1,153,411	69,350	302,849	287,067	700,668	512,017	486,991	71,074	109,173
Oct-02	331,614	239,690	132,383	15,984	1,648,671	104,194	2,372,988	775,721	315,321	362,378	160,547	399,037	430,284
Nov-02	263,808	263,431	169,724	6,938	2,085,244	20,360	1,751,107	322,978	414,447	375,974	360,959	54,404	21,031
Dic-02	267,666	176,364	97,783	2,663	856,048	69,745	944,677	99,174	336,126	161,719	185,678	66,622	161,586



CALCULOS PRONOSTICOS CON METODO WINTERS $\alpha = 0.1 \beta = 0.9 \gamma = 0.4$

MES	azul1	negro1	roj1	verde1	azulexp1	verdexp1	negroxp1	rojexp1	azul2	negro2	roj2	azulexp2	negroxp2	rojexp2
Ene-01	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb-01	345,250	40,093	32,037	30,115	329,062	11,124	254,749	137,873	350,406	208,401	193,940	0	0	0
Mar-01	369,554	674,943	375,851	3,495	840,484	18,290	450,341	8,652	840,484	418,096	473,939	10,222	122,478	6,503
Abr-01	605,565	492,430	335,352	1,965	374,889	75,367	84	0	672,859	488,512	475,667	0	0	0
May-01	815,624	728,865	694,714	0	237,073	12,940	173,363	0	725,375	249,133	290,077	179,036	23,515	0
Jun-01	692,273	400,743	478,295	2,283	442,151	68,565	985,101	0	77,909	452,850	467,378	69,231	103,069	9,360
Jul-01	843,984	512,192	563,624	55,814	138,194	4,602	35,973	246,099	790,460	576,277	579,429	14,034	7,018	0
Ago-01	524,174	373,140	288,150	19,529	93,726	54,636	244,057	225,881	568,909	411,000	399,838	59,871	91,964	29,008
Sep-01	265,749	181,174	107,012	12,928	3,19,943	82,644	1,891,667	611,873	253,543	281,703	128,542	323,778	349,248	21,287
Oct-01	202,409	202,588	135,095	5,500	1,632,082	16,209	1,352,283	295,859	330,282	299,523	303,518	42,857	16,485	9,566
Nov-01	212,620	141,268	76,777	2,101	669,597	55,701	740,214	76,818	265,898	128,495	147,486	66,020	123,417	76,736
Dic-01	512,884	504,037	181,906	7,650	370,818	49,508	448,764	195,527	471,968	360,541	364,017	0	0	0
Ene-02	424,088	50,279	39,238	35,375	369,980	13,871	303,561	170,177	425,910	256,299	244,271	0	0	0
Feb-02	452,160	849,755	444,727	4,027	752,238	22,999	540,268	10,885	997,737	513,883	879,310	11,022	132,096	6,946
Mar-02	739,594	621,685	390,226	2,244	439,332	95,345	100	0	807,398	599,990	592,030	0	0	0
Abr-02	997,133	922,573	678,652	0	278,866	16,444	207,007	0	870,296	305,637	355,381	190,953	26,079	0
May-02	848,708	508,823	560,223	2,840	524,798	87,349	1,166,661	0	304,296	127,073	368,143	35,830	83,268	0
Jun-02	605,638	398,674	297,685	46,778	0	0	98,639	965,732	966,732	560,984	576,522	77,062	114,692	10,509
Jul-02	1,043,959	603,500	603,749	66,418	165,964	5,856	44,336	316,185	986,345	716,778	718,115	16,153	8,075	0
Ago-02	651,829	489,618	363,299	23,721	115,901	69,590	304,306	288,964	702,031	513,245	497,949	41,741	109,772	35,035
Sep-02	332,120	239,673	132,563	16,030	1,654,659	104,473	2,383,056	779,027	315,790	353,033	160,812	400,753	432,100	28,654
Oct-02	264,063	253,623	169,901	6,948	2,070,348	20,402	1,755,966	323,885	414,852	376,434	381,313	64,567	21,069	12,403
Nov-02	267,791	178,417	97,800	2,695	657,029	69,601	945,798	98,302	336,278	161,811	185,771	86,736	182,064	101,688

CALCULOS PRONOSTICOS CON METODO WINTERS $\alpha = 0.1 \beta = 0.9 \gamma = 0.9$

MES	azul1	negro1	roj1	verde1	azulexp1	verdexp1	negroxp1	rojexp1	azul2	negro2	roj2	azulexp2	negroxp2	rojexp2
Ene-01	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb-01	348,616	40,397	32,368	30,547	336,967	11,317	281,686	141,703	353,713	210,882	200,935	0	0	0
Mar-01	372,401	679,014	361,854	3,534	652,594	18,643	466,144	8,874	834,232	422,037	478,990	10,436	124,984	6,708
Abr-01	608,547	494,457	337,139	1,980	379,731	76,078	86	0	676,363	491,650	478,368	0	0	0
May-01	817,669	731,175	546,298	0	238,830	13,001	174,661	0	727,234	249,943	290,910	180,325	23,681	0
Jun-01	692,385	400,783	479,393	2,264	442,383	68,560	985,611	0	262,732	102,968	299,707	32,890	76,870	9,284
Jul-01	843,434	314,954	261,370	39,934	0	0	77,338	795,163	451,735	466,355	466,355	68,866	102,536	9,284
Ago-01	840,740	500,710	501,730	55,513	134,940	4,970	38,593	243,377	787,629	573,633	677,083	13,992	6,949	0
Sep-01	521,607	371,708	206,684	16,389	92,583	54,352	240,856	222,610	566,223	408,531	387,717	59,067	90,767	28,399
Oct-01	284,295	190,351	108,411	12,824	1,301,616	81,832	1,861,944	602,107	262,201	279,816	127,816	318,726	343,908	20,773
Nov-01	201,301	201,731	134,319	5,455	1,609,463	16,051	1,360,523	251,008	328,536	297,517	301,820	41,974	16,336	9,359
Dic-01	211,561	140,717	76,377	2,085	961,105	95,210	77,899	294,607	127,713	146,091	146,091	65,037	12,616	74,971
Ene-02	505,716	498,698	179,293	7,489	367,822	48,299	431,285	187,923	466,564	354,410	368,524	0	0	0
Feb-02	423,632	50,239	35,192	35,316	368,913	13,845	302,619	169,665	425,482	255,995	243,999	0	0	0
Mar-02	482,470	850,211	445,040	4,031	753,623	23,018	541,313	10,857	998,399	513,815	579,740	11,044	132,354	6,907
Abr-02	741,163	622,713	391,105	2,261	441,716	95,706	100	0	808,089	601,563	583,381	0	0	0
May-02	1,000,344	924,854	661,992	0	281,165	16,538	208,910	0	373,030	307,741	366,698	192,796	25,317	0
Jun-02	851,977	508,324	562,480	2,655	529,608	87,940	1,198,695	0	805,440	127,670	969,678	38,040	84,196	0
Jul-02	611,104	399,817	298,868	47,053	0	0	100,783	969,546	563,736	579,046	77,966	116,940	10,701	0
Ago-02	1,047,976	635,379	608,176	56,802	167,569	5,896	44,821	318,633	969,966	720,145	721,102	16,335	8,164	0
Sep-02	653,988	470,822	364,958	23,840	116,869	69,939	307,186	291,402	704,304	515,330	499,740	72,164	110,816	35,563
Oct-02	332,976	240,451	132,918	16,092	1,665,664	104,950	2,400,530	316,981	354,144	161,260	403,742	436,261	26,968	0
Nov-02	284,495	253,961	170,201	6,966	2,079,179	20,463	1,764,490	325,460	415,937	377,215	382,013	64,825	21,190	12,498
Dic-02	266,001	176,623	97,880	2,698	658,127	69,658	947,921	96,024	336,635	161,966	185,929	86,934	162,457	102,043

CALCULOS PRONOSTICOS CON METODO WINTERS $\alpha = 0.4$ $\beta = 0.1$ $\gamma = 0.9$

MES	azul1	negro1	roj1	verde1	azulexp1	verdeexp1	negroexp1	rojexp1	azul2	negro2	roj2	azulexp2	negroexp2	rojexp2
Ene-01	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb-01	348.616	40.367	32.358	30.547	336.987	11.317	261.696	141.703	383.713	210.882	200.935	0	0	0
Mar-01	370.657	677.794	378.699	3.493	643.723	18.438	458.606	8.783	829.166	419.695	474.489	10.214	122.365	6.526
Abr-01	604.626	494.153	332.626	1.944	373.573	75.714	84	0	670.327	468.337	475.195	0	0	0
May-01	813.172	752.410	577.584	0	234.404	12.992	171.938	0	720.704	248.655	289.315	173.646	22.834	0
Jun-01	680.261	402.344	273.196	2.265	437.090	69.663	978.419	0	251.014	102.779	298.875	31.895	74.547	0
Jul-01	493.901	316.652	249.356	39.543	0	0	76.164	0	792.765	452.474	468.696	67.957	100.725	9.150
Ago-01	845.154	504.414	502.086	55.591	136.084	4.627	35.996	247.603	790.306	577.588	580.456	13.914	6.958	0
Sep-01	525.173	373.664	298.894	19.606	94.186	64.975	245.349	226.634	405.124	411.939	400.674	60.328	92.688	29.322
Oct-01	266.482	180.787	108.009	3.100	1.334.919	82.587	1.910.807	812.978	284.866	293.434	128.904	332.262	355.346	21.938
Nov-01	203.179	201.685	137.294	5.825	1.660.374	16.144	1.402.269	295.334	333.086	300.396	304.717	44.566	17.231	10.073
Dic-01	213.614	140.203	78.516	2.166	694.421	59.298	753.204	76.450	268.910	129.691	148.115	70.050	130.950	81.778
Ene-02	428.976	49.972	39.645	37.152	370.730	48.160	444.823	188.621	473.732	357.266	361.788	0	0	0
Feb-02	456.301	842.873	460.427	4.215	777.802	22.619	555.101	10.795	1.016.355	516.866	584.229	12.017	143.999	7.609
Mar-02	745.366	616.648	403.126	2.339	451.415	94.366	102	0	821.164	602.879	586.032	0	0	0
Abr-02	1.003.761	915.658	699.684	0	284.855	16.261	209.822	0	983.401	307.695	367.354	203.740	26.762	0
May-02	853.175	503.592	573.938	2.718	532.782	66.398	1.197.021	0	308.087	127.352	369.702	37.487	87.638	0
Jun-02	610.781	396.676	303.073	47.783	0	0	0	98.284	974.491	561.437	578.016	79.907	116.964	10.827
Ago-02	1.047.304	631.889	611.827	67.391	166.803	5.614	44.369	311.645	973.169	717.480	719.854	16.521	6.281	0
Sep-02	681.503	467.995	365.169	23.843	115.749	69.090	303.056	285.957	703.205	512.200	497.420	72.016	110.636	35.095
Oct-02	330.923	238.997	132.286	15.681	1.644.179	103.766	2.384.384	771.694	314.895	351.453	160.178	398.716	426.978	26.395
Nov-02	282.525	252.487	166.574	6.882	2.049.061	20.277	1.737.703	321.218	412.084	374.055	378.953	53.742	20.776	12.178
Dic-02	265.700	175.675	96.622	2.667	846.106	69.423	934.663	98.638	333.128	160.587	184.329	84.951	156.582	99.291

CALCULOS PRONOSTICOS CON METODO WINTERS $\alpha = 0.4$ $\beta = 0.4$ $\gamma = 0.1$

MES	azul1	negro1	roj1	verde1	azulexp1	verdeexp1	negroexp1	rojexp1	azul2	negro2	roj2	azulexp2	negroexp2	rojexp2
Ene-01	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb-01	343.280	39.912	31.847	29.861	324.482	11.012	250.751	135.666	348.451	206.939	197.603	0	0	0
Mar-01	387.218	673.701	374.619	3.440	628.101	18.171	467.096	8.575	821.425	415.181	469.999	9.925	116.951	6.264
Abr-01	601.298	493.500	329.216	1.917	366.688	75.315	82	0	665.531	485.417	472.468	0	0	0
May-01	810.123	734.230	570.474	0	231.280	13.012	169.862	0	716.688	247.864	288.263	168.521	22.138	0
Jun-01	688.206	404.635	466.006	2.210	431.373	69.316	967.050	0	248.100	102.619	298.105	30.712	71.786	0
Jul-01	482.201	319.042	244.905	38.626	0	0	78.966	786.067	482.200	465.705	64.753	98.399	8.761	0
Ago-01	843.782	509.293	482.895	54.235	134.269	4.666	35.717	251.079	783.874	578.038	579.935	13.274	6.638	0
Sep-01	524.400	377.375	283.126	19.116	92.981	55.731	243.585	230.327	566.474	412.394	400.405	67.492	89.322	28.004
Oct-01	266.068	192.846	105.940	12.778	1.318.206	83.698	1.898.012	822.407	293.577	282.711	128.800	317.050	341.906	20.991
Nov-01	202.814	203.354	134.783	5.495	1.641.094	16.345	1.383.746	259.039	330.413	300.610	304.414	42.865	16.494	9.673
Dic-01	213.221	141.271	77.211	2.120	877.329	58.912	749.216	79.465	266.906	129.962	147.953	67.369	125.805	78.903
Ene-02	517.740	504.834	185.308	7.857	382.067	49.669	462.823	199.471	477.916	364.305	367.698	0	0	0
Feb-02	426.434	49.978	38.672	36.217	396.857	13.789	307.980	169.791	429.367	256.878	246.005	0	0	0
Mar-02	453.983	844.221	453.736	4.136	765.526	22.816	547.325	10.784	1.007.733	514.549	581.348	11.808	139.111	7.328
Abr-02	743.605	618.416	399.024	2.308	448.860	94.601	101	0	816.900	601.891	664.780	0	0	0
May-02	1.003.833	919.705	695.216	0	283.270	16.335	209.119	0	881.370	307.835	367.459	200.048	26.279	0
Jun-02	854.987	506.431	572.071	2.704	531.664	66.924	1.196.353	0	308.101	127.703	370.953	37.025	66.534	0
Jul-02	613.002	399.172	302.620	47.669	0	0	69.002	976.399	563.786	560.222	79.233	117.950	10.738	0
Ago-02	1.053.035	636.893	612.866	67.416	167.269	5.854	44.545	314.344	977.101	721.771	723.900	16.442	8.221	0
Sep-02	695.395	471.758	366.173	23.882	116.194	68.688	304.636	288.098	708.542	515.487	500.458	71.828	110.344	35.013
Oct-02	332.806	240.775	132.682	16.013	1.669.860	104.607	2.376.229	778.025	316.315	363.589	161.110	398.138	429.345	26.369
Nov-02	263.784	254.132	169.017	6.895	2.056.910	20.423	1.745.864	323.685	413.779	376.083	380.906	53.695	20.758	12.175
Dic-02	286.929	176.643	96.831	2.661	848.975	69.666	938.471	99.305	334.278	161.329	185.135	84.800	156.492	99.307

CALCULOS PRONOSTICOS CON METODO WINTERS $\alpha = 0.4$ $\beta = 0.4$ $\gamma = 0.4$

MES	azul1	negro1	rojo1	verde1	azulexp1	verdexp1	negroxp1	rojoxp1	azul2	negro2	rojo2	azulexp2	negroxp2	rojoxp2
Ene-01	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb-01	345,250	40,083	32,037	30,115	329,062	11,124	254,748	137,873	350,406	208,401	198,840	0	0	0
Mar-01	368,130	875,007	375,571	3,452	632,897	18,261	450,183	8,635	823,398	418,438	471,158	9,992	118,732	6,327
Abr-01	601,366	493,558	329,275	1,917	365,843	75,338	82	0	665,840	485,813	472,551	0	0	0
May-01	809,149	733,533	556,780	0	230,609	12,984	169,301	0	714,689	247,600	187,941	30,562	22,066	0
Jun-01	688,970	403,985	465,150	2,204	429,489	69,095	982,256	0	218,668	102,394	297,527	84,423	95,917	8,694
Jul-01	491,293	318,584	244,440	36,521	0	0	0	76,576	784,663	451,183	464,777	13,218	6,609	0
Ago-01	842,463	508,674	491,889	54,108	133,753	4,673	35,592	248,976	676,855	576,927	678,956	57,305	68,040	27,867
Sep-01	523,788	377,039	292,778	19,083	92,897	55,619	242,006	229,586	564,785	411,817	399,908	67,401	318,218	20,926
Oct-01	265,866	192,538	106,861	12,786	1,316,863	83,592	1,894,205	621,167	282,579	282,463	128,700	316,401	16,477	9,659
Nov-01	202,743	203,298	134,744	5,492	1,639,661	16,335	1,392,375	258,785	330,300	300,481	304,298	42,622	15,477	0
Dic-01	213,204	141,262	77,204	2,120	677,190	55,904	749,044	78,487	266,885	128,840	147,940	67,353	128,875	78,875
Ene-02	514,721	602,550	184,188	7,789	376,650	49,491	455,434	196,270	475,208	361,784	365,345	0	0	0
Feb-02	426,895	50,112	36,012	36,403	400,230	13,883	310,902	171,425	430,831	247,959	245,919	0	0	0
Mar-02	455,113	846,878	454,931	4,152	770,295	22,817	561,173	10,840	1,010,217	516,138	685,937	11,691	140,088	7,407
Abr-02	744,780	619,173	398,880	2,313	448,606	94,852	101	0	618,156	603,049	695,778	0	0	0
May-02	1,004,693	820,253	695,771	0	283,806	16,357	209,666	0	882,030	308,123	367,623	200,493	26,335	0
Jun-02	856,117	506,500	578,178	2,705	531,893	86,951	1,196,935	0	308,184	127,730	370,623	37,043	86,576	0
Jul-02	612,882	389,112	302,758	47,655	0	0	0	98,948	976,213	563,662	600,099	79,189	117,886	10,728
Ago-02	1,052,833	636,707	612,628	67,378	167,114	8,860	44,499	314,013	976,743	731,440	723,608	16,425	8,213	0
Sep-02	665,120	471,604	368,014	23,867	116,074	69,837	304,181	287,760	706,264	515,224	500,231	71,744	110,216	34,950
Oct-02	332,681	240,705	138,531	16,004	1,649,332	104,538	2,373,746	777,207	316,199	363,437	161,045	397,716	428,897	26,327
Nov-02	263,721	264,075	169,967	6,892	2,095,447	20,413	1,744,482	323,424	413,663	375,951	360,787	53,662	20,741	12,150
Dic-02	266,778	176,517	96,812	2,680	846,676	69,832	937,973	99,252	334,216	161,292	185,096	84,754	158,383	59,226

CALCULOS PRONOSTICOS CON METODO WINTERS $\alpha = 0.4$ $\beta = 0.4$ $\gamma = 0.9$

MES	azul1	negro1	rojo1	verde1	azulexp1	verdexp1	negroxp1	rojoxp1	azul2	negro2	rojo2	azulexp2	negroxp2	rojoxp2
Ene-01	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb-01	348,616	40,397	32,356	30,547	336,567	11,317	281,686	141,703	353,713	210,822	200,935	0	0	0
Mar-01	368,672	877,208	377,185	3,473	639,465	18,368	455,487	8,739	826,734	418,570	473,283	10,108	121,094	6,439
Abr-01	601,563	493,698	329,376	1,918	367,113	75,370	82	0	665,826	485,676	472,693	0	0	0
May-01	807,501	732,358	568,604	0	229,448	12,936	188,327	0	713,468	246,882	187,041	167,041	21,847	0
Jun-01	684,878	403,006	463,702	2,195	426,230	68,717	953,929	0	247,937	102,013	298,547	30,301	70,842	0
Jul-01	489,758	317,810	243,653	38,342	0	0	0	77,863	782,288	449,457	463,205	63,647	95,077	8,574
Ago-01	840,232	507,631	480,651	53,694	132,861	4,651	35,292	248,062	760,674	576,058	677,297	13,114	6,569	0
Sep-01	522,778	376,472	292,184	19,027	92,242	55,427	241,453	228,300	632,717	410,838	399,066	56,890	87,690	27,623
Oct-01	265,542	192,358	105,727	12,741	1,311,812	83,412	1,887,992	282,280	282,042	128,531	315,268	340,021	20,611	0
Nov-01	202,622	203,205	134,660	5,487	1,637,194	16,318	1,390,992	298,344	330,108	300,262	304,102	42,547	16,449	9,632
Dic-01	213,174	141,247	77,193	2,120	676,951	55,891	748,746	79,436	286,849	128,918	147,917	67,325	125,924	78,826
Ene-02	509,680	498,749	152,318	7,675	367,640	48,647	443,151	190,955	470,993	357,487	361,494	0	0	0
Feb-02	429,383	50,337	39,249	36,722	406,063	14,025	381,605	174,261	433,273	259,793	247,468	0	0	0
Mar-02	446,756	848,670	456,959	4,178	778,645	23,090	672,458	10,872	1,014,417	518,830	585,631	11,635	141,789	7,546
Abr-02	744,780	620,449	400,750	2,323	451,611	95,310	123	0	620,279	605,014	687,468	0	0	0
May-02	1,005,911	821,177	698,712	0	284,734	16,384	247,135	0	883,145	309,613	356,259	201,251	28,432	0
Jun-02	865,370	506,616	572,351	2,706	532,279	86,987	1,350,020	0	308,242	127,776	370,742	37,975	86,646	0
Jul-02	612,678	399,009	302,654	47,651	0	0	0	98,954	975,998	683,433	679,890	79,113	117,774	10,713
Ago-02	1,051,965	636,394	612,220	67,313	166,846	5,853	46,094	313,458	976,138	720,878	723,107	18,394	5,188	0
Sep-02	654,655	471,346	365,743	23,842	115,866	69,549	305,698	287,173	705,788	514,716	498,847	71,669	109,992	34,839
Oct-02	332,470	240,568	132,543	15,989	1,646,690	104,420	2,342,445	775,789	316,004	353,163	160,934	388,977	428,117	26,252
Nov-02	263,697	263,979	169,861	6,867	2,052,918	20,395	1,706,867	322,970	413,466	375,726	380,566	53,675	20,712	12,133
Dic-02	266,692	176,473	96,760	2,656	847,896	69,792	916,527	99,160	334,111	161,228	185,032	84,874	158,251	59,063



CALCULOS PRONOSTICOS CON METODO WINTERS $\alpha = 0.4, \beta = 0.9, \gamma = 0.1$

MES	azul1	negro1	rojo1	verde1	azulexp1	verdeexp1	negroexp1	rojoexp1	azul2	negro2	rojo2	azulexp2	negroexp2	rojoexp2
Ene-01	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb-01	343,260	39,912	31,847	29,861	324,492	11,012	250,751	135,566	348,451	205,839	197,603	0	0	0
Mar-01	366,665	674,335	373,254	3,422	626,732	18,187	449,687	8,578	819,798	414,959	469,458	9,831	117,822	6,198
Abr-01	559,978	494,838	326,188	1,863	363,432	75,527	82	0	662,283	484,955	471,496	0	0	0
May-01	807,678	737,473	562,575	0	228,375	13,076	189,226	0	710,605	247,394	287,478	192,717	21,377	0
Jun-01	886,081	406,957	458,783	2,166	425,667	69,746	957,666	0	247,173	102,449	297,309	29,552	69,075	0
Jul-01	490,992	320,608	241,563	37,951	0	0	79,487	790,863	451,732	464,788	62,644	93,268	8,479	0
Ago-01	843,745	511,868	488,790	53,675	133,513	4,714	36,602	252,642	781,569	578,625	580,120	13,002	9,502	27,819
Sep-01	524,676	378,664	292,163	19,038	92,816	55,931	243,521	231,278	594,935	412,873	400,709	57,029	87,905	0
Oct-01	286,096	192,668	105,936	12,785	1,319,648	83,748	1,900,447	523,216	292,782	262,812	128,832	317,593	342,473	21,060
Nov-01	202,737	202,993	135,039	5,912	1,644,757	18,318	1,386,215	76,705	330,562	300,485	304,298	42,982	16,618	9,757
Dic-01	213,083	140,892	77,410	2,129	878,988	56,761	750,445	79,305	267,060	129,939	147,653	67,889	127,081	79,668
Ene-02	517,611	503,607	185,783	7,886	392,886	49,871	463,405	195,999	476,233	364,083	367,459	0	0	0
Feb-02	425,485	49,910	38,862	36,343	397,842	13,782	308,560	189,683	429,800	266,879	245,035	0	0	0
Mar-02	454,482	844,809	454,782	4,148	767,269	22,823	548,406	10,789	1,009,337	515,087	582,000	11,864	139,791	7,367
Abr-02	745,430	619,825	400,162	2,314	447,867	94,791	101	0	819,013	603,360	588,183	0	0	0
May-02	1,007,376	923,150	697,676	0	283,982	16,389	209,613	0	984,420	308,814	358,691	200,335	26,316	0
Jun-02	858,310	508,595	574,109	2,712	533,083	67,259	1,199,453	0	309,260	128,184	371,973	37,064	86,631	0
Jul-02	615,139	400,894	303,788	47,793	0	0	96,306	976,658	565,716	582,215	79,327	118,093	10,740	0
Ago-02	1,037,990	639,811	615,033	67,633	167,787	6,866	44,682	315,428	980,764	724,510	726,687	16,479	8,240	0
Sep-02	666,809	472,832	366,899	23,929	116,422	69,843	305,146	288,727	708,027	516,607	501,642	71,961	110,532	35,073
Oct-02	332,778	240,763	132,659	16,014	1,651,285	104,618	2,377,102	778,334	316,279	363,987	161,102	398,326	429,536	26,367
Nov-02	283,350	253,868	168,717	6,885	2,054,823	20,393	1,744,180	323,356	413,051	375,470	380,260	53,669	20,743	12,177
Dic-02	286,202	178,113	96,603	2,666	847,618	69,711	836,889	96,143	333,491	160,968	184,709	84,669	166,289	99,257

CALCULOS PRONOSTICOS CON METODO WINTERS $\alpha = 0.4, \beta = 0.9, \gamma = 0.4$

MES	azul1	negro1	rojo1	verde1	azulexp1	verdeexp1	negroexp1	rojoexp1	azul2	negro2	rojo2	azulexp2	negroexp2	rojoexp2
Ene-01	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb-01	345,250	40,993	32,037	30,115	323,082	11,124	254,749	137,873	350,408	208,401	198,840	0	0	0
Mar-01	367,380	675,041	373,783	3,429	628,796	18,230	447,349	8,610	820,866	415,540	470,143	9,867	118,248	6,232
Abr-01	568,952	484,175	325,620	1,888	361,923	75,298	81	0	661,201	483,644	470,625	0	0	0
May-01	805,365	735,830	560,814	0	226,772	13,011	166,890	0	708,633	246,531	286,589	161,419	21,209	0
Jun-01	684,368	405,871	457,602	2,167	423,046	69,440	951,007	0	246,573	102,137	286,508	29,342	66,594	0
Jul-01	480,313	320,268	241,214	37,872	0	0	79,161	779,810	450,971	484,075	62,394	82,894	8,428	0
Ago-01	843,544	511,775	488,987	53,655	133,433	4,712	35,678	252,476	781,366	578,487	579,970	12,993	6,497	0
Sep-01	524,940	378,813	292,316	19,053	92,931	55,981	243,863	231,606	966,212	413,127	400,928	67,110	87,728	21,879
Oct-01	280,297	192,781	106,018	12,800	1,322,003	83,659	1,904,837	624,531	255,968	283,072	128,938	318,273	343,192	21,127
Nov-01	202,885	203,057	135,128	5,517	1,647,300	16,336	1,388,852	259,225	330,764	300,695	304,504	43,058	16,644	9,783
Dic-01	213,163	140,918	77,436	2,130	879,536	55,783	751,129	79,376	287,145	128,890	147,905	68,062	127,176	78,788
Ene-02	514,465	501,308	184,946	7,817	377,990	49,360	465,940	195,776	478,498	361,479	365,124	0	0	0
Feb-02	427,318	50,076	39,137	36,676	402,046	13,866	312,240	171,699	813,600	269,226	246,175	0	0	0
Mar-02	465,809	846,419	456,171	4,166	772,773	22,940	552,846	10,957	1,012,203	516,916	583,856	11,760	140,918	7,457
Abr-02	746,222	620,335	400,594	2,318	449,057	94,667	102	0	819,859	604,071	586,856	0	0	0
May-02	1,006,952	922,872	697,292	0	293,709	16,378	209,386	0	984,084	308,727	368,540	200,114	26,288	0
Jun-02	857,378	508,168	673,482	2,707	531,066	67,083	1,190,833	0	306,933	128,016	371,537	96,990	86,369	0
Jul-02	614,466	400,356	303,422	47,715	0	0	99,002	978,616	664,962	581,927	79,081	117,734	10,690	0
Ago-02	1,056,349	639,163	614,604	67,663	167,466	5,879	44,594	318,545	980,995	723,691	728,116	16,448	8,224	0
Sep-02	666,681	472,750	366,813	23,921	118,957	66,815	304,964	288,545	707,872	516,486	501,420	71,805	110,463	35,038
Oct-02	332,820	240,778	132,678	16,017	1,651,825	104,843	2,377,979	778,623	316,320	363,885	161,126	398,475	429,897	26,412
Nov-02	265,424	253,726	166,766	6,686	2,056,106	20,404	1,745,601	323,623	413,169	375,604	380,360	53,703	20,760	12,192
Dic-02	266,277	176,151	96,631	2,657	848,103	66,745	937,720	99,221	333,692	161,023	184,765	84,766	158,392	99,375



Calculos pronosticos con metodo winters $\alpha = 0.4 \beta = 0.9 \gamma = 0.9$

MES	azul1	negro1	roj1	verde1	azulexp1	verdexp1	negroexp1	rojexp1	azul1	negro2	roj2	azulexp2	negroexp2	rojexp2
Ene-01	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb-01	348,616	40,397	32,358	30,547	336,987	11,317	281,696	141,703	363,713	210,882	200,935	0	0	0
Mar-01	388,198	876,233	374,661	3,441	632,369	18,304	450,237	9,666	822,661	416,985	471,300	9,930	116,991	6,293
Abr-01	597,218	463,057	324,666	1,980	359,314	74,805	81	0	656,353	481,830	469,151	0	0	0
Mav-01	801,455	723,063	568,101	0	223,999	12,898	164,668	0	705,298	245,066	159,155	0	20,918	0
Jun-01	681,471	404,647	455,585	2,144	418,511	939,435	0	0	245,568	101,809	296,150	28,977	67,767	0
Jul-01	489,184	319,669	240,623	37,737	0	0	0	76,630	778,030	449,681	462,988	61,960	92,260	8,338
Ago-01	843,202	511,617	488,458	53,622	133,285	4,709	39,537	252,187	781,077	578,176	12,977	6,189	0	0
Sep-01	525,368	378,563	292,576	19,077	93,131	55,066	244,467	632,174	585,662	413,559	401,299	57,293	87,943	27,985
Oct-01	266,637	192,971	108,160	12,824	1,328,248	84,049	1,911,370	283,282	263,514	129,118	319,457	344,444	21,248	0
Nov-01	203,080	203,223	135,277	5,526	1,651,999	16,368	3,042,866	260,013	331,106	301,045	304,944	43,191	16,995	79,695
Dic-01	213,281	140,978	77,481	2,152	860,484	55,847	752,316	79,503	287,288	128,977	147,994	68,162	127,377	0
Ene-02	509,398	497,479	182,796	7,702	349,280	48,509	443,529	190,422	470,939	367,145	381,240	0	0	0
Feb-02	430,419	50,357	39,432	36,973	409,319	14,054	318,634	175,233	434,644	260,512	248,105	0	0	0
Mar-02	458,054	848,840	468,507	4,197	782,292	23,139	560,860	11,008	1,017,049	520,025	586,943	11,927	142,862	7,618
Abr-02	747,582	621,195	401,342	2,324	451,082	95,259	102	0	821,250	805,395	687,985	0	0	0
Mav-02	1,006,318	922,402	695,814	0	283,237	16,358	209,991	0	983,517	308,478	358,288	169,728	26,238	0
Jun-02	885,804	507,448	672,366	2,700	529,184	86,810	1,189,644	0	308,382	127,728	370,799	39,762	85,914	0
Jul-02	613,328	399,783	302,638	47,682	0	0	0	86,476	976,654	563,683	580,362	78,652	117,108	10,601
Ago-02	1,056,088	838,678	613,845	87,442	166,984	5,887	44,443	313,734	978,964	722,840	726,184	16,389	8,196	0
Sep-02	636,410	472,811	368,668	23,907	116,246	69,768	304,621	288,229	707,610	515,225	601,213	71,825	110,342	34,979
Oct-02	332,895	240,818	132,709	16,023	1,652,758	104,684	2,379,903	776,123	316,369	363,752	161,164	368,736	429,973	26,438
Nov-02	253,550	253,823	168,895	6,893	2,058,671	20,422	1,748,071	324,083	380,584	375,831	380,584	53,781	20,789	12,219
Dic-02	286,403	176,216	96,679	2,659	849,116	69,804	938,990	99,356	333,736	161,116	184,950	84,873	156,607	99,595

Calculos pronosticos con metodo winters $\alpha = 0.9 \beta = 0.1 \gamma = 0.1$

MES	azul1	negro1	roj1	verde1	azulexp1	verdexp1	negroexp1	rojexp1	azul1	negro2	roj2	azulexp2	negroexp2	rojexp2
Ene-01	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb-01	343,290	39,912	31,847	29,561	324,492	11,012	254,286	135,666	348,451	206,939	197,603	0	0	0
Mar-01	386,489	875,064	371,707	3,403	624,007	18,203	452,260	8,580	817,926	414,487	469,954	9,722	116,524	6,122
Abr-01	600,169	495,012	326,203	1,894	363,760	78,693	83	0	682,443	484,887	471,677	0	0	0
Mav-01	809,234	736,126	566,670	0	230,122	13,055	172,424	0	713,426	247,784	289,050	165,949	21,789	0
Jun-01	688,067	405,056	484,633	2,204	430,885	69,448	884,364	0	248,648	192,650	288,111	30,564	71,436	0
Jul-01	482,529	318,980	245,338	38,732	0	0	0	76,050	788,636	452,524	466,041	65,116	96,935	8,823
Ago-01	847,364	510,123	466,728	64,772	135,271	4,692	38,412	251,420	788,384	580,236	582,337	13,486	6,743	0
Sep-01	524,138	378,658	294,729	19,271	83,440	55,478	248,692	229,164	566,369	411,983	401,148	58,516	89,680	28,540
Oct-01	286,069	191,761	106,662	12,904	1,328,272	83,292	1,938,631	619,744	262,520	292,517	129,779	323,549	348,904	21,439
Nov-01	202,984	202,672	135,880	5,563	1,651,969	16,274	1,423,741	267,993	331,661	300,616	304,994	43,564	16,841	9,880
Dic-01	213,504	140,843	77,830	2,142	681,718	58,708	765,089	76,201	267,921	129,018	148,111	68,706	128,402	80,460
Ene-02	519,524	503,670	166,685	7,931	384,311	48,851	474,953	198,969	478,695	364,842	368,127	0	0	0
Feb-02	426,248	49,893	39,140	36,592	399,877	13,780	481,834	169,730	431,024	287,285	245,466	0	0	0
Mar-02	456,087	844,232	456,720	4,166	766,719	22,782	569,959	10,742	1,011,723	515,424	562,616	11,733	140,828	7,391
Abr-02	746,824	619,042	401,526	2,323	448,803	94,615	103	0	820,309	603,311	566,366	0	0	0
Mav-02	1,006,339	920,521	698,766	0	284,361	16,340	213,828	0	884,411	306,467	368,294	201,735	26,500	0
Jun-02	856,219	568,497	574,108	2,715	533,165	86,909	1,221,878	0	308,790	127,651	371,053	37,276	87,122	0
Jul-02	613,197	398,848	303,437	47,797	0	0	0	93,912	977,356	583,822	590,372	79,642	116,559	10,794
Ago-02	1,056,466	637,826	615,184	67,697	167,783	6,670	45,268	314,553	979,916	723,278	725,634	16,558	8,269	0
Sep-02	653,130	469,885	365,381	23,849	116,988	69,402	209,248	267,055	704,434	513,663	498,728	71,912	110,488	35,081
Oct-02	331,671	239,752	132,383	18,988	1,647,645	104,168	2,412,883	276,217	315,370	362,376	160,560	398,404	429,621	28,404
Nov-02	253,112	253,263	166,740	6,887	2,053,737	20,355	1,773,093	322,688	412,827	375,046	379,877	53,736	20,773	12,189
Dic-02	286,308	178,063	96,734	2,680	849,050	69,673	953,180	99,056	333,742	160,988	184,767	84,878	156,628	99,415



POLITECNICA SUPERIOR
BIBLIOTECA DON BALDO ZEVALLOS
R. L. M. C. R.

CALCULOS PRONOSTICOS CON METODO WINTERS $\alpha = 0.9, \beta = 0.1, \gamma = 0.4$

MES	azul1	negro1	rojo1	verde1	azulexp1	verdexp1	negroxp1	rojoxp1	azul2	negro2	rojo2	azulexp2	verdexp2	negroxp2	rojoxp2
Ene-01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb-01	345,260	40,093	32,037	30,115	329,062	11,124	284,749	137,873	350,408	208,401	198,840	0	0	0	0
Mar-01	365,474	675,081	371,728	3,403	624,090	16,206	444,124	8,581	817,861	414,507	469,974	9,724	116,542	6,123	0
Abr-01	565,844	484,809	325,032	1,892	363,297	75,612	82	0	682,113	484,580	471,413	0	0	0	0
May-01	808,815	735,824	565,373	0	229,834	13,043	169,083	0	713,071	247,627	287,669	165,720	21,770	0	0
Jun-01	687,778	404,908	464,616	2,203	430,403	69,391	955,970	0	248,737	102,682	297,961	30,526	71,349	0	0
Jul-01	482,328	318,877	245,235	38,709	0	0	78,956	786,628	452,288	485,835	65,044	96,830	0	8,808	0
Ago-01	647,080	509,979	496,545	54,743	135,183	4,689	35,907	261,162	788,112	579,992	582,111	13,473	6,737	0	0
Sep-01	523,971	375,664	294,633	19,262	93,368	55,447	244,253	229,256	666,215	411,803	400,010	58,465	89,814	28,503	0
Oct-01	265,985	191,718	106,652	12,899	1,325,368	83,250	1,904,539	619,248	253,351	282,430	128,740	323,302	348,642	21,414	0
Nov-01	207,933	202,533	135,531	9,951	1,650,973	16,267	1,399,187	267,910	331,481	300,534	304,512	43,594	16,830	9,670	0
Dic-01	213,457	140,819	77,812	2,142	681,352	55,687	752,136	79,152	207,864	129,983	148,078	68,664	128,326	80,388	0
Ene-02	515,395	501,281	185,500	7,859	378,602	49,320	456,941	195,521	476,835	381,933	355,669	0	0	0	0
Feb-02	428,841	50,121	39,368	38,857	405,175	13,916	314,587	172,361	433,376	259,047	248,958	0	0	0	0
Mar-02	455,279	844,507	456,921	4,168	759,520	22,609	549,429	10,755	1,012,139	515,969	582,881	11,747	140,793	7,404	0
Abr-02	746,733	618,982	461,475	2,323	448,670	94,694	101	0	820,212	603,221	586,309	0	0	0	0
May-02	1,005,177	920,404	669,650	0	284,249	16,335	209,642	0	884,272	308,406	358,231	201,645	26,488	0	0
Jun-02	856,081	506,438	674,019	2,715	532,972	86,886	1,198,463	0	308,746	127,828	370,968	37,281	87,087	0	0
Jul-02	613,116	398,807	303,398	47,788	0	0	0	98,875	977,211	563,771	569,269	79,613	116,516	10,768	0
Ago-02	1,055,368	637,768	615,091	67,855	167,716	5,868	44,639	314,450	978,807	723,178	725,444	16,532	8,287	0	0
Sep-02	665,063	489,647	365,343	23,845	119,959	69,389	503,838	286,972	704,364	613,619	499,673	71,892	110,438	35,066	0
Oct-02	331,641	239,735	132,371	15,866	1,647,281	104,170	2,370,486	775,019	315,342	352,337	160,544	393,304	429,515	26,394	0
Nov-02	283,092	253,247	168,727	6,887	2,053,336	20,352	1,742,371	322,815	412,795	375,009	379,844	53,724	20,769	12,185	0
Dic-02	266,287	176,073	96,727	2,659	847,904	69,864	937,028	99,035	333,719	160,984	184,753	64,961	158,596	98,386	0

CALCULOS PRONOSTICOS CON METODO WINTERS $\alpha = 0.9, \beta = 0.1, \gamma = 0.9$

MES	azul1	negro1	rojo1	verde1	azulexp1	verdexp1	negroxp1	rojoxp1	azul2	negro2	rojo2	azulexp2	verdexp2	negroxp2	rojoxp2
Ene-01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb-01	348,616	40,397	32,358	30,547	338,987	11,317	281,688	141,703	353,713	210,882	200,935	0	0	0	0
Mar-01	366,499	675,110	371,758	3,403	624,208	18,207	444,222	8,583	818,021	414,541	469,008	9,728	116,573	6,126	0
Abr-01	595,318	494,467	325,744	1,890	362,513	75,392	82	0	681,558	484,059	470,968	0	0	0	0
May-01	805,108	735,318	565,871	0	229,338	13,022	168,845	0	712,470	247,381	287,688	165,319	21,718	0	0
Jun-01	687,240	404,668	464,246	2,200	429,671	69,292	963,436	0	248,549	102,493	297,709	30,460	71,197	0	0
Jul-01	481,987	318,704	245,062	38,670	0	0	78,798	786,102	451,914	485,488	64,919	96,647	8,782	0	0
Ago-01	646,548	509,736	496,239	54,695	134,990	4,683	35,846	260,716	787,951	579,951	581,729	13,450	6,728	0	0
Sep-01	523,688	375,405	294,472	19,247	93,243	55,393	243,881	228,695	668,921	411,513	399,777	65,377	89,651	26,437	0
Oct-01	265,868	191,647	106,600	12,890	1,323,804	83,179	1,907,524	618,367	253,235	282,255	128,674	322,871	348,187	21,371	0
Nov-01	202,848	202,486	135,773	5,548	1,649,252	16,255	1,307,634	257,484	331,347	300,369	304,373	43,483	16,810	9,852	0
Dic-01	213,378	140,778	77,765	2,141	680,725	55,649	751,346	79,066	287,765	129,924	148,017	68,592	128,195	80,259	0
Ene-02	510,079	497,302	183,527	7,739	369,105	48,437	444,015	189,961	472,088	357,455	381,667	0	0	0	0
Feb-02	432,695	50,486	39,784	37,387	414,666	14,149	322,948	177,010	437,958	282,035	249,480	0	0	0	0
Mar-02	455,605	844,972	457,261	4,173	770,905	22,837	550,560	10,777	1,012,843	516,139	563,331	11,772	141,080	7,428	0
Abr-02	746,578	618,981	461,380	2,322	448,439	94,659	101	0	820,212	603,221	586,309	0	0	0	0
May-02	1,005,901	920,208	668,453	0	284,060	16,327	209,479	0	884,038	308,393	358,125	201,488	26,488	0	0
Jun-02	856,876	506,338	673,870	2,714	532,638	86,847	1,197,606	0	308,671	127,789	370,968	37,284	87,028	0	0
Jul-02	612,980	398,738	303,327	47,772	0	0	0	98,911	977,001	563,617	569,149	79,563	116,442	10,777	0
Ago-02	1,055,160	637,671	614,967	67,856	167,634	5,866	44,615	314,272	978,622	723,005	725,250	16,523	8,262	0	0
Sep-02	662,980	489,684	365,276	23,839	115,909	69,367	503,688	286,828	704,246	613,510	499,510	71,866	110,384	35,039	0
Oct-02	331,590	239,706	132,350	15,862	1,646,691	104,141	2,369,465	774,675	310,296	352,271	160,517	399,129	429,531	26,376	0
Nov-02	283,058	253,220	168,703	6,885	2,052,843	20,347	1,741,702	322,489	412,741	374,947	378,789	53,703	20,769	12,178	0
Dic-02	266,255	176,057	96,716	2,659	847,651	69,849	936,710	99,001	333,680	160,980	184,739	64,932	158,543	98,334	0



CALCULOS PRONOSTICOS CON METODO WINTERS $\alpha = 0.9 \beta = 0.4 \gamma = 0.1$

MES	azul1	negro1	rojo1	verde1	azulexp1	verdeexp1	negroexp1	rojoexp1	azul1	negro2	rojo2	azulexp2	negroexp2	rojoexp2
Ene-01	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb-01	343,260	39,912	21,847	29,881	324,492	11,012	250,761	135,939	348,451	206,939	197,603	0	0	0
Mar-01	385,983	875,920	369,878	3,376	630,809	18,228	442,168	6,584	815,728	414,052	488,360	9,594	115,000	6,032
Abr-01	589,083	488,248	323,832	1,873	361,058	75,750	81	0	688,698	484,323	470,910	0	0	0
May-01	807,709	735,422	561,388	0	228,272	13,103	188,298	0	710,090	247,935	287,647	162,185	21,301	0
Jun-01	686,842	406,388	460,419	2,177	427,479	69,723	961,305	0	247,890	102,987	287,649	29,862	69,795	0
Jul-01	481,692	320,002	243,104	38,278	0	0	0	0	79,350	783,429	452,197	63,693	94,816	8,630
Ago-01	847,640	512,628	493,477	54,275	134,649	4,717	35,821	252,877	786,634	580,867	562,669	13,232	6,617	0
Sep-01	523,161	378,600	292,335	19,073	92,832	55,642	243,337	0	584,012	411,526	398,503	67,425	88,214	28,016
Oct-01	285,648	192,091	105,872	12,782	1,318,242	83,493	1,897,758	621,303	295,391	282,112	128,557	318,081	342,981	21,083
Nov-01	202,680	202,817	134,984	5,607	1,643,242	16,312	1,384,888	268,605	330,410	300,334	304,172	42,908	16,987	9,734
Dic-01	213,234	141,079	77,381	2,127	678,594	58,830	750,165	79,378	267,135	128,930	147,951	67,791	126,892	7,410
Ene-02	617,893	504,468	185,748	7,880	392,778	49,952	463,420	199,277	478,482	364,455	367,809	0	0	0
Feb-02	426,000	49,993	38,978	36,391	463,638	13,814	309,493	170,270	430,220	267,307	245,388	0	0	0
Mar-02	465,147	846,099	465,352	4,148	857,738	22,847	547,821	10,767	1,010,678	515,672	582,751	11,830	139,389	7,324
Abr-02	746,801	920,835	400,836	2,317	479,656	94,800	101	0	820,314	604,106	587,039	0	0	0
May-02	1,007,927	923,470	698,166	0	302,254	16,395	209,772	0	885,000	309,034	358,895	200,619	26,354	0
Jun-02	857,745	508,120	573,698	2,712	854,131	87,201	1,198,728	0	308,093	128,110	371,746	37,115	86,746	0
Jul-02	814,288	400,061	303,468	47,758	0	0	0	99,225	978,397	565,000	581,451	79,364	118,145	10,758
Ago-02	1,059,248	640,837	618,317	67,775	170,162	9,897	44,786	315,910	982,808	729,981	728,149	18,511	8,256	0
Sep-02	663,848	470,846	365,244	23,828	118,801	69,569	304,080	287,724	704,821	514,350	499,308	71,712	110,161	34,989
Oct-02	331,908	240,120	132,305	15,972	1,663,776	104,371	2,371,823	776,676	315,441	352,693	180,684	397,384	428,497	26,341
Nov-02	285,313	253,849	168,660	8,893	2,058,167	20,390	1,743,487	323,267	412,978	375,404	380,198	63,619	20,728	12,164
Dic-02	266,535	178,350	96,719	2,858	849,161	69,788	937,684	99,224	333,903	161,189	184,935	84,725	158,339	99,247

CALCULOS PRONOSTICOS CON METODO WINTERS $\alpha = 0.9 \beta = 0.4 \gamma = 0.4$

MES	azul1	negro1	rojo1	verde1	azulexp1	verdeexp1	negroexp1	rojoexp1	azul1	negro2	rojo2	azulexp2	negroexp2	rojoexp2
Ene-01	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb-01	345,280	40,093	32,037	30,115	329,082	11,124	254,749	137,873	360,408	208,401	199,840	0	0	0
Mar-01	365,434	675,127	369,311	3,372	618,544	16,177	440,338	8,547	814,547	413,285	487,602	9,995	114,338	6,995
Abr-01	598,098	495,610	323,033	1,869	359,603	75,569	81	0	658,643	483,350	470,072	0	0	0
May-01	806,880	737,818	560,778	0	227,883	13,079	167,807	0	708,366	247,208	287,220	161,676	21,240	0
Jun-01	686,428	406,197	460,130	2,176	428,844	69,649	959,691	0	247,534	102,481	287,455	29,811	69,679	0
Jul-01	491,628	316,918	243,019	38,259	0	0	0	0	79,276	783,169	461,981	485,209	63,632	8,618
Ago-01	847,482	512,554	493,382	54,260	134,488	4,715	35,803	262,548	786,492	580,795	582,552	13,226	6,613	0
Sep-01	523,107	378,469	292,304	19,070	92,809	55,632	243,267	230,088	653,956	411,474	399,459	57,408	98,188	28,004
Oct-01	285,533	192,083	105,866	12,781	1,318,056	83,484	1,897,437	621,303	262,377	282,182	128,549	318,010	342,926	21,078
Nov-01	202,684	202,912	134,980	5,607	1,643,116	16,311	1,394,169	268,582	330,400	300,332	304,161	42,904	16,588	9,733
Dic-01	213,230	141,077	77,380	2,127	678,565	58,828	750,128	79,374	267,130	128,927	147,948	67,787	126,890	79,404
Ene-02	428,141	502,148	184,803	7,811	377,260	49,436	495,898	196,205	475,223	361,829	365,466	0	0	0
Feb-02	429,141	502,148	184,803	7,811	377,260	49,436	495,898	196,205	475,223	361,829	365,466	0	0	0
Mar-02	459,231	846,219	455,439	4,149	787,176	22,854	548,199	10,772	1,010,658	515,788	582,668	11,836	139,460	7,330
Abr-02	746,171	920,835	400,836	2,315	477,637	94,804	101	0	819,855	603,833	588,674	0	0	0
May-02	1,007,488	923,159	697,850	0	283,914	16,362	209,518	0	984,625	308,870	358,718	200,372	26,322	0
Jun-02	857,632	508,018	573,740	2,711	852,840	87,161	1,198,860	0	309,015	128,070	371,642	37,087	86,683	0
Jul-02	814,203	400,015	303,358	47,748	0	0	0	99,184	978,257	564,898	581,359	79,331	118,097	10,749
Ago-02	1,059,162	640,787	618,286	67,788	168,042	6,898	44,745	315,839	982,728	729,880	728,085	18,508	8,254	0
Sep-02	663,816	470,829	365,227	23,827	115,885	69,563	304,052	287,687	704,790	514,322	499,284	71,703	110,147	34,982
Oct-02	331,898	240,115	132,302	15,971	1,647,365	104,368	2,371,658	776,672	315,433	352,692	180,679	397,336	428,497	26,341
Nov-02	283,309	263,647	168,678	8,882	2,063,752	20,390	1,743,400	323,265	412,972	375,398	380,192	63,617	20,727	12,164
Dic-02	266,533	178,349	96,718	2,858	848,174	69,787	937,644	99,222	333,900	161,157	184,933	84,723	158,335	99,244



CALCULOS PROYECTIVOS CON METODO WINTERS $\alpha = 0.9$ $\beta = 0.4$ $\gamma = 0.9$

MES	azul1	negro1	rojo1	verde1	azulexp1	verdeexp1	negroexp1	rojoexp1	azul2	negro2	rojo2	azulexp2	negroexp2	rojoexp2
Ene-01	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb-01	348,616	40,397	32,355	30,547	336,967	11,317	261,696	141,703	353,713	210,882	200,935	0	0	0
Mar-01	364,507	673,792	368,350	3,369	614,627	18,094	437,160	8,484	812,549	412,011	466,318	9,487	113,734	5,929
Abr-01	586,438	484,837	322,103	1,861	357,088	78,192	80	0	696,862	481,700	468,663	0	0	0
May-01	805,424	738,801	559,748	0	226,665	13,637	166,954	0	708,141	246,670	286,667	160,848	21,133	0
Jun-01	681,724	405,875	459,642	2,172	425,746	69,522	956,888	0	247,289	102,383	297,125	29,723	69,477	0
Jul-01	491,245	319,776	242,876	38,226	0	0	0	76,146	782,734	451,685	464,921	63,527	94,574	8,566
Ago-01	847,216	512,430	493,221	54,235	134,381	4,712	35,771	252,317	786,232	580,532	662,354	13,213	6,607	0
Sep-01	523,015	376,418	292,250	19,065	82,768	95,614	243,145	229,871	563,860	411,366	369,383	57,379	86,144	27,662
Oct-01	285,507	192,068	106,865	12,779	1,317,736	53,470	1,896,913	621,030	292,363	282,119	128,538	317,920	342,832	21,069
Nov-01	202,643	202,903	134,992	6,506	1,642,884	16,309	1,384,552	258,542	330,383	300,302	304,144	42,897	16,583	9,731
Dic-01	213,224	141,074	71,378	2,127	678,815	55,825	750,095	76,367	267,123	128,922	147,944	67,762	126,875	79,394
Ene-02	509,809	498,284	182,698	7,695	368,082	48,678	443,392	190,626	438,520	263,532	260,646	0	0	0
Feb-02	434,484	50,750	39,747	37,471	418,467	14,297	326,765	179,314	438,520	263,532	260,646	0	0	0
Mar-02	458,198	846,421	456,585	4,151	767,774	22,867	548,684	10,782	1,011,159	515,983	583,051	11,846	139,583	7,340
Abr-02	748,801	620,952	400,190	2,311	446,439	94,641	101	0	819,078	602,964	586,056	0	0	0
May-02	1,009,433	922,636	697,316	0	283,387	18,361	209,078	0	883,993	308,593	358,431	199,942	28,268	0
Jun-02	859,432	507,846	673,477	2,709	532,249	87,093	1,197,352	0	308,663	126,001	371,465	37,040	86,574	0
Jul-02	614,565	399,838	303,280	47,730	0	0	0	99,113	978,020	664,727	661,203	79,274	116,013	10,737
Ago-02	1,059,501	640,729	616,178	67,752	187,984	6,894	44,727	11,714	982,567	726,768	727,977	16,501	8,261	0
Sep-02	653,934	470,801	365,188	23,824	115,982	69,544	303,985	287,624	704,738	514,274	499,242	71,667	110,123	34,970
Oct-02	331,931	240,107	132,286	16,970	1,647,190	104,359	2,371,371	776,628	315,420	352,664	160,672	397,287	428,415	26,333
Nov-02	263,323	253,842	168,674	6,882	2,053,651	20,389	1,743,284	329,233	412,963	376,387	380,183	53,613	20,726	12,162
Dic-02	266,541	176,347	96,717	2,659	848,146	69,786	637,609	99,219	333,666	161,155	184,930	84,720	158,330	99,238

METODO WINTERS $\alpha = 0.9$ $\beta = 0.9$ $\gamma = 0.1$

MES	azul1	negro1	rojo1	verde1	azulexp1	verdeexp1	negroexp1	rojoexp1	azul2	negro2	rojo2	azulexp2	negroexp2	rojoexp2
Ene-01	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb-01	343,260	39,912	31,847	29,661	324,492	11,012	250,751	132,668	348,451	206,939	197,603	0	0	0
Mar-01	365,188	677,346	386,830	3,341	615,478	18,260	439,001	8,589	812,066	413,336	467,371	9,382	112,481	5,853
Abr-01	598,216	497,566	321,104	1,855	368,769	76,033	81	0	697,213	483,942	470,334	0	0	0
May-01	807,222	739,776	568,890	0	227,682	13,135	169,098	0	708,669	247,521	287,433	160,542	21,089	0
Jun-01	686,673	406,793	499,383	2,171	426,914	69,821	960,896	0	247,458	102,566	297,612	29,719	69,459	0
Jul-01	491,626	320,161	242,820	36,225	0	0	0	76,420	783,025	452,185	466,347	63,534	94,579	6,612
Ago-01	850,206	514,418	484,678	54,388	134,820	4,731	36,895	253,374	788,861	582,640	584,430	13,242	6,022	0
Sep-01	521,667	376,386	291,361	19,013	82,696	55,606	242,774	229,699	562,225	410,334	398,308	57,260	87,957	27,967
Oct-01	285,206	191,855	105,718	12,764	1,810,783	23,408	1,895,856	620,806	292,048	281,827	128,394	317,640	342,523	21,062
Nov-01	202,703	202,974	134,979	9,507	1,643,410	16,316	1,395,061	268,667	330,468	300,399	304,237	42,804	16,586	9,733
Dic-01	213,319	141,142	71,408	2,127	676,781	56,852	750,371	76,405	267,237	128,911	148,010	67,801	126,711	79,416
Ene-02	518,107	504,593	185,763	7,861	382,836	49,963	463,490	199,316	478,683	364,634	367,890	0	0	0
Feb-02	426,239	50,000	38,998	36,448	399,689	13,830	310,293	170,659	439,476	257,638	246,668	0	0	0
Mar-02	465,687	847,253	465,883	4,149	786,490	22,861	547,468	10,761	1,011,768	516,096	583,320	11,804	139,082	7,289
Abr-02	747,865	621,944	401,518	2,320	448,623	96,040	101	0	821,666	605,048	687,983	0	0	0
May-02	1,009,239	924,659	699,071	0	284,672	16,417	210,076	0	886,163	309,444	359,586	200,830	26,394	0
Jun-02	858,351	508,483	574,317	2,714	533,895	87,272	1,200,842	0	308,324	128,211	372,030	37,159	88,646	0
Jul-02	614,529	400,206	303,519	47,760	0	0	0	99,276	978,771	665,229	581,679	79,416	118,219	10,765
Ago-02	1,082,761	643,023	618,335	67,984	188,522	5,914	44,868	316,719	996,065	728,297	730,534	16,552	8,277	0
Sep-02	651,958	469,233	384,200	23,766	116,744	69,381	303,468	287,124	702,779	612,817	497,895	71,674	109,946	34,846
Oct-02	331,507	239,820	132,148	15,955	1,645,978	104,260	2,369,821	776,008	315,060	352,284	160,493	397,051	428,154	26,328
Nov-02	253,378	253,717	168,724	6,884	2,054,263	20,396	1,743,827	323,334	413,085	375,489	380,298	53,630	20,732	12,166
Dic-02	266,649	176,428	96,760	2,659	848,476	69,815	637,964	99,257	334,046	161,226	185,013	84,751	158,389	99,270



CALCULOS PRONOSTICOS CON METODO WINTERS $\alpha = 0.9 \beta = 0.9 \gamma = 0.4$

MES	azul1	negro1	rojo1	verde1	azulexp1	verdexp1	negroxp1	rojoxp1	azul2	negro2	rojo2	azulexp2	negroxp2	rojoxp2
Ene-01	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb-01	345,250	40,083	32,037	30,115	329,062	11,24	254,749	137,873	350,406	208,401	198,840	0	0	0
Mar-01	353,702	675,208	365,286	3,320	609,317	19,130	434,029	8,491	808,857	411,274	466,316	9,274	111,200	5,781
Abr-01	567,187	496,904	320,531	1,850	227,550	78,804	81	0	656,115	482,870	469,452	0	0	0
May-01	807,144	739,724	568,833	0	337,638	13,133	187,983	0	708,592	247,492	150,498	21,083	0	0
Jun-01	689,787	408,937	459,448	2,172	427,059	69,538	561,064	0	247,471	102,583	297,657	29,731	59,486	0
Jul-01	41,850	320,176	242,832	38,228	0	0	79,431	783,062	452,212	466,371	63,543	94,582	8,614	0
Ago-01	850,207	514,418	484,678	54,388	134,820	4,731	35,895	253,374	788,951	552,640	564,131	13,242	6,622	0
Sep-01	521,585	375,393	291,360	19,012	92,595	55,504	242,771	229,698	562,222	410,331	398,308	57,259	87,956	27,956
Oct-01	255,205	191,858	105,718	12,764	1,318,776	63,408	1,895,849	620,804	282,048	291,827	128,394	317,839	342,521	21,052
Nov-01	262,703	202,974	134,979	5,507	1,643,410	18,316	1,395,062	255,668	330,468	300,399	304,237	42,804	16,586	9,733
Dic-01	213,319	141,142	77,408	2,127	678,781	58,952	750,371	79,405	287,237	128,981	148,010	67,991	126,711	79,418
Ene-02	515,041	502,276	184,640	7,812	377,326	49,448	455,979	195,087	475,828	351,912	365,540	0	0	0
Feb-02	430,505	50,388	39,403	36,900	409,473	14,072	318,957	175,397	434,665	260,672	248,218	0	0	0
Mar-02	454,611	846,732	454,785	4,134	762,069	22,768	543,924	10,891	1,009,507	514,638	581,559	11,528	138,194	7,217
Abr-02	746,695	621,165	400,843	2,314	446,839	94,770	101	0	920,395	603,856	568,668	0	0	0
May-02	1,008,998	924,439	698,898	0	284,456	16,410	209,937	0	985,949	309,355	359,284	200,795	26,377	0
Jun-02	853,457	508,517	574,369	2,715	533,810	57,286	1,201,236	0	309,350	128,225	372,056	37,168	86,870	0
Jul-02	614,558	400,221	303,534	47,784	0	0	96,288	978,816	565,282	581,710	79,425	118,235	10,767	0
Ago-02	1,052,756	843,028	618,338	67,984	168,525	5,914	44,886	315,724	988,070	728,302	730,538	16,553	6,277	0
Sep-02	651,966	489,232	364,199	23,768	119,743	69,390	303,465	287,121	702,777	512,915	497,933	71,574	109,945	34,945
Oct-02	331,507	239,820	132,148	15,955	1,645,974	104,260	2,369,812	776,005	315,060	352,284	160,493	397,049	428,152	26,328
Nov-02	253,379	253,717	168,724	6,864	2,054,283	20,395	1,743,827	323,334	413,085	375,489	380,296	53,630	20,732	12,166
Dic-02	266,649	176,428	96,760	2,659	848,476	68,815	937,964	96,267	334,046	161,226	185,013	54,751	158,388	99,270

CALCULOS PRONOSTICOS CON METODO WINTERS $\alpha = 0.9 \beta = 0.9 \gamma = 0.9$

MES	azul1	negro1	rojo1	verde1	azulexp1	verdexp1	negroxp1	rojoxp1	azul2	negro2	rojo2	azulexp2	negroxp2	rojoxp2
Ene-01	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb-01	346,618	40,397	32,358	30,547	336,967	11,317	261,696	141,703	353,713	210,882	200,935	0	0	0
Mar-01	361,187	671,595	362,671	3,286	599,680	17,906	425,392	6,320	803,420	407,794	461,834	9,087	109,003	5,601
Abr-01	595,450	495,789	319,561	1,642	354,023	75,412	80	0	654,259	481,292	467,984	0	0	0
May-01	807,012	739,630	558,737	0	227,443	13,129	167,984	0	708,479	247,443	287,351	150,420	21,073	0
Jun-01	686,927	408,910	459,560	2,172	427,309	69,656	561,702	0	247,527	102,612	297,732	29,751	69,532	0
Jul-01	491,691	320,197	242,853	38,233	0	0	79,449	783,125	452,297	465,412	63,568	94,614	8,617	0
Ago-01	850,207	514,418	484,678	54,388	134,820	4,731	35,895	253,375	788,952	552,641	564,131	13,242	6,622	0
Sep-01	521,581	375,383	291,357	19,012	92,593	55,503	242,766	229,691	582,218	410,327	398,303	57,268	87,954	27,955
Oct-01	285,205	191,855	105,718	12,764	1,318,771	63,408	1,895,836	620,800	282,047	281,826	128,394	317,837	342,519	21,052
Nov-01	292,703	202,974	134,979	5,507	1,643,410	18,316	1,395,062	255,668	300,469	300,399	304,237	42,804	16,586	9,733
Dic-01	213,320	141,142	77,408	2,127	678,782	58,952	750,372	79,405	287,237	128,981	148,010	67,991	126,711	79,418
Ene-02	509,935	498,418	182,737	7,697	369,182	46,591	443,992	471,240	357,548	361,628	0	0	0	0
Feb-02	437,721	51,042	40,090	37,915	426,395	14,485	333,736	163,822	441,748	285,992	292,710	0	0	0
Mar-02	452,824	843,169	452,928	4,110	754,492	22,609	637,784	10,970	1,005,050	512,165	579,385	11,395	136,631	7,058
Abr-02	744,698	619,651	399,703	2,304	443,741	94,309	100	0	918,209	601,832	595,224	0	0	0
May-02	1,008,994	924,202	698,898	0	284,168	16,398	209,696	0	985,603	309,203	359,108	200,590	26,347	0
Jun-02	848,584	508,576	574,458	2,715	534,010	87,309	1,201,746	0	309,395	129,248	372,126	37,195	86,907	0
Jul-02	614,608	400,248	303,560	47,789	0	0	96,311	978,893	565,318	581,710	79,444	118,282	10,771	0
Ago-02	1,052,755	843,030	618,344	67,985	168,528	5,914	44,870	316,732	989,078	728,309	730,545	16,553	6,277	0
Sep-02	651,963	489,230	364,197	23,765	119,742	69,380	303,460	287,117	702,773	512,911	497,930	71,573	109,943	34,944
Oct-02	331,508	239,819	132,147	15,955	1,645,964	104,260	2,369,796	775,999	315,059	352,283	160,492	397,046	428,149	26,327
Nov-02	253,379	253,717	168,724	6,864	2,054,262	20,395	1,743,826	323,334	413,085	375,499	380,296	53,630	20,732	12,166
Dic-02	266,649	176,428	96,760	2,659	848,477	68,815	937,965	96,267	334,046	161,226	185,013	54,751	158,389	99,270

APENDICE 18
CALCULO DE ERRORES



METODO DE PRONOSTICO	Promedio Móvil	Suavización Exponencial $\alpha=0.1$	Suavización Exponencial $\alpha=0.4$	Suavización Exponencial $\alpha=0.9$	Método Tendenci $\alpha=0.10, \beta=0.4$	Método Tendenci $\alpha=0.10, \beta=0.4$
EMA	288.164	233.640	237.640	221.727	238.146	268.325
EMRC	311.548	278.666	268.481	260.831	291.508	322.938
PAME	59.87%	46.78%	49.06%	37.70%	54.13%	63.45%
EMA	219.678	229.447	251.242	274.506	242.083	252.587
EMRC	252.676	266.676	265.802	336.693	279.351	288.289
PAME	54.16%	126.23%	124.63%	120.66%	134.11%	136.33%
EMA	181.020	198.190	190.877	182.122	215.549	257.459
EMRC	208.067	238.545	214.518	217.386	245.613	280.912
PAME	75.47%	95.45%	100.08%	87.37%	112.14%	141.90%
EMA	21.400	16.068	18.943	17.668	17.247	19.471
EMRC	26.913	22.565	23.175	23.009	22.808	24.118
PAME	1.43E+12	7.76E+11	7.39E+11	2.33E+11	8.57E+11	9.84E+11
EMA	544.569	408.464	445.331	458.070	408.271	419.666
EMRC	772.928	632.097	635.783	633.038	623.398	636.193
PAME	422514666666730.00%	3539209662407110.00%	3862119274666710.00%	4255455408000060.00%	3860617805875170.00%	4100351415938690.00%
EMA	39.830	35.516	39.054	47.028	35.444	36.361
EMRC	46.410	37.938	43.266	54.929	38.016	39.967
PAME	6626400101.68%	4171262619.01%	4927700283.23%	6741118526.67%	4366179485.13%	4115682974.67%
EMA	722.740	519.183	550.459	609.837	523.927	528.694
EMRC	941.378	748.881	768.914	824.937	745.044	766.584
PAME	4703218400043610.00%	3954479584760980.00%	5253865566037980.00%	9167731758043310.00%	412640672378410.00%	3841726295676320.00%
EMA	192.390	161.097	158.910	151.947	164.424	176.066
EMRC	245.408	218.755	216.579	218.771	224.217	245.783
PAME	190784000000060.00%	4033618186692270.00%	1914087600000170.00%	248818600000173.00%	4126116897659380.00%	3629941611722980.00%
EMA	271.026	262.326	297.875	257.955	280.266	311.864
EMRC	320.923	303.537	304.534	338.872	315.367	347.759
PAME	61.83%	45.92%	50.99%	49.03%	53.86%	64.17%
EMA	216.931	159.261	183.445	183.445	161.341	169.437
EMRC	237.326	184.463	202.755	202.755	187.336	194.611
PAME	75.92%	53.57%	62.20%	62.20%	58.08%	61.68%
EMA	181.423	149.217	149.217	149.217	152.623	165.776
EMRC	209.856	180.204	180.204	180.204	186.556	199.166
PAME	80.56%	46.25%	46.25%	46.25%	51.39%	57.37%
EMA	107.004	97.465	83.445	102.533	67.988	75.901
EMRC	147.349	124.137	127.970	153.035	122.662	122.749
PAME	152768000000100.00%	485845988106593.00%	84820692850481.00%	675967606382403.00%	66838637750749.00%	1050568381598340.00%
EMA	102.940	88.050	97.804	127.406	87.956	87.184
EMRC	143.763	133.084	136.679	168.672	130.575	128.870
PAME	2154466966666850.00%	66726777044543.09%	1481160309813510.00%	2078807819074930.00%	869371323844199.00%	1320611018950330.00%
EMA	19.319	15.835	17.869	23.124	15.768	15.607
EMRC	30.038	29.566	29.939	37.935	29.115	28.183
PAME	492173333333347.00%	145081096721247.00%	433082326331755.00%	772019683046920.00%	174740928128873.00%	252732643489568.00%

METODO PRONOS	Método Tendencia $\alpha=0,10, \beta=0,9$	Método Tendencia $\alpha=0,4, \beta=0,1$	Método Tendencia $\alpha=0,4, \beta=0,4$	Método Tendencia $\alpha=0,4, \beta=0,9$	Método Tendencia $\alpha=0,9, \beta=0,1$	Método Tendencia $\alpha=0,9, \beta=0,4$
	282.456	249.846	259.109	283.240	235.454	285.553
	358.775	283.396	311.191	341.318	273.117	302.578
Azul1	71.87%	53.42%	52.48%	53.34%	40.27%	45.74%
	271.143	260.140	281.658	281.685	285.452	317.900
	304.179	295.636	322.070	306.616	352.194	398.273
Negro1	139.42%	127.86%	123.54%	124.80%	123.01%	127.41%
	283.735	199.630	199.630	212.590	194.983	225.574
	316.141	226.611	226.611	249.277	228.785	252.354
Rolo1	162.25%	108.82%	108.82%	107.47%	81.61%	97.92%
	22.451	20.620	23.192	27.833	18.352	18.925
	26.216	24.268	27.174	32.200	24.127	27.138
Verde1	1.16E+12	8.18E+11	8.75E+11	6.54E+11	1.80E+11	1.77E+11
	440.707	468.392	522.085	639.036	475.048	499.835
	669.872	657.414	739.821	878.223	664.178	739.880
AzulExp1	4397987977922610.00%	4071196929098700.00%	4095045241600070.00%	3594106375610240.00%	43588410605694060.00%	4434124279375560.00%
	36.417	39.482	41.476	45.459	49.137	57.203
	39.952	44.119	47.091	53.544	57.450	66.107
VerdeExp1	3899586369.28%	5076489425.98%	5432069725.12%	6534426671.04%	7054349599.05%	7932610717.14%
	541.394	575.171	636.061	724.178	856.251	771.003
	794.168	791.499	870.428	999.467	864.860	977.831
NegroExp1	3490289503009050.00%	5356112597833560.00%	5571310224898990.00%	674448599320720.00%	9789999927335760.00%	11938512789706400.00%
	204.861	170.884	202.057	204.471	162.316	190.150
	272.276	227.336	258.944	279.450	229.015	255.748
RoloExp1	2853528681884200.00%	1622257425812690.00%	1124010391347410.00%	1688978216683420.00%	356216254003380.00%	1073185449523390.00%
	314.087	263.382	256.952	285.841	268.282	321.044
	369.627	316.997	335.300	389.298	354.179	402.203
Azul2	68.67%	54.95%	54.75%	58.25%	51.54%	59.10%
	177.389	177.389	214.013	249.501	209.810	230.491
	204.085	209.568	227.931	265.843	235.237	269.653
Negro2	65.58%	66.78%	72.75%	80.50%	64.32%	66.22%
	175.707	173.547	185.555	194.960	194.960	222.109
	211.620	197.805	212.842	240.559	221.858	252.646
Rolo2	62.36%	57.54%	60.20%	62.74%	60.50%	65.38%
	85.939	88.353	100.151	115.586	107.324	120.133
	127.573	131.346	140.152	159.440	159.941	181.632
AzulExp2	1383624604397730.00%	1007399048189620.00%	1119601325018390.00%	1046892105776610.00%	701324510833182.00%	517715879694178.00%
	92.170	99.998	109.180	122.339	131.415	147.605
	132.105	139.768	148.755	182.823	176.047	200.084
NegroExp2	1711349228126360.00%	1706299221689700.00%	2006395307060830.00%	2172906904123830.00%	2239184144005160.00%	2454981815182780.00%
	16.267	17.998	19.084	20.711	23.346	26.812
	27.587	30.058	31.384	33.985	39.636	45.016
RoloExp2	35457328596259.00%	480193391924148.00%	613485491747746.00%	731586475664171.00%	843849613430389.00%	102701831863840.00%



METODOC PRONOST	Método Tendencia $\alpha=0.9, \beta=0.9$		Winters $\alpha=0.1, \beta=0.1, \gamma=0.1$		Winters $\alpha=0.1, \beta=0.1, \gamma=0.9$		Winters $\alpha=0.1, \beta=0.4, \gamma=0.4$		Winters $\alpha=0.1, \beta=0.4, \gamma=0.9$		Winters $\alpha=0.1, \beta=0.9, \gamma=0.1$		Winters $\alpha=0.1, \beta=0.9, \gamma=0.4$		Winters $\alpha=0.1, \beta=0.9, \gamma=0.9$	
	$\beta=0.1, \gamma=0.1$	$\beta=0.1, \gamma=0.4$	$\beta=0.1, \gamma=0.9$	$\beta=0.4, \gamma=0.1$	$\beta=0.4, \gamma=0.4$	$\beta=0.4, \gamma=0.9$	$\beta=0.9, \gamma=0.1$	$\beta=0.9, \gamma=0.4$	$\beta=0.9, \gamma=0.9$	$\beta=0.9, \gamma=0.1$	$\beta=0.9, \gamma=0.4$	$\beta=0.9, \gamma=0.9$	$\beta=0.9, \gamma=0.1$	$\beta=0.9, \gamma=0.4$	$\beta=0.9, \gamma=0.9$	
	285.726	31,952,906	41,802,454	67,024,981	67,024,981	62,101,522	63,781,389	63,781,389	62,101,522	63,781,389	63,781,389	62,101,522	63,781,389	63,781,389	62,101,522	
Azul1	50.78%	0.99%	1.12%	1.35%	0.99%	1.08%	0.99%	0.99%	1.30%	0.66%	0.66%	0.66%	0.66%	0.66%	0.87%	
	317.900	11,849	11,849	11,249	5,152	5,187	5,284	2,884	5,284	2,884	2,471	2,884	2,471	2,356		
Negro1	398.273	204,124,694	202,835,322	204,869,156	38,578,103	38,533,359	44,059,889	16,530,951	44,059,889	16,530,951	13,464,150	13,464,150	13,464,150	13,463,921		
	127.41%	2.73%	2.67%	2.63%	1.16%	1.17%	1.24%	0.63%	1.24%	0.63%	0.55%	0.63%	0.55%	0.60%		
	273.168	16,540	16,932	17,329	9,890	10,126	10,527	8,182	10,527	8,182	8,041	8,041	8,041	7,868		
	309.500	402,555,413	417,899,122	447,149,192	164,957,692	176,020,542	197,451,177	121,332,433	197,451,177	121,332,433	118,389,679	118,389,679	118,389,679	116,816,800		
Rojo1	107.97%	5.34%	5.43%	5.57%	3.24%	3.27%	3.32%	2.18%	3.32%	2.18%	2.20%	2.20%	2.20%	2.28%		
	23.472	1,170	1,190	1,224	730	738	754	434	754	434	417	417	417	391		
	3,406,611	3,522,401	3,745,520	1,488,421	1,626,350	1,609,325	557,023	495,745	1,609,325	557,023	495,745	495,745	495,745	432,886		
Verde1	6.95E+11	7.14%	7.27%	7.48%	4.08%	4.12%	4.22%	2.74%	4.22%	2.74%	2.79%	2.79%	2.79%	2.92%		
	590.608	23,838	25,405	25,405	15,369	15,337	16,455	7,191	16,455	7,191	8,559	8,559	8,559	12,729		
	820.819	1,249,806,719	1,308,667,010	1,451,738,812	628,797,033	495,291,307	489,390,737	82,492,730	489,390,737	82,492,730	115,536,825	115,536,825	115,536,825	278,872,117		
AzulExp1	5373379755469860.00%	4.32%	4.52%	4.89%	2.75%	2.88%	3.37%	1.85%	3.37%	1.85%	1.96%	1.96%	1.96%	2.40%		
	73.866	1,353	1,331	1,348	496	534	640	236	640	236	225	225	225	448		
	84.636	3,343,932	3,407,612	3,683,036	512,835	601,937	956,091	158,804	601,937	158,804	175,019	175,019	175,019	487,809		
VerdeExp1	9672717680.18%	3.14%	3.09%	3.12%	1.31%	1.37%	1.68%	0.68%	1.68%	0.68%	0.69%	0.69%	0.69%	1.19%		
	942.601	16,491	16,673	18,365	13,110	13,254	14,221	5,359	14,221	5,359	7,110	7,110	7,110	12,136		
	1,155.926	786,490,290	847,602,412	1,046,789,691	430,867,900	407,845,318	494,117,692	69,227,987	494,117,692	69,227,987	94,798,787	94,798,787	94,798,787	309,633,335		
NegroExp1	16283013181352400.00%	2.90%	3.13%	3.63%	2.09%	2.34%	2.94%	1.40%	2.94%	1.40%	1.58%	1.58%	1.58%	2.19%		
	208.634	5,650	5,836	6,185	1,973	2,505	3,457	777	3,457	777	1,603	1,603	1,603	3,664		
	305.855	80,920,411	86,333,274	100,719,210	11,603,239	17,966,090	35,570,924	1,891,718	35,570,924	1,891,718	8,163,119	8,163,119	8,163,119	36,869,663		
RojoExp1	1448385142579370.00%	3.02%	2.98%	3.30%	1.28%	1.48%	2.14%	0.61%	2.14%	0.61%	0.80%	0.80%	0.80%	1.92%		
	391.090	12,811	13,321	14,202	10,303	10,730	11,928	8,086	11,928	8,086	8,045	8,045	8,045	8,165		
	490.460	235,278,401	255,257,703	299,165,007	149,044,323	164,284,451	200,122,122	103,267,063	200,122,122	103,267,063	111,159,075	111,159,075	111,159,075	111,159,075		
Azul2	64.73%	2.28%	2.37%	2.52%	1.81%	1.85%	2.00%	1.22%	2.00%	1.22%	1.24%	1.24%	1.24%	1.34%		
	253.230	2,971	3,552	4,853	3,060	3,979	4,943	2,101	4,943	2,101	2,227	2,227	2,227	3,079		
	319.863	15,365,904	19,919,730	33,408,138	18,386,702	22,340,404	35,248,166	9,680,393	35,248,166	9,680,393	9,025,700	9,025,700	9,025,700	16,344,282		
Negro2	63.33%	0.80%	0.97%	1.34%	0.76%	0.90%	1.21%	0.51%	1.21%	0.51%	0.59%	0.59%	0.59%	0.88%		
	271.846	3,346	3,851	4,892	3,735	4,208	5,183	2,719	5,183	2,719	2,760	2,760	2,760	3,202		
	303.645	15,029,170	19,770,898	32,794,258	23,374,712	27,498,113	39,739,905	14,183,944	39,739,905	14,183,944	12,984,291	12,984,291	12,984,291	17,774,609		
Rojo2	75.71%	0.92%	1.09%	1.35%	0.92%	1.03%	1.27%	0.61%	1.27%	0.61%	0.66%	0.66%	0.66%	0.88%		
	154.582	10,358	10,459	10,636	5,750	5,782	5,837	2,730	5,837	2,730	2,623	2,623	2,623	2,497		
	228.637	318,195,722	324,474,440	336,488,318	110,485,399	108,378,963	108,249,585	25,117,844	108,249,585	25,117,844	23,547,145	23,547,145	23,547,145	23,783,390		
AzulExp2	211098032081969.00%	14.11%	14.34%	14.76%	7.34%	7.42%	7.66%	4.92%	7.66%	4.92%	5.04%	5.04%	5.04%	5.33%		
	190.357	11,778	11,903	12,119	6,502	6,503	6,503	2,986	6,503	2,986	2,915	2,915	2,915	2,855		
	255.675	373,726,518	379,803,514	391,591,568	126,071,695	123,056,984	118,873,089	19,417,808	123,056,984	19,417,808	18,208,295	18,208,295	18,208,295	19,796,829		
NegroExp2	293247617554640.00%	14.11%	14.34%	14.75%	7.34%	7.42%	7.64%	4.92%	7.64%	4.92%	5.03%	5.03%	5.03%	5.32%		
	33.123	1,971	1,972	1,974	1,080	1,039	966	366	1,039	366	394	394	394	511		
	55.960	15,773,506	15,815,126	15,941,748	4,125,410	3,656,886	2,845,996	484,911	3,656,886	484,911	670,736	670,736	670,736	1,299,602		
RojoExp2	1363980946612570.00%	14.20%	14.55%	15.20%	7.36%	7.50%	8.16%	4.95%	8.16%	4.95%	5.17%	5.17%	5.17%	5.63%		

METODO PRONOST	Winters $\alpha=0.4$ $\beta=0.1, \gamma=0.1$	Winters $\alpha=0.4$ $\beta=0.1, \gamma=0.4$	Winters $\alpha=0.4$ $\beta=0.1, \gamma=0.9$	Winters $\alpha=0.4$ $\beta=0.4, \gamma=0.1$	Winters $\alpha=0.4$ $\beta=0.4, \gamma=0.9$	Winters $\alpha=0.4$ $\beta=0.9, \gamma=0.1$	Winters $\alpha=0.4$ $\beta=0.9, \gamma=0.9$	Winters $\alpha=0.9$ $\beta=0.1, \gamma=0.1$	Winters $\alpha=0.9$ $\beta=0.1, \gamma=0.4$
Azul1	2,738	2,921	3,403	2,129	2,228	1,724	3,006	1,819	2,033
	11,987,489	12,743,048	17,887,943	7,146,210	11,266,771	5,668,170	15,138,939	6,702,788	7,486,372
	0.47%	0.51%	0.63%	0.35%	0.44%	0.35%	0.55%	0.29%	0.35%
Negro1	3,642	3,634	3,643	2,044	1,865	1,653	2,102	1,913	2,035
	20,515,118	19,728,053	20,440,109	7,768,399	6,962,966	5,011,963	8,395,821	5,897,766	6,533,139
	0.79%	0.75%	0.83%	0.42%	0.39%	0.36%	0.48%	0.41%	0.41%
Rojo1	44,098,272	45,321,125	48,206,349	16,554,901	15,101,177	5,909,327	7,300,163	10,447,185	9,930,349
	1.35%	1.38%	1.46%	0.74%	0.73%	0.48%	0.71%	0.63%	0.66%
	280	287	308	113	108	107	134	164	176
Verde1	285,302	296,704	333,628	46,151	60,384	111,523	49,472	75,589	112,824
	1.78%	1.81%	1.96%	0.89%	0.89%	1.03%	0.88%	0.81%	0.87%
	5,433	5,965	7,244	2,585	2,909	4,879	2,768	5,379	2,908
AzulExp1	76,579,719	79,989,744	107,009,037	15,970,540	26,077,339	67,391,794	9,025,527	19,404,982	64,352,094
	1.14%	1.27%	1.60%	0.62%	0.71%	1.14%	0.43%	0.69%	1.25%
	352	372	423	150	148	121	295	160	199
VerdeExp1	224,349	251,139	377,833	59,667	71,922	178,982	33,184	73,585	47,177
	0.90%	0.93%	1.10%	0.42%	0.44%	0.72%	0.35%	0.46%	0.44%
	4,380	4,883	5,868	1,766	2,201	23,286	1,231	2,933	6,170
NegroExp1	54,602,057	52,271,939	75,176,068	7,371,308	15,050,182	1,981,294,849	4,083,133	19,300,412	84,506,308
	0.87%	1.05%	1.42%	0.50%	0.63%	5.62%	0.37%	0.68%	1.38%
	1,237	1,604	2,399	269	542	1,469	486	850	497
RojoExp1	3,388,344	5,989,169	14,641,416	1,715,17	1,183,927	7,351,634	549,432	1,957,885	8,785,994
	0.87%	0.97%	1.36%	0.37%	0.54%	1.18%	0.33%	0.41%	0.64%
	4,313	4,395	5,032	3,255	3,186	3,319	2,552	2,509	3,450
Azul2	33,895,384	37,260,508	47,581,388	19,540,672	20,397,424	27,794,149	13,119,864	14,753,639	24,030,742
	0.76%	0.77%	0.89%	0.49%	0.49%	0.55%	0.36%	0.40%	0.59%
	1,621	1,829	2,255	1,282	1,287	1,754	1,247	1,462	2,239
Negro2	4,998,378	5,785,281	10,177,915	3,308,331	3,678,957	7,950,133	3,181,514	4,001,698	9,086,731
	0.40%	0.47%	0.61%	0.30%	0.32%	0.50%	0.28%	0.37%	0.64%
	1,838	2,011	2,383	1,481	1,441	1,750	1,314	1,468	2,192
Rojo2	5,805,262	6,497,664	10,168,321	3,943,215	4,166,237	7,612,421	3,496,169	4,134,978	8,424,513
	0.45%	0.50%	0.62%	0.33%	0.34%	0.46%	0.29%	0.36%	0.59%
	2,163	2,121	2,048	638	576	598	319	308	813
AzulExp2	20,178,726	19,412,726	18,207,116	2,822,038	2,480,107	2,149,896	309,537	230,027	597,829
	3.50%	3.54%	3.84%	1.51%	1.58%	1.87%	1.02%	1.89%	1.85%
	2,447	2,438	2,422	736	709	890	531	643	953
NegroExp2	21,243,004	20,759,471	20,303,162	2,713,102	3,161,601	4,504,963	1,791,028	2,195,834	3,447,813
	3.50%	3.54%	3.83%	1.51%	1.57%	1.95%	1.02%	1.27%	1.87%
	337	318	284	58	72	118	52	71	109
RojoExp2	577,152	504,079	390,576	19,244	24,060	43,579	10,907	16,667	72,658
	3.51%	3.67%	4.20%	1.50%	1.76%	2.56%	1.10%	1.55%	2.57%
	117	126	155	117	126	155	117	126	155

METODO	Winters $\alpha=0.9$ $\beta=0.1, \gamma=0.9$	Winters $\alpha=0.9$ $\beta=0.4, \gamma=0.1$	Winters $\alpha=0.9$ $\beta=0.4, \gamma=0.4$	Winters $\alpha=0.9$ $\beta=0.4, \gamma=0.9$	Winters $\alpha=0.9$ $\beta=0.9, \gamma=0.1$	Winters $\alpha=0.9$ $\beta=0.9, \gamma=0.4$	Winters $\alpha=0.9$ $\beta=0.9, \gamma=0.9$
Azul1	2,497	1,542	1,833	2,486	1,734	2,285	3,362
	12,788,500	7,910,462	9,138,544	15,890,344	13,038,175	14,976,874	25,913,998
	0.46%	0.24%	0.30%	0.46%	0.26%	0.38%	0.62%
Negro1	2,296	1,257	1,471	1,881	1,192	1,510	2,107
	8,770,514	4,034,570	4,787,601	7,463,415	5,418,485	6,595,667	11,216,843
	0.53%	0.27%	0.29%	0.43%	0.27%	0.32%	0.50%
Rojo1	2,023	1,229	1,229	1,243	1,008	1,132	1,569
	9,402,216	3,898,795	3,571,095	3,547,132	4,267,084	4,472,647	5,985,754
	0.78%	0.39%	0.44%	0.58%	0.33%	0.43%	0.67%
Verde1	217	108	139	192	128	167	234
	189,535	54,297	81,815	174,652	71,895	108,560	243,935
	1.03%	0.44%	0.54%	0.71%	0.37%	0.55%	0.90%
AzulExp1	3,967	11,067	1,779	3,247	999	2,476	5,033
	45,722,838	606,797,909	11,443,122	47,046,969	2,892,854	18,269,474	87,204,121
	0.98%	2.40%	0.51%	0.93%	0.32%	0.66%	1.25%
VerdeExp1	279	59	112	210	53	119	240
	197,175	5,500	38,785	163,725	6,103	36,239	182,988
	0.80%	0.26%	0.41%	0.74%	0.29%	0.46%	0.87%
NegroExp1	3,466	805	1,577	3,262	883	2,183	4,364
	43,882,199	1,687,959	10,250,316	48,722,274	2,228,056	15,691,690	75,841,827
	0.96%	0.30%	0.53%	1.05%	0.32%	0.70%	1.36%
RojoExp1	1,603	324	706	1,388	488	921	1,892
	9,431,157	366,125	1,939,129	10,173,592	735,919	2,990,808	14,484,072
	1.08%	0.26%	0.55%	1.08%	0.26%	0.53%	1.30%
Azul2	3,203	2,118	2,279	2,828	2,056	2,651	3,901
	18,870,263	11,180,504	12,119,940	18,506,963	14,262,202	17,031,984	31,009,216
	0.56%	0.36%	0.34%	0.48%	0.29%	0.40%	0.63%
Negro2	1,797	1,073	1,421	2,094	1,302	1,857	2,815
	7,644,310	4,020,922	4,949,237	9,705,649	6,307,020	8,035,548	16,409,295
	0.49%	0.21%	0.33%	0.56%	0.25%	0.42%	0.70%
Rojo2	1,769	1,148	1,375	1,979	1,302	1,791	2,658
	6,855,078	4,323,725	4,977,393	8,532,498	6,635,806	8,011,978	14,721,508
	0.46%	0.23%	0.31%	0.51%	0.26%	0.40%	0.65%
AzulExp2	702	144	138	128	112	124	151
	2,100,233	104,012	88,765	69,991	36,333	38,899	51,260
	1.99%	0.68%	0.87%	1.20%	0.54%	0.88%	1.56%
NegroExp2	881	243	225	195	175	216	383
	2,709,642	472,115	354,968	203,984	90,320	180,658	835,941
	1.38%	0.68%	0.87%	1.19%	0.54%	0.87%	1.53%
RojoExp2	102	13	12	12	12	18	32
	48,341	1,213	804	474	418	1,363	6,376
	2.27%	0.72%	1.00%	1.62%	0.59%	1.17%	2.20%

APENDICE 21
PLAN MAESTRO DE PRODUCCION (MPS)



	Feb-03	Mar-03	Abr-03	May-03	Jun-03	Jul-03	Ago-03	Sep-03	Oct-03	Nov-03	Dic-03
AZUL 1											
Io:	440,349										
Ft	531,686	566,236	924,070	1,241,563	1,052,067	750,547	1,278,255	793,067	401,624	305,507	320,414
It	0	0	0	0	0	0	0	0	0	0	0
MPS	91,337	566,236	924,070	1,241,563	1,052,067	750,547	1,278,255	793,067	401,624	305,507	320,414
NEGRO 1											
Io:	385,306										
Ft	62,450	1,053,273	768,978	1,138,596	623,933	489,416	774,195	571,758	291,059	306,494	212,428
It	322,855	0	0	0	0	0	0	0	0	0	0
MPS	0	730,418	768,978	1,138,596	623,933	489,416	774,195	571,758	291,059	306,494	212,428
ROJO 1											
Io:	195,131										
Ft	48,673	566,827	496,494	860,819	704,701	371,169	744,869	443,710	160,370	203,814	116,502
It	116,458	0	0	0	0	0	0	0	0	0	0
MPS	0	450,369	496,494	860,819	704,701	371,169	744,869	443,710	160,370	203,814	116,502
VERDE 1											
Io:	110,087										
Ft	45,304	5,163	2,870	0	3,330	58,427	81,963	28,947	19,359	8,316	3,202
It	64,783	59,620	56,750	56,750	53,420	0	0	0	0	0	0
MPS	0	0	0	0	0	5,007	81,963	28,947	19,359	8,316	3,202
AZUL EXP 1											
Io:	459,116										
Ft	495,561	954,403	555,312	350,515	654,780	0	203,512	140,917	1,996,483	2,481,095	1,021,507
It	0	0	0	0	0	0	0	0	0	0	0
MPS	36,445	954,403	555,312	350,515	654,780	0	203,512	140,917	1,996,483	2,481,095	1,021,507
VERDE EXP 1											
Io:	114,779										
Ft	17,222	28,439	117,561	20,216	107,080	0	7,133	84,501	126,497	24,635	84,056
It	97,558	69,119	0	0	0	0	0	0	0	0	0
MPS	0	0	48,443	20,216	107,080	0	7,133	84,501	126,497	24,635	84,056
NEGRO EXP 1											
Io:	401,727										
Ft	384,058	681,619	125	258,534	1,472,162	0	54,154	368,984	2,870,491	2,103,177	1,127,549
It	17,659	0	0	0	0	0	0	0	0	0	0
MPS	0	663,961	125	258,534	1,472,162	0	54,154	368,984	2,870,491	2,103,177	1,127,549



	Feb-03	Mar-03	Abr-03	May-03	Jun-03	Jul-03	Aug-03	Sep-03	Oct-03	Nov-03	Dic-03
ROJO EXP 1											
Io:	165,131										
Ft	211,491	0	0	0	0	121,273	382,213	349,119	939,964	389,960	119,317
It	0	0	0	0	0	0	0	0	0	0	0
MPS	46,360	0	0	0	0	121,273	382,213	349,119	939,964	389,960	119,317
AZUL 2											
Io:	81,541										
Ft	536,891	1,257,342	1,016,309	1,090,163	379,126	1,195,405	1,185,975	854,891	381,699	498,069	401,398
It	0	0	0	0	0	0	0	0	0	0	0
MPS	455,350	1,257,342	1,016,309	1,090,163	379,126	1,195,405	1,185,975	854,891	381,699	498,069	401,398
NEGRO 2											
Io:	63,400										
Ft	320,842	641,527	747,771	380,703	157,146	690,350	876,344	623,897	426,785	452,767	193,743
It	0	0	0	0	0	0	0	0	0	0	0
MPS	257,442	641,527	747,771	380,703	157,146	690,350	876,344	623,897	426,785	452,767	193,743
ROJO 2											
Io:	36,228										
Ft	306,115	724,978	726,612	442,097	455,985	710,432	878,805	605,633	194,437	458,541	222,321
It	0	0	0	0	0	0	0	0	0	0	0
MPS	269,887	724,978	726,612	442,097	455,985	710,432	878,805	605,633	194,437	458,541	222,321
AZUL EXP 2											
Io:	107,535										
Ft	0	14,472	0	247,483	45,586	97,100	20,007	87,119	481,512	64,769	102,031
It	107,535	93,063	93,063	154,420	0	0	0	0	0	0	0
MPS	0	0	0	247,483	45,586	97,100	20,007	87,119	481,512	64,769	102,031
NEGRO EXP 2											
Io:	83,638										
Ft	0	173,458	0	32,509	106,545	144,547	10,004	133,828	519,242	25,038	190,684
It	0	0	0	0	0	0	0	0	0	0	0
MPS	0	173,458	0	32,509	106,545	144,547	10,004	133,828	519,242	25,038	190,684
ROJO EXP 2											
Io:	47,793										
Ft	0	9,112	0	0	0	13,161	0	42,506	31,912	14,691	119,501
It	47,793	38,681	38,681	38,681	38,681	25,520	25,520	0	0	0	0
MPS	0	0	0	0	0	0	0	16,986	31,912	14,691	119,501
TOTAL LOCAL											
	1,074,016	4,370,870	4,679,234	5,153,960	3,372,977	4,212,326	5,820,406	3,921,905	1,875,342	2,233,507	1,470,008
TOTAL EXPORTACION											
	82,805	1,781,822	603,980	909,257	2,386,153	362,920	677,023	1,181,454	6,966,101	5,103,366	2,764,646
TOTAL											
	1,156,821	6,162,692	5,283,114	6,063,217	5,759,130	4,575,246	6,497,429	5,103,359	8,841,443	7,336,873	4,234,653



	Ene-04	Feb-04	Mar-04	Abr-04	May-04	Jun-04	Jul-04	Ago-04	Sep-04	Oct-04	Nov-04	Dic-04
AZUL 1												
Io:	775,985	635,492	675,017	1,068,798	1,472,706	1,244,943	886,059	1,505,623	932,073	471,005	357,536	374,217
Ft	0	0	0	0	0	0	0	0	0	0	0	0
It	0	0	0	0	0	0	0	0	0	0	0	0
MPS	775,985	635,492	675,017	1,068,798	1,472,706	1,244,943	886,059	1,505,623	932,073	471,005	357,536	374,217
NEGRO1												
Io:	757,372	74,782	1,257,886	915,983	1,352,847	739,526	578,710	913,331	672,997	341,858	359,207	248,448
Ft	0	0	0	0	0	0	0	0	0	0	0	0
It	0	0	0	0	0	0	0	0	0	0	0	0
MPS	757,372	74,782	1,257,886	915,983	1,352,847	739,526	578,710	913,331	672,997	341,858	359,207	248,448
ROJO1												
Io:	278,845	58,282	676,927	591,396	1,022,781	835,243	438,881	878,719	522,267	188,350	238,863	136,254
Ft	0	0	0	0	0	0	0	0	0	0	0	0
It	0	0	0	0	0	0	0	0	0	0	0	0
MPS	278,845	58,282	676,927	591,396	1,022,781	835,243	438,881	878,719	522,267	188,350	238,863	136,254
VERDE1												
Io:	11,829	54,247	6,166	3,419	0	3,947	69,084	96,689	34,072	22,736	9,745	3,745
Ft	0	0	0	0	0	0	0	0	0	0	0	0
It	0	0	0	0	0	0	0	0	0	0	0	0
MPS	11,829	54,247	6,166	3,419	0	3,947	69,084	96,689	34,072	22,736	9,745	3,745
AZUL EXP 1												
Io:	574,549	593,344	1,139,679	661,397	416,426	776,007	0	240,063	165,852	2,344,829	2,907,551	1,194,606
Ft	0	0	0	0	0	0	0	0	0	0	0	0
It	0	0	0	0	0	0	0	0	0	0	0	0
MPS	574,549	593,344	1,139,679	661,397	416,426	776,007	0	240,063	165,852	2,344,829	2,907,551	1,194,606
VERDE EXP 1												
Io:	74,987	20,621	33,962	140,027	24,018	126,911	0	8,414	99,458	148,562	28,870	98,304
Ft	0	0	0	0	0	0	0	0	0	0	0	0
It	0	0	0	0	0	0	0	0	0	0	0	0
MPS	74,987	20,621	33,962	140,027	24,018	126,911	0	8,414	99,458	148,562	28,870	98,304
NEGRO EXP 1												
Io:	694,477	459,215	812,845	149	306,760	1,742,568	0	63,806	433,783	3,367,323	2,462,024	1,317,236
Ft	0	0	0	0	0	0	0	0	0	0	0	0
It	0	0	0	0	0	0	0	0	0	0	0	0
MPS	694,477	459,215	812,845	149	306,760	1,742,568	0	63,806	433,783	3,367,323	2,462,024	1,317,236

ROJO EXP 1												
	Ene-04	Feb-04	Mar-04	Abr-04	May-04	Jun-04	Jul-04	Ago-04	Sep-04	Oct-04	Nov-04	Dic-04
Io:	298,642	252,868	15,973	0	0	0	143,211	450,328	410,425	1,102,645	456,492	139,368
Ft	0	0	0	0	0	0	0	0	0	0	0	0
It	0	0	0	0	0	0	0	0	0	0	0	0
MPS	298,642	252,868	15,973	0	0	0	143,211	450,328	410,425	1,102,645	456,492	139,368

AZUL 2												
	Ene-04	Feb-04	Mar-04	Abr-04	May-04	Jun-04	Jul-04	Ago-04	Sep-04	Oct-04	Nov-04	Dic-04
Io:	716,784	641,710	1,498,887	1,207,285	1,293,094	448,621	1,411,230	1,386,925	1,004,729	447,637	582,889	488,798
Ft	0	0	0	0	0	0	0	0	0	0	0	0
It	0	0	0	0	0	0	0	0	0	0	0	0
MPS	716,784	641,710	1,498,887	1,207,285	1,293,094	448,621	1,411,230	1,386,925	1,004,729	447,637	582,889	488,798

NEGRO 2												
	Ene-04	Feb-04	Mar-04	Abr-04	May-04	Jun-04	Jul-04	Ago-04	Sep-04	Oct-04	Nov-04	Dic-04
Io:	546,001	383,499	764,802	889,198	451,589	185,959	815,022	1,032,258	733,276	500,529	529,891	226,283
Ft	0	0	0	0	0	0	0	0	0	0	0	0
It	0	0	0	0	0	0	0	0	0	0	0	0
MPS	546,001	383,499	764,802	889,198	451,589	185,959	815,022	1,032,258	733,276	500,529	529,891	226,283

ROJO 2												
	Ene-04	Feb-04	Mar-04	Abr-04	May-04	Jun-04	Jul-04	Ago-04	Sep-04	Oct-04	Nov-04	Dic-04
Io:	551,010	365,886	864,268	864,015	524,401	539,579	838,711	1,035,135	711,795	228,029	536,637	259,655
Ft	0	0	0	0	0	0	0	0	0	0	0	0
It	0	0	0	0	0	0	0	0	0	0	0	0
MPS	551,010	365,886	864,268	864,015	524,401	539,579	838,711	1,035,135	711,795	228,029	536,637	259,655

AZUL EXP 2												
	Ene-04	Feb-04	Mar-04	Abr-04	May-04	Jun-04	Jul-04	Ago-04	Sep-04	Oct-04	Nov-04	Dic-04
Io:	0	0	17,281	0	294,010	54,024	114,801	23,599	102,532	565,462	75,900	119,318
Ft	0	0	0	0	0	0	0	0	0	0	0	0
It	0	0	0	0	0	0	0	0	0	0	0	0
MPS	0	0	17,281	0	294,010	54,024	114,801	23,599	102,532	565,462	75,900	119,318

NEGRO EXP 2												
	Ene-04	Feb-04	Mar-04	Abr-04	May-04	Jun-04	Jul-04	Ago-04	Sep-04	Oct-04	Nov-04	Dic-04
Io:	0	0	207,125	0	38,621	126,267	170,897	11,800	157,505	609,772	29,341	222,962
Ft	0	0	0	0	0	0	0	0	0	0	0	0
It	0	0	0	0	0	0	0	0	0	0	0	0
MPS	0	0	207,125	0	38,621	126,267	170,897	11,800	157,505	609,772	29,341	222,962

ROJO EXP 2												
	Ene-04	Feb-04	Mar-04	Abr-04	May-04	Jun-04	Jul-04	Ago-04	Sep-04	Oct-04	Nov-04	Dic-04
Io:	0	0	10,879	0	0	0	15,558	0	50,023	37,473	17,215	139,736
Ft	0	0	0	0	0	0	0	0	0	0	0	0
It	0	0	0	0	0	0	0	0	0	0	0	0
MPS	0	0	10,879	0	0	0	15,558	0	50,023	37,473	17,215	139,736

TOTAL LOCAL	3,637,827	2,213,896	5,743,953	5,670,094	6,117,418	3,997,817	5,037,697	6,858,681	4,611,209	2,200,144	2,614,768	1,717,400
TOTAL EXPORTACION	1,642,656	1,326,048	2,237,743	801,573	1,079,836	2,825,777	444,467	798,010	1,419,579	8,175,868	5,977,393	3,231,561
TOTAL	5,280,483	3,539,944	7,981,697	6,371,667	7,197,254	6,823,595	5,482,164	7,656,691	6,030,788	10,376,010	8,592,161	4,948,961

**APENDICE 22
PLAN DE REQUERIMIENTOS DE MATERIALES (MRP)**

AZUL 1	ACTUAL	Feb-03	Mar-03	Abr-03	May-03	Jun-03	Jul-03	Agosto-03	Sep-03	Oct-03	Nov-03	Dic-03
		lo:	531,886	924,070	1,241,583	1,052,087	760,547	1,278,255	793,097	401,624	0	0
Fl	0	0	0	0	0	0	0	0	0	0	0	0
II	0	0	0	0	0	0	0	0	0	0	0	0
MPS	81,337	566,236	924,070	1,241,583	1,052,087	760,547	1,278,255	793,097	401,624	0	0	320,414
1. AZUL 1												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS PLANIFICADAS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
1.1. REPUUESTO												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS PLANIFICADAS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
1.2. BARRIL												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS PLANIFICADAS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
1.3. TAPA												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS PLANIFICADAS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
1.4. BLOTON												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS PLANIFICADAS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
1.5. CALA MASTER												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS PLANIFICADAS												
LANZAMIENTO PEDIDOS PLANIFICADOS												



RECEPCIONES PROGRAMADAS
RECEPCIONES NETAS PLANIFICADAS
LANZAMIENTO PEDIDOS PLANIFICADOS



1.6 CÁJILLA												
NECEDIDADES BRUTAS												
DISPONIBILIDAD	32,333	26,478	28,128	45,783	61,363	91,873	36,919	62,734	38,638	19,625	14,897	15,962
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES NETAS	32,333	26,478	28,128	45,783	61,363	91,873	36,919	62,734	38,638	19,625	14,897	15,962
RECEPCION PEDIDOS PLANIFICADOS	32,333	26,478	28,128	45,783	61,363	91,873	36,919	62,734	38,638	19,625	14,897	15,962
LANZAMIENTO PEDIDOS PLANIFICADOS	32,333	26,478	28,128	45,783	61,363	91,873	36,919	62,734	38,638	19,625	14,897	15,962
1.1.1 MUNTO												
NECEDIDADES BRUTAS												
DISPONIBILIDAD	775,985	635,482	675,017	1,066,798	1,472,706	1,244,843	886,059	1,505,623	932,073	471,005	357,536	374,217
RECEPCIONES PROGRAMADAS	4,482	16,660	18,843	20,146	22,439	2,490	16,437	10,814	3,741	7,735	200	983
RECEPCIONES NETAS	775,548	631,042	656,057	1,076,854	1,452,265	1,222,504	863,563	1,486,199	921,269	467,264	348,800	374,017
RECEPCION PEDIDOS PLANIFICADOS	775,000	650,000	675,000	1,000,000	1,475,000	1,200,000	800,000	1,450,000	925,000	475,000	350,000	375,000
LANZAMIENTO PEDIDOS PLANIFICADOS	675,000	1,100,000	1,475,000	1,225,000	900,000	1,500,000	925,000	475,000	350,000	275,000	0	0
1.1.2 YINTA												
NECEDIDADES BRUTAS												
DISPONIBILIDAD	248,32	203,36	218,01	351,82	471,27	398,38	293,54	481,80	298,29	150,72	114,41	119,75
RECEPCIONES PROGRAMADAS	41,22	37,87	21,88	70,25	68,98	0,60	17,08	35,28	37,00	69,29	71,86	52,11
RECEPCIONES NETAS	198,10	165,49	196,13	281,57	402,29	397,78	276,46	446,52	261,29	81,43	42,55	67,64
RECEPCION PEDIDOS PLANIFICADOS	200,00	250,00	230,00	329,75	401,02	298,40	282,94	464,74	283,00	113,72	28,14	47,88
LANZAMIENTO PEDIDOS PLANIFICADOS	200,00	250,00	230,00	329,75	401,02	298,40	282,94	464,74	283,00	113,72	28,14	47,88
1.1.3 TUBO												
NECEDIDADES BRUTAS												
DISPONIBILIDAD	775,985	635,482	675,017	1,066,798	1,472,706	1,244,843	886,059	1,505,623	932,073	471,005	357,536	374,217
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES NETAS	775,985	635,482	675,017	1,066,798	1,472,706	1,244,843	886,059	1,505,623	932,073	471,005	357,536	374,217
RECEPCION PEDIDOS PLANIFICADOS	775,985	635,482	675,017	1,066,798	1,472,706	1,244,843	886,059	1,505,623	932,073	471,005	357,536	374,217
LANZAMIENTO PEDIDOS PLANIFICADOS	775,985	635,482	675,017	1,066,798	1,472,706	1,244,843	886,059	1,505,623	932,073	471,005	357,536	374,217
1.1.4 BOPORTE												
NECEDIDADES BRUTAS												
DISPONIBILIDAD	776,985	635,482	675,017	1,066,798	1,472,706	1,244,843	886,059	1,505,623	932,073	471,005	357,536	374,217
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES NETAS	776,985	635,482	675,017	1,066,798	1,472,706	1,244,843	886,059	1,505,623	932,073	471,005	357,536	374,217
RECEPCION PEDIDOS PLANIFICADOS	776,985	635,482	675,017	1,066,798	1,472,706	1,244,843	886,059	1,505,623	932,073	471,005	357,536	374,217
LANZAMIENTO PEDIDOS PLANIFICADOS	776,985	635,482	675,017	1,066,798	1,472,706	1,244,843	886,059	1,505,623	932,073	471,005	357,536	374,217
1.2.1 POLIESTIRENO												
NECEDIDADES BRUTAS												
DISPONIBILIDAD	2,715,60	2,224,22	2,362,86	3,845,79	5,154,47	4,367,30	3,101,21	5,269,68	3,282,25	1,649,52	1,291,37	1,309,76
RECEPCIONES PROGRAMADAS	26,40	7,24	29,68	8,88	29,41	37,11	40,81	39,22	13,97	30,45	38,08	34,32
RECEPCIONES NETAS	2,673,54	2,197,76	2,365,32	3,816,12	5,145,59	4,327,99	3,054,09	5,228,78	3,228,03	1,634,55	1,220,92	1,270,88
RECEPCION PEDIDOS PLANIFICADOS	2,700,00	2,205,00	2,365,00	3,825,00	5,175,00	4,366,00	3,105,00	5,265,00	3,240,00	1,665,00	1,260,00	1,305,00
LANZAMIENTO PEDIDOS PLANIFICADOS	2,205,00	2,395,00	3,825,00	5,175,00	4,366,00	3,106,00	5,265,00	3,240,00	1,665,00	1,260,00	1,305,00	0,00



1.3.1 POLIPROMILENO													
	NECESIDADES BRUTAS	800.30	670.88	722.27	1,175.71	1,976.80	1,332.09	948.08	1,811.02	897.32	503.88	382.96	400.41
	DISPONIBILIDAD	14.18	11.89	11.89	6.17	6.38	23.29	20.21	29.19	21.87	12.80	35.33	39.92
NIVEL 2	RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NECESIDADES NETAS	786.87	660.84	708.11	1,169.83	1,969.82	1,328.71	928.78	1,801.81	898.13	482.10	369.87	365.08
	RECEPCION PEDIDOS PLANIFICADOS	816.00	675.00	720.00	1,170.00	1,975.00	1,350.00	945.00	1,820.00	890.00	485.00	405.00	405.00
	LANZAMIENTO PEDIDOS PLANIFICADOS	816.00	675.00	720.00	1,170.00	1,975.00	1,350.00	945.00	1,820.00	890.00	485.00	405.00	405.00
1.3.2 COLORANTE													
	NECESIDADES BRUTAS	13.19	10.80	11.46	19.88	26.64	21.16	15.00	26.80	16.95	8.01	6.08	6.36
	DISPONIBILIDAD	40.80	30.00	18.63	44.85	19.61	43.65	28.89	2.96	32.14	24.13	18.08	11.68
NIVEL 2	RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NECESIDADES NETAS	4.20	0.00	0.00	0.15	0.00	1.35	0.00	0.00	12.85	0.00	0.00	0.00
	RECEPCION PEDIDOS PLANIFICADOS	48.00	0.00	0.00	45.00	45.00	48.00	0.00	0.00	48.00	0.00	0.00	0.00
	LANZAMIENTO PEDIDOS PLANIFICADOS	0.00	0.00	45.00	0.00	45.00	0.00	0.00	45.00	0.00	0.00	0.00	0.00
1.4.1 POLIETILENO BAJA DENSIDAD													
	NECESIDADES BRUTAS	88.46	72.45	76.96	125.26	187.99	141.82	101.01	171.64	106.29	53.89	40.76	42.66
	DISPONIBILIDAD	3.84	21.39	34.44	44.18	11.29	4.36	38.35	1.71	30.49	21.76	28.00	28.34
NIVEL 2	RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NECESIDADES NETAS	88.16	68.61	55.56	90.82	123.71	130.64	98.65	133.29	104.54	23.24	18.00	16.66
	RECEPCION PEDIDOS PLANIFICADOS	90.00	90.00	90.00	135.00	135.00	135.00	135.00	135.00	135.00	45.00	45.00	45.00
	LANZAMIENTO PEDIDOS PLANIFICADOS	90.00	90.00	135.00	135.00	135.00	135.00	135.00	135.00	45.00	45.00	45.00	45.00
1.4.2 COLORANTE													
	NECESIDADES BRUTAS	1.40	1.14	1.22	1.99	2.63	2.24	1.59	2.71	1.69	0.85	0.64	0.67
	DISPONIBILIDAD	12.74	11.80	10.39	8.41	5.78	3.52	1.82	44.21	42.53	41.88	41.04	40.37
NIVEL 2	RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	NECESIDADES NETAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.79	0.00	0.00	0.00	0.00
	RECEPCION PEDIDOS PLANIFICADOS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	46.00	0.00	0.00	0.00	0.00
	LANZAMIENTO PEDIDOS PLANIFICADOS	0.00	0.00	0.00	0.00	45.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.1.3.1 POLIETILENO													
	NECESIDADES BRUTAS	485.59	391.29	405.01	659.28	983.62	746.97	531.64	903.37	569.24	262.80	214.92	224.53
	DISPONIBILIDAD	32.56	9.26	6.25	17.97	26.35	41.39	42.76	31.39	3.13	25.83	26.01	14.48
NIVEL 3	RECEPCIONES PROGRAMADAS	1.00	3.00	3.00	4.00	5.00	6.00	7.00	8.00	6.00	10.00	10.00	12.00
	NECESIDADES NETAS	482.44	380.74	398.75	657.03	970.65	723.81	497.26	898.02	536.87	289.47	198.90	210.52
	RECEPCION PEDIDOS PLANIFICADOS	495.00	350.00	405.00	675.00	900.00	785.00	640.00	900.00	540.00	315.00	235.00	225.00
	LANZAMIENTO PEDIDOS PLANIFICADOS	360.00	405.00	675.00	800.00	785.00	540.00	900.00	540.00	315.00	225.00	225.00	0.00
1.1.1 POLIACETAL NATURAL													
	NECESIDADES BRUTAS	131.92	108.03	114.75	186.80	280.39	211.64	150.83	255.90	159.45	80.07	90.78	63.82
	DISPONIBILIDAD	5.81	30.77	3.02	37.22	6.69	14.22	36.59	42.64	10.16	10.12	28.33	42.72
NIVEL 3	RECEPCIONES PROGRAMADAS	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00	12.00
	NECESIDADES NETAS	128.19	104.23	88.88	147.78	218.14	210.76	143.41	227.36	134.81	79.86	81.67	47.28
	RECEPCION PEDIDOS PLANIFICADOS	135.00	135.00	90.00	225.00	225.00	180.00	180.00	270.00	135.00	90.00	90.00	90.00
	LANZAMIENTO PEDIDOS PLANIFICADOS	135.00	90.00	225.00	225.00	225.00	180.00	270.00	135.00	90.00	90.00	90.00	0.00



APENDICE 22
PLAN DE REQUERIMIENTOS DE MATERIALES (MRP)

NEGR01	ACTUAL	Feb-03	Mar-03	Abr-03	May-03	Jun-03	Jul-03	Ag0-03	Sep-03	Oct-03	Nov-03	Dic-03
lo:	386,306	82,450	1,093,273	708,978	1,138,699	623,933	488,418	774,165	671,768	291,099	308,484	212,428
Fl		332,865	0	0	0	0	0	0	0	0	0	0
ll		0	730,419	708,978	1,138,699	623,933	488,418	774,165	671,768	291,099	308,484	212,428
MRP		0	730,419	708,978	1,138,699	623,933	488,418	774,165	671,768	291,099	308,484	212,428

1. NEGRO 1												
NIVEL 0	NECESIDADES BRUTAS	0	730,419	708,978	1,138,699	623,933	488,418	774,165	671,768	291,099	308,484	212,428
	DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0
	RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0
	RECEPCIONES NETAS	0	730,419	708,978	1,138,699	623,933	488,418	774,165	671,768	291,099	308,484	212,428
	LANZAMIENTO PEDIDOS PLANIFICADOS	0	730,419	708,978	1,138,699	623,933	488,418	774,165	671,768	291,099	308,484	212,428

1.1. REPUESTO												
NIVEL 1	NECESIDADES BRUTAS	86,000	730,419	708,978	1,138,699	623,933	488,418	774,165	671,768	291,099	308,484	212,428
	DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0
	RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0
	RECEPCIONES NETAS	86,000	730,419	708,978	1,138,699	623,933	488,418	774,165	671,768	291,099	308,484	212,428
	LANZAMIENTO PEDIDOS PLANIFICADOS	86,000	730,419	708,978	1,138,699	623,933	488,418	774,165	671,768	291,099	308,484	212,428

1.2. BARRIL												
NIVEL 1	NECESIDADES BRUTAS	0	730,419	708,978	1,138,699	623,933	488,418	774,165	671,768	291,099	308,484	212,428
	DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0
	RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0
	RECEPCIONES NETAS	0	730,419	708,978	1,138,699	623,933	488,418	774,165	671,768	291,099	308,484	212,428
	LANZAMIENTO PEDIDOS PLANIFICADOS	0	730,419	708,978	1,138,699	623,933	488,418	774,165	671,768	291,099	308,484	212,428

1.3. TAPA												
NIVEL 1	NECESIDADES BRUTAS	80,000	730,419	708,978	1,138,699	623,933	488,418	774,165	671,768	291,099	308,484	212,428
	DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0
	RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0
	RECEPCIONES NETAS	80,000	730,419	708,978	1,138,699	623,933	488,418	774,165	671,768	291,099	308,484	212,428
	LANZAMIENTO PEDIDOS PLANIFICADOS	80,000	730,419	708,978	1,138,699	623,933	488,418	774,165	671,768	291,099	308,484	212,428

1.4. BOTON												
NIVEL 1	NECESIDADES BRUTAS	47,000	730,419	708,978	1,138,699	623,933	488,418	774,165	671,768	291,099	308,484	212,428
	DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0
	RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0
	RECEPCIONES NETAS	47,000	730,419	708,978	1,138,699	623,933	488,418	774,165	671,768	291,099	308,484	212,428
	LANZAMIENTO PEDIDOS PLANIFICADOS	47,000	730,419	708,978	1,138,699	623,933	488,418	774,165	671,768	291,099	308,484	212,428

1.5. CAJA MASTIL												
NIVEL 1	NECESIDADES BRUTAS	0	609	641	649	520	408	645	478	243	265	177
	DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0
	RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0
	RECEPCIONES NETAS	0	609	641	649	520	408	645	478	243	265	177
	LANZAMIENTO PEDIDOS PLANIFICADOS	0	609	641	649	520	408	645	478	243	265	177



1.0 CAJILLA												
RECEPCIONES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 1	0	30,434	35,041	47,441	25,987	20,392	32,268	25,923	12,128	12,771	8,861	0
RECEPCIONES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 2	0	841,418	768,978	1,138,686	623,933	489,416	774,195	571,768	291,009	306,494	212,428	0
RECEPCIONES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 2	320,000	3,682	5,604	21,009	22,076	7,690	8,464	11,708	20,637	14,143	1,715	0
RECEPCIONES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 2	0	321,418	768,398	1,128,982	602,826	467,340	798,536	663,294	278,363	285,857	198,285	0
RECEPCIONES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 2	328,000	778,000	828,000	478,000	775,000	676,000	300,000	300,000	200,000	776,000	75,000	0
RECEPCIONES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 2	0	205,25	246,07	384,35	199,66	166,61	247,74	182,86	83,14	86,08	67,99	0
RECEPCIONES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 2	78,00	70,75	24,87	60,32	60,60	4,05	66,31	73,35	80,20	82,13	14,15	0
RECEPCIONES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 2	0	128,28	175,33	339,88	139,34	85,95	243,69	129,85	19,80	17,87	0,00	0
RECEPCIONES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 2	200,00	200,00	400,00	200,00	200,00	100,00	300,00	200,00	100,00	100,00	0,00	0
RECEPCIONES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 2	0	841,418	768,978	1,138,686	623,933	489,416	774,195	571,768	291,009	306,494	212,428	0
RECEPCIONES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 2	0	841,418	768,978	1,138,686	623,933	489,416	774,195	571,768	291,009	306,494	212,428	0
RECEPCIONES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 2	0	841,418	768,978	1,138,686	623,933	489,416	774,195	571,768	291,009	306,494	212,428	0
RECEPCIONES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 2	0	841,418	768,978	1,138,686	623,933	489,416	774,195	571,768	291,009	306,494	212,428	0
RECEPCIONES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 2	0	2,569,46	2,691,42	3,995,09	2,183,78	1,712,89	2,709,08	2,001,15	1,018,74	1,072,73	743,60	0
RECEPCIONES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 2	320,00	13,54	22,11	42,03	18,26	15,31	6,83	29,47	0,73	0,00	29,60	0
RECEPCIONES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 2	0	2,238,46	2,677,89	3,892,87	2,141,74	1,684,69	2,694,37	1,953,53	989,27	1,072,00	735,60	0
RECEPCIONES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 2	0	2,250,00	2,700,00	4,005,00	2,160,00	1,710,00	2,700,00	2,025,00	1,080,00	1,080,00	785,00	0
RECEPCIONES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 2	2,250,00	2,700,00	4,005,00	2,160,00	1,710,00	2,700,00	2,025,00	1,080,00	1,080,00	785,00	3,655,00	0

0.00352 N

0.0038 KG



1.3.1 POLIPROPILENO												
0.00107 KG												
RECEPCIONES BRUTAS	0.00	717.36	822.81	1,218.30	687.61	833.87	928.39	611.78	311.44	327.86	227.30	43.40
DISPONIBILIDAD	0.00	2.88	34.85	38.84	10.27	39.89	10.10	13.68	0.00	0.00	0.00	0.00
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCIONES NETAS	0.00	717.36	822.18	1,188.45	638.08	484.73	818.12	614.80	301.38	315.20	227.00	43.40
RECEPCION PEDIDOS PLANIFICADOS	0.00	720.00	885.00	1,218.00	678.00	485.00	885.00	615.00	318.00	318.00	270.00	43.40
LANZAMIENTO PEDIDOS PLANIFICADOS	0.00	720.00	885.00	1,218.00	678.00	485.00	885.00	615.00	318.00	318.00	270.00	43.40

1.3.2 COLORANTE												
0.0000170 KG												
RECEPCIONES BRUTAS	0.00	11.40	13.07	19.36	10.61	8.32	13.19	9.72	4.86	6.21	3.61	36.60
DISPONIBILIDAD	0.00	33.60	20.53	1.17	30.87	27.63	1.09	4.37	44.52	39.21	0.00	0.00
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCIONES NETAS	0.00	11.40	13.07	18.19	10.61	8.32	13.19	9.72	4.86	6.21	3.61	36.60
RECEPCION PEDIDOS PLANIFICADOS	0.00	48.00	0.00	45.00	0.00	0.00	0.00	48.00	0.00	0.00	0.00	0.00
LANZAMIENTO PEDIDOS PLANIFICADOS	45.00	0.00	0.00	45.00	0.00	0.00	0.00	48.00	0.00	0.00	0.00	0.00

1.4.1 POLIETILENO BAJA DENSIDAD												
0.0001140 KG												
RECEPCIONES BRUTAS	0.00	77.81	87.48	129.80	71.13	86.79	89.26	65.18	33.18	34.84	24.22	6.83
DISPONIBILIDAD	0.00	12.09	14.43	19.83	39.50	37.71	29.48	9.27	21.08	31.14	0.00	0.00
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCIONES NETAS	0.00	77.81	87.48	119.97	71.13	86.79	89.26	65.18	33.18	34.84	24.22	6.83
RECEPCION PEDIDOS PLANIFICADOS	0.00	80.00	86.00	118.37	76.87	80.58	80.58	35.73	23.82	13.86	0.00	0.00
LANZAMIENTO PEDIDOS PLANIFICADOS	80.00	80.00	135.00	80.00	45.00	80.00	45.00	45.00	45.00	45.00	0.00	80.00

1.4.2 COLORANTE												
0.00 KG												
RECEPCIONES BRUTAS	0.00	1.23	1.38	2.05	1.12	0.88	1.39	1.03	0.62	0.66	0.36	34.46
DISPONIBILIDAD	0.00	43.77	42.39	40.34	39.21	39.33	36.94	35.81	35.39	34.83	34.46	0.00
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCIONES NETAS	0.00	1.23	1.38	2.05	1.12	0.88	1.39	1.03	0.62	0.66	0.36	34.46
RECEPCION PEDIDOS PLANIFICADOS	0.00	45.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LANZAMIENTO PEDIDOS PLANIFICADOS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

1.3.1 POLIETILENO												
0.0000000 KG												
RECEPCIONES BRUTAS	0.00	394.85	481.39	683.16	374.36	293.65	464.62	343.06	174.64	193.90	127.48	18.03
DISPONIBILIDAD	0.00	20.16	8.78	0.00	31.26	7.80	38.08	10.02	16.39	11.49	18.03	0.00
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCIONES NETAS	0.00	394.85	441.34	674.40	373.76	292.40	466.92	304.88	164.62	186.81	118.87	18.03
RECEPCION PEDIDOS PLANIFICADOS	0.00	405.00	480.00	678.00	408.00	270.00	488.00	318.00	180.00	190.00	135.00	18.03
LANZAMIENTO PEDIDOS PLANIFICADOS	405.00	405.00	270.00	488.00	318.00	180.00	488.00	180.00	480.00	450.00	450.00	18.03

1.1.1 POLIACETAL NATURAL												
0.0001700 KG												
RECEPCIONES BRUTAS	0.00	108.64	130.73	193.86	108.07	83.20	131.81	87.20	49.49	52.10	36.11	0.89
DISPONIBILIDAD	0.00	23.89	30.23	18.07	0.00	7.40	10.79	5.86	44.11	37.00	0.00	0.00
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCIONES NETAS	0.00	108.64	130.73	185.79	108.07	83.20	121.02	81.34	44.11	48.10	36.11	0.89
RECEPCION PEDIDOS PLANIFICADOS	0.00	108.00	136.00	180.00	80.00	80.00	136.00	80.00	48.00	46.00	0.00	0.00
LANZAMIENTO PEDIDOS PLANIFICADOS	180.00	80.00	80.00	136.00	80.00	80.00	48.00	0.00	136.00	136.00	45.00	0.00

**APENDICE 22
PLAN DE REQUERIMIENTOS DE MATERIALES (MRP)**

ROU01	Actual	Feb-03	Mar-03	Abr-03	May-03	Jun-03	Jul-03	Ag-03	Sep-03	Oct-03	Nov-03	Dic-03
101	185,131	48,873	868,827	488,484	880,819	704,701	371,188	744,888	443,710	160,370	203,814	118,802
PI	0	118,448	0	0	0	0	0	0	0	0	0	0
II	0	0	0	0	0	0	0	0	0	0	0	0
MRP	0	0	450,389	488,484	880,819	704,701	371,188	744,888	443,710	160,370	203,814	118,802
1.0 JOJO												
NECESIDADES BRUTAS	0	0	450,389	488,484	880,819	704,701	371,188	744,888	443,710	160,370	203,814	118,802
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	0	450,389	488,484	880,819	704,701	371,188	744,888	443,710	160,370	203,814	118,802
RECEPCION PEDIDOS PLANIFICADOS	0	0	450,389	488,484	880,819	704,701	371,188	744,888	443,710	160,370	203,814	118,802
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	450,389	488,484	880,819	704,701	371,188	744,888	443,710	160,370	203,814	118,802
1.1 REPUERTO												
NECESIDADES BRUTAS	0	0	450,389	488,484	880,819	704,701	371,188	744,888	443,710	160,370	203,814	118,802
DISPONIBILIDAD	53,500	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	0	396,889	488,484	880,819	704,701	371,188	744,888	443,710	160,370	203,814	118,802
RECEPCION PEDIDOS PLANIFICADOS	0	0	396,889	488,484	880,819	704,701	371,188	744,888	443,710	160,370	203,814	118,802
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	396,889	488,484	880,819	704,701	371,188	744,888	443,710	160,370	203,814	118,802
1.2 BARRIL												
NECESIDADES BRUTAS	0	0	450,389	488,484	880,819	704,701	371,188	744,888	443,710	160,370	203,814	118,802
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	0	450,389	488,484	880,819	704,701	371,188	744,888	443,710	160,370	203,814	118,802
RECEPCION PEDIDOS PLANIFICADOS	0	0	450,389	488,484	880,819	704,701	371,188	744,888	443,710	160,370	203,814	118,802
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	450,389	488,484	880,819	704,701	371,188	744,888	443,710	160,370	203,814	118,802
1.3 TAPA												
NECESIDADES BRUTAS	0	0	450,389	488,484	880,819	704,701	371,188	744,888	443,710	160,370	203,814	118,802
DISPONIBILIDAD	85,000	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	0	365,389	488,484	880,819	704,701	371,188	744,888	443,710	160,370	203,814	118,802
RECEPCION PEDIDOS PLANIFICADOS	0	0	365,389	488,484	880,819	704,701	371,188	744,888	443,710	160,370	203,814	118,802
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	365,389	488,484	880,819	704,701	371,188	744,888	443,710	160,370	203,814	118,802
1.4 BOTÓN												
NECESIDADES BRUTAS	0	0	450,389	488,484	880,819	704,701	371,188	744,888	443,710	160,370	203,814	118,802
DISPONIBILIDAD	24,000	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	0	426,389	488,484	880,819	704,701	371,188	744,888	443,710	160,370	203,814	118,802
RECEPCION PEDIDOS PLANIFICADOS	0	0	426,389	488,484	880,819	704,701	371,188	744,888	443,710	160,370	203,814	118,802
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	426,389	488,484	880,819	704,701	371,188	744,888	443,710	160,370	203,814	118,802
1.5 CAJA MASTER												
NECESIDADES BRUTAS	0	0	375	414	717	887	308	621	370	134	170	97
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	0	375	414	717	887	308	621	370	134	170	97
RECEPCION PEDIDOS PLANIFICADOS	0	0	375	414	717	887	308	621	370	134	170	97
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	375	414	717	887	308	621	370	134	170	97





POLITECNICA DEL LITORAL
BIBLIOTECA 'GONZALO ZEVALLOS'
F.I.M.C.R.

1.0 CAJILLA												
	0	18,765	20,687	35,887	58,383	15,405	31,038	18,488	6,882	0	4,854	
NECESIDADES BRUTAS	0	18,765	20,687	35,887	58,383	15,405	31,038	18,488	6,882	0	4,854	
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	
NECESIDADES NETAS	0	18,765	20,687	35,887	58,383	15,405	31,038	18,488	6,882	0	4,854	
RECEPCION PEDIDOS PLANIFICADOS	0	18,765	20,687	35,887	58,383	15,405	31,038	18,488	6,882	0	4,854	
LANZAMIENTO PEDIDOS PLANIFICADOS	0	18,765	20,687	35,887	58,383	15,405	31,038	18,488	6,882	0	4,854	
1.1.1 BUNTO												
	0	388,869	498,484	860,819	704,701	371,169	744,869	443,710	180,370	0	118,502	
NECESIDADES BRUTAS	0	388,869	498,484	860,819	704,701	371,169	744,869	443,710	180,370	0	118,502	
DISPONIBILIDAD	0	17,131	20,637	9,818	5,118	8,048	14,079	20,368	9,988	0	14,884	
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	
NECESIDADES NETAS	0	17,131	20,637	9,818	5,118	8,048	14,079	20,368	9,988	0	14,884	
RECEPCION PEDIDOS PLANIFICADOS	0	17,131	20,637	9,818	5,118	8,048	14,079	20,368	9,988	0	14,884	
LANZAMIENTO PEDIDOS PLANIFICADOS	0	17,131	20,637	9,818	5,118	8,048	14,079	20,368	9,988	0	14,884	
	0	107,869	478,383	840,182	684,892	366,053	735,921	428,631	140,001	0	103,615	
RECEPCION PEDIDOS PLANIFICADOS	0	107,869	478,383	840,182	684,892	366,053	735,921	428,631	140,001	0	103,615	
LANZAMIENTO PEDIDOS PLANIFICADOS	0	107,869	478,383	840,182	684,892	366,053	735,921	428,631	140,001	0	103,615	
	0	125,000	500,000	850,000	700,000	375,000	750,000	480,000	180,000	0	126,000	
RECEPCION PEDIDOS PLANIFICADOS	0	125,000	500,000	850,000	700,000	375,000	750,000	480,000	180,000	0	126,000	
LANZAMIENTO PEDIDOS PLANIFICADOS	0	125,000	500,000	850,000	700,000	375,000	750,000	480,000	180,000	0	126,000	
	0	880,000	700,000	375,000	750,000	460,000	150,000	280,000	125,000	0	278,000	
RECEPCION PEDIDOS PLANIFICADOS	0	880,000	700,000	375,000	750,000	460,000	150,000	280,000	125,000	0	278,000	
LANZAMIENTO PEDIDOS PLANIFICADOS	0	880,000	700,000	375,000	750,000	460,000	150,000	280,000	125,000	0	278,000	
	0	0	0	0	0	0	0	0	0	0	0	
RECEPCION PEDIDOS PLANIFICADOS	0	0	0	0	0	0	0	0	0	0	0	
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	0	0	0	0	0	0	0	0	0	
	0	127,000	158,800	275,456	225,500	118,777	238,336	141,989	51,32	0	37,28	
NECESIDADES BRUTAS	0	127,000	158,800	275,456	225,500	118,777	238,336	141,989	51,32	0	37,28	
DISPONIBILIDAD	0	33,000	74,12	98,66	73,10	54,38	16,03	74,04	22,72	0	20,22	
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	
NECESIDADES NETAS	0	33,000	74,12	98,66	73,10	54,38	16,03	74,04	22,72	0	20,22	
RECEPCION PEDIDOS PLANIFICADOS	0	33,000	74,12	98,66	73,10	54,38	16,03	74,04	22,72	0	20,22	
LANZAMIENTO PEDIDOS PLANIFICADOS	0	33,000	74,12	98,66	73,10	54,38	16,03	74,04	22,72	0	20,22	
	0	87,000	125,88	201,34	125,84	45,62	183,97	125,96	0,00	0	42,80	
RECEPCION PEDIDOS PLANIFICADOS	0	87,000	125,88	201,34	125,84	45,62	183,97	125,96	0,00	0	42,80	
LANZAMIENTO PEDIDOS PLANIFICADOS	0	87,000	125,88	201,34	125,84	45,62	183,97	125,96	0,00	0	42,80	
	0	100,000	200,000	300,000	200,000	100,000	200,000	200,000	100,000	0	100,000	
RECEPCION PEDIDOS PLANIFICADOS	0	100,000	200,000	300,000	200,000	100,000	200,000	200,000	100,000	0	100,000	
LANZAMIENTO PEDIDOS PLANIFICADOS	0	100,000	200,000	300,000	200,000	100,000	200,000	200,000	100,000	0	100,000	
	0	388,869	498,484	860,819	704,701	371,169	744,869	443,710	180,370	0	118,502	
NECESIDADES BRUTAS	0	388,869	498,484	860,819	704,701	371,169	744,869	443,710	180,370	0	118,502	
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	
NECESIDADES NETAS	0	388,869	498,484	860,819	704,701	371,169	744,869	443,710	180,370	0	118,502	
RECEPCION PEDIDOS PLANIFICADOS	0	388,869	498,484	860,819	704,701	371,169	744,869	443,710	180,370	0	118,502	
LANZAMIENTO PEDIDOS PLANIFICADOS	0	388,869	498,484	860,819	704,701	371,169	744,869	443,710	180,370	0	118,502	
	0	388,869	498,484	860,819	704,701	371,169	744,869	443,710	180,370	0	118,502	
NECESIDADES BRUTAS	0	388,869	498,484	860,819	704,701	371,169	744,869	443,710	180,370	0	118,502	
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	
NECESIDADES NETAS	0	388,869	498,484	860,819	704,701	371,169	744,869	443,710	180,370	0	118,502	
RECEPCION PEDIDOS PLANIFICADOS	0	388,869	498,484	860,819	704,701	371,169	744,869	443,710	180,370	0	118,502	
LANZAMIENTO PEDIDOS PLANIFICADOS	0	388,869	498,484	860,819	704,701	371,169	744,869	443,710	180,370	0	118,502	
	0	1,576,29	1,737,73	3,012,87	2,468,45	1,288,09	2,607,04	1,582,88	581,30	0	407,76	
NECESIDADES BRUTAS	0	1,576,29	1,737,73	3,012,87	2,468,45	1,288,09	2,607,04	1,582,88	581,30	0	407,76	
DISPONIBILIDAD	0	43,71	15,98	18,11	20,68	32,57	35,53	12,54	36,25	0	40,14	
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	
NECESIDADES NETAS	0	1,576,29	1,694,02	2,998,89	2,448,34	1,272,43	2,571,47	1,571,48	548,75	0	364,88	
RECEPCION PEDIDOS PLANIFICADOS	0	1,576,29	1,694,02	2,998,89	2,448,34	1,272,43	2,571,47	1,571,48	548,75	0	364,88	
LANZAMIENTO PEDIDOS PLANIFICADOS	0	1,576,29	1,694,02	2,998,89	2,448,34	1,272,43	2,571,47	1,571,48	548,75	0	364,88	
	0	1,620,00	1,710,00	2,475,00	1,305,00	2,610,00	1,580,00	720,00	408,00	0	945,00	
RECEPCION PEDIDOS PLANIFICADOS	0	1,620,00	1,710,00	2,475,00	1,305,00	2,610,00	1,580,00	720,00	408,00	0	945,00	
LANZAMIENTO PEDIDOS PLANIFICADOS	0	1,620,00	1,710,00	2,475,00	1,305,00	2,610,00	1,580,00	720,00	408,00	0	945,00	
	0	0	0	0	0	0	0	0	0	0	0	
RECEPCION PEDIDOS PLANIFICADOS	0	0	0	0	0	0	0	0	0	0	0	
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	0	0	0	0	0	0	0	0	0	

0.0035 KG

1.3.1 POLIPROPILENO											
0.00107 KG											
NECESIDADES BRUTAS	0.00	390.84	531.25	921.08	764.03	397.15	797.01	474.77	171.60	218.08	124.09
DISPONIBILIDAD	0.00	14.06	22.81	1.73	15.70	20.55	33.54	8.77	17.17	24.09	34.44
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCIONES NETAS	0.00	380.84	517.19	898.27	752.30	384.45	776.45	441.23	162.83	200.81	100.56
RECEPCION PEDIDOS PLANIFICADOS	0.00	403.00	540.00	600.00	765.00	405.00	610.00	450.00	160.00	225.00	134.00
LANZAMIENTO PEDIDOS PLANIFICADOS	0.00	403.00	540.00	600.00	765.00	405.00	610.00	450.00	160.00	225.00	134.00

1.3.2 COLORANTE											
0.0000170 KG											
NECESIDADES BRUTAS	0.00	8.44	14.03	11.98	6.31	12.66	7.64	2.73	3.48	1.98	1.98
DISPONIBILIDAD	0.00	38.79	15.71	3.73	42.42	28.70	19.49	16.03	14.05	0.00	0.00
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCIONES NETAS	0.00	8.44	14.03	11.98	6.31	12.66	7.64	2.73	3.48	1.98	1.98
RECEPCION PEDIDOS PLANIFICADOS	0.00	45.00	0.00	45.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LANZAMIENTO PEDIDOS PLANIFICADOS	45.00	0.00	45.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

1.4.1 POLIETILENO BAJA DENSIDAD											
0.0001140 KG											
NECESIDADES BRUTAS	0.00	48.61	68.80	98.13	80.34	42.31	84.82	50.58	18.20	23.23	13.28
DISPONIBILIDAD	0.00	41.39	28.78	21.66	31.32	34.01	38.10	33.51	38.70	37.00	23.71
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCIONES NETAS	0.00	48.61	68.80	98.13	80.34	42.31	84.82	50.58	18.20	23.23	13.28
RECEPCION PEDIDOS PLANIFICADOS	0.00	90.00	48.00	90.00	45.00	90.00	48.00	45.00	45.00	0.00	0.00
LANZAMIENTO PEDIDOS PLANIFICADOS	90.00	48.00	90.00	45.00	90.00	48.00	45.00	45.00	45.00	0.00	0.00

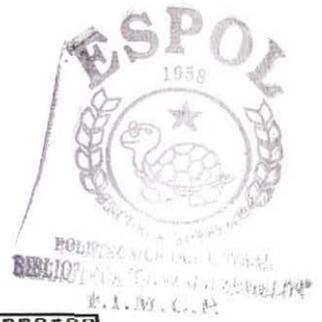
1.4.2 COLORANTE											
0.0000018 KG											
NECESIDADES BRUTAS	0.00	0.77	0.89	1.55	1.27	0.67	1.34	0.80	0.20	0.37	0.21
DISPONIBILIDAD	0.00	44.23	43.34	41.79	40.52	38.85	37.71	37.42	37.08	36.85	36.85
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCIONES NETAS	0.00	0.77	0.89	1.55	1.27	0.67	1.34	0.80	0.20	0.37	0.21
RECEPCION PEDIDOS PLANIFICADOS	0.00	45.00	0.00	45.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LANZAMIENTO PEDIDOS PLANIFICADOS	45.00	0.00	45.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

1.1.3.1 POLIETILENO											
0.00000000 KG											
NECESIDADES BRUTAS	0.00	230.12	287.80	516.48	422.92	222.70	448.62	268.23	88.32	122.28	89.90
DISPONIBILIDAD	0.00	31.86	3.98	27.48	6.87	11.87	15.05	18.62	12.60	58.31	0.41
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCIONES NETAS	0.00	230.12	288.02	512.51	385.33	213.03	434.65	251.18	77.40	109.69	44.58
RECEPCION PEDIDOS PLANIFICADOS	0.00	270.00	270.00	540.00	489.00	228.00	450.00	270.00	135.00	135.00	45.00
LANZAMIENTO PEDIDOS PLANIFICADOS	270.00	270.00	540.00	489.00	228.00	270.00	450.00	270.00	135.00	135.00	45.00

1.1.4.1 POLIURETAN NATURAL											
0.0001700 KG											
NECESIDADES BRUTAS	0.00	67.47	84.40	140.34	119.80	83.10	128.63	75.43	27.28	34.65	19.81
DISPONIBILIDAD	0.00	32.53	28.13	16.79	31.89	13.89	22.26	36.83	8.57	18.82	0.12
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCIONES NETAS	0.00	67.47	61.87	119.21	103.01	31.11	112.74	63.17	0.00	26.08	0.00
RECEPCION PEDIDOS PLANIFICADOS	0.00	80.00	80.00	135.00	145.00	48.00	135.00	90.00	0.00	45.00	0.00
LANZAMIENTO PEDIDOS PLANIFICADOS	80.00	80.00	135.00	145.00	48.00	135.00	90.00	90.00	0.00	45.00	0.00

ROJO	Ene-04	Feb-04	Mar-04	Abr-04	May-04	Jun-04	Jul-04	Ag0-04	Sep-04	Oct-04	Nov-04	Dic-04
16:												
PI	278,845	58,282	676,927	591,366	1,022,781	835,243	438,081	878,719	522,267	188,350	238,863	136,264
R	0	0	0	0	0	0	0	0	0	0	0	0
MPS	278,845	58,282	676,927	591,366	1,022,781	835,243	438,081	878,719	522,267	188,350	238,863	136,264
1.0 JOJO												
NECESIDADES BRUTAS	278,845	58,282	676,927	591,366	1,022,781	835,243	438,081	878,719	522,267	188,350	238,863	136,264
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NIVEL 0	278,845	58,282	676,927	591,366	1,022,781	835,243	438,081	878,719	522,267	188,350	238,863	136,264
NECESIDADES NETAS	278,845	58,282	676,927	591,366	1,022,781	835,243	438,081	878,719	522,267	188,350	238,863	136,264
RECEPCION PEDIDOS PLANIFICADOS	278,845	58,282	676,927	591,366	1,022,781	835,243	438,081	878,719	522,267	188,350	238,863	136,264
LANZAMIENTO PEDIDOS PLANIFICADOS	278,845	58,282	676,927	591,366	1,022,781	835,243	438,081	878,719	522,267	188,350	238,863	136,264
1.1 TREPUESTO												
NECESIDADES BRUTAS	278,845	58,282	676,927	591,366	1,022,781	835,243	438,081	878,719	522,267	188,350	238,863	136,264
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NIVEL 1	278,845	58,282	676,927	591,366	1,022,781	835,243	438,081	878,719	522,267	188,350	238,863	136,264
NECESIDADES NETAS	278,845	58,282	676,927	591,366	1,022,781	835,243	438,081	878,719	522,267	188,350	238,863	136,264
RECEPCION PEDIDOS PLANIFICADOS	278,845	58,282	676,927	591,366	1,022,781	835,243	438,081	878,719	522,267	188,350	238,863	136,264
LANZAMIENTO PEDIDOS PLANIFICADOS	278,845	58,282	676,927	591,366	1,022,781	835,243	438,081	878,719	522,267	188,350	238,863	136,264
1.2 BARRIL												
NECESIDADES BRUTAS	278,845	58,282	676,927	591,366	1,022,781	835,243	438,081	878,719	522,267	188,350	238,863	136,264
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NIVEL 1	278,845	58,282	676,927	591,366	1,022,781	835,243	438,081	878,719	522,267	188,350	238,863	136,264
NECESIDADES NETAS	278,845	58,282	676,927	591,366	1,022,781	835,243	438,081	878,719	522,267	188,350	238,863	136,264
RECEPCION PEDIDOS PLANIFICADOS	278,845	58,282	676,927	591,366	1,022,781	835,243	438,081	878,719	522,267	188,350	238,863	136,264
LANZAMIENTO PEDIDOS PLANIFICADOS	278,845	58,282	676,927	591,366	1,022,781	835,243	438,081	878,719	522,267	188,350	238,863	136,264
1.3 TAPA												
NECESIDADES BRUTAS	278,845	58,282	676,927	591,366	1,022,781	835,243	438,081	878,719	522,267	188,350	238,863	136,264
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NIVEL 1	278,845	58,282	676,927	591,366	1,022,781	835,243	438,081	878,719	522,267	188,350	238,863	136,264
NECESIDADES NETAS	278,845	58,282	676,927	591,366	1,022,781	835,243	438,081	878,719	522,267	188,350	238,863	136,264
RECEPCION PEDIDOS PLANIFICADOS	278,845	58,282	676,927	591,366	1,022,781	835,243	438,081	878,719	522,267	188,350	238,863	136,264
LANZAMIENTO PEDIDOS PLANIFICADOS	278,845	58,282	676,927	591,366	1,022,781	835,243	438,081	878,719	522,267	188,350	238,863	136,264
1.4 BOTON												
NECESIDADES BRUTAS	278,845	58,282	676,927	591,366	1,022,781	835,243	438,081	878,719	522,267	188,350	238,863	136,264
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NIVEL 1	278,845	58,282	676,927	591,366	1,022,781	835,243	438,081	878,719	522,267	188,350	238,863	136,264
NECESIDADES NETAS	278,845	58,282	676,927	591,366	1,022,781	835,243	438,081	878,719	522,267	188,350	238,863	136,264
RECEPCION PEDIDOS PLANIFICADOS	278,845	58,282	676,927	591,366	1,022,781	835,243	438,081	878,719	522,267	188,350	238,863	136,264
LANZAMIENTO PEDIDOS PLANIFICADOS	278,845	58,282	676,927	591,366	1,022,781	835,243	438,081	878,719	522,267	188,350	238,863	136,264
1.5 CAJA MASTER												
NECESIDADES BRUTAS	232	48	564	483	852	685	368	732	435	157	168	114
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NIVEL 1	232	48	564	483	852	685	368	732	435	157	168	114
NECESIDADES NETAS	232	48	564	483	852	685	368	732	435	157	168	114
RECEPCION PEDIDOS PLANIFICADOS	232	48	564	483	852	685	368	732	435	157	168	114
LANZAMIENTO PEDIDOS PLANIFICADOS	232	48	564	483	852	685	368	732	435	157	168	114

1.1 CAJILLA												
NIVEL 1												
Necesidades Brutas	11,619	2,428	28,205	24,842	42,618	34,802	18,287	36,613	21,761	7,846	9,853	5,077
Disponibilidad	0	0	0	0	0	0	0	0	0	0	0	0
Recepciones Programadas	11,619	2,428	28,205	24,842	42,618	34,802	18,287	36,613	21,761	7,846	9,853	5,077
Necesidades Netas	0	0	0	0	0	0	0	0	0	0	0	0
Recepcion Pedidos Planificados	11,619	2,428	28,205	24,842	42,618	34,802	18,287	36,613	21,761	7,846	9,853	5,077
Lanzamiento Pedidos Planificados	11,619	2,428	28,205	24,842	42,618	34,802	18,287	36,613	21,761	7,846	9,853	5,077
1.1.1 PUERTO												
NIVEL 2												
Necesidades Brutas	278,845	58,282	676,827	591,386	1,022,781	835,243	438,881	878,718	522,267	188,350	238,883	136,254
Disponibilidad	0	0	0	0	0	0	0	0	0	0	0	0
Recepciones Programadas	10,658	2,568	428	9,232	11,451	1,208	12,328	8,600	11,342	22,892	0,120	22,875
Necesidades Netas	268,187	55,714	676,827	582,154	1,011,330	834,035	426,579	870,118	510,925	165,458	228,763	113,379
Recepcion Pedidos Planificados	278,845	58,282	676,827	591,386	1,022,781	835,243	438,881	878,718	522,267	188,350	238,883	136,254
Lanzamiento Pedidos Planificados	278,845	58,282	676,827	591,386	1,022,781	835,243	438,881	878,718	522,267	188,350	238,883	136,254
1.1.2 YUNTA												
NIVEL 2												
Necesidades Brutas	80,23	18,86	216,62	189,25	327,38	287,28	140,44	281,19	107,13	60,27	78,44	43,80
Disponibilidad	0	0	0	0	0	0	0	0	0	0	0	0
Recepciones Programadas	30,69	12,34	98,72	6,47	78,18	11,61	71,46	90,27	23,15	62,86	88,44	42,84
Necesidades Netas	49,54	6,44	217,90	182,78	249,20	275,67	168,98	190,92	83,98	0,00	0,00	0,00
Recepcion Pedidos Planificados	80,23	18,86	216,62	189,25	327,38	287,28	140,44	281,19	107,13	60,27	78,44	43,80
Lanzamiento Pedidos Planificados	80,23	18,86	216,62	189,25	327,38	287,28	140,44	281,19	107,13	60,27	78,44	43,80
1.1.3 YUNO												
NIVEL 2												
Necesidades Brutas	278,845	58,282	676,827	591,386	1,022,781	835,243	438,881	878,718	522,267	188,350	238,883	136,254
Disponibilidad	0	0	0	0	0	0	0	0	0	0	0	0
Recepciones Programadas	278,845	58,282	676,827	591,386	1,022,781	835,243	438,881	878,718	522,267	188,350	238,883	136,254
Necesidades Netas	0	0	0	0	0	0	0	0	0	0	0	0
Recepcion Pedidos Planificados	278,845	58,282	676,827	591,386	1,022,781	835,243	438,881	878,718	522,267	188,350	238,883	136,254
Lanzamiento Pedidos Planificados	278,845	58,282	676,827	591,386	1,022,781	835,243	438,881	878,718	522,267	188,350	238,883	136,254
1.1.4 BOPORTE												
NIVEL 2												
Necesidades Brutas	278,845	58,282	676,827	591,386	1,022,781	835,243	438,881	878,718	522,267	188,350	238,883	136,254
Disponibilidad	0	0	0	0	0	0	0	0	0	0	0	0
Recepciones Programadas	278,845	58,282	676,827	591,386	1,022,781	835,243	438,881	878,718	522,267	188,350	238,883	136,254
Necesidades Netas	0	0	0	0	0	0	0	0	0	0	0	0
Recepcion Pedidos Planificados	278,845	58,282	676,827	591,386	1,022,781	835,243	438,881	878,718	522,267	188,350	238,883	136,254
Lanzamiento Pedidos Planificados	278,845	58,282	676,827	591,386	1,022,781	835,243	438,881	878,718	522,267	188,350	238,883	136,254
1.2 POLIESTRENO												
NIVEL 2												
Necesidades Brutas	875,00	203,98	2,368,25	2,099,89	3,578,73	2,823,35	1,530,08	3,075,62	1,827,83	658,22	838,02	478,89
Disponibilidad	0	0	0	0	0	0	0	0	0	0	0	0
Recepciones Programadas	8,18	30,20	0,85	1,08	21,33	22,68	16,80	1,38	18,48	34,22	8,20	20,31
Necesidades Netas	866,82	173,78	2,367,40	2,098,81	3,557,40	2,800,67	1,513,28	3,074,24	1,809,35	624,00	829,82	458,58
Recepcion Pedidos Planificados	875,00	203,98	2,368,25	2,099,89	3,578,73	2,823,35	1,530,08	3,075,62	1,827,83	658,22	838,02	478,89
Lanzamiento Pedidos Planificados	875,00	203,98	2,368,25	2,099,89	3,578,73	2,823,35	1,530,08	3,075,62	1,827,83	658,22	838,02	478,89



1.3.1 POLIPROPILENO												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
NIVEL 2												
288.36	62.36	724.31	632.78	1,084.38	883.71	496.60	640.23	568.83	201.53	255.59	145.79	
6.07	33.71	26.40	26.60	12.23	18.52	43.92	3.66	29.86	8.33	22.74	11.89	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
283.93	58.26	690.60	603.40	1,067.77	861.48	481.96	896.31	556.14	171.67	247.26	123.05	
270.00	90.00	720.00	630.00	1,060.00	800.00	496.00	900.00	585.00	180.00	270.00	135.00	
270.00	90.00	720.00	630.00	1,060.00	800.00	496.00	900.00	585.00	180.00	270.00	135.00	
LANZAMIENTO PEDIDOS PLANIFICADOS												

1.3.2 COLORANTE												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
NIVEL 2												
4.74	8.69	11.51	10.05	17.39	14.20	7.48	14.64	8.69	3.20	4.06	2.32	
8.31	8.32	41.81	31.75	14.37	0.17	37.71	22.77	13.89	19.89	6.63	4.31	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.00	0.00	3.18	0.00	0.00	0.00	7.26	0.00	0.00	0.00	0.00	0.00	
0.00	0.00	48.00	0.00	0.00	0.00	48.00	0.00	0.00	0.00	0.00	0.00	
0.00	45.00	0.00	0.00	0.00	45.00	0.00	0.00	0.00	0.00	0.00	0.00	
LANZAMIENTO PEDIDOS PLANIFICADOS												

1.3.1 POLIETILENO BAJA DENSIDAD												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
NIVEL 2												
31.79	6.64	77.17	67.42	116.60	85.22	50.03	100.17	59.54	21.47	27.23	15.53	
38.93	30.28	43.11	20.88	39.10	33.89	28.85	18.67	4.13	27.66	0.43	29.80	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8.07	0.00	46.88	24.31	85.80	66.12	18.15	71.33	40.87	17.34	0.00	15.10	
45.00	0.00	90.00	45.00	135.00	80.00	48.00	80.00	48.00	45.00	0.00	45.00	
0.00	80.00	45.00	135.00	80.00	45.00	80.00	45.00	48.00	0.00	45.00	0.00	
LANZAMIENTO PEDIDOS PLANIFICADOS												

1.4.2 COLORANTE												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
NIVEL 2												
0.60	0.10	1.22	1.06	1.84	1.60	0.79	1.58	0.94	0.34	0.43	0.25	
36.35	36.24	36.02	33.96	32.12	30.61	28.82	26.24	27.30	28.96	26.53	26.28	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
LANZAMIENTO PEDIDOS PLANIFICADOS												

1.3.1 POLIETILENO												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
NIVEL 3												
167.31	34.87	408.16	354.84	613.67	581.15	203.33	627.23	313.36	113.01	143.32	81.76	
13.10	23.13	21.98	27.14	43.47	37.33	44.00	11.77	0.00	36.00	27.36	36.32	
166.80	21.87	383.02	324.96	569.53	487.67	238.00	483.23	301.59	69.00	107.62	64.88	
180.00	49.00	408.00	360.00	650.00	485.00	270.00	485.00	318.00	136.00	136.00	90.00	
45.00	405.00	360.00	530.00	485.00	270.00	498.00	313.00	138.00	136.00	63.00	0.00	
LANZAMIENTO PEDIDOS PLANIFICADOS												

1.4.1 POLIACETAL NATURAL												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
NIVEL 3												
47.40	9.81	116.08	100.54	173.87	141.99	74.61	145.38	88.79	32.02	40.61	23.18	
42.71	32.80	7.73	42.19	3.32	41.33	11.72	42.33	43.55	11.53	15.62	37.78	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
47.26	0.00	82.27	82.81	131.88	136.67	33.26	137.67	46.46	0.00	28.08	7.24	
90.00	0.00	135.00	135.00	180.00	180.00	180.00	180.00	90.00	0.00	45.00	46.00	
0.00	90.00	135.00	135.00	180.00	180.00	180.00	90.00	0.00	45.00	45.00	0.00	
LANZAMIENTO PEDIDOS PLANIFICADOS												

APENDICE 22
PLAN DE REQUERIMIENTOS DE MATERIALES (MRP)

VERDE 1	Actual	Feb-03	Mar-03	Abr-03	May-03	Jun-03	Jul-03	Agosto-03	Sep-03	Oct-03	Nov-03	Dic-03
lo:	110,087											
Fi:	45,304	5,163	2,875	36,750	0	5,330	68,427	81,953	28,847	19,358	8,316	3,202
R:	64,783	60,620	56,750	0	0	63,430	0	0	0	0	0	0
MPS	0	0	0	0	0	0	5,007	81,953	28,847	19,358	8,316	3,202
1. VERDE 1												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 0												
1.1 INYUESTO												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 1												
1.2 BANRIL												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 1												
1.3 TAPA												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 1												
1.4 BOTON												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 1												
1.5 CAJA WALTER												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												



1.3.1 POLIPROPILENO												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 2												
12.66	86.04	6.60	3.66	0.00	4.22	73.92	103.46	36.46	24.33	10.43	4.01	
10.27	42.23	35.63	31.97	0.00	27.75	43.83	30.37	38.92	14.63	4.16	0.16	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.00	47.77	0.00	0.00	0.00	0.00	48.17	68.83	6.08	0.00	0.00	0.00	
0.00	80.00	0.00	0.00	0.00	0.00	80.00	90.00	45.00	0.00	0.00	0.00	
0.00	80.00	0.00	0.00	0.00	0.00	80.00	90.00	45.00	0.00	0.00	0.00	

1.3.2 COLORANTE												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 2												
0.20	0.92	0.10	0.06	0.00	0.07	1.17	1.84	0.98	0.39	0.17	0.06	
42.30	41.38	41.28	41.22	0.00	41.15	39.88	38.33	37.78	37.37	37.20	37.14	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

1.4.1 POLIETILENO BAJA DENSIDAD												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 2												
1.35	6.16	0.70	0.39	0.00	0.45	7.89	11.02	3.08	2.69	1.11	0.43	
26.82	20.73	20.03	19.84	0.00	18.19	11.31	0.28	41.41	38.82	37.71	37.28	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.56	0.00	0.00	0.00	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	45.00	0.00	0.00	0.00	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	45.00	0.00	0.00	0.00	0.00	

1.4.2 COLORANTE												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 2												
0.02	0.10	0.01	0.01	0.00	0.01	0.12	0.17	0.06	0.04	0.02	0.01	
44.71	44.62	44.61	44.60	0.00	44.59	44.47	44.29	44.23	44.19	44.17	44.17	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

1.1.1.1 POLIETILENO												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 3												
7.10	32.65	3.70	2.08	0.00	2.37	41.45	58.01	20.44	13.64	5.85	2.25	
38.83	7.28	3.89	1.83	0.00	46.06	3.71	34.70	14.25	0.61	39.76	37.42	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5.17	0.00	0.00	0.00	0.00	0.04	0.00	55.30	0.00	0.00	5.24	0.00	
45.60	0.00	0.00	0.00	0.00	48.00	80.00	90.00	0.00	0.00	45.00	0.00	
0.00	0.00	0.00	0.00	45.00	0.00	80.00	90.00	0.00	45.00	0.00	0.00	

1.1.1.1 POLIAGUETAL NATURAL												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 3												
2.01	9.22	1.05	0.66	0.00	0.67	11.74	18.44	5.78	3.87	1.86	0.64	
17.03	7.81	6.76	6.18	0.00	5.51	3.77	21.33	15.64	11.67	10.02	9.38	
0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	
0.00	0.00	0.00	0.00	0.00	0.00	7.23	0.00	0.00	0.00	0.00	0.00	
0.00	0.00	0.00	0.00	0.00	0.00	45.00	0.00	0.00	0.00	0.00	0.00	
0.00	0.00	0.00	0.00	45.00	0.00	0.00	0.00	0.00	45.00	0.00	0.00	

APENDICE 22

PLAN DE REQUERIMIENTOS DE MATERIALES (MRP)

AZULEXP1	ACTUAL	Feb-03	Mar-03	Abr-03	May-03	Jun-03	Jul-03	Ago-03	Sep-03	Oct-03	Nov-03	Dic-03
10:	488,116				350,515	654,780		203,512	140,817	1,996,483	2,481,065	1,021,507
PI	0	0	0	0	0	0	0	0	0	0	0	0
II	0	0	0	0	0	0	0	0	0	0	0	0
MRP	36,445	488,116	488,116	488,116	350,515	654,780		203,512	140,817	1,996,483	2,481,065	1,021,507
1. AZULEXP1 NECESIDADES BRUTAS DISPONIBILIDAD RECEPCIONES PROGRAMADAS NECESIDADES NETAS RECEPCION PEDIDOS PLANIFICADOS LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 0		36,445	488,116	488,116	350,515	654,780		203,512	140,817	1,996,483	2,481,065	1,021,507
1.1. BUESTO NECESIDADES BRUTAS DISPONIBILIDAD RECEPCIONES PROGRAMADAS NECESIDADES NETAS RECEPCION PEDIDOS PLANIFICADOS LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 1	640,000	603,556	0	0	0	654,780		203,512	140,817	1,996,483	2,481,065	1,021,507
1.2. BAREIL NECESIDADES BRUTAS DISPONIBILIDAD RECEPCIONES PROGRAMADAS NECESIDADES NETAS RECEPCION PEDIDOS PLANIFICADOS LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 1	650,000	613,556	0	0	0	654,780		203,512	140,817	1,996,483	2,481,065	1,021,507
1.3. TAPA NECESIDADES BRUTAS DISPONIBILIDAD RECEPCIONES PROGRAMADAS NECESIDADES NETAS RECEPCION PEDIDOS PLANIFICADOS LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 1	630,000	593,556	0	0	0	654,780		203,512	140,817	1,996,483	2,481,065	1,021,507
1.4. BOTÓN NECESIDADES BRUTAS DISPONIBILIDAD RECEPCIONES PROGRAMADAS NECESIDADES NETAS RECEPCION PEDIDOS PLANIFICADOS LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 1	630,000	593,556	0	0	0	654,780		203,512	140,817	1,996,483	2,481,065	1,021,507
1.5. CAJA MASTER NECESIDADES BRUTAS DISPONIBILIDAD RECEPCIONES PROGRAMADAS NECESIDADES NETAS RECEPCION PEDIDOS PLANIFICADOS LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 1	30	761	483	292	548	548	170	117	1,996,483	2,481,065	2,068	851



AZULEXP1		Ene-04	Feb-04	Mar-04	Abr-04	May-04	Jun-04	Jul-04	Ago-04	Sep-04	Oct-04	Nov-04	Dic-04
10:													
PI	874,548	593,344	1,136,879	661,397	416,426	776,007	0	0	240,063	166,852	2,344,629	2,607,561	1,194,006
R	0	0	0	0	0	0	0	0	0	0	0	0	0
MPS	874,548	593,344	1,136,879	661,397	416,426	776,007	0	0	240,063	166,852	2,344,629	2,607,561	1,194,006
1. AZULEXP1													
NECESIDADES BRUTAS		574,548	593,344	1,136,879	661,397	416,426	776,007	0	240,063	166,852	2,344,629	2,607,561	1,194,006
DISPONIBILIDAD		0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS		0	0	0	0	0	0	0	0	0	0	0	0
NIVEL 0		574,548	593,344	1,136,879	661,397	416,426	776,007	0	240,063	166,852	2,344,629	2,607,561	1,194,006
RECEPCIONES NETAS		574,548	593,344	1,136,879	661,397	416,426	776,007	0	240,063	166,852	2,344,629	2,607,561	1,194,006
RECEPCION PEDIDOS PLANIFICADOS		574,548	593,344	1,136,879	661,397	416,426	776,007	0	240,063	166,852	2,344,629	2,607,561	1,194,006
LANZAMIENTO PEDIDOS PLANIFICADOS		574,548	593,344	1,136,879	661,397	416,426	776,007	0	240,063	166,852	2,344,629	2,607,561	1,194,006
1.1. FUEJITO													
NECESIDADES BRUTAS		574,548	593,344	1,136,879	661,397	416,426	776,007	0	240,063	166,852	2,344,629	2,607,561	1,194,006
DISPONIBILIDAD		0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS		0	0	0	0	0	0	0	0	0	0	0	0
NIVEL 1		574,548	593,344	1,136,879	661,397	416,426	776,007	0	240,063	166,852	2,344,629	2,607,561	1,194,006
RECEPCIONES NETAS		574,548	593,344	1,136,879	661,397	416,426	776,007	0	240,063	166,852	2,344,629	2,607,561	1,194,006
RECEPCION PEDIDOS PLANIFICADOS		574,548	593,344	1,136,879	661,397	416,426	776,007	0	240,063	166,852	2,344,629	2,607,561	1,194,006
LANZAMIENTO PEDIDOS PLANIFICADOS		574,548	593,344	1,136,879	661,397	416,426	776,007	0	240,063	166,852	2,344,629	2,607,561	1,194,006
1.2. BARRIL													
NECESIDADES BRUTAS		574,548	593,344	1,136,879	661,397	416,426	776,007	0	240,063	166,852	2,344,629	2,607,561	1,194,006
DISPONIBILIDAD		0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS		0	0	0	0	0	0	0	0	0	0	0	0
NIVEL 1		574,548	593,344	1,136,879	661,397	416,426	776,007	0	240,063	166,852	2,344,629	2,607,561	1,194,006
RECEPCIONES NETAS		574,548	593,344	1,136,879	661,397	416,426	776,007	0	240,063	166,852	2,344,629	2,607,561	1,194,006
RECEPCION PEDIDOS PLANIFICADOS		574,548	593,344	1,136,879	661,397	416,426	776,007	0	240,063	166,852	2,344,629	2,607,561	1,194,006
LANZAMIENTO PEDIDOS PLANIFICADOS		574,548	593,344	1,136,879	661,397	416,426	776,007	0	240,063	166,852	2,344,629	2,607,561	1,194,006
1.3. TAPA													
NECESIDADES BRUTAS		574,548	593,344	1,136,879	661,397	416,426	776,007	0	240,063	166,852	2,344,629	2,607,561	1,194,006
DISPONIBILIDAD		0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS		0	0	0	0	0	0	0	0	0	0	0	0
NIVEL 1		574,548	593,344	1,136,879	661,397	416,426	776,007	0	240,063	166,852	2,344,629	2,607,561	1,194,006
RECEPCIONES NETAS		574,548	593,344	1,136,879	661,397	416,426	776,007	0	240,063	166,852	2,344,629	2,607,561	1,194,006
RECEPCION PEDIDOS PLANIFICADOS		574,548	593,344	1,136,879	661,397	416,426	776,007	0	240,063	166,852	2,344,629	2,607,561	1,194,006
LANZAMIENTO PEDIDOS PLANIFICADOS		574,548	593,344	1,136,879	661,397	416,426	776,007	0	240,063	166,852	2,344,629	2,607,561	1,194,006
1.4. BOTON													
NECESIDADES BRUTAS		574,548	593,344	1,136,879	661,397	416,426	776,007	0	240,063	166,852	2,344,629	2,607,561	1,194,006
DISPONIBILIDAD		0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS		0	0	0	0	0	0	0	0	0	0	0	0
NIVEL 1		574,548	593,344	1,136,879	661,397	416,426	776,007	0	240,063	166,852	2,344,629	2,607,561	1,194,006
RECEPCIONES NETAS		574,548	593,344	1,136,879	661,397	416,426	776,007	0	240,063	166,852	2,344,629	2,607,561	1,194,006
RECEPCION PEDIDOS PLANIFICADOS		574,548	593,344	1,136,879	661,397	416,426	776,007	0	240,063	166,852	2,344,629	2,607,561	1,194,006
LANZAMIENTO PEDIDOS PLANIFICADOS		574,548	593,344	1,136,879	661,397	416,426	776,007	0	240,063	166,852	2,344,629	2,607,561	1,194,006
1.5. CAJA MASTER													
NECESIDADES BRUTAS		478	494	960	551	347	647	0	200	138	1,954	2,423	960
DISPONIBILIDAD		0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS		0	0	0	0	0	0	0	0	0	0	0	0
NIVEL 1		478	494	960	551	347	647	0	200	138	1,954	2,423	960
RECEPCIONES NETAS		478	494	960	551	347	647	0	200	138	1,954	2,423	960
RECEPCION PEDIDOS PLANIFICADOS		478	494	960	551	347	647	0	200	138	1,954	2,423	960
LANZAMIENTO PEDIDOS PLANIFICADOS		478	494	960	551	347	647	0	200	138	1,954	2,423	960

1.3.1 POLIPROPILENO	914.77	654.88	1,219.46	707.69	445.66	830.33	0.00	256.87	177.46	2,508.75	3,111.08	1,278.23
NECESIDADES BRUTAS				33.63	39.06	17.72	17.72	30.86	33.39	44.64	39.56	20.33
DISPONIBILIDAD	30.86	26.78	21.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NECESIDADES PROGRAMADAS	588.34	604.22	1,192.88	688.37	411.94	782.28	0.00	238.14	146.61	2,475.36	3,066.44	1,239.67
NECESIDADES NETAS	830.00	630.00	1,218.00	730.00	460.00	810.00	0.00	270.00	180.00	2,520.00	3,105.00	1,260.00
RECEPCION PEDIDOS PLANIFICADOS	830.00	630.00	1,218.00	730.00	460.00	810.00	0.00	270.00	180.00	2,520.00	3,105.00	1,260.00
LANZAMIENTO PEDIDOS PLANIFICADOS	830.00	630.00	1,218.00	730.00	460.00	810.00	0.00	270.00	180.00	2,520.00	3,105.00	1,260.00

1.3.2 COLORANTE	9.77	10.08	18.37	11.24	7.08	13.18	0.00	4.08	2.02	39.86	48.43	20.31
NECESIDADES BRUTAS				8.46	35.14	22.95	22.95	18.87	16.06	21.19	16.78	41.46
DISPONIBILIDAD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NECESIDADES PROGRAMADAS	9.07	0.00	0.00	1.78	0.00	0.00	0.00	0.00	0.00	23.81	28.24	3.85
NECESIDADES NETAS	45.00	0.00	0.00	45.00	0.00	0.00	0.00	0.00	0.00	45.00	45.00	45.00
RECEPCION PEDIDOS PLANIFICADOS	45.00	0.00	0.00	45.00	0.00	0.00	0.00	0.00	0.00	45.00	45.00	45.00
LANZAMIENTO PEDIDOS PLANIFICADOS	45.00	0.00	0.00	45.00	0.00	0.00	0.00	0.00	0.00	45.00	45.00	45.00

1.4.1 POLIETILENO BAJA DENSIDAD	65.80	67.64	126.92	76.40	47.47	88.46	0.00	27.37	18.01	267.26	331.48	136.19
NECESIDADES BRUTAS				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DISPONIBILIDAD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NECESIDADES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NECESIDADES NETAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCION PEDIDOS PLANIFICADOS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LANZAMIENTO PEDIDOS PLANIFICADOS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

1.4.3 COLORANTE	1.03	1.07	2.05	1.19	0.75	1.40	0.00	0.43	0.30	4.22	5.23	2.15
NECESIDADES BRUTAS				43.84	42.76	40.61	40.61	40.17	36.88	35.69	30.42	28.27
DISPONIBILIDAD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NECESIDADES PROGRAMADAS	0.00	0.00	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NECESIDADES NETAS	0.00	0.00	48.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCION PEDIDOS PLANIFICADOS	0.00	0.00	48.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LANZAMIENTO PEDIDOS PLANIFICADOS	0.00	0.00	48.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

1.1.1 POLIETILENO	344.73	396.01	893.81	398.81	240.86	465.60	0.00	144.04	98.51	1,406.78	1,744.53	716.76
NECESIDADES BRUTAS				22.28	42.42	26.82	26.82	17.78	8.27	41.49	6.96	10.20
DISPONIBILIDAD	18.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NECESIDADES PROGRAMADAS	341.07	337.08	890.88	392.72	227.86	423.18	0.00	117.22	81.73	1,368.51	1,735.04	709.86
NECESIDADES NETAS	360.00	360.00	875.00	405.00	270.00	450.00	0.00	135.00	80.00	1,440.00	1,710.00	720.00
RECEPCION PEDIDOS PLANIFICADOS	360.00	360.00	875.00	405.00	270.00	450.00	0.00	135.00	80.00	1,440.00	1,710.00	720.00
LANZAMIENTO PEDIDOS PLANIFICADOS	360.00	360.00	875.00	405.00	270.00	450.00	0.00	135.00	80.00	1,440.00	1,710.00	720.00

1.1.1 POLIACETAL NATURAL	87.87	108.87	183.76	112.44	70.78	131.02	0.00	40.81	28.19	368.50	484.28	203.08
NECESIDADES BRUTAS				40.36	37.12	40.20	40.20	44.39	16.19	22.61	23.32	0.24
DISPONIBILIDAD	18.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NECESIDADES PROGRAMADAS	70.04	80.91	184.85	72.08	62.88	94.80	0.00	0.61	0.00	392.39	471.68	176.78
NECESIDADES NETAS	90.00	90.00	225.00	90.00	80.00	135.00	0.00	45.00	0.00	405.00	495.00	180.00
RECEPCION PEDIDOS PLANIFICADOS	90.00	90.00	225.00	90.00	80.00	135.00	0.00	45.00	0.00	405.00	495.00	180.00
LANZAMIENTO PEDIDOS PLANIFICADOS	90.00	225.00	90.00	90.00	135.00	0.00	45.00	0.00	405.00	495.00	180.00	0.00

**APENDICE 22
PLAN DE REQUERIMIENTOS DE MATERIALES (MRP)**

VERDE EXP1	ACTUAL	FEB-03	MAR-03	ABR-03	MAY-03	JUN-03	JUL-03	AGO-03	SEP-03	OCT-03	NOV-03	DIC-03
lo:	114,778											
Fl:	17,222	28,439	117,661	0	20,216	107,080	0	7,133	84,801	126,487	24,635	84,066
R:	97,556	66,119	0	48,443	0	0	0	0	0	0	0	0
MP8:	0	0	0	0	20,216	107,080	0	7,133	84,801	126,487	24,635	84,066

1. VERDE EXP1												
NECESIDADES BRUTAS	0	0	48,443	0	20,216	107,080	0	7,133	84,801	126,487	24,635	84,066
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	0	48,443	0	20,216	107,080	0	7,133	84,801	126,487	24,635	84,066
RECEPCION PEDIDOS PLANIFICADOS	0	0	48,443	0	20,216	107,080	0	7,133	84,801	126,487	24,635	84,066
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	48,443	0	20,216	107,080	0	7,133	84,801	126,487	24,635	84,066

1.1 BURETTO												
NECESIDADES BRUTAS	0	0	48,443	0	20,216	107,080	0	7,133	84,801	126,487	24,635	84,066
DISPONIBILIDAD	35,000	35,000	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	0	13,443	0	20,216	107,080	0	7,133	84,801	126,487	24,635	84,066
RECEPCION PEDIDOS PLANIFICADOS	0	0	13,443	0	20,216	107,080	0	7,133	84,801	126,487	24,635	84,066
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	13,443	0	20,216	107,080	0	7,133	84,801	126,487	24,635	84,066

1.2 BARRIL												
NECESIDADES BRUTAS	0	0	48,443	0	20,216	107,080	0	7,133	84,801	126,487	24,635	84,066
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	0	48,443	0	20,216	107,080	0	7,133	84,801	126,487	24,635	84,066
RECEPCION PEDIDOS PLANIFICADOS	0	0	48,443	0	20,216	107,080	0	7,133	84,801	126,487	24,635	84,066
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	48,443	0	20,216	107,080	0	7,133	84,801	126,487	24,635	84,066

1.3 TAPA												
NECESIDADES BRUTAS	0	0	48,443	0	20,216	107,080	0	7,133	84,801	126,487	24,635	84,066
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	0	48,443	0	20,216	107,080	0	7,133	84,801	126,487	24,635	84,066
RECEPCION PEDIDOS PLANIFICADOS	0	0	48,443	0	20,216	107,080	0	7,133	84,801	126,487	24,635	84,066
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	48,443	0	20,216	107,080	0	7,133	84,801	126,487	24,635	84,066

1.4 BOTON												
NECESIDADES BRUTAS	0	0	48,443	0	20,216	107,080	0	7,133	84,801	126,487	24,635	84,066
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	0	48,443	0	20,216	107,080	0	7,133	84,801	126,487	24,635	84,066
RECEPCION PEDIDOS PLANIFICADOS	0	0	48,443	0	20,216	107,080	0	7,133	84,801	126,487	24,635	84,066
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	48,443	0	20,216	107,080	0	7,133	84,801	126,487	24,635	84,066

1.5 CAJA MASTER												
NECESIDADES BRUTAS	0	0	40	0	17	89	0	6	70	106	21	70
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	0	40	0	17	89	0	6	70	106	21	70
RECEPCION PEDIDOS PLANIFICADOS	0	0	40	0	17	89	0	6	70	106	21	70
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	40	0	17	89	0	6	70	106	21	70



BIBLIOTECA GENERAL ZEVALLOS

1.5 CAJILLA											
NECESIDADES BRUTAS	0	2,916	842	4,482	0	287	3,521	5,271	1,028	3,502	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	2,916	842	4,482	0	287	3,521	5,271	1,028	3,502	0
RECEPCIONES NETAS	0	0	0	0	0	0	0	0	0	0	0
RECEPCION PEDIDOS PLANIFICADOS	0	2,916	842	4,482	0	287	3,521	5,271	1,028	3,502	0
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	0	0	0	0	0	0	0	0	0

1.1.1 PUUNTO											
NECESIDADES BRUTAS	0	13,443	20,216	107,080	0	7,133	84,501	126,487	24,636	84,056	0
DISPONIBILIDAD	0	82,557	62,341	5,281	0	23,128	13,827	12,130	12,488	28,138	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES NETAS	0	0	0	44,738	0	1,871	61,373	112,870	12,508	71,561	0
RECEPCION PEDIDOS PLANIFICADOS	0	0	0	50,000	0	26,000	75,000	126,000	25,000	100,000	0
LANZAMIENTO PEDIDOS PLANIFICADOS	0	50,000	0	25,000	0	125,000	25,000	100,000	50,000	25,000	0

1.1.2 TIRTA											
NECESIDADES BRUTAS	0.00	4.30	6.47	34.27	0.00	2.28	27.04	40.48	7.88	26.90	0.00
DISPONIBILIDAD	0.00	95.70	89.23	54.86	54.96	92.68	25.64	85.16	77.28	60.38	0.00
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCIONES NETAS	0.00	4.30	0.00	0.00	0.00	0.00	0.00	14.84	0.00	0.00	0.00
RECEPCION PEDIDOS PLANIFICADOS	100.00	100.00	0.00	0.00	0.00	100.00	0.00	100.00	0.00	0.00	0.00
LANZAMIENTO PEDIDOS PLANIFICADOS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

1.1.3 TUJO											
NECESIDADES BRUTAS	0	13,443	20,216	107,080	0	7,133	84,501	126,487	24,636	84,056	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	13,443	20,216	107,080	0	7,133	84,501	126,487	24,636	84,056	0
RECEPCIONES NETAS	0	0	0	107,080	0	0	0	0	0	0	0
RECEPCION PEDIDOS PLANIFICADOS	0	13,443	20,216	107,080	0	7,133	84,501	126,487	24,636	84,056	0
LANZAMIENTO PEDIDOS PLANIFICADOS	0	13,443	20,216	107,080	0	7,133	84,501	126,487	24,636	84,056	0

1.1.4 SORTEO											
NECESIDADES BRUTAS	0	13,443	20,216	107,080	0	7,133	84,501	126,487	24,636	84,056	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	13,443	20,216	107,080	0	7,133	84,501	126,487	24,636	84,056	0
RECEPCIONES NETAS	0	0	0	107,080	0	0	0	0	0	0	0
RECEPCION PEDIDOS PLANIFICADOS	0	13,443	20,216	107,080	0	7,133	84,501	126,487	24,636	84,056	0
LANZAMIENTO PEDIDOS PLANIFICADOS	0	13,443	20,216	107,080	0	7,133	84,501	126,487	24,636	84,056	0

1.2.1 POLIESTIRENO											
NECESIDADES BRUTAS	0.00	188.55	70.76	374.78	0.00	24.00	285.78	442.74	86.22	284.20	0.00
DISPONIBILIDAD	0.00	16.45	28.88	14.81	14.81	34.86	6.16	16.45	20.23	41.04	0.00
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCIONES NETAS	0.00	168.85	60.31	348.08	0.00	10.05	260.81	433.55	66.77	273.86	0.00
RECEPCION PEDIDOS PLANIFICADOS	0.00	188.00	60.00	360.00	0.00	45.00	270.00	450.00	90.00	315.00	0.00
LANZAMIENTO PEDIDOS PLANIFICADOS	0.00	188.00	60.00	360.00	0.00	45.00	270.00	450.00	90.00	315.00	0.00

VERDE EXP1	Ene-04	Feb-04	Mar-04	Abr-04	May-04	Jun-04	Jul-04	Agg-04	Sep-04	Oct-04	Nov-04	Dic-04
lo:												
Fl	74,987	20,621	33,962	140,027	24,018	126,911	0	0	0	148,562	28,870	96,304
R	0	0	0	0	0	0	0	0	0	0	0	0
NP5	74,987	20,621	33,962	140,027	24,018	126,911	0	0	0	148,562	28,870	96,304
1. VENDER EXP1												
NECEDIDADES BRUTAS	74,987	20,621	33,962	140,027	24,018	126,911	0	0	0	148,562	28,870	96,304
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES NETAS	74,987	20,621	33,962	140,027	24,018	126,911	0	0	0	148,562	28,870	96,304
RECEPCION PEDIDOS PLANIFICADOS	74,987	20,621	33,962	140,027	24,018	126,911	0	0	0	148,562	28,870	96,304
LANZAMIENTO PEDIDOS PLANIFICADOS	74,987	20,621	33,962	140,027	24,018	126,911	0	0	0	148,562	28,870	96,304
1.1 TRUJESTO												
NECEDIDADES BRUTAS	74,987	20,621	33,962	140,027	24,018	126,911	0	0	0	148,562	28,870	96,304
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES NETAS	74,987	20,621	33,962	140,027	24,018	126,911	0	0	0	148,562	28,870	96,304
RECEPCION PEDIDOS PLANIFICADOS	74,987	20,621	33,962	140,027	24,018	126,911	0	0	0	148,562	28,870	96,304
LANZAMIENTO PEDIDOS PLANIFICADOS	74,987	20,621	33,962	140,027	24,018	126,911	0	0	0	148,562	28,870	96,304
1.2 BARRIL												
NECEDIDADES BRUTAS	74,987	20,621	33,962	140,027	24,018	126,911	0	0	0	148,562	28,870	96,304
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES NETAS	74,987	20,621	33,962	140,027	24,018	126,911	0	0	0	148,562	28,870	96,304
RECEPCION PEDIDOS PLANIFICADOS	74,987	20,621	33,962	140,027	24,018	126,911	0	0	0	148,562	28,870	96,304
LANZAMIENTO PEDIDOS PLANIFICADOS	74,987	20,621	33,962	140,027	24,018	126,911	0	0	0	148,562	28,870	96,304
1.3 TAPA												
NECEDIDADES BRUTAS	74,987	20,621	33,962	140,027	24,018	126,911	0	0	0	148,562	28,870	96,304
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES NETAS	74,987	20,621	33,962	140,027	24,018	126,911	0	0	0	148,562	28,870	96,304
RECEPCION PEDIDOS PLANIFICADOS	74,987	20,621	33,962	140,027	24,018	126,911	0	0	0	148,562	28,870	96,304
LANZAMIENTO PEDIDOS PLANIFICADOS	74,987	20,621	33,962	140,027	24,018	126,911	0	0	0	148,562	28,870	96,304
1.4 BOTO												
NECEDIDADES BRUTAS	74,987	20,621	33,962	140,027	24,018	126,911	0	0	0	148,562	28,870	96,304
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES NETAS	74,987	20,621	33,962	140,027	24,018	126,911	0	0	0	148,562	28,870	96,304
RECEPCION PEDIDOS PLANIFICADOS	74,987	20,621	33,962	140,027	24,018	126,911	0	0	0	148,562	28,870	96,304
LANZAMIENTO PEDIDOS PLANIFICADOS	74,987	20,621	33,962	140,027	24,018	126,911	0	0	0	148,562	28,870	96,304
1.5 CAJA MASTER												
NECEDIDADES BRUTAS	62	17	28	117	20	106	0	7	03	124	24	82
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES NETAS	62	17	28	117	20	106	0	7	03	124	24	82
RECEPCION PEDIDOS PLANIFICADOS	62	17	28	117	20	106	0	7	03	124	24	82
LANZAMIENTO PEDIDOS PLANIFICADOS	62	17	28	117	20	106	0	7	03	124	24	82

1.6 CAJILLA												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 1												
3,124	869	1,415	5,834	1,001	5,288	0	391	4,144	6,190	1,203	4,086	0
0	0	0	0	0	0	0	0	0	0	0	0	0
3,124	869	1,415	5,834	1,001	5,288	0	391	4,144	6,190	1,203	4,086	0
3,124	869	1,415	5,834	1,001	5,288	0	391	4,144	6,190	1,203	4,086	0
3,124	869	1,415	5,834	1,001	5,288	0	391	4,144	6,190	1,203	4,086	0
1.1.1 PUNTO												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 2												
74,987	20,621	33,982	140,027	24,018	126,811	0	9,414	96,458	148,582	28,870	96,304	0
3,481	7,831	29,889	9,842	6,924	7,913	0	24,489	40	1,478	22,008	24,304	0
0	0	0	0	0	0	0	0	0	0	0	0	0
46,549	17,168	26,131	118,198	15,778	117,987	0	801	74,860	148,522	27,392	75,986	0
80,000	28,000	60,000	123,000	25,000	126,000	0	25,000	78,000	160,000	50,000	100,000	0
80,000	128,000	28,000	123,000	0	26,000	78,000	189,000	90,000	180,000	0	0	0
1.1.1 FONTA												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 2												
24,000	6,60	10,87	44,81	7,69	40,61	0,00	2,69	31,83	47,64	9,24	51,46	0
26,38	16,79	6,92	64,11	66,42	16,81	19,91	13,12	26,29	23,75	14,51	29,06	0,00
0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
0,00	0,00	0,00	35,89	0,00	0,00	0,00	0,00	18,71	21,25	0,00	16,84	0,00
0,00	0,00	0,00	100,00	0,00	0,00	0,00	0,00	45,00	45,00	0,00	45,00	0,00
0,00	100,00	0,00	0,00	0,00	0,00	49,00	45,00	0,00	45,00	0,00	0,00	0,00
1.1.3 TUJO												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 2												
74,987	20,621	33,982	140,027	24,018	126,811	0	9,414	96,458	148,582	28,870	96,304	0
0	0	0	0	0	0	0	0	0	0	0	0	0
74,987	20,621	33,982	140,027	24,018	126,811	0	9,414	96,458	148,582	28,870	96,304	0
74,987	20,621	33,982	140,027	24,018	126,811	0	9,414	96,458	148,582	28,870	96,304	0
74,987	20,621	33,982	140,027	24,018	126,811	0	9,414	96,458	148,582	28,870	96,304	0
1.1.4 BOPORTE												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 2												
74,987	20,621	33,982	140,027	24,018	126,811	0	9,414	96,458	148,582	28,870	96,304	0
0	0	0	0	0	0	0	0	0	0	0	0	0
74,987	20,621	33,982	140,027	24,018	126,811	0	9,414	96,458	148,582	28,870	96,304	0
74,987	20,621	33,982	140,027	24,018	126,811	0	9,414	96,458	148,582	28,870	96,304	0
74,987	20,621	33,982	140,027	24,018	126,811	0	9,414	96,458	148,582	28,870	96,304	0
1.2.1 POLIESTIRENO												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 2												
262,46	72,17	119,87	490,08	84,08	444,19	0,00	29,45	348,10	518,87	101,08	344,08	0,00
3,68	21,41	37,64	42,46	3,36	6,19	9,19	24,74	36,64	11,87	0,63	16,59	0,00
0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
221,42	68,98	87,46	452,85	41,62	440,81	0,00	20,26	323,36	483,33	89,37	343,44	0,00
225,00	80,00	135,00	495,00	45,00	450,00	0,00	45,00	380,00	485,00	80,00	380,00	0,00
80,00	135,00	495,00	495,00	45,00	450,00	45,00	390,00	485,00	60,00	380,00	380,00	0,00

1.3.1 POLIPROPILENO	80.24	22.06	38.34	148.83	25.70	135.79	0.00	9.00	106.42	158.86	30.88	105.19
NECESIDADES BRUTAS												
DISPONIBILIDAD	12.02	34.96	43.82	28.79	3.09	2.30	2.30	38.28	21.87	42.01	12.02	41.83
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCIONES NETAS	77.98	10.04	1.38	106.21	0.00	132.70	0.00	4.71	88.13	137.08	0.00	93.17
RECEPCION PEDIDOS PLANIFICADOS	90.00	45.00	45.00	135.00	0.00	135.00	0.00	45.00	80.00	180.00	0.00	135.00
LANZAMIENTO PEDIDOS PLANIFICADOS	90.00	45.00	45.00	135.00	0.00	135.00	0.00	45.00	80.00	180.00	0.00	135.00

1.3.2 COLORANTE	1.27	0.35	0.89	2.38	0.41	2.16	0.00	0.14	1.60	2.53	0.49	1.67
NECESIDADES BRUTAS												
DISPONIBILIDAD	35.18	34.83	34.25	31.87	31.47	28.31	28.31	29.16	27.47	24.95	24.46	22.76
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCIONES NETAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCION PEDIDOS PLANIFICADOS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LANZAMIENTO PEDIDOS PLANIFICADOS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

1.4.1 POLETILINO BAJA DENSIDAD	8.85	2.35	3.87	15.88	2.74	14.47	0.00	0.96	11.34	16.84	3.29	11.21
NECESIDADES BRUTAS												
DISPONIBILIDAD	24.16	21.81	17.84	1.87	44.24	28.77	28.77	28.81	17.47	0.53	42.24	31.64
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCIONES NETAS	0.00	0.00	0.00	0.00	0.78	0.00	0.00	0.00	0.00	0.00	2.78	0.00
RECEPCION PEDIDOS PLANIFICADOS	0.00	0.00	0.00	0.00	45.00	0.00	0.00	0.00	0.00	0.00	45.00	0.00
LANZAMIENTO PEDIDOS PLANIFICADOS	0.00	0.00	0.00	45.00	0.00	0.00	0.00	0.00	0.00	45.00	0.00	0.00

1.4.2 COLORANTE	0.13	0.04	0.06	0.26	0.04	0.23	0.00	0.02	0.18	0.27	0.05	0.18
NECESIDADES BRUTAS												
DISPONIBILIDAD	43.98	43.92	43.86	43.61	43.57	43.34	43.34	43.32	43.14	42.88	42.82	42.65
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCIONES NETAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCION PEDIDOS PLANIFICADOS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LANZAMIENTO PEDIDOS PLANIFICADOS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

1.1.3.1 POLIETILENO	44.88	12.37	26.38	84.02	14.41	78.15	0.00	5.05	65.68	89.14	17.32	59.86
NECESIDADES BRUTAS												
DISPONIBILIDAD	34.47	22.10	1.72	7.71	38.28	52.15	52.15	47.10	32.42	33.29	15.98	1.86
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCIONES NETAS	10.53	0.00	0.00	82.29	6.71	37.05	0.00	0.00	12.58	86.71	0.00	43.02
RECEPCION PEDIDOS PLANIFICADOS	45.00	0.00	0.00	90.00	45.00	90.00	0.00	45.00	46.00	90.00	0.00	45.00
LANZAMIENTO PEDIDOS PLANIFICADOS	45.00	0.00	60.00	45.00	90.00	90.00	0.00	45.00	46.00	90.00	45.00	45.00

1.1.4.1 POLIACETAL NATURAL	12.75	3.51	5.77	23.80	4.08	21.57	0.00	1.43	16.01	25.28	4.81	16.71
NECESIDADES BRUTAS												
DISPONIBILIDAD	42.77	39.26	33.49	9.88	5.60	28.03	28.03	27.56	10.69	30.43	25.52	9.81
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCIONES NETAS	2.23	0.00	0.00	0.00	0.00	16.87	0.00	0.00	0.00	14.87	0.00	0.00
RECEPCION PEDIDOS PLANIFICADOS	45.00	0.00	0.00	0.00	0.00	48.00	0.00	0.00	45.00	48.00	0.00	0.00
LANZAMIENTO PEDIDOS PLANIFICADOS	45.00	0.00	0.00	0.00	45.00	48.00	0.00	0.00	45.00	48.00	0.00	0.00

1.6 CAJILLA											
NECESIDADES BRUTAS	0	27,655	5	10,772	61,340	0	2,256	15,374	119,604	67,632	46,981
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	27,655	5	10,772	61,340	0	2,256	15,374	119,604	67,632	46,981
RECEPCION PEDIDOS PLANIFICADOS	0	27,655	5	10,772	61,340	0	2,256	15,374	119,604	67,632	46,981
LANZAMIENTO PEDIDOS PLANIFICADOS	0	27,655	5	10,772	61,340	0	2,256	15,374	119,604	67,632	46,981

1.1.1 PUNTO											
NECESIDADES BRUTAS	0	277,061	125	258,534	1,472,162	0	54,154	368,884	2,870,481	2,103,177	1,127,549
DISPONIBILIDAD	129,000	1,039	914	17,380	20,218	20,218	18,064	22,080	1,588	23,411	20,862
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	148,861	0	257,620	1,454,782	0	33,936	362,820	2,848,412	2,101,999	1,104,138
RECEPCION PEDIDOS PLANIFICADOS	0	160,000	0	276,000	1,475,000	0	50,000	375,000	2,850,000	2,125,000	1,125,000
LANZAMIENTO PEDIDOS PLANIFICADOS	0	276,000	1,475,000	0	50,000	375,000	2,850,000	2,125,000	1,125,000	675,000	475,000

1.1.2 TINTA											
NECESIDADES BRUTAS	0.00	88.05	0.04	82.73	471.09	0.00	17.33	118.07	918.56	073.02	360.62
DISPONIBILIDAD	0.00	11.05	11.01	28.28	57.19	57.19	30.86	21.78	3.23	30.21	65.40
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NECESIDADES NETAS	0.00	88.95	0.00	71.72	442.81	0.00	0.00	78.21	886.77	098.76	335.60
RECEPCION PEDIDOS PLANIFICADOS	0.00	100.00	0.00	100.00	500.00	0.00	0.00	100.00	900.00	700.00	400.00
LANZAMIENTO PEDIDOS PLANIFICADOS	0.00	100.00	500.00	0.00	0.00	100.00	900.00	700.00	400.00	200.00	100.00

1.1.3 TUBO											
NECESIDADES BRUTAS	0	277,061	125	258,534	1,472,162	0	54,154	368,884	2,870,481	2,103,177	1,127,549
DISPONIBILIDAD	123,500	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	148,861	0	258,534	1,472,162	0	54,154	368,884	2,870,481	2,103,177	1,127,549
RECEPCION PEDIDOS PLANIFICADOS	0	160,000	0	258,534	1,472,162	0	54,154	368,884	2,870,481	2,103,177	1,127,549
LANZAMIENTO PEDIDOS PLANIFICADOS	0	276,000	1,475,000	0	50,000	375,000	2,850,000	2,125,000	1,125,000	675,000	475,000

1.1.4 SOPORTE											
NECESIDADES BRUTAS	0	277,061	125	258,534	1,472,162	0	54,154	368,884	2,870,481	2,103,177	1,127,549
DISPONIBILIDAD	320,000	42,038	41,814	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	161,023	0	216,020	1,472,162	0	54,154	368,884	2,870,481	2,103,177	1,127,549
RECEPCION PEDIDOS PLANIFICADOS	0	160,000	0	216,020	1,472,162	0	54,154	368,884	2,870,481	2,103,177	1,127,549
LANZAMIENTO PEDIDOS PLANIFICADOS	0	276,000	1,475,000	0	50,000	375,000	2,850,000	2,125,000	1,125,000	675,000	475,000

1.2.1 POLIESTIRENO											
NECESIDADES BRUTAS	0.00	2,323.88	0.44	904.87	5,152.57	0.00	180.54	1,201.44	10,046.72	7,361.12	3,946.42
DISPONIBILIDAD	0.00	16.14	15.70	10.83	33.26	33.26	23.72	37.28	25.56	44.44	56.02
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NECESIDADES NETAS	0.00	2,333.88	0.00	988.17	5,141.74	0.00	160.28	1,207.72	10,009.44	7,335.58	3,901.98
RECEPCION PEDIDOS PLANIFICADOS	0.00	2,340.00	0.00	900.00	5,175.00	0.00	180.00	1,205.00	10,035.00	7,380.00	3,950.00
LANZAMIENTO PEDIDOS PLANIFICADOS	0.00	2,340.00	0.00	900.00	5,175.00	0.00	180.00	1,205.00	10,035.00	7,380.00	3,950.00



NEGRO EXP1	Ene-04	Feb-04	Mar-04	Abr-04	May-04	Jun-04	Jul-04	Ag0-04	Sep-04	Oct-04	Nov-04	Dic-04
10:												
FI	884.477	458.215	812.845	0	306.760	1.742.568	0	63.800	433.783	3.367.323	2.462.024	1.317.236
II	0	0	0	0	0	0	0	0	0	0	0	0
MPB	884.477	458.215	812.845	148	306.760	1.742.568	0	63.800	433.783	3.367.323	2.462.024	1.317.236

1. NEGRO EXP1	884.477	458.215	812.845	148	306.760	1.742.568	0	63.800	433.783	3.367.323	2.462.024	1.317.236
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	884.477	458.215	812.845	148	306.760	1.742.568	0	63.800	433.783	3.367.323	2.462.024	1.317.236
NECESIDADES NETAS	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCION PEDIDOS PLANIFICADOS	884.477	458.215	812.845	148	306.760	1.742.568	0	63.800	433.783	3.367.323	2.462.024	1.317.236
LANZAMIENTO PEDIDOS PLANIFICADOS	884.477	458.215	812.845	148	306.760	1.742.568	0	63.800	433.783	3.367.323	2.462.024	1.317.236

1.1. REPUESTO	884.477	458.215	812.845	148	306.760	1.742.568	0	63.800	433.783	3.367.323	2.462.024	1.317.236
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	884.477	458.215	812.845	148	306.760	1.742.568	0	63.800	433.783	3.367.323	2.462.024	1.317.236
NECESIDADES NETAS	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCION PEDIDOS PLANIFICADOS	884.477	458.215	812.845	148	306.760	1.742.568	0	63.800	433.783	3.367.323	2.462.024	1.317.236
LANZAMIENTO PEDIDOS PLANIFICADOS	884.477	458.215	812.845	148	306.760	1.742.568	0	63.800	433.783	3.367.323	2.462.024	1.317.236

1.2. MANTEN	884.477	458.215	812.845	148	306.760	1.742.568	0	63.800	433.783	3.367.323	2.462.024	1.317.236
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	884.477	458.215	812.845	148	306.760	1.742.568	0	63.800	433.783	3.367.323	2.462.024	1.317.236
NECESIDADES NETAS	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCION PEDIDOS PLANIFICADOS	884.477	458.215	812.845	148	306.760	1.742.568	0	63.800	433.783	3.367.323	2.462.024	1.317.236
LANZAMIENTO PEDIDOS PLANIFICADOS	884.477	458.215	812.845	148	306.760	1.742.568	0	63.800	433.783	3.367.323	2.462.024	1.317.236

1.3. TAPA	884.477	458.215	812.845	148	306.760	1.742.568	0	63.800	433.783	3.367.323	2.462.024	1.317.236
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	884.477	458.215	812.845	148	306.760	1.742.568	0	63.800	433.783	3.367.323	2.462.024	1.317.236
NECESIDADES NETAS	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCION PEDIDOS PLANIFICADOS	884.477	458.215	812.845	148	306.760	1.742.568	0	63.800	433.783	3.367.323	2.462.024	1.317.236
LANZAMIENTO PEDIDOS PLANIFICADOS	884.477	458.215	812.845	148	306.760	1.742.568	0	63.800	433.783	3.367.323	2.462.024	1.317.236

1.4. BOTON	884.477	458.215	812.845	148	306.760	1.742.568	0	63.800	433.783	3.367.323	2.462.024	1.317.236
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	884.477	458.215	812.845	148	306.760	1.742.568	0	63.800	433.783	3.367.323	2.462.024	1.317.236
NECESIDADES NETAS	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCION PEDIDOS PLANIFICADOS	884.477	458.215	812.845	148	306.760	1.742.568	0	63.800	433.783	3.367.323	2.462.024	1.317.236
LANZAMIENTO PEDIDOS PLANIFICADOS	884.477	458.215	812.845	148	306.760	1.742.568	0	63.800	433.783	3.367.323	2.462.024	1.317.236

1.5. CAJA MASTER	578	383	677	0	258	1.452	0	63	361	2.800	2.052	1.088
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	578	383	677	0	258	1.452	0	63	361	2.800	2.052	1.088
NECESIDADES NETAS	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCION PEDIDOS PLANIFICADOS	578	383	677	0	258	1.452	0	63	361	2.800	2.052	1.088
LANZAMIENTO PEDIDOS PLANIFICADOS	578	383	677	0	258	1.452	0	63	361	2.800	2.052	1.088



1.6 CAJILLA												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
NECESIDADES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 1												
20.937	18.134	33.869	6	12.782	72.607	0	2.689	18.074	140.305	102.594	54.985	0
0	0	0	0	0	0	0	0	0	0	0	0	0
20.937	18.134	33.869	6	12.782	72.607	0	2.689	18.074	140.305	102.594	54.985	0
20.937	18.134	33.869	6	12.782	72.607	0	2.689	18.074	140.305	102.594	54.985	0
20.937	18.134	33.869	6	12.782	72.607	0	2.689	18.074	140.305	102.594	54.985	0
1.1.1 PUNTO												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
NECESIDADES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 2												
604.477	459.215	812.845	148	306.760	1.742.668	0	63.808	433.763	3.367.323	2.462.024	1.317.236	0
1.385	17.117	4.325	4.177	22.417	4.849	4.949	19.043	7.260	14.937	2.613	10.677	0
673.815	487.628	796.674	0	322.563	1.720.151	0	68.957	417.740	3.360.963	2.447.099	1.314.323	0
875.000	475.000	800.000	0	325.000	1.725.000	0	75.000	425.000	3.375.000	2.450.000	1.325.000	0
800.000	0	325.000	1.725.000	0	75.000	425.000	3.375.000	2.450.000	1.325.000	0	0	0
1.1.2 FINA												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
NECESIDADES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 2												
222.23	146.86	200.11	0.06	98.16	667.02	0.00	20.42	136.81	1.077.64	787.96	421.62	0
47.16	0.21	40.10	40.06	41.89	84.27	84.27	63.85	26.04	47.60	56.05	36.14	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
162.04	96.78	269.80	0.00	56.11	515.73	0.00	0.00	74.86	1.052.60	740.36	361.66	0
200.00	100.00	300.00	0.00	100.00	600.00	0.00	1.100.00	100.00	1.100.00	800.00	400.00	0.00
300.00	0.00	100.00	600.00	0.00	0.00	100.00	1.100.00	800.00	400.00	0.00	0.00	0.00
1.1.3 TUBO												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
NECESIDADES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 2												
604.477	459.215	812.845	148	306.760	1.742.668	0	63.808	433.763	3.367.323	2.462.024	1.317.236	0
0	0	0	0	0	0	0	0	0	0	0	0	0
604.477	459.215	812.845	148	306.760	1.742.668	0	63.808	433.763	3.367.323	2.462.024	1.317.236	0
604.477	459.215	812.845	148	306.760	1.742.668	0	63.808	433.763	3.367.323	2.462.024	1.317.236	0
1.1.4 SOPORTE												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
NECESIDADES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 2												
604.477	459.215	812.845	148	306.760	1.742.668	0	63.808	433.763	3.367.323	2.462.024	1.317.236	0
0	0	0	0	0	0	0	0	0	0	0	0	0
604.477	459.215	812.845	148	306.760	1.742.668	0	63.808	433.763	3.367.323	2.462.024	1.317.236	0
604.477	459.215	812.845	148	306.760	1.742.668	0	63.808	433.763	3.367.323	2.462.024	1.317.236	0
1.2.1 POLIESTIRENO												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
NECESIDADES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 2												
2.430.87	1.607.26	2.644.86	0.52	1.073.66	6.096.69	0.00	223.32	1.616.24	11.785.63	8.617.09	4.610.33	0
12.36	26.10	16.14	14.62	20.96	41.97	41.97	43.66	10.41	14.78	37.69	17.37	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.372.66	1.604.90	2.618.66	0.00	1.058.04	6.078.03	0.00	191.36	1.474.06	11.775.22	8.602.31	4.572.63	0.00
2.366.00	1.600.00	2.638.00	0.00	1.060.00	6.120.00	0.00	225.00	1.466.00	11.760.00	8.640.00	4.560.00	0.00
1.620.00	2.638.00	0.00	1.060.00	6.120.00	0.00	225.00	1.466.00	11.760.00	8.640.00	4.560.00	0.00	0.00



POLITECNICA NACIONAL
BIBLIOTECA "JOSÉ DE VIALLOS"
F.U.M.C.C.

APENDICE 22
PLAN DE REQUERIMIENTOS DE MATERIALES (MRP)

ROJO EXP1	Actual	Feb-03	Mar-03	Abr-03	May-03	Jun-03	Jul-03	Ag-03	Sep-03	Oct-03	Nov-03	Dic-03
lo:	165,131											
Fl	211,481	0	0	0	0	0	121,273	382,213	348,119	939,984	389,960	119,317
R	0	0	0	0	0	0	0	0	0	0	0	0
MPS	46,360	0	0	0	0	0	121,273	382,213	348,119	939,984	389,960	119,317
1. ROJO EXP1												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
NIVEL 0												
RECEPCIONES PROGRAMADAS												
NECESIDADES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
1.1. BURETO												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
NIVEL 1												
RECEPCIONES PROGRAMADAS												
NECESIDADES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
1.2. MARRIL												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
NIVEL 1												
RECEPCIONES PROGRAMADAS												
NECESIDADES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
1.3. YAPA												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
NIVEL 1												
RECEPCIONES PROGRAMADAS												
NECESIDADES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
1.4. BOSTON												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
NIVEL 1												
RECEPCIONES PROGRAMADAS												
NECESIDADES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
1.5. CAJA MASTER												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
NIVEL 1												
RECEPCIONES PROGRAMADAS												
NECESIDADES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												



1.3 CAJILLA																	
NECESIDADES BRUTAS																	
DISPONIBILIDAD																	
RECEPCIONES PROGRAMADAS																	
RECEPCIONES NETAS																	
RECEPCION PEDIDOS PLANIFICADOS																	
LANZAMIENTO PEDIDOS PLANIFICADOS																	
NIVEL 1																	
	1,932	0	0	0	0	0	0	0	0	0	5,983	15,928	14,847	38,165	16,248	4,972	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	5,983	15,928	14,847	38,165	16,248	4,972	0
	1,932	0	0	0	0	0	0	0	0	0	5,983	15,928	14,847	38,165	16,248	4,972	0
	1,932	0	0	0	0	0	0	0	0	0	5,983	15,928	14,847	38,165	16,248	4,972	0
	1,932	0	0	0	0	0	0	0	0	0	5,983	15,928	14,847	38,165	16,248	4,972	0
NIVEL 2																	
	46,360	0	0	0	0	0	0	0	0	0	121,273	382,213	346,119	939,964	399,960	119,317	0
	43,140	43,140	0	0	0	0	0	0	0	0	21,097	14,694	15,935	571	10,810	16,293	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	78,133	360,346	334,485	924,428	399,360	106,707	0
	0	0	0	0	0	0	0	0	0	0	100,000	375,000	360,000	926,000	400,000	125,000	0
	0	0	0	0	0	0	0	0	0	0	380,000	929,000	469,000	1,250,000	300,000	275,000	0
	0	0	0	0	0	0	0	0	0	0	100,000	375,000	360,000	926,000	400,000	125,000	0
	0	0	0	0	0	0	0	0	0	0	380,000	929,000	469,000	1,250,000	300,000	275,000	0
1.1.1 JUNTO																	
NECESIDADES BRUTAS																	
DISPONIBILIDAD																	
RECEPCIONES PROGRAMADAS																	
RECEPCIONES NETAS																	
RECEPCION PEDIDOS PLANIFICADOS																	
LANZAMIENTO PEDIDOS PLANIFICADOS																	
NIVEL 2																	
	14,84	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	38,81	122,31	111,72	300,76	124,76	38,19	0
	97,16	97,16	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	58,36	36,06	24,33	23,94	98,76	60,57	0
	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0
	2,84	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	83,98	76,87	76,87	276,46	101,24	0,00	0
	100,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	100,00	100,00	100,00	300,00	200,00	0,00	0
	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	100,00	300,00	200,00	300,00	100,00	100,00	0
	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	100,00	300,00	200,00	300,00	100,00	100,00	0
1.1.2 JUNTO																	
NECESIDADES BRUTAS																	
DISPONIBILIDAD																	
RECEPCIONES PROGRAMADAS																	
RECEPCIONES NETAS																	
RECEPCION PEDIDOS PLANIFICADOS																	
LANZAMIENTO PEDIDOS PLANIFICADOS																	
NIVEL 2																	
	46,360	0	0	0	0	0	0	0	0	0	121,273	382,213	346,119	939,964	399,960	119,317	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12,160	0	0	0	0	0	0	0	0	0	121,273	382,213	346,119	939,964	399,960	119,317	0
	12,160	0	0	0	0	0	0	0	0	0	121,273	382,213	346,119	939,964	399,960	119,317	0
	12,160	0	0	0	0	0	0	0	0	0	121,273	382,213	346,119	939,964	399,960	119,317	0
	12,160	0	0	0	0	0	0	0	0	0	121,273	382,213	346,119	939,964	399,960	119,317	0
	12,160	0	0	0	0	0	0	0	0	0	121,273	382,213	346,119	939,964	399,960	119,317	0
1.1.3 JUNTO																	
NECESIDADES BRUTAS																	
DISPONIBILIDAD																	
RECEPCIONES PROGRAMADAS																	
RECEPCIONES NETAS																	
RECEPCION PEDIDOS PLANIFICADOS																	
LANZAMIENTO PEDIDOS PLANIFICADOS																	
NIVEL 2																	
	46,360	0	0	0	0	0	0	0	0	0	121,273	382,213	346,119	939,964	399,960	119,317	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12,160	0	0	0	0	0	0	0	0	0	121,273	382,213	346,119	939,964	399,960	119,317	0
	12,160	0	0	0	0	0	0	0	0	0	121,273	382,213	346,119	939,964	399,960	119,317	0
	12,160	0	0	0	0	0	0	0	0	0	121,273	382,213	346,119	939,964	399,960	119,317	0
	12,160	0	0	0	0	0	0	0	0	0	121,273	382,213	346,119	939,964	399,960	119,317	0
	12,160	0	0	0	0	0	0	0	0	0	121,273	382,213	346,119	939,964	399,960	119,317	0
1.1.4 SOPORTE																	
NECESIDADES BRUTAS																	
DISPONIBILIDAD																	
RECEPCIONES PROGRAMADAS																	
RECEPCIONES NETAS																	
RECEPCION PEDIDOS PLANIFICADOS																	
LANZAMIENTO PEDIDOS PLANIFICADOS																	
NIVEL 2																	
	46,360	0	0	0	0	0	0	0	0	0	121,273	382,213	346,119	939,964	399,960	119,317	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	46,360	0	0	0	0	0	0	0	0	0	121,273	382,213	346,119	939,964	399,960	119,317	0
	46,360	0	0	0	0	0	0	0	0	0	121,273	382,213	346,119	939,964	399,960	119,317	0
	46,360	0	0	0	0	0	0	0	0	0	121,273	382,213	346,119	939,964	399,960	119,317	0
	46,360	0	0	0	0	0	0	0	0	0	121,273	382,213	346,119	939,964	399,960	119,317	0
	46,360	0	0	0	0	0	0	0	0	0	121,273	382,213	346,119	939,964	399,960	119,317	0
1.2.1 POLIETRENO																	
NECESIDADES BRUTAS																	
DISPONIBILIDAD																	
RECEPCIONES PROGRAMADAS																	
RECEPCIONES NETAS																	
RECEPCION PEDIDOS PLANIFICADOS																	
LANZAMIENTO PEDIDOS PLANIFICADOS																	
NIVEL 2																	
	182,28	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	424,46	1,337,75	1,221,62	3,269,86	1,334,86	417,81	0
	17,74	17,74	17,74	17,74	17,74	17,74	17,74	17,74	17,74	17,74	43,28	16,54	3,62	43,75	28,88	16,28	0
	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0
	182,28	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	468,71	1,384,46	1,211,38	3,286,35	1,321,11	368,72	0
	180,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	450,00	1,365,00	1,216,00	3,330,00	1,330,00	405,00	0
	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	1,305,00	1,315,00	3,330,00	1,350,00	405,00	1,035,00	0

ROJO EXP1	Ene-04	Feb-04	Mar-04	Abr-04	May-04	Jun-04	Jul-04	Ag-04	Sep-04	Oct-04	Nov-04	Dic-04
br:	298,642	252,888	15,873	0	0	0	143,211	450,328	410,426	1,102,645	456,492	136,388
fl:	0	0	0	0	0	0	0	0	0	0	0	0
il:	0	0	0	0	0	0	0	0	0	0	0	0
mps:	298,642	252,888	15,873	0	0	0	143,211	450,328	410,426	1,102,645	456,492	136,388

1. ROJO EXP1	298,642	252,888	15,873	0	0	0	143,211	450,328	410,426	1,102,645	456,492	136,388
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	298,642	252,888	15,873	0	0	0	143,211	450,328	410,426	1,102,645	456,492	136,388
NECESIDADES NETAS	298,642	252,888	15,873	0	0	0	143,211	450,328	410,426	1,102,645	456,492	136,388
RECEPCION PEDIDOS PLANIFICADOS	298,642	252,888	15,873	0	0	0	143,211	450,328	410,426	1,102,645	456,492	136,388
LANZAMIENTO PEDIDOS PLANIFICADOS	298,642	252,888	15,873	0	0	0	143,211	450,328	410,426	1,102,645	456,492	136,388

1.1 TRUENTO	298,642	252,888	15,873	0	0	0	143,211	450,328	410,426	1,102,645	456,492	136,388
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	298,642	252,888	15,873	0	0	0	143,211	450,328	410,426	1,102,645	456,492	136,388
NECESIDADES NETAS	298,642	252,888	15,873	0	0	0	143,211	450,328	410,426	1,102,645	456,492	136,388
RECEPCION PEDIDOS PLANIFICADOS	298,642	252,888	15,873	0	0	0	143,211	450,328	410,426	1,102,645	456,492	136,388
LANZAMIENTO PEDIDOS PLANIFICADOS	298,642	252,888	15,873	0	0	0	143,211	450,328	410,426	1,102,645	456,492	136,388

1.2 BARRIL	298,642	252,888	15,873	0	0	0	143,211	450,328	410,426	1,102,645	456,492	136,388
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	298,642	252,888	15,873	0	0	0	143,211	450,328	410,426	1,102,645	456,492	136,388
NECESIDADES NETAS	298,642	252,888	15,873	0	0	0	143,211	450,328	410,426	1,102,645	456,492	136,388
RECEPCION PEDIDOS PLANIFICADOS	298,642	252,888	15,873	0	0	0	143,211	450,328	410,426	1,102,645	456,492	136,388
LANZAMIENTO PEDIDOS PLANIFICADOS	298,642	252,888	15,873	0	0	0	143,211	450,328	410,426	1,102,645	456,492	136,388

1.3 TAPA	298,642	252,888	15,873	0	0	0	143,211	450,328	410,426	1,102,645	456,492	136,388
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	298,642	252,888	15,873	0	0	0	143,211	450,328	410,426	1,102,645	456,492	136,388
NECESIDADES NETAS	298,642	252,888	15,873	0	0	0	143,211	450,328	410,426	1,102,645	456,492	136,388
RECEPCION PEDIDOS PLANIFICADOS	298,642	252,888	15,873	0	0	0	143,211	450,328	410,426	1,102,645	456,492	136,388
LANZAMIENTO PEDIDOS PLANIFICADOS	298,642	252,888	15,873	0	0	0	143,211	450,328	410,426	1,102,645	456,492	136,388

1.4 BOTÓN	298,642	252,888	15,873	0	0	0	143,211	450,328	410,426	1,102,645	456,492	136,388
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	298,642	252,888	15,873	0	0	0	143,211	450,328	410,426	1,102,645	456,492	136,388
NECESIDADES NETAS	298,642	252,888	15,873	0	0	0	143,211	450,328	410,426	1,102,645	456,492	136,388
RECEPCION PEDIDOS PLANIFICADOS	298,642	252,888	15,873	0	0	0	143,211	450,328	410,426	1,102,645	456,492	136,388
LANZAMIENTO PEDIDOS PLANIFICADOS	298,642	252,888	15,873	0	0	0	143,211	450,328	410,426	1,102,645	456,492	136,388

1.5 CAJA MASTER	248	211	13	0	0	0	118	375	342	918	380	116
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	248	211	13	0	0	0	118	375	342	918	380	116
NECESIDADES NETAS	248	211	13	0	0	0	118	375	342	918	380	116
RECEPCION PEDIDOS PLANIFICADOS	248	211	13	0	0	0	118	375	342	918	380	116
LANZAMIENTO PEDIDOS PLANIFICADOS	248	211	13	0	0	0	118	375	342	918	380	116



1.0 CAJILLA														
NECESIDADES BRUTAS														
DISPONIBILIDAD														
RECEPCIONES PROGRAMADAS														
RECEPCIONES NETAS														
RECEPCION PEDIDOS PLANIFICADOS														
LANZAMIENTO PEDIDOS PLANIFICADOS														
NIVEL 1														
	12,443	10,536	666	0	0	0	0	0	0	0	17,101	45,844	19,020	5,808
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12,443	10,536	666	0	0	0	0	0	0	0	17,101	45,844	19,020	5,808
	12,443	10,536	666	0	0	0	0	0	0	0	17,101	45,844	19,020	5,808
	12,443	10,536	666	0	0	0	0	0	0	0	17,101	45,844	19,020	5,808
1.1 JUNTO														
NECESIDADES BRUTAS														
DISPONIBILIDAD														
RECEPCIONES PROGRAMADAS														
RECEPCIONES NETAS														
RECEPCION PEDIDOS PLANIFICADOS														
LANZAMIENTO PEDIDOS PLANIFICADOS														
NIVEL 2														
	290,642	252,699	15,973	0	0	0	0	0	0	0	410,425	1,102,645	456,482	136,389
	17,651	35,793	23,810	23,810	23,810	0	0	0	0	0	19,948	17,201	0	0
	282,348	235,217	0	0	0	0	0	0	0	0	408,164	1,082,799	439,281	128,680
	300,000	275,000	0	0	0	0	0	0	0	0	425,000	1,100,000	450,000	160,000
	0	0	0	125,000	450,000	0	0	0	0	0	450,000	1,500,000	0	0
1.1.1 TINTA														
NECESIDADES BRUTAS														
DISPONIBILIDAD														
RECEPCIONES PROGRAMADAS														
RECEPCIONES NETAS														
RECEPCION PEDIDOS PLANIFICADOS														
LANZAMIENTO PEDIDOS PLANIFICADOS														
NIVEL 2														
	95,67	80,92	5,11	0,00	0,00	0,00	0,00	0,00	0,00	0,00	131,34	352,85	148,06	44,50
	64,01	61,09	75,99	75,99	75,99	0,00	0,00	0,00	0,00	0,00	32,71	68,66	11,79	56,18
	1,00	2,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	11,00	11,00	11,00	11,00
	35,98	18,91	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	47,28	331,14	88,21	43,82
	100,00	100,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	100,00	400,00	100,00	100,00
	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	100,00	100,00	0,00	0,00
1.1.2 TUBO														
NECESIDADES BRUTAS														
DISPONIBILIDAD														
RECEPCIONES PROGRAMADAS														
RECEPCIONES NETAS														
RECEPCION PEDIDOS PLANIFICADOS														
LANZAMIENTO PEDIDOS PLANIFICADOS														
NIVEL 2														
	289,642	252,699	15,973	0	0	0	0	0	0	0	410,425	1,102,645	456,482	136,389
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	289,642	252,699	15,973	0	0	0	0	0	0	0	410,425	1,102,645	456,482	136,389
	289,642	252,699	15,973	0	0	0	0	0	0	0	410,425	1,102,645	456,482	136,389
	289,642	252,699	15,973	0	0	0	0	0	0	0	410,425	1,102,645	456,482	136,389
1.1.3 ESPORTE														
NECESIDADES BRUTAS														
DISPONIBILIDAD														
RECEPCIONES PROGRAMADAS														
RECEPCIONES NETAS														
RECEPCION PEDIDOS PLANIFICADOS														
LANZAMIENTO PEDIDOS PLANIFICADOS														
NIVEL 2														
	290,642	252,699	15,973	0	0	0	0	0	0	0	410,425	1,102,645	456,482	136,389
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	290,642	252,699	15,973	0	0	0	0	0	0	0	410,425	1,102,645	456,482	136,389
	290,642	252,699	15,973	0	0	0	0	0	0	0	410,425	1,102,645	456,482	136,389
	290,642	252,699	15,973	0	0	0	0	0	0	0	410,425	1,102,645	456,482	136,389
1.2 POLIESTERINO														
NECESIDADES BRUTAS														
DISPONIBILIDAD														
RECEPCIONES PROGRAMADAS														
RECEPCIONES NETAS														
RECEPCION PEDIDOS PLANIFICADOS														
LANZAMIENTO PEDIDOS PLANIFICADOS														
NIVEL 2														
	1,045,25	885,04	55,80	0,00	0,00	0,00	0,00	0,00	0,00	0,00	1,438,49	3,839,28	1,597,72	487,66
	6,03	20,89	10,69	10,69	10,69	0,00	0,00	0,00	0,00	0,00	2,70	16,95	39,23	1,37
	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
	1,028,97	879,01	34,81	0,00	0,00	0,00	0,00	0,00	0,00	0,00	1,433,78	3,833,05	1,590,77	468,63
	1,035,00	900,00	45,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	1,440,00	3,870,00	1,520,00	450,00
	900,00	45,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	3,970,00	1,520,00	450,00	0,00

**APENDICE 22
PLAN DE REQUERIMIENTOS DE MATERIALES (MRP)**

AZUL 2	ACTUAL	Feb-03	Mar-03	Abr-03	May-03	Jun-03	Jul-03	Ag0-03	Sep-03	Oct-03	Nov-03	Dic-03
		81,541	536,801	1,267,342	1,016,309	1,080,163	376,126	1,185,405	1,185,976	854,891	381,899	488,099
IP		0	0	0	0	0	0	0	0	0	0	0
PL		0	0	0	0	0	0	0	0	0	0	0
MPS		455,350	0	0	1,080,163	376,126	1,185,405	1,185,976	854,891	381,899	488,099	401,398
NIVEL 0												
NECESIDADES BRUTAS		455,350	0	0	1,080,163	376,126	1,185,405	1,185,976	854,891	381,899	488,099	401,398
DISPONIBILIDAD		0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS		0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS		455,350	0	0	1,080,163	376,126	1,185,405	1,185,976	854,891	381,899	488,099	401,398
RECEPCION PEDIDOS PLANIFICADOS		455,350	0	0	1,080,163	376,126	1,185,405	1,185,976	854,891	381,899	488,099	401,398
LANZAMIENTO PEDIDOS PLANIFICADOS		0	0	0	0	0	0	0	0	0	0	0
1.1 TREPUESTO												
NECESIDADES BRUTAS		455,350	0	0	1,080,163	376,126	1,185,405	1,185,976	854,891	381,899	488,099	401,398
DISPONIBILIDAD		0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS		0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS		455,350	0	0	1,080,163	376,126	1,185,405	1,185,976	854,891	381,899	488,099	401,398
RECEPCION PEDIDOS PLANIFICADOS		455,350	0	0	1,080,163	376,126	1,185,405	1,185,976	854,891	381,899	488,099	401,398
LANZAMIENTO PEDIDOS PLANIFICADOS		0	0	0	0	0	0	0	0	0	0	0
1.2 BARRIL												
NECESIDADES BRUTAS		455,350	0	0	1,080,163	376,126	1,185,405	1,185,976	854,891	381,899	488,099	401,398
DISPONIBILIDAD		0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS		0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS		455,350	0	0	1,080,163	376,126	1,185,405	1,185,976	854,891	381,899	488,099	401,398
RECEPCION PEDIDOS PLANIFICADOS		455,350	0	0	1,080,163	376,126	1,185,405	1,185,976	854,891	381,899	488,099	401,398
LANZAMIENTO PEDIDOS PLANIFICADOS		0	0	0	0	0	0	0	0	0	0	0
1.3 TAPA												
NECESIDADES BRUTAS		455,350	0	0	1,080,163	376,126	1,185,405	1,185,976	854,891	381,899	488,099	401,398
DISPONIBILIDAD		0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS		0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS		455,350	0	0	1,080,163	376,126	1,185,405	1,185,976	854,891	381,899	488,099	401,398
RECEPCION PEDIDOS PLANIFICADOS		455,350	0	0	1,080,163	376,126	1,185,405	1,185,976	854,891	381,899	488,099	401,398
LANZAMIENTO PEDIDOS PLANIFICADOS		0	0	0	0	0	0	0	0	0	0	0
1.4 BOTON												
NECESIDADES BRUTAS		455,350	0	0	1,080,163	376,126	1,185,405	1,185,976	854,891	381,899	488,099	401,398
DISPONIBILIDAD		0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS		0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS		455,350	0	0	1,080,163	376,126	1,185,405	1,185,976	854,891	381,899	488,099	401,398
RECEPCION PEDIDOS PLANIFICADOS		455,350	0	0	1,080,163	376,126	1,185,405	1,185,976	854,891	381,899	488,099	401,398
LANZAMIENTO PEDIDOS PLANIFICADOS		0	0	0	0	0	0	0	0	0	0	0
1.5 CAJA MAYER												
NECESIDADES BRUTAS		378	0	0	908	316	988	988	712	318	415	334
DISPONIBILIDAD		0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS		0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS		378	0	0	908	316	988	988	712	318	415	334
RECEPCION PEDIDOS PLANIFICADOS		378	0	0	908	316	988	988	712	318	415	334
LANZAMIENTO PEDIDOS PLANIFICADOS		0	0	0	0	0	0	0	0	0	0	0



1.1.1 POLIETILENO BAJA DENSIDAD														0.000114	KG								
NECESIDADES BRUTAS														51.91	0.00	124.28	43.22	130.28	135.20	67.48	45.61	58.78	45.76
DISPONIBILIDAD														38.00	38.00	3.81	4.32	4.32	4.11	4.48	43.14	31.36	30.60
RECEPCIONES PROGRAMADAS														0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCIONES NETAS														51.91	0.00	86.19	39.41	130.68	130.69	93.34	1.86	13.64	14.40
RECEPCION PEDIDOS PLANIFICADOS														90.00	0.00	90.00	45.00	135.00	135.00	135.00	45.00	45.00	45.00
LANZAMIENTO PEDIDOS PLANIFICADOS														0.00	0.00	45.00	135.00	135.00	135.00	45.00	45.00	45.00	80.00

1.1.2 COLORANTE														0.000002	KG								
NECESIDADES BRUTAS														0.82	0.00	1.60	0.68	2.15	2.13	1.54	0.69	0.90	0.72
DISPONIBILIDAD														44.18	44.18	42.22	41.54	38.38	37.25	35.71	35.02	34.13	33.40
RECEPCIONES PROGRAMADAS														0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCIONES NETAS														0.82	0.00	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCION PEDIDOS PLANIFICADOS														45.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LANZAMIENTO PEDIDOS PLANIFICADOS														0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

1.1.3.1 POLIETILENO														0.000600	KG								
NECESIDADES BRUTAS														0.00	0.00	380.31	237.48	717.24	711.56	512.93	220.02	288.84	240.84
DISPONIBILIDAD														0.00	0.00	14.69	12.22	14.97	23.39	5.45	1.44	17.59	1.78
RECEPCIONES PROGRAMADAS														0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCIONES NETAS														0.00	0.00	380.31	212.78	705.03	698.61	498.55	223.58	297.41	232.24
RECEPCION PEDIDOS PLANIFICADOS														0.00	0.00	405.00	225.00	720.00	720.00	495.00	225.00	315.00	225.00
LANZAMIENTO PEDIDOS PLANIFICADOS														0.00	0.00	225.00	720.00	720.00	495.00	225.00	315.00	225.00	460.00

1.1.3.2 COLORANTE														0.000017	KG								
NECESIDADES BRUTAS														0.00	0.00	11.06	6.45	20.32	20.16	14.53	6.49	8.47	6.02
DISPONIBILIDAD														0.00	0.00	33.84	27.50	7.17	32.01	17.48	10.98	2.82	40.70
RECEPCIONES PROGRAMADAS														0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCIONES NETAS														0.00	0.00	11.06	0.00	0.00	12.99	0.00	0.00	0.00	4.30
RECEPCION PEDIDOS PLANIFICADOS														0.00	0.00	45.00	0.00	0.00	45.00	0.00	0.00	0.00	45.00
LANZAMIENTO PEDIDOS PLANIFICADOS														0.00	0.00	0.00	0.00	45.00	0.00	0.00	0.00	45.00	0.00

1.1.4.1 POLIACETIL NATURAL														0.000170	KG								
NECESIDADES BRUTAS														77.41	0.00	165.33	64.45	203.22	201.82	145.33	64.89	84.87	68.24
DISPONIBILIDAD														12.56	12.59	7.26	32.91	8.58	32.08	22.65	2.76	8.08	29.85
RECEPCIONES PROGRAMADAS														0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCIONES NETAS														77.41	0.00	172.74	37.18	170.11	182.02	112.35	42.24	81.82	60.15
RECEPCION PEDIDOS PLANIFICADOS														80.00	0.00	160.00	80.00	160.00	226.00	135.00	45.00	80.00	80.00
LANZAMIENTO PEDIDOS PLANIFICADOS														180.00	80.00	245.00	135.00	45.00	80.00	90.00	135.00	80.00	270.00

1.1.4.2 COLORANTE														0.000027	KG								
NECESIDADES BRUTAS														12.29	0.00	28.43	10.24	32.28	32.02	23.08	10.31	13.45	10.84
DISPONIBILIDAD														32.71	32.71	3.27	38.03	6.78	18.74	48.99	30.35	18.90	6.69
RECEPCIONES PROGRAMADAS														0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCIONES NETAS														12.29	0.00	6.97	6.97	0.00	26.26	4.34	0.00	0.00	0.00
RECEPCION PEDIDOS PLANIFICADOS														45.00	0.00	45.00	45.00	0.00	45.00	45.00	0.00	0.00	0.00
LANZAMIENTO PEDIDOS PLANIFICADOS														0.00	0.00	45.00	0.00	45.00	45.00	0.00	0.00	0.00	45.00

1.6 CAJILLA												
NIVEL 1	29.866	29.739	62.454	50.304	53.879	10.693	58.801	58.205	41.864	18.652	24.397	19.633
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	29.866	29.739	62.454	50.304	53.879	10.693	58.801	58.205	41.864	18.652	24.397	19.633
RECEPCIONES NETAS	29.866	29.739	62.454	50.304	53.879	10.693	58.801	58.205	41.864	18.652	24.397	19.633
LANZAMIENTO PEDIDOS PLANIFICADOS	29.866	29.739	62.454	50.304	53.879	10.693	58.801	58.205	41.864	18.652	24.397	19.633

1.1.1 PUERTO												
NIVEL 2	716.784	641.710	1.498.887	1.207.285	1.293.094	448.821	1.411.230	1.398.925	1.004.729	447.637	582.889	468.798
NECESIDADES BRUTAS	5.341	14.744	7.456	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	984.859	938.389	1.485.259	1.192.841	1.285.635	434.256	1.389.486	1.392.411	997.140	444.777	577.086	446.464
RECEPCIONES NETAS	700.000	650.000	1.500.000	1.200.000	1.300.000	450.000	1.400.000	1.400.000	1.000.000	450.000	600.000	480.000
LANZAMIENTO PEDIDOS PLANIFICADOS	1.500.000	1.300.000	1.300.000	450.000	1.400.000	1.400.000	1.000.000	450.000	600.000	450.000	600.000	480.000

1.1.2 TOTA												
NIVEL 2	228.37	203.35	478.84	386.33	413.79	143.56	481.59	447.02	321.51	143.24	188.52	150.02
NECESIDADES BRUTAS	9.17	3.82	24.17	37.84	24.05	80.49	28.60	81.88	60.37	17.13	30.60	60.59
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	180.83	186.18	475.83	382.18	378.96	118.51	371.10	418.12	238.63	82.87	108.40	119.41
RECEPCIONES NETAS	200.00	200.00	500.00	400.00	400.00	200.00	400.00	500.00	300.00	200.00	200.00	200.00
LANZAMIENTO PEDIDOS PLANIFICADOS	500.00	400.00	400.00	200.00	400.00	500.00	300.00	100.00	200.00	200.00	200.00	0.00

1.1.3 TUBO												
NIVEL 2	716.784	641.710	1.498.887	1.207.285	1.293.094	448.821	1.411.230	1.398.925	1.004.729	447.637	582.889	468.798
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	716.784	641.710	1.498.887	1.207.285	1.293.094	448.821	1.411.230	1.398.925	1.004.729	447.637	582.889	468.798
RECEPCIONES NETAS	716.784	641.710	1.498.887	1.207.285	1.293.094	448.821	1.411.230	1.398.925	1.004.729	447.637	582.889	468.798
LANZAMIENTO PEDIDOS PLANIFICADOS	716.784	641.710	1.498.887	1.207.285	1.293.094	448.821	1.411.230	1.398.925	1.004.729	447.637	582.889	468.798

1.1.4 SOPORTE												
NIVEL 2	716.784	641.710	1.498.887	1.207.285	1.293.094	448.821	1.411.230	1.398.925	1.004.729	447.637	582.889	468.798
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	716.784	641.710	1.498.887	1.207.285	1.293.094	448.821	1.411.230	1.398.925	1.004.729	447.637	582.889	468.798
RECEPCIONES NETAS	716.784	641.710	1.498.887	1.207.285	1.293.094	448.821	1.411.230	1.398.925	1.004.729	447.637	582.889	468.798
LANZAMIENTO PEDIDOS PLANIFICADOS	716.784	641.710	1.498.887	1.207.285	1.293.094	448.821	1.411.230	1.398.925	1.004.729	447.637	582.889	468.798

1.2.1 POLIESTIRENO												
NIVEL 2	2.508.75	2.246.98	5.248.11	4.225.50	4.528.93	1.570.17	4.939.31	4.885.24	3.316.55	1.586.73	2.040.11	1.640.79
NECESIDADES BRUTAS	8.99	13.01	31.80	36.41	10.58	18.41	28.10	41.86	38.31	43.58	28.47	7.07
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	2.460.01	2.236.96	5.233.10	4.189.38	4.489.42	1.568.99	4.923.00	4.893.14	3.274.89	1.531.42	1.996.53	1.612.33
RECEPCIONES NETAS	2.475.00	2.250.00	5.268.00	4.235.00	4.500.00	1.578.00	4.908.00	4.845.00	3.310.00	1.578.00	2.025.00	1.650.00
LANZAMIENTO PEDIDOS PLANIFICADOS	2.250.00	2.250.00	4.235.00	4.500.00	1.578.00	1.578.00	4.908.00	4.845.00	3.310.00	1.578.00	2.025.00	1.650.00

1.3.1 RESINA K												
NIVEL 2	946.16	947.06	1.878.83	1.593.82	1.706.88	592.18	1.862.82	1.843.64	1.326.24	590.88	768.41	618.01
NECESIDADES BRUTAS	0.31	8.25	8.72	38.10	38.22	32.04	14.21	15.27	38.03	33.15	28.74	36.02
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	944.89	948.75	1.870.28	1.565.80	1.678.78	565.96	1.850.79	1.828.73	1.310.87	561.85	739.26	600.08
RECEPCIONES NETAS	949.00	955.00	1.880.00	1.620.00	1.710.00	598.00	1.845.00	1.845.00	1.350.00	595.00	765.00	600.00
LANZAMIENTO PEDIDOS PLANIFICADOS	949.00	955.00	1.880.00	1.620.00	1.710.00	598.00	1.845.00	1.845.00	1.350.00	595.00	765.00	600.00



1.4.1 POLIETILENO BAJA DENSIDAD												
NECESIDADES BRUTAS												
	81.71	73.15	170.87	137.63	147.41	51.14	160.88	158.25	114.54	51.03	66.46	53.44
DISPONIBILIDAD												
	38.68	10.74	19.86	17.23	4.62	43.68	17.90	38.55	14.01	7.98	21.53	23.08
RECEPCIONES PROGRAMADAS												
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCIONES NETAS												
	51.11	54.26	160.14	117.77	130.18	48.32	117.20	141.45	78.99	37.02	66.47	21.02
RECEPCION PEDIDOS PLANIFICADOS												
	90.00	45.00	180.00	135.00	135.00	90.00	135.00	180.00	90.00	45.00	60.00	45.00
LANZAMIENTO PEDIDOS PLANIFICADOS												
	45.00	135.00	135.00	135.00	90.00	135.00	180.00	90.00	45.00	60.00	45.00	0.00

1.4.2 COLORANTE												
NECESIDADES BRUTAS												
	1.29	1.16	2.70	3.17	2.33	0.61	2.54	2.51	1.91	0.61	1.05	0.84
DISPONIBILIDAD												
	32.11	30.86	28.28	26.09	23.78	22.65	20.41	17.60	16.09	15.28	14.23	13.39
RECEPCIONES PROGRAMADAS												
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCIONES NETAS												
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCION PEDIDOS PLANIFICADOS												
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LANZAMIENTO PEDIDOS PLANIFICADOS												
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

1.1.3.1 POLIETILENO												
NECESIDADES BRUTAS												
	430.07	399.03	869.33	724.37	775.68	269.17	845.74	638.19	902.84	268.58	340.73	281.28
DISPONIBILIDAD												
	21.68	41.68	42.33	37.98	27.10	27.63	36.19	8.03	35.20	36.61	1.98	36.60
RECEPCIONES PROGRAMADAS												
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCIONES NETAS												
	428.32	357.34	867.67	682.04	737.80	242.07	818.81	601.87	594.90	233.39	313.12	279.40
RECEPCION PEDIDOS PLANIFICADOS												
	450.00	408.00	900.00	720.00	788.00	270.00	865.00	610.00	630.00	270.00	315.00	315.00
LANZAMIENTO PEDIDOS PLANIFICADOS												
	405.00	800.00	720.00	765.00	270.00	885.00	610.00	630.00	270.00	315.00	315.00	0.00

1.1.3.2 COLORANTE												
NECESIDADES BRUTAS												
	12.19	10.61	25.48	20.52	21.88	7.63	23.99	23.75	17.08	7.61	6.91	7.97
DISPONIBILIDAD												
	28.51	17.61	37.12	16.80	39.62	31.69	8.00	29.25	12.17	4.58	39.65	31.66
RECEPCIONES PROGRAMADAS												
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCIONES NETAS												
	0.00	0.00	7.88	0.00	6.38	0.00	0.00	15.75	0.00	0.00	6.35	0.00
RECEPCION PEDIDOS PLANIFICADOS												
	0.00	0.00	45.00	0.00	45.00	0.00	45.00	45.00	0.00	45.00	0.00	0.00
LANZAMIENTO PEDIDOS PLANIFICADOS												
	0.00	45.00	45.00	45.00	0.00	0.00	45.00	0.00	0.00	45.00	0.00	0.00

1.1.4.1 POLIACETAL NATURAL												
NECESIDADES BRUTAS												
	121.85	108.09	264.81	205.24	219.83	76.27	236.81	237.48	170.80	76.10	90.09	79.70
DISPONIBILIDAD												
	41.89	20.80	33.09	3.85	4.03	11.78	34.95	14.38	14.87	16.47	43.38	41.69
RECEPCIONES PROGRAMADAS												
	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00	12.00
RECEPCIONES NETAS												
	63.01	68.10	230.81	176.15	220.67	78.24	235.16	210.62	186.53	71.53	91.62	48.31
RECEPCION PEDIDOS PLANIFICADOS												
	135.00	90.00	270.00	180.00	225.00	90.00	270.00	225.00	180.00	90.00	135.00	60.00
LANZAMIENTO PEDIDOS PLANIFICADOS												
	180.00	225.00	270.00	270.00	225.00	180.00	270.00	135.00	90.00	0.00	0.00	0.00

1.1.4.2 COLORANTE												
NECESIDADES BRUTAS												
	19.35	17.33	40.47	32.60	34.91	12.11	38.10	37.72	27.13	12.69	15.74	12.66
DISPONIBILIDAD												
	31.71	14.38	16.91	31.32	41.40	26.28	36.19	43.47	16.34	6.28	33.62	20.89
RECEPCIONES PROGRAMADAS												
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCIONES NETAS												
	13.28	0.00	24.08	13.88	3.00	0.00	8.91	1.53	0.00	0.00	11.48	0.00
RECEPCION PEDIDOS PLANIFICADOS												
	45.00	0.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00
LANZAMIENTO PEDIDOS PLANIFICADOS												
	0.00	45.00	45.00	45.00	0.00	45.00	45.00	0.00	0.00	45.00	0.00	0.00

**APENDICE 22
PLAN DE REQUERIMIENTOS DE MATERIALES (MRP)**

NEGR0 2	ACTUAL	Feb-03	Mar-03	Abr-03	May-03	Jun-03	Jul-03	Ago-03	Sep-03	Oct-03	Nov-03	Dic-03
lo:	83,400	320,842	641,527	747,771	380,703	157,146	690,350	876,344	623,887	426,785	452,767	193,743
Pl:	0	0	0	0	0	0	0	0	0	0	0	0
H:	0	0	0	0	0	0	0	0	0	0	0	0
MPS:	257,442	641,527	747,771	380,703	157,146	690,350	876,344	623,887	426,785	452,767	193,743	

NEGR0 2	257,442	641,527	747,771	380,703	157,146	690,350	876,344	623,887	426,785	452,767	193,743
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	257,442	641,527	747,771	380,703	157,146	690,350	876,344	623,887	426,785	452,767	193,743
NECESIDADES NETAS	257,442	641,527	747,771	380,703	157,146	690,350	876,344	623,887	426,785	452,767	193,743
RECEPCION PEDIDOS PLANIFICADOS	257,442	641,527	747,771	380,703	157,146	690,350	876,344	623,887	426,785	452,767	193,743
LANZAMIENTO PEDIDOS PLANIFICADOS	257,442	641,527	747,771	380,703	157,146	690,350	876,344	623,887	426,785	452,767	193,743

1.-REPUESTO	257,442	641,527	747,771	380,703	157,146	690,350	876,344	623,887	426,785	452,767	193,743
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	257,442	641,527	747,771	380,703	157,146	690,350	876,344	623,887	426,785	452,767	193,743
NECESIDADES NETAS	257,442	641,527	747,771	380,703	157,146	690,350	876,344	623,887	426,785	452,767	193,743
RECEPCION PEDIDOS PLANIFICADOS	257,442	641,527	747,771	380,703	157,146	690,350	876,344	623,887	426,785	452,767	193,743
LANZAMIENTO PEDIDOS PLANIFICADOS	257,442	641,527	747,771	380,703	157,146	690,350	876,344	623,887	426,785	452,767	193,743

1.2 BARRIL	257,442	641,527	747,771	380,703	157,146	690,350	876,344	623,887	426,785	452,767	193,743
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	257,442	641,527	747,771	380,703	157,146	690,350	876,344	623,887	426,785	452,767	193,743
NECESIDADES NETAS	257,442	641,527	747,771	380,703	157,146	690,350	876,344	623,887	426,785	452,767	193,743
RECEPCION PEDIDOS PLANIFICADOS	257,442	641,527	747,771	380,703	157,146	690,350	876,344	623,887	426,785	452,767	193,743
LANZAMIENTO PEDIDOS PLANIFICADOS	257,442	641,527	747,771	380,703	157,146	690,350	876,344	623,887	426,785	452,767	193,743

1.3 TAPA	257,442	641,527	747,771	380,703	157,146	690,350	876,344	623,887	426,785	452,767	193,743
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	257,442	641,527	747,771	380,703	157,146	690,350	876,344	623,887	426,785	452,767	193,743
NECESIDADES NETAS	257,442	641,527	747,771	380,703	157,146	690,350	876,344	623,887	426,785	452,767	193,743
RECEPCION PEDIDOS PLANIFICADOS	257,442	641,527	747,771	380,703	157,146	690,350	876,344	623,887	426,785	452,767	193,743
LANZAMIENTO PEDIDOS PLANIFICADOS	257,442	641,527	747,771	380,703	157,146	690,350	876,344	623,887	426,785	452,767	193,743

1.4 BOTON	257,442	641,527	747,771	380,703	157,146	690,350	876,344	623,887	426,785	452,767	193,743
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	257,442	641,527	747,771	380,703	157,146	690,350	876,344	623,887	426,785	452,767	193,743
NECESIDADES NETAS	257,442	641,527	747,771	380,703	157,146	690,350	876,344	623,887	426,785	452,767	193,743
RECEPCION PEDIDOS PLANIFICADOS	257,442	641,527	747,771	380,703	157,146	690,350	876,344	623,887	426,785	452,767	193,743
LANZAMIENTO PEDIDOS PLANIFICADOS	257,442	641,527	747,771	380,703	157,146	690,350	876,344	623,887	426,785	452,767	193,743

1.5 CAJA MASTER	215	535	623	317	131	575	730	520	356	377	161
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	215	535	623	317	131	575	730	520	356	377	161
NECESIDADES NETAS	215	535	623	317	131	575	730	520	356	377	161
RECEPCION PEDIDOS PLANIFICADOS	215	535	623	317	131	575	730	520	356	377	161
LANZAMIENTO PEDIDOS PLANIFICADOS	215	535	623	317	131	575	730	520	356	377	161





UNAI
UNIVERSIDAD NACIONAL DE INGENIERIA
ESCUELA SUPERIOR DE INGENIEROS CIVILES
R.M. C. 11

NEGR02		Ene-04	Feb-04	Mar-04	Abr-04	May-04	Jun-04	Jul-04	Ago-04	Sep-04	Oct-04	Nov-04	Dic-04
lo:													
Fl		548,001	383,498	764,802	889,198	451,689	185,659	815,022	1,032,288	733,276	500,529	529,891	226,283
ll		0	0	0	0	0	0	0	0	0	0	0	0
MPS		548,001	383,498	764,802	889,198	451,689	185,659	815,022	1,032,288	733,276	500,529	529,891	226,283

NEGR01													
RECEBIDAS BRUTAS	548,001	383,498	764,802	889,198	451,689	185,659	815,022	1,032,288	733,276	500,529	529,891	226,283	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES NETAS	548,001	383,498	764,802	889,198	451,689	185,659	815,022	1,032,288	733,276	500,529	529,891	226,283	0
RECEPCION PEDIDOS PLANIFICADOS	548,001	383,498	764,802	889,198	451,689	185,659	815,022	1,032,288	733,276	500,529	529,891	226,283	0
LANZAMIENTO PEDIDOS PLANIFICADOS	548,001	383,498	764,802	889,198	451,689	185,659	815,022	1,032,288	733,276	500,529	529,891	226,283	0

1.1 REPUESTO													
RECEBIDAS BRUTAS	546,001	383,498	764,802	889,198	451,689	185,659	815,022	1,032,288	733,276	500,529	529,891	226,283	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES NETAS	546,001	383,498	764,802	889,198	451,689	185,659	815,022	1,032,288	733,276	500,529	529,891	226,283	0
RECEPCION PEDIDOS PLANIFICADOS	546,001	383,498	764,802	889,198	451,689	185,659	815,022	1,032,288	733,276	500,529	529,891	226,283	0
LANZAMIENTO PEDIDOS PLANIFICADOS	546,001	383,498	764,802	889,198	451,689	185,659	815,022	1,032,288	733,276	500,529	529,891	226,283	0

1.2 BARRIL													
RECEBIDAS BRUTAS	546,001	383,498	764,802	889,198	451,689	185,659	815,022	1,032,288	733,276	500,529	529,891	226,283	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES NETAS	546,001	383,498	764,802	889,198	451,689	185,659	815,022	1,032,288	733,276	500,529	529,891	226,283	0
RECEPCION PEDIDOS PLANIFICADOS	546,001	383,498	764,802	889,198	451,689	185,659	815,022	1,032,288	733,276	500,529	529,891	226,283	0
LANZAMIENTO PEDIDOS PLANIFICADOS	546,001	383,498	764,802	889,198	451,689	185,659	815,022	1,032,288	733,276	500,529	529,891	226,283	0

1.3 TAYA													
RECEBIDAS BRUTAS	546,001	383,498	764,802	889,198	451,689	185,659	815,022	1,032,288	733,276	500,529	529,891	226,283	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES NETAS	546,001	383,498	764,802	889,198	451,689	185,659	815,022	1,032,288	733,276	500,529	529,891	226,283	0
RECEPCION PEDIDOS PLANIFICADOS	546,001	383,498	764,802	889,198	451,689	185,659	815,022	1,032,288	733,276	500,529	529,891	226,283	0
LANZAMIENTO PEDIDOS PLANIFICADOS	546,001	383,498	764,802	889,198	451,689	185,659	815,022	1,032,288	733,276	500,529	529,891	226,283	0

1.4 BOTON													
RECEBIDAS BRUTAS	546,001	383,498	764,802	889,198	451,689	185,659	815,022	1,032,288	733,276	500,529	529,891	226,283	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES NETAS	546,001	383,498	764,802	889,198	451,689	185,659	815,022	1,032,288	733,276	500,529	529,891	226,283	0
RECEPCION PEDIDOS PLANIFICADOS	546,001	383,498	764,802	889,198	451,689	185,659	815,022	1,032,288	733,276	500,529	529,891	226,283	0
LANZAMIENTO PEDIDOS PLANIFICADOS	546,001	383,498	764,802	889,198	451,689	185,659	815,022	1,032,288	733,276	500,529	529,891	226,283	0

1.5 CUB MASTER													
RECEBIDAS BRUTAS	465	320	637	741	378	155	679	890	611	417	442	442	442
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES NETAS	465	320	637	741	378	155	679	890	611	417	442	442	
RECEPCION PEDIDOS PLANIFICADOS	465	320	637	741	378	155	679	890	611	417	442	442	
LANZAMIENTO PEDIDOS PLANIFICADOS	465	320	637	741	378	155	679	890	611	417	442	442	



BIBLIOTECA NACIONAL DEL LITORAL
CALLE 100, LULA, GUAYAS

1.3 CALILLA											
NECESIDADES BRUTAS											
DISPONIBILIDAD											
NIVEL 1											
22,750	15,979	31,897	37,050	18,816	7,748	33,999	43,011	30,583	20,885	22,078	9,428
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
22,750	15,979	31,897	37,050	18,816	7,748	33,999	43,011	30,583	20,885	22,078	9,428
22,750	15,979	31,897	37,050	18,816	7,748	33,999	43,011	30,583	20,885	22,078	9,428
22,750	15,979	31,897	37,050	18,816	7,748	33,999	43,011	30,583	20,885	22,078	9,428

1.1.1 BUENO											
NECESIDADES BRUTAS											
DISPONIBILIDAD											
NIVEL 2											
548,001	303,469	764,802	889,198	451,889	185,859	815,022	1,032,286	733,276	500,529	529,891	226,283
2,534	19,025	4,233	15,024	13,436	2,777	12,456	5,168	21,020	21,391	16,500	15,317
0	0	0	0	0	0	0	0	0	0	0	0
528,000	284,476	760,569	874,174	438,453	183,082	802,566	1,027,118	712,556	478,638	513,391	210,863
528,000	284,476	760,569	874,174	438,453	183,082	802,566	1,027,118	712,556	478,638	513,391	210,863

1.1.3 YINTA											
NECESIDADES BRUTAS											
DISPONIBILIDAD											
NIVEL 2											
174,72	122,72	244,74	284,54	144,51	59,51	280,81	330,32	234,66	180,17	189,59	72,41
91,77	59,05	14,31	29,77	85,28	26,75	64,58	34,82	86,87	39,81	70,24	87,83
118,23	40,85	185,09	270,23	114,74	0,00	0,00	0,00	0,00	0,00	0,00	0,00
200,00	100,00	300,00	360,00	200,00	0,00	300,00	300,00	200,00	100,00	200,00	100,00
200,00	300,00	200,00	0,00	300,00	300,00	0,00	100,00	200,00	100,00	0,00	0,00

1.1.3 YUJO											
NECESIDADES BRUTAS											
DISPONIBILIDAD											
NIVEL 2											
548,001	383,469	764,802	889,198	451,889	185,859	815,022	1,032,286	733,276	500,529	529,891	226,283
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
548,001	383,469	764,802	889,198	451,889	185,859	815,022	1,032,286	733,276	500,529	529,891	226,283
548,001	383,469	764,802	889,198	451,889	185,859	815,022	1,032,286	733,276	500,529	529,891	226,283

1.1.4 SOPORTE											
NECESIDADES BRUTAS											
DISPONIBILIDAD											
NIVEL 2											
548,001	383,469	764,802	889,198	451,889	185,859	815,022	1,032,286	733,276	500,529	529,891	226,283
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
548,001	383,469	764,802	889,198	451,889	185,859	815,022	1,032,286	733,276	500,529	529,891	226,283
548,001	383,469	764,802	889,198	451,889	185,859	815,022	1,032,286	733,276	500,529	529,891	226,283

1.3.1 POLIESTRERO											
NECESIDADES BRUTAS											
DISPONIBILIDAD											
NIVEL 2											
1,011,01	1,342,26	2,679,81	3,112,19	1,540,56	650,86	2,892,59	3,812,00	2,666,47	1,751,85	1,854,52	781,98
34,33	42,09	20,28	13,09	7,52	31,67	14,09	1,19	44,72	2,87	38,25	11,26
0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
1,000,67	1,307,81	2,659,53	3,099,10	1,533,06	619,19	2,878,59	3,810,81	2,621,77	1,749,15	1,816,27	770,72
1,035,00	1,350,00	2,685,00	3,105,00	1,576,00	675,00	2,935,00	3,800,00	2,610,00	1,710,00	1,880,00	785,00
1,350,00	2,655,00	3,105,00	1,575,00	675,00	2,935,00	3,800,00	2,810,00	1,710,00	1,880,00	785,00	0,00

1.3.1 REINA Y											
NECESIDADES BRUTAS											
DISPONIBILIDAD											
NIVEL 2											
720,72	606,22	1,099,54	1,173,74	598,10	249,47	1,075,83	1,382,58	987,62	690,70	689,48	289,89
7,59	41,07	21,53	17,79	6,70	31,23	36,43	32,82	44,89	14,20	34,74	6,09
0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
712,71	498,53	998,47	1,155,95	591,40	218,24	1,039,40	1,350,00	942,73	676,50	654,74	283,80
720,00	540,00	980,00	1,170,00	585,00	270,00	1,080,00	1,360,00	980,00	690,00	720,00	270,00
720,00	540,00	980,00	1,170,00	585,00	270,00	1,080,00	1,360,00	980,00	690,00	720,00	270,00

1.1.1 POLIETILENO BAJA DENSIDAD												
	82.24	43.72	67.19	101.37	61.48	21.20	62.91	117.98	83.89	67.06	80.41	25.80
NECESIDADES BRUTAS			40.72	29.35	22.87	1.67	43.78	10.00	22.48	10.43	42.92	14.23
DISPONIBILIDAD	39.63	37.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECIBIONES PROGRAMADAS	0.00	0.00	49.28	60.65	22.13	0.00	81.24	73.82	67.81	34.87	49.98	0.00
NECESIDADES NETAS	53.37	7.06	90.00	90.00	48.00	0.00	136.00	80.00	87.91	46.00	90.00	0.00
RECIBICION PEDIDOS PLANIFICADOS	60.00	45.00	90.00	48.00	0.00	0.00	90.00	90.00	80.00	60.00	90.00	0.00
LANZAMIENTO PEDIDOS PLANIFICADOS	45.00	80.00	90.00	48.00	0.00	0.00	90.00	90.00	45.00	60.00	90.00	0.00

1.1.2 COLORANTE												
	0.99	0.99	1.38	1.80	0.81	0.33	1.47	1.86	1.32	0.80	0.96	0.41
NECESIDADES BRUTAS			32.14	30.64	20.73	26.39	27.63	26.07	24.78	23.85	22.90	22.48
DISPONIBILIDAD	34.21	33.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECIBIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NECESIDADES NETAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECIBICION PEDIDOS PLANIFICADOS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LANZAMIENTO PEDIDOS PLANIFICADOS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

1.1.3.1 POLIETILENO												
	327.60	230.10	469.68	553.92	270.95	111.59	480.01	619.35	436.97	300.32	317.83	136.77
NECESIDADES BRUTAS			24.13	30.61	29.66	0.00	14.07	24.72	34.76	4.43	1.50	0.73
DISPONIBILIDAD	316.11	31.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECIBIONES PROGRAMADAS	0.00	0.00	428.67	509.38	240.34	81.61	480.63	605.28	415.28	265.87	313.50	134.27
NECESIDADES NETAS	321.86	191.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECIBICION PEDIDOS PLANIFICADOS	360.00	228.00	460.00	540.00	270.00	80.00	486.00	630.00	450.00	270.00	315.00	136.00
LANZAMIENTO PEDIDOS PLANIFICADOS	225.00	450.00	540.00	270.00	90.00	486.00	630.00	450.00	270.00	315.00	315.00	136.00

1.1.3.2 COLORANTE												
	6.28	6.62	13.00	16.12	7.69	3.16	13.86	17.95	12.47	8.61	9.01	3.86
NECESIDADES BRUTAS			18.68	4.64	41.87	0.00	24.85	7.30	39.63	31.33	22.32	16.47
DISPONIBILIDAD	36.18	32.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECIBIONES PROGRAMADAS	0.00	0.00	0.00	0.00	3.13	0.00	0.00	0.00	5.17	0.00	0.00	0.00
NECESIDADES NETAS	5.82	0.00	0.00	0.00	46.00	0.00	0.00	0.00	46.00	0.00	0.00	0.00
RECIBICION PEDIDOS PLANIFICADOS	45.00	0.00	0.00	46.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LANZAMIENTO PEDIDOS PLANIFICADOS	0.00	0.00	0.00	46.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

1.1.4.1 POLIACETAL NATURAL												
	92.92	65.19	130.02	161.19	79.77	31.61	139.66	176.48	124.96	85.08	80.08	36.47
NECESIDADES BRUTAS			0.73	28.86	42.79	1.18	7.63	12.14	22.48	27.40	27.32	33.86
DISPONIBILIDAD	15.94	40.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECIBIONES PROGRAMADAS	0.00	0.00	98.27	180.44	47.21	0.00	127.37	167.86	112.51	82.60	82.98	11.16
NECESIDADES NETAS	74.08	48.28	90.00	160.00	90.00	0.00	136.00	160.00	136.00	80.00	80.00	45.00
RECIBICION PEDIDOS PLANIFICADOS	90.00	90.00	160.00	90.00	0.00	136.00	160.00	136.00	80.00	80.00	80.00	45.00
LANZAMIENTO PEDIDOS PLANIFICADOS	90.00	90.00	160.00	90.00	0.00	136.00	160.00	136.00	80.00	80.00	80.00	45.00

1.1.4.2 COLORANTE												
	14.74	10.35	20.65	24.01	12.19	6.02	22.01	27.87	19.80	13.51	14.31	6.11
NECESIDADES BRUTAS			32.15	8.14	40.94	35.82	13.92	9.06	11.26	42.73	29.43	22.32
DISPONIBILIDAD	18.15	7.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECIBIONES PROGRAMADAS	0.00	0.00	0.00	0.00	4.08	0.00	0.00	13.95	0.00	2.27	0.00	0.00
NECESIDADES NETAS	0.00	0.00	0.00	0.00	48.00	0.00	0.00	48.00	0.00	46.00	0.00	0.00
RECIBICION PEDIDOS PLANIFICADOS	0.00	0.00	0.00	46.00	0.00	0.00	46.00	0.00	0.00	0.00	0.00	0.00
LANZAMIENTO PEDIDOS PLANIFICADOS	0.00	45.00	0.00	46.00	0.00	0.00	46.00	0.00	45.00	0.00	0.00	0.00



POLITECNICA DEL LITORAL
 BARRIOTECA GONZALO ZEVALLOS
 E.T.M.C.R.

APENDICE 22
 PLAN DE REQUERIMIENTOS DE MATERIALES (MRP)

ROJ2	ACTUAL	Feb-03	Mar-03	Abr-03	May-03	Jun-03	Jul-03	Ago-03	Sep-03	Oct-03	Nov-03	Dic-03
16:	38,228											
PL	308,116	724,878	726,612	442,097	458,988	710,432	710,432	878,805	608,633	194,437	458,541	222,321
U	0	0	0	0	0	0	0	0	0	0	0	0
MP3	308,887	724,878	726,612	442,097	458,988	710,432	710,432	878,805	608,633	194,437	458,541	222,321

ROJ2	268,887	724,878	726,612	442,097	458,988	710,432	710,432	878,805	608,633	194,437	458,541	222,321
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	268,887	724,878	726,612	442,097	458,988	710,432	710,432	878,805	608,633	194,437	458,541	222,321
NECESIDADES NETAS	268,887	724,878	726,612	442,097	458,988	710,432	710,432	878,805	608,633	194,437	458,541	222,321
RECEPCION PEDIDOS PLANIFICADOS	268,887	724,878	726,612	442,097	458,988	710,432	710,432	878,805	608,633	194,437	458,541	222,321
LANZAMIENTO PEDIDOS PLANIFICADOS	268,887	724,878	726,612	442,097	458,988	710,432	710,432	878,805	608,633	194,437	458,541	222,321

1.1 REPUESTO	268,887	724,878	726,612	442,097	458,988	710,432	710,432	878,805	608,633	194,437	458,541	222,321
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	268,887	724,878	726,612	442,097	458,988	710,432	710,432	878,805	608,633	194,437	458,541	222,321
NECESIDADES NETAS	268,887	724,878	726,612	442,097	458,988	710,432	710,432	878,805	608,633	194,437	458,541	222,321
RECEPCION PEDIDOS PLANIFICADOS	268,887	724,878	726,612	442,097	458,988	710,432	710,432	878,805	608,633	194,437	458,541	222,321
LANZAMIENTO PEDIDOS PLANIFICADOS	268,887	724,878	726,612	442,097	458,988	710,432	710,432	878,805	608,633	194,437	458,541	222,321

1.2 BARRIL	268,887	724,878	726,612	442,097	458,988	710,432	710,432	878,805	608,633	194,437	458,541	222,321
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	268,887	724,878	726,612	442,097	458,988	710,432	710,432	878,805	608,633	194,437	458,541	222,321
NECESIDADES NETAS	268,887	724,878	726,612	442,097	458,988	710,432	710,432	878,805	608,633	194,437	458,541	222,321
RECEPCION PEDIDOS PLANIFICADOS	268,887	724,878	726,612	442,097	458,988	710,432	710,432	878,805	608,633	194,437	458,541	222,321
LANZAMIENTO PEDIDOS PLANIFICADOS	268,887	724,878	726,612	442,097	458,988	710,432	710,432	878,805	608,633	194,437	458,541	222,321

1.3 TAPA	268,887	724,878	726,612	442,097	458,988	710,432	710,432	878,805	608,633	194,437	458,541	222,321
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	268,887	724,878	726,612	442,097	458,988	710,432	710,432	878,805	608,633	194,437	458,541	222,321
NECESIDADES NETAS	268,887	724,878	726,612	442,097	458,988	710,432	710,432	878,805	608,633	194,437	458,541	222,321
RECEPCION PEDIDOS PLANIFICADOS	268,887	724,878	726,612	442,097	458,988	710,432	710,432	878,805	608,633	194,437	458,541	222,321
LANZAMIENTO PEDIDOS PLANIFICADOS	268,887	724,878	726,612	442,097	458,988	710,432	710,432	878,805	608,633	194,437	458,541	222,321

1.4 BOTON	268,887	724,878	726,612	442,097	458,988	710,432	710,432	878,805	608,633	194,437	458,541	222,321
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	268,887	724,878	726,612	442,097	458,988	710,432	710,432	878,805	608,633	194,437	458,541	222,321
NECESIDADES NETAS	268,887	724,878	726,612	442,097	458,988	710,432	710,432	878,805	608,633	194,437	458,541	222,321
RECEPCION PEDIDOS PLANIFICADOS	268,887	724,878	726,612	442,097	458,988	710,432	710,432	878,805	608,633	194,437	458,541	222,321
LANZAMIENTO PEDIDOS PLANIFICADOS	268,887	724,878	726,612	442,097	458,988	710,432	710,432	878,805	608,633	194,437	458,541	222,321

1.5 CAJA MASTER	228	604	606	388	388	388	562	732	508	162	382	188
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	228	604	606	388	388	388	562	732	508	162	382	188
NECESIDADES NETAS	228	604	606	388	388	388	562	732	508	162	382	188
RECEPCION PEDIDOS PLANIFICADOS	228	604	606	388	388	388	562	732	508	162	382	188
LANZAMIENTO PEDIDOS PLANIFICADOS	228	604	606	388	388	388	562	732	508	162	382	188



POLITECNICA DEL LITORAL
BIBLIOTECA "GONZALO ZEVALLOS"
R.L.M.C.P.

1.1 CAJILLA											
NECESIDADES BRUTAS											
DISPONIBILIDAD	11,245	30,207	30,275	18,421	18,669	29,601	36,617	25,235	8,102	19,105	8,283
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	11,245	30,207	30,275	18,421	18,669	29,601	36,617	25,235	8,102	19,105	8,283
RECEPCION PEDIDOS PLANIFICADOS	11,245	30,207	30,275	18,421	18,669	29,601	36,617	25,235	8,102	19,105	8,283
LANZAMIENTO PEDIDOS PLANIFICADOS	11,245	30,207	30,275	18,421	18,669	29,601	36,617	25,235	8,102	19,105	8,283

1.1.1 PUNTO											
NECESIDADES BRUTAS											
DISPONIBILIDAD	266,867	724,978	726,612	442,097	455,985	710,432	878,805	605,633	194,437	458,541	222,321
RECEPCIONES PROGRAMADAS	0	5,135	3,953	11,426	5,441	20,098	16,204	10,571	18,134	7,593	10,272
NECESIDADES NETAS	266,867	719,843	722,559	430,671	450,544	690,334	862,599	595,062	176,303	450,948	211,728
RECEPCION PEDIDOS PLANIFICADOS	275,000	728,000	726,000	450,000	460,000	726,000	878,000	600,000	200,000	450,000	225,000
LANZAMIENTO PEDIDOS PLANIFICADOS	725,000	450,000	450,000	725,000	875,000	680,000	300,000	450,000	235,000	550,000	375,000

1.1.2 TIRYA											
NECESIDADES BRUTAS											
DISPONIBILIDAD	86,36	231,86	232,82	141,47	145,92	227,34	281,22	103,80	82,22	148,73	71,14
RECEPCIONES PROGRAMADAS	13,64	81,64	49,13	7,66	91,74	34,40	53,19	59,38	97,16	60,43	76,28
NECESIDADES NETAS	72,72	150,22	183,69	133,81	54,18	192,94	228,03	44,42	15,06	88,30	0,00
RECEPCION PEDIDOS PLANIFICADOS	86,36	218,36	190,87	138,26	139,26	165,60	246,81	140,62	2,84	49,87	20,71
LANZAMIENTO PEDIDOS PLANIFICADOS	100,00	300,00	200,00	100,00	200,00	200,00	300,00	200,00	100,00	100,00	100,00
	200,00	100,00	200,00	200,00	300,00	200,00	100,00	100,00	100,00	100,00	200,00

1.1.3 TURO											
NECESIDADES BRUTAS											
DISPONIBILIDAD	266,867	724,978	726,612	442,097	455,985	710,432	878,805	605,633	194,437	458,541	222,321
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	266,867	724,978	726,612	442,097	455,985	710,432	878,805	605,633	194,437	458,541	222,321
RECEPCION PEDIDOS PLANIFICADOS	266,867	724,978	726,612	442,097	455,985	710,432	878,805	605,633	194,437	458,541	222,321
LANZAMIENTO PEDIDOS PLANIFICADOS	266,867	724,978	726,612	442,097	455,985	710,432	878,805	605,633	194,437	458,541	222,321

1.1.4 ESPORTE											
NECESIDADES BRUTAS											
DISPONIBILIDAD	266,867	724,978	726,612	442,097	455,985	710,432	878,805	605,633	194,437	458,541	222,321
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	266,867	724,978	726,612	442,097	455,985	710,432	878,805	605,633	194,437	458,541	222,321
RECEPCION PEDIDOS PLANIFICADOS	266,867	724,978	726,612	442,097	455,985	710,432	878,805	605,633	194,437	458,541	222,321
LANZAMIENTO PEDIDOS PLANIFICADOS	266,867	724,978	726,612	442,097	455,985	710,432	878,805	605,633	194,437	458,541	222,321

1.2 POLIESTRENO											
NECESIDADES BRUTAS											
DISPONIBILIDAD	844,60	2,637,42	2,543,14	1,547,34	1,595,85	2,486,51	3,075,82	2,119,72	880,53	1,804,86	778,12
RECEPCIONES PROGRAMADAS	0,00	27,87	4,83	32,49	11,54	0,03	26,21	24,50	19,87	34,08	20,95
NECESIDADES NETAS	844,60	2,609,55	2,538,31	1,514,85	1,584,31	2,486,48	3,049,61	2,095,22	860,66	1,770,78	757,17
RECEPCION PEDIDOS PLANIFICADOS	844,60	2,637,42	2,543,14	1,547,34	1,595,85	2,486,51	3,075,82	2,119,72	880,53	1,804,86	778,12
LANZAMIENTO PEDIDOS PLANIFICADOS	2,868,00	2,650,00	1,575,00	1,575,00	2,475,00	3,105,00	2,115,00	875,00	1,820,00	765,00	1,038,00

1.3.1 RESINA K											
NECESIDADES BRUTAS											
DISPONIBILIDAD	356,25	658,97	959,13	593,57	601,90	937,77	1,160,02	799,44	256,66	605,27	293,46
RECEPCIONES PROGRAMADAS	3,75	38,78	22,68	24,08	7,18	14,41	24,39	34,95	3,30	28,02	4,50
NECESIDADES NETAS	352,50	620,19	936,45	569,49	594,72	923,36	1,135,63	764,49	253,36	577,25	288,96
RECEPCION PEDIDOS PLANIFICADOS	356,25	658,97	959,13	593,57	601,90	937,77	1,160,02	799,44	256,66	605,27	293,46
LANZAMIENTO PEDIDOS PLANIFICADOS	960,00	960,00	960,00	960,00	960,00	960,00	1,170,00	810,00	325,00	630,00	270,00

1.1.1 POLIETILENO BAJA DENSIDAD												
0.0001140 KG												
NECESIDADES BRUTAS												
	30.77	82.65	80.40	61.88	90.89	100.19	68.04	22.17	52.27	25.34		
DISPONIBILIDAD	14.23	21.99	23.35	16.37	25.38	15.20	36.16	13.89	6.72	26.37		
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
NECESIDADES NETAS	30.77	68.41	21.65	28.63	64.62	74.80	53.84	0.00	38.28	16.83		
RECEPCION PEDIDOS PLANIFICADOS	45.00	90.00	45.00	90.00	90.00	90.00	90.00	0.00	45.00	45.00		
LANZAMIENTO PEDIDOS PLANIFICADOS	90.00	90.00	45.00	90.00	90.00	90.00	0.00	45.00	45.00	45.00		

1.1.2 COLORANTE												
0.0000018 KG												
NECESIDADES BRUTAS												
	0.48	1.30	1.31	0.82	1.29	1.89	1.09	0.35	0.83	0.40		
DISPONIBILIDAD	44.91	43.21	41.60	40.28	39.01	37.42	36.33	35.98	35.16	34.76		
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
NECESIDADES NETAS	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
RECEPCION PEDIDOS PLANIFICADOS	45.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
LANZAMIENTO PEDIDOS PLANIFICADOS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

1.1.3.1 POLIETILENO												
0.0000600 KG												
NECESIDADES BRUTAS												
	181.93	434.08	285.26	273.59	428.26	527.29	303.38	116.68	275.12	103.36		
DISPONIBILIDAD	18.07	33.08	2.11	3.28	21.01	39.72	39.34	9.88	4.56	6.16		
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
NECESIDADES NETAS	161.89	416.82	283.14	269.74	422.89	500.29	323.66	80.32	266.44	128.84		
RECEPCION PEDIDOS PLANIFICADOS	180.00	450.00	270.00	270.00	450.00	540.00	360.00	90.00	270.00	105.00		
LANZAMIENTO PEDIDOS PLANIFICADOS	450.00	450.00	270.00	450.00	540.00	360.00	90.00	270.00	135.00	360.00		

1.1.3.2 COLORANTE												
0.0000170 KG												
NECESIDADES BRUTAS												
	4.99	12.32	7.52	7.76	12.08	14.64	10.30	3.31	7.80	3.78		
DISPONIBILIDAD	40.41	28.09	6.22	0.47	33.39	18.45	8.16	4.85	42.05	38.27		
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
NECESIDADES NETAS	4.99	0.00	0.00	0.00	11.61	0.00	0.00	0.00	2.89	0.00		
RECEPCION PEDIDOS PLANIFICADOS	45.00	0.00	0.00	0.00	45.00	0.00	0.00	0.00	45.00	0.00		
LANZAMIENTO PEDIDOS PLANIFICADOS	0.00	0.00	0.00	45.00	0.00	0.00	0.00	45.00	0.00	0.00		

1.1.4.1 POLIACRYL NATURAL												
0.0001700 KG												
NECESIDADES BRUTAS												
	45.88	123.25	76.16	77.52	120.77	149.40	102.96	33.06	77.89	37.76		
DISPONIBILIDAD	44.12	19.87	37.19	4.87	18.90	4.50	36.86	33.06	0.10	7.31		
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
NECESIDADES NETAS	45.88	79.13	82.81	40.33	116.10	130.80	98.48	0.00	44.80	37.89		
RECEPCION PEDIDOS PLANIFICADOS	90.00	90.00	90.00	45.00	135.00	135.00	135.00	0.00	45.00	45.00		
LANZAMIENTO PEDIDOS PLANIFICADOS	90.00	45.00	135.00	135.00	0.00	45.00	45.00	90.00	90.00	90.00		

1.1.4.2 COLORANTE												
0.0000270 KG												
NECESIDADES BRUTAS												
	7.29	19.87	11.04	12.31	19.18	23.73	10.35	5.25	12.38	6.00		
DISPONIBILIDAD	37.71	18.14	43.82	18.27	0.09	21.39	5.01	44.76	32.38	26.38		
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
NECESIDADES NETAS	7.29	0.00	1.48	0.00	0.00	23.84	0.00	0.24	0.00	0.00		
RECEPCION PEDIDOS PLANIFICADOS	45.00	0.00	45.00	0.00	0.00	45.00	0.00	45.00	0.00	0.00		
LANZAMIENTO PEDIDOS PLANIFICADOS	0.00	45.00	0.00	0.00	45.00	0.00	45.00	0.00	0.00	0.00		

1.1.1 POLIURETANO BAJA DENSIDAD												
0.0001140 KG												
NIVEL 2												
NECESIDADES BRUTAS	30.77	82.65	82.83	80.40	81.98	80.69	100.18	69.04	22.17	52.27	25.34	
DISPONIBILIDAD	14.23	21.99	28.75	23.35	16.37	28.38	15.20	36.16	13.60	6.72	28.37	
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
RECEPCIONES NETAS	30.77	88.41	81.25	21.65	28.83	64.62	74.80	53.84	6.00	38.28	18.63	
RECEPCION PEDIDOS PLANIFICADOS	45.00	93.00	90.00	45.00	45.00	90.00	90.00	90.00	0.00	45.00	45.00	
LANZAMIENTO PEDIDOS PLANIFICADOS	90.00	93.00	45.00	45.00	90.00	90.00	90.00	0.00	45.00	45.00	45.00	
1.1.2 COLORANTE												
0.0000018 KG												
NIVEL 2												
NECESIDADES BRUTAS	0.49	1.30	1.31	0.80	0.92	1.26	1.59	1.00	0.38	0.83	0.40	
DISPONIBILIDAD	44.81	43.21	41.90	41.11	40.28	38.01	37.42	38.33	35.86	35.16	34.78	
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
RECEPCIONES NETAS	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
RECEPCION PEDIDOS PLANIFICADOS	45.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
LANZAMIENTO PEDIDOS PLANIFICADOS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1.1.3.1 POLIURETANO												
0.0000000 KG												
NIVEL 3												
NECESIDADES BRUTAS	161.93	634.88	435.97	286.26	273.59	426.25	527.28	363.38	116.69	275.12	153.39	
DISPONIBILIDAD	18.07	33.08	2.11	6.86	3.26	27.01	38.72	36.34	9.68	4.56	6.10	
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
RECEPCIONES NETAS	161.93	418.82	462.89	283.14	268.74	422.89	500.28	323.66	80.32	286.44	128.84	
RECEPCION PEDIDOS PLANIFICADOS	180.00	463.00	483.00	270.00	270.00	460.00	540.00	360.00	90.00	270.00	135.00	
LANZAMIENTO PEDIDOS PLANIFICADOS	450.00	403.00	370.00	270.00	450.00	540.00	380.00	90.00	270.00	135.00	380.00	
1.1.3.2 COLORANTE												
0.0000170 KG												
NIVEL 3												
NECESIDADES BRUTAS	4.59	12.32	12.35	7.52	7.75	12.08	14.84	10.30	3.31	7.80	3.78	
DISPONIBILIDAD	40.41	28.08	15.73	6.22	0.47	33.39	18.46	8.15	4.85	42.05	38.27	
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
RECEPCIONES NETAS	4.59	0.00	0.00	0.00	0.00	11.61	0.00	0.00	0.00	2.85	0.00	
RECEPCION PEDIDOS PLANIFICADOS	45.00	0.00	0.00	0.00	0.00	45.00	0.00	0.00	0.00	45.00	0.00	
LANZAMIENTO PEDIDOS PLANIFICADOS	0.00	0.00	0.00	0.00	45.00	0.00	0.00	0.00	45.00	0.00	0.00	
1.1.4.1 POLIURETANO NATURAL												
0.0001700 KG												
NIVEL 3												
NECESIDADES BRUTAS	48.88	123.35	123.52	76.16	77.52	120.77	149.40	102.86	33.05	77.95	37.79	
DISPONIBILIDAD	44.12	10.87	22.35	37.19	4.67	18.60	4.50	36.55	33.05	0.10	7.31	
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
RECEPCIONES NETAS	48.88	79.13	112.66	82.81	40.33	116.10	130.80	98.45	0.00	44.80	37.68	
RECEPCION PEDIDOS PLANIFICADOS	90.00	93.00	135.00	80.00	45.00	135.00	135.00	135.00	0.00	45.00	45.00	
LANZAMIENTO PEDIDOS PLANIFICADOS	90.00	45.00	135.00	135.00	135.00	0.00	45.00	45.00	90.00	90.00	90.00	
1.1.4.2 COLORANTE												
0.0000270 KG												
NIVEL 3												
NECESIDADES BRUTAS	7.39	19.67	19.82	11.94	12.31	19.18	23.73	16.35	5.29	12.38	6.00	
DISPONIBILIDAD	37.71	18.14	43.52	31.58	19.27	0.08	21.36	5.01	44.78	32.38	28.38	
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
RECEPCIONES NETAS	7.39	0.00	1.48	0.00	0.00	0.00	23.84	0.00	0.24	0.00	0.00	
RECEPCION PEDIDOS PLANIFICADOS	45.00	0.00	45.00	0.00	0.00	0.00	0.00	0.00	45.00	0.00	0.00	
LANZAMIENTO PEDIDOS PLANIFICADOS	0.00	45.00	0.00	0.00	0.00	45.00	0.00	45.00	0.00	0.00	0.00	

ROJ2	Ene-04	Feb-04	Mar-04	Abr-04	May-04	Jun-04	Jul-04	Ago-04	Sep-04	Oct-04	Nov-04	Dic-04
lo:												
Fl	551,010	365,886	864,268	864,015	524,401	538,637	638,711	1,035,135	711,795	228,028	538,637	268,885
R	0	0	0	0	0	0	0	0	0	0	0	0
MPB	551,010	365,886	864,268	864,015	524,401	538,637	638,711	1,035,135	711,795	228,028	538,637	268,885

ROJ2	551,010	365,886	864,268	864,015	524,401	538,637	638,711	1,035,135	711,795	228,028	538,637	268,885
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	551,010	365,886	864,268	864,015	524,401	538,637	638,711	1,035,135	711,795	228,028	538,637	268,885
RECEPCIONES NETAS	551,010	365,886	864,268	864,015	524,401	538,637	638,711	1,035,135	711,795	228,028	538,637	268,885
RECEPCION PEDIDOS PLANIFICADOS	551,010	365,886	864,268	864,015	524,401	538,637	638,711	1,035,135	711,795	228,028	538,637	268,885
LANZAMIENTO PEDIDOS PLANIFICADOS	551,010	365,886	864,268	864,015	524,401	538,637	638,711	1,035,135	711,795	228,028	538,637	268,885

1.1 REPUESTO	551,010	365,886	864,268	864,015	524,401	538,637	638,711	1,035,135	711,795	228,028	538,637	268,885
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	551,010	365,886	864,268	864,015	524,401	538,637	638,711	1,035,135	711,795	228,028	538,637	268,885
RECEPCIONES NETAS	551,010	365,886	864,268	864,015	524,401	538,637	638,711	1,035,135	711,795	228,028	538,637	268,885
RECEPCION PEDIDOS PLANIFICADOS	551,010	365,886	864,268	864,015	524,401	538,637	638,711	1,035,135	711,795	228,028	538,637	268,885
LANZAMIENTO PEDIDOS PLANIFICADOS	551,010	365,886	864,268	864,015	524,401	538,637	638,711	1,035,135	711,795	228,028	538,637	268,885

1.2 BARRIL	551,010	365,886	864,268	864,015	524,401	538,637	638,711	1,035,135	711,795	228,028	538,637	268,885
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	551,010	365,886	864,268	864,015	524,401	538,637	638,711	1,035,135	711,795	228,028	538,637	268,885
RECEPCIONES NETAS	551,010	365,886	864,268	864,015	524,401	538,637	638,711	1,035,135	711,795	228,028	538,637	268,885
RECEPCION PEDIDOS PLANIFICADOS	551,010	365,886	864,268	864,015	524,401	538,637	638,711	1,035,135	711,795	228,028	538,637	268,885
LANZAMIENTO PEDIDOS PLANIFICADOS	551,010	365,886	864,268	864,015	524,401	538,637	638,711	1,035,135	711,795	228,028	538,637	268,885

1.3 TAPA	551,010	365,886	864,268	864,015	524,401	538,637	638,711	1,035,135	711,795	228,028	538,637	268,885
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	551,010	365,886	864,268	864,015	524,401	538,637	638,711	1,035,135	711,795	228,028	538,637	268,885
RECEPCIONES NETAS	551,010	365,886	864,268	864,015	524,401	538,637	638,711	1,035,135	711,795	228,028	538,637	268,885
RECEPCION PEDIDOS PLANIFICADOS	551,010	365,886	864,268	864,015	524,401	538,637	638,711	1,035,135	711,795	228,028	538,637	268,885
LANZAMIENTO PEDIDOS PLANIFICADOS	551,010	365,886	864,268	864,015	524,401	538,637	638,711	1,035,135	711,795	228,028	538,637	268,885

1.4 BOLON	551,010	365,886	864,268	864,015	524,401	538,637	638,711	1,035,135	711,795	228,028	538,637	268,885
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	551,010	365,886	864,268	864,015	524,401	538,637	638,711	1,035,135	711,795	228,028	538,637	268,885
RECEPCIONES NETAS	551,010	365,886	864,268	864,015	524,401	538,637	638,711	1,035,135	711,795	228,028	538,637	268,885
RECEPCION PEDIDOS PLANIFICADOS	551,010	365,886	864,268	864,015	524,401	538,637	638,711	1,035,135	711,795	228,028	538,637	268,885
LANZAMIENTO PEDIDOS PLANIFICADOS	551,010	365,886	864,268	864,015	524,401	538,637	638,711	1,035,135	711,795	228,028	538,637	268,885

1.5 CAJA MASTER	469	305	720	720	437	460	669	863	593	190	447	218
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	469	305	720	720	437	460	669	863	593	190	447	218
RECEPCIONES NETAS	469	305	720	720	437	460	669	863	593	190	447	218
RECEPCION PEDIDOS PLANIFICADOS	469	305	720	720	437	460	669	863	593	190	447	218
LANZAMIENTO PEDIDOS PLANIFICADOS	469	305	720	720	437	460	669	863	593	190	447	218



1.1 CÁJILLA												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 1	22.869	15.245	36.011	36.001	21.850	23.462	34.848	43.131	29.658	9.501	22.300	10.819
	0	0	0	0	0	0	0	0	0	0	0	0
	22.869	15.245	36.011	36.001	21.850	23.462	34.848	43.131	29.658	9.501	22.300	10.819
	22.869	15.245	36.011	36.001	21.850	23.462	34.848	43.131	29.658	9.501	22.300	10.819
1.1.1 PUERTO												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 2	551.010	365.086	864.268	864.015	524.401	536.579	836.711	1.035.135	711.795	228.029	536.037	256.955
	9.263	18.377	4.109	15.084	15.993	1.114	12.403	2.389	15.474	12.445	698	16.153
	540.737	356.623	846.861	859.909	508.307	525.668	837.697	1.022.731	709.526	212.585	524.192	256.947
	550.000	375.000	860.000	876.000	525.000	525.000	850.000	1.025.000	725.000	225.000	525.000	275.000
	650.000	875.000	925.000	925.000	850.000	1.025.000	725.000	225.000	925.000	275.000	525.000	275.000
1.1.2 TRINJA												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 2	176.32	117.08	276.57	276.48	167.81	172.87	268.38	331.24	227.77	72.07	171.72	85.00
	2.86	85.88	9.31	32.83	95.02	92.35	23.87	82.73	64.95	61.98	20.28	37.17
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	87.04	114.12	190.68	267.17	134.88	107.64	176.03	307.27	135.05	8.02	79.74	62.83
	100.00	200.00	200.00	300.00	200.00	200.00	200.00	400.00	200.00	100.00	100.00	100.00
	200.00	300.00	200.00	200.00	200.00	400.00	200.00	100.00	100.00	100.00	0.00	0.00
1.1.3 TUJO												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 2	851.010	305.086	864.268	864.015	524.401	536.579	836.711	1.035.135	711.795	228.029	536.037	256.955
	0	0	0	0	0	0	0	0	0	0	0	0
	851.010	305.086	864.268	864.015	524.401	536.579	836.711	1.035.135	711.795	228.029	536.037	256.955
	851.010	305.086	864.268	864.015	524.401	536.579	836.711	1.035.135	711.795	228.029	536.037	256.955
1.1.4 SOPORTE												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 2	551.010	305.086	864.268	864.015	524.401	536.579	836.711	1.035.135	711.795	228.029	536.037	256.955
	0	0	0	0	0	0	0	0	0	0	0	0
	551.010	305.086	864.268	864.015	524.401	536.579	836.711	1.035.135	711.795	228.029	536.037	256.955
	551.010	305.086	864.268	864.015	524.401	536.579	836.711	1.035.135	711.795	228.029	536.037	256.955
1.2 POLIBOTIENO												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 2	1.928.63	1.280.60	3.024.64	3.024.05	1.635.40	1.898.52	2.935.49	3.622.97	2.461.28	798.10	1.876.23	908.78
	27.42	8.82	41.88	32.83	42.43	43.90	33.41	10.44	30.10	6.06	17.83	6.03
	1.897.66	1.253.19	3.018.12	2.982.17	1.602.97	1.846.10	2.901.69	3.588.46	2.460.94	798.94	1.872.17	899.97
	1.635.00	1.280.00	3.000.00	3.016.00	1.603.00	1.895.00	2.925.00	3.600.00	2.520.00	765.00	1.860.00	900.00
	1.280.00	3.068.00	3.018.00	1.846.00	1.660.00	2.929.00	3.660.00	2.920.00	765.00	1.860.00	900.00	900.00
1.3.1 TRÉBINA K												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
RECEPCIONES NETAS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
NIVEL 2	727.33	492.97	1.140.93	1.140.50	692.21	712.24	1.107.10	1.366.38	936.97	361.00	706.30	342.76
	42.23	8.26	38.42	22.82	9.71	13.47	31.37	14.86	26.43	34.43	1.07	16.32
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	722.77	440.74	1.131.68	1.102.68	689.29	706.63	1.093.63	1.351.01	904.97	260.97	673.93	341.66
	785.00	480.00	1.170.00	1.125.00	675.00	720.00	1.125.00	1.380.00	945.00	315.00	675.00	300.00
	785.00	480.00	1.170.00	1.125.00	675.00	720.00	1.125.00	1.380.00	945.00	315.00	675.00	300.00

**APENDICE 22
PLAN DE REQUERIMIENTOS DE MATERIALES (MRP)**

AZUL EXP2	ACTUAL	Feb-03	Mar-03	Abr-03	May-03	Jun-03	Jul-03	Agc-03	Sep-03	Oct-03	Nov-03	Dic-03
lo:	107,535	0	14,472	0	247,463	45,566	97,100	20,007	87,119	481,512	84,769	102,031
ft:	0	0	0	0	0	0	0	0	0	0	0	0
h:	107,535	93,063	93,063	0	154,420	45,566	97,100	20,007	87,119	481,512	84,769	102,031
mps:	0	0	0	0	154,420	45,566	97,100	20,007	87,119	481,512	84,769	102,031
AZUL EXP2												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
NECESIDADES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
1.1 TREPUESTO												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
NECESIDADES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
1.2 BARRIL												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
NECESIDADES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
1.3 TAPA												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
NECESIDADES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
1.4 BOTON												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
NECESIDADES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												
1.5 CAJA MASTER												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
NECESIDADES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												



1.8 CAJILLA												
NECESIDADES BRUTAS	0	0	0	0	6,434	1,899	4,046	934	3,630	20,063	2,699	4,251
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	0	0	0	6,434	1,899	4,046	934	3,630	20,063	2,699	4,251
RECEPCION PEDIDOS PLANIFICADOS	0	0	0	0	6,434	1,899	4,046	934	3,630	20,063	2,699	4,251
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	0	0	6,434	1,899	4,046	934	3,630	20,063	2,699	4,251

1.1.1 PUNTO												
NECESIDADES BRUTAS	0	0	0	0	154,420	45,566	97,100	20,007	87,119	481,512	64,769	102,031
DISPONIBILIDAD	0	0	0	0	20,560	24,994	2,894	7,987	20,766	14,256	24,497	22,458
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	0	0	0	154,420	25,005	72,106	17,113	79,232	460,744	50,513	77,544
RECEPCION PEDIDOS PLANIFICADOS	0	0	0	0	175,000	50,000	75,000	25,000	100,000	475,000	75,000	100,000
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	0	0	175,000	50,000	75,000	25,000	100,000	475,000	75,000	100,000

1.1.2 TINTA												
NECESIDADES BRUTAS	0.00	0.00	0.00	0.00	49.41	14.59	31.07	6.40	27.88	154.08	20.73	32.05
DISPONIBILIDAD	0.00	0.00	0.00	0.00	50.59	36.00	4.93	98.62	70.85	16.56	95.84	63.19
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NECESIDADES NETAS	0.00	0.00	0.00	0.00	49.41	0.00	0.00	1.48	0.00	83.44	4.18	0.00
RECEPCION PEDIDOS PLANIFICADOS	0.00	0.00	0.00	0.00	100.00	0.00	0.00	100.00	0.00	100.00	0.00	0.00
LANZAMIENTO PEDIDOS PLANIFICADOS	0.00	0.00	0.00	0.00	100.00	0.00	0.00	100.00	0.00	100.00	0.00	0.00

1.1.3 TUBO												
NECESIDADES BRUTAS	0	0	0	0	154,420	45,566	97,100	20,007	87,119	481,512	64,769	102,031
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	0	0	0	154,420	45,566	97,100	20,007	87,119	481,512	64,769	102,031
RECEPCION PEDIDOS PLANIFICADOS	0	0	0	0	154,420	45,566	97,100	20,007	87,119	481,512	64,769	102,031
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	0	0	154,420	45,566	97,100	20,007	87,119	481,512	64,769	102,031

1.1.4 BOPORTE												
NECESIDADES BRUTAS	0	0	0	0	154,420	45,566	97,100	20,007	87,119	481,512	64,769	102,031
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	0	0	0	154,420	45,566	97,100	20,007	87,119	481,512	64,769	102,031
RECEPCION PEDIDOS PLANIFICADOS	0	0	0	0	154,420	45,566	97,100	20,007	87,119	481,512	64,769	102,031
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	0	0	154,420	45,566	97,100	20,007	87,119	481,512	64,769	102,031

1.2.1 POLIESTIRENO												
NECESIDADES BRUTAS	0.00	0.00	0.00	0.00	540.47	159.85	339.85	70.02	304.92	1,665.29	228.69	387.11
DISPONIBILIDAD	0.00	0.00	0.00	0.00	44.53	19.98	40.13	15.10	25.19	4.90	3.20	6.09
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NECESIDADES NETAS	0.00	0.00	0.00	0.00	540.47	115.02	319.87	29.90	289.81	1,660.10	221.60	383.81
RECEPCION PEDIDOS PLANIFICADOS	0.00	0.00	0.00	0.00	595.00	135.00	360.00	45.00	315.00	1,665.00	225.00	380.00
LANZAMIENTO PEDIDOS PLANIFICADOS	0.00	0.00	0.00	0.00	595.00	135.00	360.00	45.00	315.00	1,665.00	225.00	380.00

1.3.1 RESINA K												
NECESIDADES BRUTAS	0.00	0.00	0.00	0.00	203.83	60.17	126.17	26.41	115.00	635.60	85.50	134.69
DISPONIBILIDAD	0.00	0.00	0.00	0.00	21.17	5.89	12.82	31.41	6.41	0.62	5.32	5.64
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NECESIDADES NETAS	0.00	0.00	0.00	0.00	203.83	39.01	122.18	13.56	83.59	629.18	84.68	129.39
RECEPCION PEDIDOS PLANIFICADOS	0.00	0.00	0.00	0.00	225.00	45.00	135.00	45.00	90.00	630.00	90.00	135.00
LANZAMIENTO PEDIDOS PLANIFICADOS	0.00	0.00	0.00	0.00	225.00	45.00	135.00	45.00	90.00	630.00	90.00	135.00



AZUL EXP2												
	Ene-04	Feb-04	Mir-04	Abr-04	May-04	Jun-04	Jul-04	Age-04	Sep-04	Oct-04	Nov-04	Dic-04
Io:	0	0	17,281	0	294,010	54,024	114,801	23,599	102,532	565,462	75,900	119,318
Fi:	0	0	0	0	0	0	0	0	0	0	0	0
R:	0	0	17,281	0	294,010	54,024	114,801	23,599	102,532	565,462	75,900	119,318
MPS	0	0	17,281	0	294,010	54,024	114,801	23,599	102,532	565,462	75,900	119,318

AZUL EXP2												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
NECESIDADES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												

1.1 REPUESTO												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
NECESIDADES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												

1.2 BAREIL												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
NECESIDADES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												

1.3 TAPA												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
NECESIDADES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												

1.4 BOTON												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
NECESIDADES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												

1.5 CAJA MASTER												
NECESIDADES BRUTAS												
DISPONIBILIDAD												
RECEPCIONES PROGRAMADAS												
NECESIDADES NETAS												
RECEPCION PEDIDOS PLANIFICADOS												
LANZAMIENTO PEDIDOS PLANIFICADOS												



POLITECNICA DEL LITORAL
BIBLIOTECA "GONZALO ZEVALLOS"

1.8 CAJILLA												
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES NETAS	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCION PEDIDOS PLANIFICADOS	0	0	0	0	0	0	0	0	0	0	0	0
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	0	0	0	0	0	0	0	0	0	0
NIVEL 1												
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES NETAS	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCION PEDIDOS PLANIFICADOS	0	0	0	0	0	0	0	0	0	0	0	0
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	0	0	0	0	0	0	0	0	0	0
1.1.1 PUNTO												
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	22,456	22,456	17,281	5,175	5,175	11,164	7,140	17,339	16,740	16,208	746	5,528
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES NETAS	0	0	0	0	0	286,836	42,880	107,861	6,380	83,782	540,254	75,154
RECEPCION PEDIDOS PLANIFICADOS	0	0	0	0	0	300,000	50,000	125,000	25,000	100,000	550,000	100,000
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	300,000	50,000	50,000	135,000	25,000	100,000	550,000	100,000	100,000	100,000
1.1.2 TINTA												
NECESIDADES BRUTAS	0.00	0.00	5.83	0.00	0.00	84.06	17.29	38.74	7.85	32.81	180.95	24.29
DISPONIBILIDAD	63.19	63.19	57.86	57.86	0.00	63.57	46.28	9.55	2.00	69.19	84.24	63.95
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCIONES NETAS	0.00	0.00	0.00	0.00	0.00	36.43	0.00	0.00	0.00	30.81	111.76	0.00
RECEPCION PEDIDOS PLANIFICADOS	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	100.00	200.00	0.00
LANZAMIENTO PEDIDOS PLANIFICADOS	0.00	0.00	0.00	100.00	100.00	0.00	0.00	0.00	100.00	200.00	0.00	0.00
1.1.3 TUBO												
NECESIDADES BRUTAS	0	0	17,281	0	0	294,010	54,024	114,801	23,599	102,532	585,462	75,900
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES NETAS	0	0	17,281	0	0	294,010	54,024	114,801	23,599	102,532	585,462	75,900
RECEPCION PEDIDOS PLANIFICADOS	0	0	17,281	0	0	294,010	54,024	114,801	23,599	102,532	585,462	75,900
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	17,281	0	0	294,010	54,024	114,801	23,599	102,532	585,462	75,900
1.1.4 BOPORTE												
NECESIDADES BRUTAS	0	0	17,281	0	0	294,010	54,024	114,801	23,599	102,532	585,462	75,900
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES NETAS	0	0	17,281	0	0	294,010	54,024	114,801	23,599	102,532	585,462	75,900
RECEPCION PEDIDOS PLANIFICADOS	0	0	17,281	0	0	294,010	54,024	114,801	23,599	102,532	585,462	75,900
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	17,281	0	0	294,010	54,024	114,801	23,599	102,532	585,462	75,900
1.2.1 POLIESTIRENO												
NECESIDADES BRUTAS	0.00	0.00	60.46	0.00	0.00	1,029.04	180.09	401.80	82.60	358.86	1,979.12	265.65
DISPONIBILIDAD	6.09	6.09	35.61	35.61	41.57	32.49	32.49	55.69	43.09	44.23	0.11	4.46
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCIONES NETAS	0.00	0.00	0.00	0.00	0.00	983.43	147.51	389.31	46.81	315.77	1,934.89	265.54
RECEPCION PEDIDOS PLANIFICADOS	0.00	0.00	90.00	90.00	1,035.00	180.00	405.00	90.00	360.00	360.00	1,935.00	270.00
LANZAMIENTO PEDIDOS PLANIFICADOS	0.00	90.00	0.00	1,035.00	180.00	405.00	90.00	360.00	360.00	1,935.00	270.00	450.00
1.2.1 RESINA K												
NECESIDADES BRUTAS	0.00	0.00	22.81	0.00	0.00	388.06	71.31	151.54	31.15	135.34	746.41	100.19
DISPONIBILIDAD	5.64	5.64	27.83	27.83	44.74	44.74	18.42	1.89	15.74	15.39	33.98	23.80
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECEPCIONES NETAS	0.00	0.00	0.00	0.00	0.00	380.26	28.56	133.11	29.26	119.61	731.02	66.20
RECEPCION PEDIDOS PLANIFICADOS	0.00	0.00	17.17	0.00	0.00	405.00	45.00	135.00	45.00	135.00	785.00	90.00
LANZAMIENTO PEDIDOS PLANIFICADOS	0.00	0.00	45.00	0.00	0.00	405.00	45.00	135.00	45.00	135.00	785.00	90.00

1.1.1 POLIETILENO BAJA DENSIDAD													
NIVEL 2	NECESIDADES BRUTAS	0.00	0.00	1.97	0.00	33.52	8.16	13.09	2.69	11.69	64.46	8.85	13.60
	DISPONIBILIDAD	15.01	15.01	13.04	13.04	24.52	18.36	5.26	2.59	35.90	18.44	7.78	39.18
	RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	RECEPCIONES NETAS	0.00	0.00	0.00	0.00	20.48	0.00	0.00	0.00	9.10	28.56	0.00	5.82
	RECEPCION PEDIDOS PLANIFICADOS	0.00	0.00	0.00	0.00	45.00	0.00	0.00	0.00	45.00	45.00	0.00	45.00
	LANZAMIENTO PEDIDOS PLANIFICADOS	0.00	0.00	0.00	45.00	0.00	0.00	0.00	45.00	0.00	0.00	45.00	0.00

1.1.2 COLORANTE													
NIVEL 2	NECESIDADES BRUTAS	0.00	0.00	0.03	0.00	0.53	0.10	0.21	0.04	0.16	1.02	0.14	0.21
	DISPONIBILIDAD	43.11	43.11	43.07	43.07	42.55	42.45	42.24	42.20	42.01	41.00	40.86	40.64
	RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	RECEPCIONES NETAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	RECEPCION PEDIDOS PLANIFICADOS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	LANZAMIENTO PEDIDOS PLANIFICADOS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

1.1.3.1 POLIETILENO													
NIVEL 3	NECESIDADES BRUTAS	0.00	0.00	10.37	0.00	176.41	32.41	66.86	14.16	81.52	339.28	45.54	71.59
	DISPONIBILIDAD	43.47	43.47	33.10	33.10	36.70	4.28	25.40	11.24	39.72	15.45	14.81	33.32
	RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	RECEPCIONES NETAS	0.00	0.00	0.00	0.00	143.30	0.00	64.80	0.00	50.28	298.55	30.08	56.68
	RECEPCION PEDIDOS PLANIFICADOS	0.00	0.00	0.00	0.00	180.00	0.00	90.00	0.00	90.00	315.00	45.00	90.00
	LANZAMIENTO PEDIDOS PLANIFICADOS	0.00	0.00	0.00	180.00	0.00	90.00	0.00	90.00	315.00	45.00	90.00	0.00

1.1.3.2 COLORANTE													
NIVEL 3	NECESIDADES BRUTAS	0.00	0.00	0.28	0.00	5.00	0.92	1.95	0.40	1.74	9.61	1.28	2.03
	DISPONIBILIDAD	27.11	27.11	26.81	26.81	21.61	20.90	18.94	18.54	16.60	7.16	5.90	3.87
	RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	RECEPCIONES NETAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	RECEPCION PEDIDOS PLANIFICADOS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	LANZAMIENTO PEDIDOS PLANIFICADOS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

1.1.4.1 POLIACETAL NATURAL													
NIVEL 3	NECESIDADES BRUTAS	0.00	0.00	2.84	0.00	48.68	9.18	19.52	4.01	17.43	98.13	12.90	20.28
	DISPONIBILIDAD	1.07	1.07	43.13	43.13	38.15	28.96	9.45	5.44	33.01	20.86	13.87	38.69
	RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	RECEPCIONES NETAS	0.00	0.00	1.87	0.00	6.85	0.00	0.00	0.00	11.99	63.12	0.00	6.31
	RECEPCION PEDIDOS PLANIFICADOS	0.00	0.00	45.00	0.00	45.00	0.00	0.00	0.00	45.00	90.00	0.00	45.00
	LANZAMIENTO PEDIDOS PLANIFICADOS	0.00	45.00	0.00	0.00	0.00	45.00	90.00	0.00	45.00	0.00	0.00	0.00

1.1.4.2 COLORANTE													
NIVEL 3	NECESIDADES BRUTAS	0.00	0.00	0.47	0.00	7.64	1.46	3.10	0.64	2.77	15.27	2.05	3.22
	DISPONIBILIDAD	16.58	16.58	16.11	16.11	6.18	6.72	3.62	2.86	0.21	29.95	27.90	24.87
	RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	RECEPCIONES NETAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.05	0.00	0.00
	RECEPCION PEDIDOS PLANIFICADOS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	45.00	0.00	0.00
	LANZAMIENTO PEDIDOS PLANIFICADOS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	45.00	0.00	0.00	0.00

**APENDICE 22
PLAN DE REQUERIMIENTOS DE MATERIALES (MRP)**

NEGRO EXP2	ACTUAL	Feb-03	Mar-03	Abr-03	May-03	Jun-03	Jul-03	Ag-03	Sep-03	Oct-03	Nov-03	Dic-03
ID:	83,638											
FI:	0	173,458	0	173,458	0	108,545	144,547	10,004	133,828	519,242	25,038	190,684
II:	0	0	0	0	0	0	0	0	0	0	0	0
MPS:	0	173,458	0	173,458	0	108,545	144,547	10,004	133,828	519,242	25,038	190,684
NEGRO EXP2												
NECESIDADES BRUTAS	0	173,458	0	173,458	0	108,545	144,547	10,004	133,828	519,242	25,038	190,684
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	173,458	0	173,458	0	108,545	144,547	10,004	133,828	519,242	25,038	190,684
RECEPCION PEDIDOS PLANIFICADOS	0	173,458	0	173,458	0	108,545	144,547	10,004	133,828	519,242	25,038	190,684
LANZAMIENTO PEDIDOS PLANIFICADOS	0	173,458	0	173,458	0	108,545	144,547	10,004	133,828	519,242	25,038	190,684
1.1 TREPUESTO												
NECESIDADES BRUTAS	0	173,458	0	173,458	0	108,545	144,547	10,004	133,828	519,242	25,038	190,684
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	173,458	0	173,458	0	108,545	144,547	10,004	133,828	519,242	25,038	190,684
RECEPCION PEDIDOS PLANIFICADOS	0	173,458	0	173,458	0	108,545	144,547	10,004	133,828	519,242	25,038	190,684
LANZAMIENTO PEDIDOS PLANIFICADOS	0	173,458	0	173,458	0	108,545	144,547	10,004	133,828	519,242	25,038	190,684
1.2 BARRIL												
NECESIDADES BRUTAS	0	173,458	0	173,458	0	108,545	144,547	10,004	133,828	519,242	25,038	190,684
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	173,458	0	173,458	0	108,545	144,547	10,004	133,828	519,242	25,038	190,684
RECEPCION PEDIDOS PLANIFICADOS	0	173,458	0	173,458	0	108,545	144,547	10,004	133,828	519,242	25,038	190,684
LANZAMIENTO PEDIDOS PLANIFICADOS	0	173,458	0	173,458	0	108,545	144,547	10,004	133,828	519,242	25,038	190,684
1.3 TAPA												
NECESIDADES BRUTAS	0	173,458	0	173,458	0	108,545	144,547	10,004	133,828	519,242	25,038	190,684
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	173,458	0	173,458	0	108,545	144,547	10,004	133,828	519,242	25,038	190,684
RECEPCION PEDIDOS PLANIFICADOS	0	173,458	0	173,458	0	108,545	144,547	10,004	133,828	519,242	25,038	190,684
LANZAMIENTO PEDIDOS PLANIFICADOS	0	173,458	0	173,458	0	108,545	144,547	10,004	133,828	519,242	25,038	190,684
1.4 BOTON												
NECESIDADES BRUTAS	0	173,458	0	173,458	0	108,545	144,547	10,004	133,828	519,242	25,038	190,684
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	173,458	0	173,458	0	108,545	144,547	10,004	133,828	519,242	25,038	190,684
RECEPCION PEDIDOS PLANIFICADOS	0	173,458	0	173,458	0	108,545	144,547	10,004	133,828	519,242	25,038	190,684
LANZAMIENTO PEDIDOS PLANIFICADOS	0	173,458	0	173,458	0	108,545	144,547	10,004	133,828	519,242	25,038	190,684
1.5 CAJA MASTER												
NECESIDADES BRUTAS	0	145	0	145	0	89	120	8	112	433	21	169
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	145	0	145	0	89	120	8	112	433	21	169
RECEPCION PEDIDOS PLANIFICADOS	0	145	0	145	0	89	120	8	112	433	21	169
LANZAMIENTO PEDIDOS PLANIFICADOS	0	145	0	145	0	89	120	8	112	433	21	169



NEGR0 EXP2	Ene-04	Feb-04	Mar-04	Abr-04	May-04	Jun-04	Jul-04	Ago-04	Sep-04	Oct-04	Nov-04	Dic-04
Id:	0	0	207,125	0	38,621	126,287	170,697	11,600	187,505	609,772	29,341	222,992
Fl:	0	0	0	0	0	0	0	0	0	0	0	0
R:	0	0	207,125	0	38,621	126,287	170,697	11,600	187,505	609,772	29,341	222,992
MPS:	0	0	0	0	0	0	0	0	0	0	0	0

NEGR0 EXP2	0	0	207,125	0	38,621	126,287	170,697	11,600	187,505	609,772	29,341	222,992
NECESIDADES BRUTAS	0	0	207,125	0	38,621	126,287	170,697	11,600	187,505	609,772	29,341	222,992
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	0	207,125	0	38,621	126,287	170,697	11,600	187,505	609,772	29,341	222,992
RECEPCION PEDIDOS PLANIFICADOS	0	0	207,125	0	38,621	126,287	170,697	11,600	187,505	609,772	29,341	222,992
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	207,125	0	38,621	126,287	170,697	11,600	187,505	609,772	29,341	222,992

1.1 TREPUERTO	0	0	207,125	0	38,621	126,287	170,697	11,600	187,505	609,772	29,341	222,992
NECESIDADES BRUTAS	0	0	207,125	0	38,621	126,287	170,697	11,600	187,505	609,772	29,341	222,992
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	0	207,125	0	38,621	126,287	170,697	11,600	187,505	609,772	29,341	222,992
RECEPCION PEDIDOS PLANIFICADOS	0	0	207,125	0	38,621	126,287	170,697	11,600	187,505	609,772	29,341	222,992
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	207,125	0	38,621	126,287	170,697	11,600	187,505	609,772	29,341	222,992

1.2 BAREIL	0	0	207,125	0	38,621	126,287	170,697	11,600	187,505	609,772	29,341	222,992
NECESIDADES BRUTAS	0	0	207,125	0	38,621	126,287	170,697	11,600	187,505	609,772	29,341	222,992
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	0	207,125	0	38,621	126,287	170,697	11,600	187,505	609,772	29,341	222,992
RECEPCION PEDIDOS PLANIFICADOS	0	0	207,125	0	38,621	126,287	170,697	11,600	187,505	609,772	29,341	222,992
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	207,125	0	38,621	126,287	170,697	11,600	187,505	609,772	29,341	222,992

1.3 TAPA	0	0	207,125	0	38,621	126,287	170,697	11,600	187,505	609,772	29,341	222,992
NECESIDADES BRUTAS	0	0	207,125	0	38,621	126,287	170,697	11,600	187,505	609,772	29,341	222,992
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	0	207,125	0	38,621	126,287	170,697	11,600	187,505	609,772	29,341	222,992
RECEPCION PEDIDOS PLANIFICADOS	0	0	207,125	0	38,621	126,287	170,697	11,600	187,505	609,772	29,341	222,992
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	207,125	0	38,621	126,287	170,697	11,600	187,505	609,772	29,341	222,992

1.4 BÖTON	0	0	207,125	0	38,621	126,287	170,697	11,600	187,505	609,772	29,341	222,992
NECESIDADES BRUTAS	0	0	207,125	0	38,621	126,287	170,697	11,600	187,505	609,772	29,341	222,992
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	0	207,125	0	38,621	126,287	170,697	11,600	187,505	609,772	29,341	222,992
RECEPCION PEDIDOS PLANIFICADOS	0	0	207,125	0	38,621	126,287	170,697	11,600	187,505	609,772	29,341	222,992
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	207,125	0	38,621	126,287	170,697	11,600	187,505	609,772	29,341	222,992

1.5 CAJA MASTER	0	0	173	0	32	105	142	10	131	508	24	166
NECESIDADES BRUTAS	0	0	173	0	32	105	142	10	131	508	24	166
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	0	173	0	32	105	142	10	131	508	24	166
RECEPCION PEDIDOS PLANIFICADOS	0	0	173	0	32	105	142	10	131	508	24	166
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	173	0	32	105	142	10	131	508	24	166



POLITECNICA DE LOJA
 ESCUELA SUPERIOR POLITÉCNICA DE LOJA

1.6 CAJILLA	0	0	6,830	0	1,609	5,261	7,121	482	6,863	25,407	1,223	9,281
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	1,609	5,261	7,121	482	6,863	25,407	1,223	9,281
NECESIDADES NETAS	0	0	6,830	0	1,609	5,261	7,121	482	6,863	25,407	1,223	9,281
RECEPCION PEDIDOS PLANIFICADOS	0	0	6,830	0	1,609	5,261	7,121	482	6,863	25,407	1,223	9,281
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	6,830	0	1,609	5,261	7,121	482	6,863	25,407	1,223	9,281

1.1.1 PUNTO	0	0	207,125	0	38,621	126,267	170,867	11,800	157,505	609,772	29,341	222,992
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	14,145	14,145	7,020	0	16,396	17,131	21,234	9,455	1,839	17,167	12,825	14,834
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	0	182,980	0	31,602	107,869	143,766	0	148,070	607,833	13,175	210,166
RECEPCION PEDIDOS PLANIFICADOS	0	0	200,000	0	60,000	126,000	175,000	0	150,000	624,000	25,000	225,000
LANZAMIENTO PEDIDOS PLANIFICADOS	200,000	0	50,000	125,000	175,000	0	150,000	625,000	25,000	225,000	0	0

1.1.2 TINTA	0.00	0.00	66.28	0.00	12.36	40.41	54.69	3.76	50.40	195.13	9.39	71.38
NECESIDADES BRUTAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DISPONIBILIDAD	72.53	72.53	8.25	0.00	93.89	55.48	98.80	98.02	44.62	49.49	40.10	68.74
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NECESIDADES NETAS	0.00	0.00	58.03	0.00	6.11	0.00	1.20	0.00	150.51	150.51	0.00	31.28
RECEPCION PEDIDOS PLANIFICADOS	0.00	0.00	100.00	0.00	100.00	0.00	100.00	0.00	200.00	200.00	0.00	100.00
LANZAMIENTO PEDIDOS PLANIFICADOS	0.00	0.00	100.00	100.00	0.00	100.00	0.00	0.00	200.00	200.00	0.00	100.00

1.1.3 TUBO	0	0	207,125	0	38,621	126,267	170,867	11,800	157,505	609,772	29,341	222,992
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	0	207,125	0	38,621	126,267	170,867	11,800	157,505	609,772	29,341	222,992
RECEPCION PEDIDOS PLANIFICADOS	0	0	207,125	0	38,621	126,267	170,867	11,800	157,505	609,772	29,341	222,992
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	207,125	0	38,621	126,267	170,867	11,800	157,505	609,772	29,341	222,992

1.1.4 BOPORTE	0	0	207,125	0	38,621	126,267	170,867	11,800	157,505	609,772	29,341	222,992
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	0	207,125	0	38,621	126,267	170,867	11,800	157,505	609,772	29,341	222,992
RECEPCION PEDIDOS PLANIFICADOS	0	0	207,125	0	38,621	126,267	170,867	11,800	157,505	609,772	29,341	222,992
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	207,125	0	38,621	126,267	170,867	11,800	157,505	609,772	29,341	222,992

1.2.1 POLIESTIRENO	0.00	0.00	724.84	0.00	135.17	441.93	588.14	41.30	551.27	2,134.20	102.89	780.47
NECESIDADES BRUTAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DISPONIBILIDAD	4.51	4.51	44.57	44.57	44.39	7.46	39.32	43.02	31.75	12.95	44.86	29.39
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NECESIDADES NETAS	0.00	0.00	720.33	0.00	90.81	397.54	580.68	1.98	508.25	2,102.45	90.14	735.61
RECEPCION PEDIDOS PLANIFICADOS	0.00	0.00	765.00	0.00	135.00	405.00	630.00	45.00	540.00	2,115.00	135.00	705.00
LANZAMIENTO PEDIDOS PLANIFICADOS	0.00	765.00	0.00	135.00	405.00	630.00	45.00	540.00	2,115.00	135.00	785.00	0.00

1.3.1 RESINA K	0.00	0.00	273.41	0.00	50.98	186.87	235.55	15.58	207.91	804.90	38.73	254.35
NECESIDADES BRUTAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DISPONIBILIDAD	36.67	36.67	33.27	33.27	27.29	40.61	40.03	24.45	41.55	1.85	7.82	28.57
RECEPCIONES PROGRAMADAS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NECESIDADES NETAS	0.00	0.00	236.73	0.00	17.71	139.39	184.97	0.00	183.45	793.35	37.08	286.43
RECEPCION PEDIDOS PLANIFICADOS	0.00	0.00	270.00	0.00	45.00	180.00	225.00	0.00	225.00	785.00	45.00	315.00
LANZAMIENTO PEDIDOS PLANIFICADOS	0.00	0.00	270.00	0.00	45.00	180.00	225.00	0.00	225.00	785.00	45.00	315.00

**APENDICE 22
PLAN DE REQUERIMIENTOS DE MATERIALES (MRP)**

ROJO EXP2	ACTUAL	Feb-03	Mar-03	Abr-03	May-03	Jun-03	Jul-03	Agc-03	Sep-03	Oct-03	Nov-03	Dic-03
lo:	47,793											
Pt		0	9,112	0	0	0	13,161	0	42,506	31,912	14,091	119,501
R		47,793	38,681	38,681	39,681	38,681	25,520	26,520	0	0	0	0
MPS		0	0	0	0	0	0	0	16,986	31,912	14,091	119,501

ROJO EXP2												
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	16,986	31,912	14,091	119,501
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	0	0	0	0	0	0	0	16,986	31,912	14,091	119,501
RECEPCION PEDIDOS PLANIFICADOS	0	0	0	0	0	0	0	0	16,986	31,912	14,091	119,501
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	0	0	0	0	0	0	16,986	31,912	14,091	119,501

1.1 REPUESTO												
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	16,986	31,912	14,091	119,501
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	0	0	0	0	0	0	0	16,986	31,912	14,091	119,501
RECEPCION PEDIDOS PLANIFICADOS	0	0	0	0	0	0	0	0	16,986	31,912	14,091	119,501
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	0	0	0	0	0	0	16,986	31,912	14,091	119,501

1.2 BARRIL												
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	16,986	31,912	14,091	119,501
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	0	0	0	0	0	0	0	16,986	31,912	14,091	119,501
RECEPCION PEDIDOS PLANIFICADOS	0	0	0	0	0	0	0	0	16,986	31,912	14,091	119,501
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	0	0	0	0	0	0	16,986	31,912	14,091	119,501

1.3 TAPA												
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	16,986	31,912	14,091	119,501
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	0	0	0	0	0	0	0	16,986	31,912	14,091	119,501
RECEPCION PEDIDOS PLANIFICADOS	0	0	0	0	0	0	0	0	16,986	31,912	14,091	119,501
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	0	0	0	0	0	0	16,986	31,912	14,091	119,501

1.4 BOTON												
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	16,986	31,912	14,091	119,501
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	0	0	0	0	0	0	0	16,986	31,912	14,091	119,501
RECEPCION PEDIDOS PLANIFICADOS	0	0	0	0	0	0	0	0	16,986	31,912	14,091	119,501
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	0	0	0	0	0	0	16,986	31,912	14,091	119,501

1.5 CAJA MASTER												
NECESIDADES BRUTAS	0	0	0	0	0	0	0	0	14	27	12	100
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	0	0	0	0	0	0	0	14	27	12	100
RECEPCION PEDIDOS PLANIFICADOS	0	0	0	0	0	0	0	0	14	27	12	100
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	0	0	0	0	0	0	14	27	12	100

1.4.1 POLIETILENO BAJA DENSIDAD													0.00	KG		
NECESIDADES BRUTAS													0.00			
DISPONIBILIDAD													0.00			
RECEPCIONES PROGRAMADAS													0.00			
NECESIDADES NETAS													0.00			
RECEPCION PEDIDOS PLANIFICADOS													0.00			
LANZAMIENTO PEDIDOS PLANIFICADOS													0.00			
NIVEL 2													1.84	3.84	1.87	13.92
													43.08	37.75	37.75	24.13
													0.00	0.00	0.00	0.00
													1.84	0.00	0.00	0.00
													48.00	0.00	0.00	0.00
													49.80	0.00	0.00	0.00

1.4.2 COLORANTE													0.00	KG		
NECESIDADES BRUTAS													0.00			
DISPONIBILIDAD													0.00			
RECEPCIONES PROGRAMADAS													0.00			
NECESIDADES NETAS													0.00			
RECEPCION PEDIDOS PLANIFICADOS													0.00			
LANZAMIENTO PEDIDOS PLANIFICADOS													0.00			
NIVEL 2													0.03	0.06	0.03	0.22
													44.07	44.91	44.89	44.07
													0.00	0.00	0.00	0.00
													0.03	0.00	0.00	0.00
													48.00	0.00	0.00	0.00
													48.00	0.00	0.00	0.00

1.1.3.1 POLIETILENO													0.00	KG		
NECESIDADES BRUTAS													0.00			
DISPONIBILIDAD													0.00			
RECEPCIONES PROGRAMADAS													0.00			
NECESIDADES NETAS													0.00			
RECEPCION PEDIDOS PLANIFICADOS													0.00			
LANZAMIENTO PEDIDOS PLANIFICADOS													0.00			
NIVEL 3													10.19	19.15	8.81	71.70
													34.81	18.66	6.85	26.15
													0.00	0.00	0.00	0.00
													10.19	0.00	0.00	64.88
													45.00	0.00	0.00	90.00
													45.00	0.00	0.00	0.00

1.1.3.2 COLORANTE													0.00	KG		
NECESIDADES BRUTAS													0.00			
DISPONIBILIDAD													0.00			
RECEPCIONES PROGRAMADAS													0.00			
NECESIDADES NETAS													0.00			
RECEPCION PEDIDOS PLANIFICADOS													0.00			
LANZAMIENTO PEDIDOS PLANIFICADOS													0.00			
NIVEL 3													0.29	0.54	0.25	2.03
													44.71	44.17	43.92	41.89
													0.00	0.00	0.00	0.00
													0.28	0.00	0.00	0.00
													46.00	0.00	0.00	0.00
													46.00	0.00	0.00	0.00

1.1.4.1 POLIACETAL NATURAL													0.00	KG		
NECESIDADES BRUTAS													0.00			
DISPONIBILIDAD													0.00			
RECEPCIONES PROGRAMADAS													0.00			
NECESIDADES NETAS													0.00			
RECEPCION PEDIDOS PLANIFICADOS													0.00			
LANZAMIENTO PEDIDOS PLANIFICADOS													0.00			
NIVEL 3													2.80	5.43	2.60	20.32
													42.11	36.09	34.10	13.87
													0.00	0.00	0.00	0.00
													2.89	0.00	0.00	0.00
													48.00	0.00	0.00	0.00
													45.00	0.00	0.00	0.00

1.1.4.2 COLORANTE													0.00	KG		
NECESIDADES BRUTAS													0.00			
DISPONIBILIDAD													0.00			
RECEPCIONES PROGRAMADAS													0.00			
NECESIDADES NETAS													0.00			
RECEPCION PEDIDOS PLANIFICADOS													0.00			
LANZAMIENTO PEDIDOS PLANIFICADOS													0.00			
NIVEL 3													0.46	0.85	0.40	3.23
													44.54	43.98	43.28	40.08
													0.00	0.00	0.00	0.00
													0.46	0.00	0.00	0.00
													48.00	0.00	0.00	0.00
													45.00	0.00	0.00	0.00



ROJO EXP2	Ene-04	Feb-04	Mar-04	Abr-04	May-04	Jun-04	Juli-04	Ago-04	Sep-04	Oct-04	Nov-04	Dic-04
lo:	0	0	0	0	0	0	0	0	0	0	0	0
Fl:	0	0	10,879	0	0	0	0	0	0	0	0	0
h:	0	0	0	0	0	0	0	0	0	0	0	0
MPS	0	0	10,879	0	0	0	0	0	0	0	0	0

ROJO EXP2	0	0	10,879	0	0	0	0	0	0	0	0	0
NECESIDADES BRUTAS	0	0	10,879	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	0	10,879	0	0	0	0	0	0	0	0	0
RECEPCION PEDIDOS PLANIFICADOS	0	0	10,879	0	0	0	0	0	0	0	0	0
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	10,879	0	0	0	0	0	0	0	0	0

1.1 REPUERTO	0	0	10,879	0	0	0	0	0	0	0	0	0
NECESIDADES BRUTAS	0	0	10,879	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	0	10,879	0	0	0	0	0	0	0	0	0
RECEPCION PEDIDOS PLANIFICADOS	0	0	10,879	0	0	0	0	0	0	0	0	0
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	10,879	0	0	0	0	0	0	0	0	0

1.2 BARRIL	0	0	10,879	0	0	0	0	0	0	0	0	0
NECESIDADES BRUTAS	0	0	10,879	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	0	10,879	0	0	0	0	0	0	0	0	0
RECEPCION PEDIDOS PLANIFICADOS	0	0	10,879	0	0	0	0	0	0	0	0	0
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	10,879	0	0	0	0	0	0	0	0	0

1.3 TAPA	0	0	10,879	0	0	0	0	0	0	0	0	0
NECESIDADES BRUTAS	0	0	10,879	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	0	10,879	0	0	0	0	0	0	0	0	0
RECEPCION PEDIDOS PLANIFICADOS	0	0	10,879	0	0	0	0	0	0	0	0	0
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	10,879	0	0	0	0	0	0	0	0	0

1.4 BOTON	0	0	10,879	0	0	0	0	0	0	0	0	0
NECESIDADES BRUTAS	0	0	10,879	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	0	10,879	0	0	0	0	0	0	0	0	0
RECEPCION PEDIDOS PLANIFICADOS	0	0	10,879	0	0	0	0	0	0	0	0	0
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	10,879	0	0	0	0	0	0	0	0	0

1.5 CAJA MASTER	0	0	9	0	0	0	0	0	0	0	0	0
NECESIDADES BRUTAS	0	0	9	0	0	0	0	0	0	0	0	0
DISPONIBILIDAD	0	0	0	0	0	0	0	0	0	0	0	0
RECEPCIONES PROGRAMADAS	0	0	0	0	0	0	0	0	0	0	0	0
NECESIDADES NETAS	0	0	9	0	0	0	0	0	0	0	0	0
RECEPCION PEDIDOS PLANIFICADOS	0	0	9	0	0	0	0	0	0	0	0	0
LANZAMIENTO PEDIDOS PLANIFICADOS	0	0	9	0	0	0	0	0	0	0	0	0

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TAPA TRANSPARENTE											
	Feb-03	Mar-03	Abr-03	May-03	Jun-03	Jul-03	Ago-03	Sep-03	Oct-03	Nov-03	Dic-03
TOTAL	982,679	1,539,963	1,474,383	2,099,891	1,144,388	2,837,833	2,971,135	2,322,355	2,035,586	1,513,875	1,229,678

BOTON											
	Feb-03	Mar-03	Abr-03	May-03	Jun-03	Jul-03	Ago-03	Sep-03	Oct-03	Nov-03	Dic-03
TOTAL AZUL LOCAL	521,087	566,236	924,070	2,331,746	1,431,212	1,945,952	2,464,230	1,647,958	783,323	803,576	721,812
TOTAL NEGRO LOCAL	257,442	1,324,945	1,516,749	1,519,299	781,079	1,179,766	1,650,539	1,195,656	717,854	759,261	406,171
TOTAL ROJO LOCAL	269,887	1,151,347	1,223,106	1,302,916	1,160,686	1,081,601	1,623,674	1,049,344	354,807	662,354	338,823
VERDE1	0	0	0	0	0	5,007	81,963	28,947	19,359	8,316	3,202
TOTAL AZUL EXP	0	319,782	555,312	504,934	700,366	971,100	223,519	228,036	2,477,995	2,545,865	1,123,538
VERDE EXP 1	0	0	48,443	20,216	107,080	0	7,133	84,501	126,497	24,635	84,056
TOTAL NEGRO EXP	0	837,419	125	291,044	1,578,706	144,547	64,158	502,812	3,389,733	2,128,216	1,318,233
TOTAL ROJO EXP	46,360	0	0	0	0	121,273	382,213	366,105	971,876	404,651	238,818

TUBO TRANSPARENTE											
	Feb-03	Mar-03	Abr-03	May-03	Jun-03	Jul-03	Ago-03	Sep-03	Oct-03	Nov-03	Dic-03
TOTAL LOCAL	0	1,552,197	2,189,541	3,240,998	2,380,720	1,616,140	2,879,282	1,837,483	872,422	824,130	652,546
TOTAL EXPORTACION	12,160	89,782	568,880	629,265	2,234,022	121,273	647,012	943,521	5,933,436	4,998,868	2,352,429

TUBO AMARILLO											
	Feb-03	Mar-03	Abr-03	May-03	Jun-03	Jul-03	Ago-03	Sep-03	Oct-03	Nov-03	Dic-03
TOTAL LOCAL	269,887	1,265,947	1,474,383	1,473,312	992,257	2,596,186	2,941,124	2,084,421	1,002,920	1,409,377	817,462
TOTAL EXPORTACION	0	173,458	0	186,929	152,131	241,647	30,010	237,933	1,032,665	104,499	412,216

SOPORTE											
	Feb-03	Mar-03	Abr-03	May-03	Jun-03	Jul-03	Ago-03	Sep-03	Oct-03	Nov-03	Dic-03
TOTAL LOCAL 1	0	1,425,697	2,189,541	3,240,998	2,380,720	1,616,140	2,879,282	1,837,483	872,422	824,130	652,546
TOTAL EXPORTACION 1	46,360	109,782	568,755	587,351	2,234,022	121,273	647,012	943,521	5,933,436	4,998,868	2,352,429
TOTAL LOCAL 2	982,679	1,366,505	1,474,383	1,912,962	992,257	2,596,186	2,941,124	2,084,421	1,002,920	1,409,377	817,462
TOTAL EXPORTACION 2	0	173,458	0	186,929	152,131	241,647	30,010	237,933	1,032,665	104,499	412,216

TAPA TRANSPARENTE												
	Ene-04	Feb-04	Mar-04	Abr-04	May-04	Jun-04	Jul-04	Ago-04	Sep-04	Oct-04	Nov-04	Dic-04
TOTAL	1,813,796	1,391,094	3,363,243	2,960,498	2,601,715	1,354,450	3,366,220	3,499,717	2,759,860	2,388,902	1,771,872	1,436,783

BOTON												
	Ene-04	Feb-04	Mar-04	Abr-04	May-04	Jun-04	Jul-04	Ago-04	Sep-04	Oct-04	Nov-04	Dic-04
TOTAL AZUL LOCAL	1,492,770	1,277,201	2,173,904	2,306,082	2,765,800	1,693,564	2,297,289	2,902,548	1,936,802	918,642	940,424	843,016
TOTAL NEGRO LOCAL	1,303,373	458,280	2,022,688	1,805,181	1,804,436	925,485	1,393,732	1,945,590	1,406,273	842,387	889,098	474,731
TOTAL ROJO LOCAL	829,855	424,168	1,541,195	1,455,412	1,547,182	1,374,821	1,277,592	1,913,853	1,234,062	416,379	775,500	395,909
VERDE1	11,829	54,247	6,166	3,419	0	3,947	69,084	96,689	34,072	22,736	9,745	3,745
TOTAL AZUL EXP	574,549	593,344	1,156,960	661,397	710,437	830,032	114,801	263,662	268,384	2,910,091	2,983,451	1,313,924
VERDE EXP 1	74,987	20,621	33,962	140,027	24,018	126,911	0	8,414	99,458	148,562	28,870	98,304
TOTAL NEGRO EXP	694,477	459,215	1,019,970	149	345,381	1,868,835	170,897	75,606	591,288	3,977,095	2,491,366	1,540,227
TOTAL ROJO EXP	298,642	252,868	26,852	0	0	0	158,769	450,328	460,448	1,140,118	473,706	279,125

TUBO TRANSPARENTE												
	Ene-04	Feb-04	Mar-04	Abr-04	May-04	Jun-04	Jul-04	Ago-04	Sep-04	Oct-04	Nov-04	Dic-04
TOTAL LOCAL	1,824,032	822,802	2,615,996	2,609,595	3,848,334	2,823,659	1,972,733	3,394,363	2,161,408	1,023,949	965,352	762,663
TOTAL EXPORTACION	1,642,656	1,326,048	2,002,458	801,573	747,205	2,645,486	143,211	762,611	1,109,519	6,963,159	5,854,937	2,749,535

TUBO AMARILLO												
	Ene-04	Feb-04	Mar-04	Abr-04	May-04	Jun-04	Jul-04	Ago-04	Sep-04	Oct-04	Nov-04	Dic-04
TOTAL LOCAL	1,813,796	1,391,094	3,127,957	2,960,498	2,269,084	1,174,158	3,064,964	3,464,318	2,449,800	1,176,195	1,649,416	954,737
TOTAL EXPORTACION	0	0	235,285	0	332,632	180,291	301,256	35,399	310,060	1,212,707	122,456	482,046

SOPORTE												
	Ene-04	Feb-04	Mar-04	Abr-04	May-04	Jun-04	Jul-04	Ago-04	Sep-04	Oct-04	Nov-04	Dic-04
TOTAL LOCAL 1	1,824,032	822,802	2,615,996	2,609,595	3,848,334	2,823,659	1,972,733	3,394,363	2,161,408	1,023,949	965,352	762,663
TOTAL EXPORTACION 1	1,642,656	1,326,048	2,002,458	801,573	747,205	2,645,486	143,211	762,611	1,109,519	6,963,159	5,854,937	2,749,535
TOTAL LOCAL 2	1,813,796	1,391,094	3,127,957	2,960,498	2,269,084	1,174,158	3,064,964	3,464,318	2,449,800	1,176,195	1,649,416	954,737
TOTAL EXPORTACION 2	0	0	235,285	0	332,632	180,291	301,256	35,399	310,060	1,212,707	122,456	482,046



GOBIERNO DEL LITORAL
 GOBIERNO DEL ESTADO DE VALLARTA
 17/02/2004, C. M.

APENDICE 24
ORDENES DE COMPRA CONJUNTAS



CAJA MASTER											
	Feb-03	Mar-03	Abr-03	May-03	Jun-03	Jul-03	Ago-03	Sep-03	Oct-03	Nov-03	Dic-03
TOTAL 1 AZUL	106	1,233	1,233	1,327	1,422	625	1,233	778	1,998	2,372	1,118
TOTAL 1 NEGRO	0	1,162	641	1,164	1,747	408	692	784	2,008	2,008	1,117
TOTAL 1 ROJO	39	375	414	717	387	410	939	661	917	495	197
TOTAL 1 VERDE	0	0	0	17	89	4	74	95	122	27	72
TOTAL 2 AZUL	379	0	0	1,037	354	1,077	1,005	785	719	469	420
TOTAL 2 NEGRO	215	679	623	344	220	696	739	631	788	398	320
TOTAL 2 ROJO	225	604	666	308	366	592	732	519	189	394	285

CAJILLA											
	Feb-03	Mar-03	Abr-03	May-03	Jun-03	Jul-03	Ago-03	Sep-03	Oct-03	Nov-03	Dic-03
TOTAL 1 AZUL	5,324	61,649	61,649	66,337	71,119	31,273	61,740	38,916	99,921	116,108	55,912
TOTAL 1 NEGRO	0	58,099	32,046	58,214	87,337	20,392	34,515	39,198	131,732	100,403	55,832
TOTAL 1 ROJO	1,932	18,765	20,687	35,867	29,363	20,518	46,962	33,635	45,847	24,741	9,826
TOTAL 1 VERDE	0	0	2,018	842	4,462	209	3,712	4,727	6,077	1,373	3,636
TOTAL 2 AZUL	18,973	0	0	51,854	17,696	53,854	50,249	39,250	35,967	23,452	20,976
TOTAL 2 NEGRO	10,727	33,958	31,157	17,217	10,987	34,787	36,931	31,572	39,418	19,909	16,018
TOTAL 2 ROJO	11,245	30,207	30,275	18,421	18,999	29,601	36,617	25,942	9,431	19,718	14,243

PUNTO (Medio)											
	Feb-03	Mar-03	Abr-03	May-03	Jun-03	Jul-03	Ago-03	Sep-03	Oct-03	Nov-03	Dic-03
TOTAL	2,775,000	3,850,000	4,575,000	1,775,000	3,475,000	2,800,000	6,750,000	5,875,000	3,050,000	3,475,000	2,125,000

PUNTO (Plmo)											
	Feb-03	Mar-03	Abr-03	May-03	Jun-03	Jul-03	Ago-03	Sep-03	Oct-03	Nov-03	Dic-03
TOTAL	1,475,000	2,050,000	1,125,000	2,850,000	2,950,000	2,350,000	2,025,000	1,525,000	1,250,000	1,775,000	1,425,000

TINTA											
	Feb-03	Mar-03	Abr-03	May-03	Jun-03	Jul-03	Ago-03	Sep-03	Oct-03	Nov-03	Dic-03
TOTAL AZUL LOCAL	400	600	500	700	600	600	400	300	300	300	400
TOTAL AZUL EXP	300	200	200	0	200	45	800	800	400	200	100
TOTAL NEGRO LOCAL	700	300	100	600	500	300	200	100	100	400	200
TOTAL NEGRO EXP	0	100	500	100	0	100	1,100	700	500	200	100
TOTAL ROJO LOCAL	400	400	400	300	500	400	100	200	100	100	200
TOTAL ROJO EXP	0	0	0	0	100	200	300	200	0	0	0
VERDE	0	0	0	0	0	0	0	0	0	0	0
VERDE EXP 1	100	0	0	0	0	0	100	0	0	0	0

POLIESTIRENO											
	Feb-03	Mar-03	Abr-03	May-03	Jun-03	Jul-03	Ago-03	Sep-03	Oct-03	Nov-03	Dic-03
TOTAL LOCAL	12,915	13,730	13,680	10,890	15,060	17,640	17,285	6,750	9,815	6,085	11,655
TOTAL EXPORTACION	4,050	2,115	2,925	8,325	1,305	2,340	4,140	24,300	17,910	9,675	5,625

POLIPROPILENO												
	Ene-04	Feb-04	Mar-04	Abr-04	May-04	Jun-04	Jul-04	Agosto-04	Sep-04	Oct-04	Nov-04	Dic-04
TOTAL LOCAL	2,250	1,800	3,420	2,563	4,140	2,700	1,710	2,340	1,755	540	675	405
TOTAL EXPORTACION	1,800	1,395	2,160	855	810	2,790	135	900	1,170	7,470	6,255	2,925

RESINA K												
	Ene-04	Feb-04	Mar-04	Abr-04	May-04	Jun-04	Jul-04	Agosto-04	Sep-04	Oct-04	Nov-04	Dic-04
TOTAL LOCAL	2,430	1,845	4,140	3,915	2,970	1,575	4,050	4,545	3,285	1,530	2,160	1,200
TOTAL EXPORTACION	0	0	315	0	450	225	405	45	405	1,575	180	630

POLIETILENO BAJA DENSIDAD												
	Ene-04	Feb-04	Mar-04	Abr-04	May-04	Jun-04	Jul-04	Agosto-04	Sep-04	Oct-04	Nov-04	Dic-04
TOTAL AZUL LOCAL	0	45	90	45	90	45	45	45	0	0	45	0
TOTAL AZUL EXP.	0	45	45	0	0	0	0	0	90	0	45	0
TOTAL NEGRO LOCAL	0	45	45	45	45	0	45	0	90	0	0	0
TOTAL NEGRO EXP.	0	45	45	0	45	0	0	45	45	0	0	0
TOTAL ROJO LOCAL	45	0	0	0	0	90	0	45	0	0	0	0
TOTAL ROJO EXP.	45	0	0	0	0	0	0	0	0	0	45	0
VERDE EXP 1	0	0	0	0	0	0	0	0	0	0	0	0

POLIETILENO BAJA DENSIDAD												
	Ene-04	Feb-04	Mar-04	Abr-04	May-04	Jun-04	Jul-04	Agosto-04	Sep-04	Oct-04	Nov-04	Dic-04
TOTAL LOCAL	0	45	45	90	0	0	0	45	0	45	0	0
TOTAL EXPORTACION	0	0	0	0	0	0	0	0	0	45	0	0

POLIETILENO												
	Ene-04	Feb-04	Mar-04	Abr-04	May-04	Jun-04	Jul-04	Agosto-04	Sep-04	Oct-04	Nov-04	Dic-04
TOTAL LOCAL	270	765	630	630	450	630	630	495	225	315	90	0
TOTAL EXPORTACION	90	180	180	180	180	0	45	225	585	360	360	0

POLIACETAL NATURAL												
	Ene-04	Feb-04	Mar-04	Abr-04	May-04	Jun-04	Jul-04	Agosto-04	Sep-04	Oct-04	Nov-04	Dic-04
TOTAL LOCAL	2,340	3,050	3,780	2,970	2,475	3,195	3,375	2,250	1,260	1,305	720	0
TOTAL EXPORTACION	900	1,215	495	720	1,620	315	450	855	4,905	3,510	1,980	0

POLIACETAL NATURAL												
	Ene-04	Feb-04	Mar-04	Abr-04	May-04	Jun-04	Jul-04	Agosto-04	Sep-04	Oct-04	Nov-04	Dic-04
TOTAL LOCAL	810	900	1,035	900	900	810	855	630	405	270	180	0
TOTAL EXPORTACION	180	450	90	225	450	90	225	180	1,395	1,035	495	0



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