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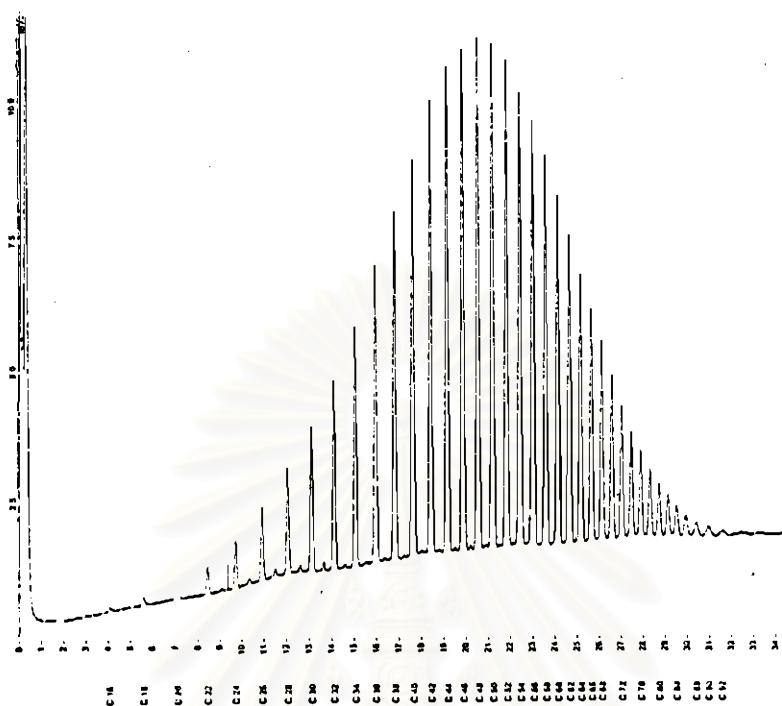




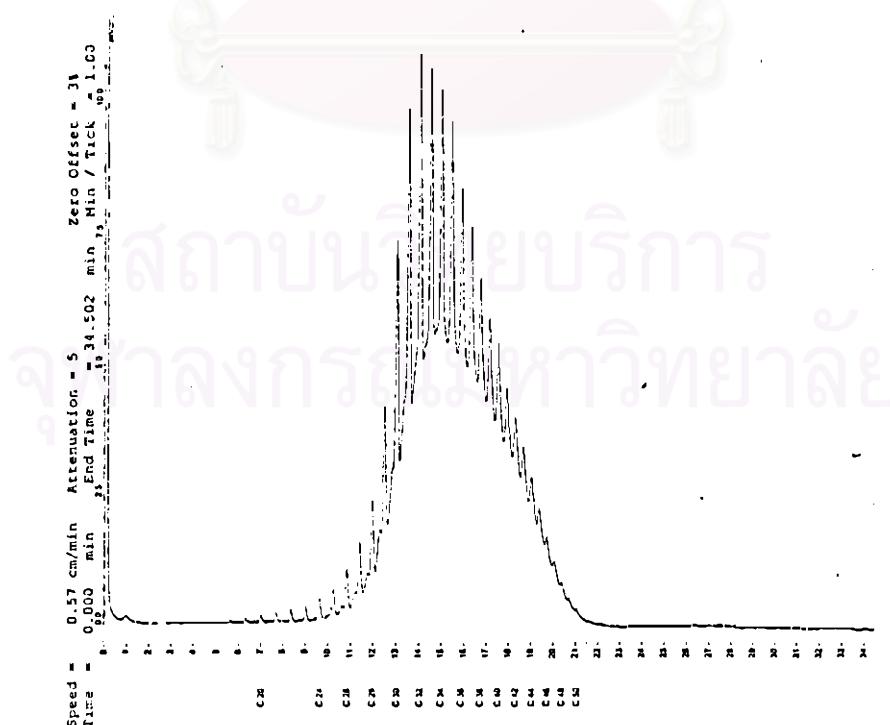
## **APPENDICES**

สถาบันวิทยบริการ  
จุฬาลงกรณ์มหาวิทยาลัย

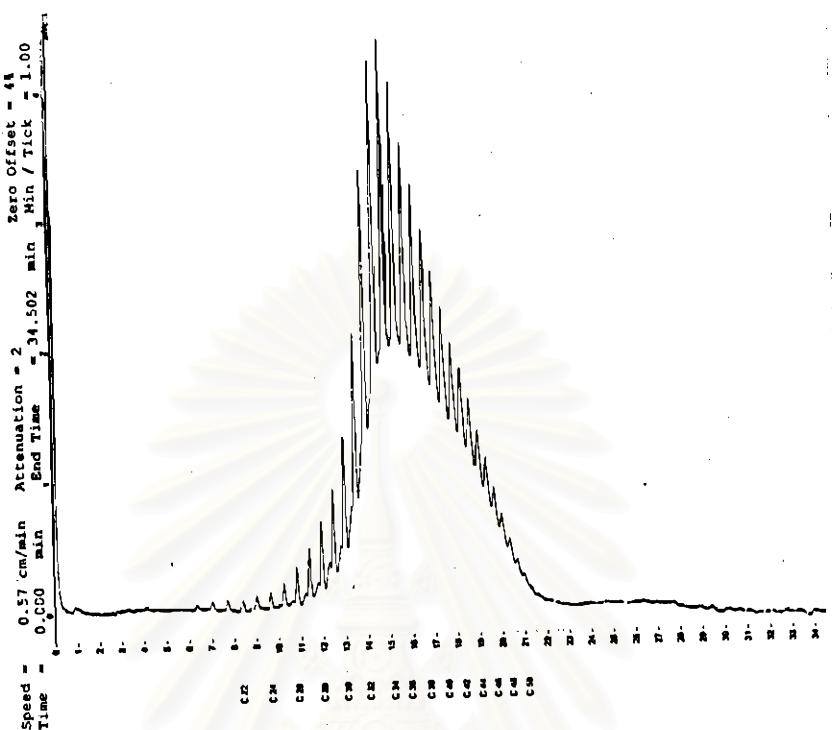
## APPENDIX A



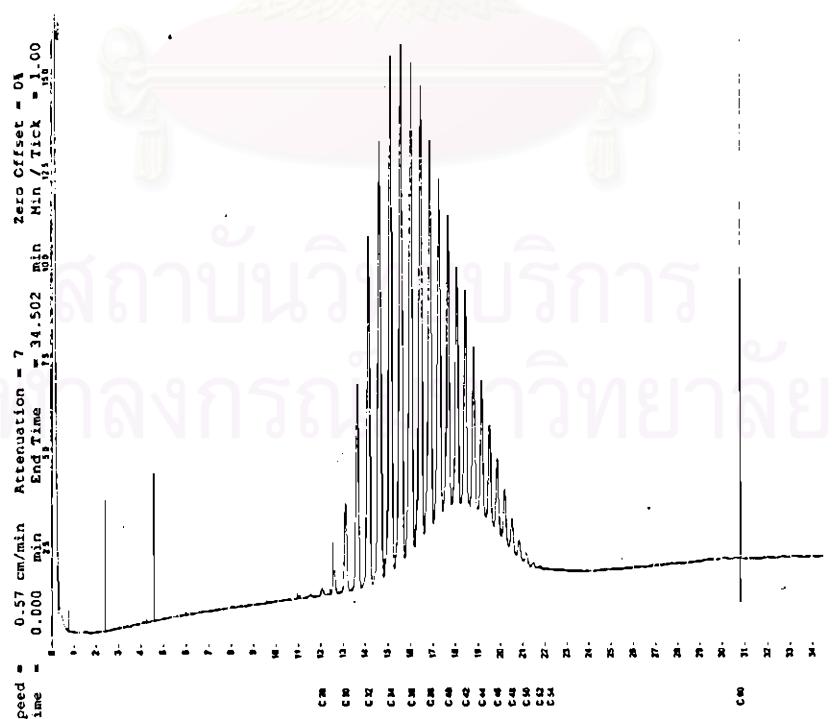
**Figure A1** GC chromatogram of normal paraffin standards (C<sub>19</sub>-C<sub>92</sub>)



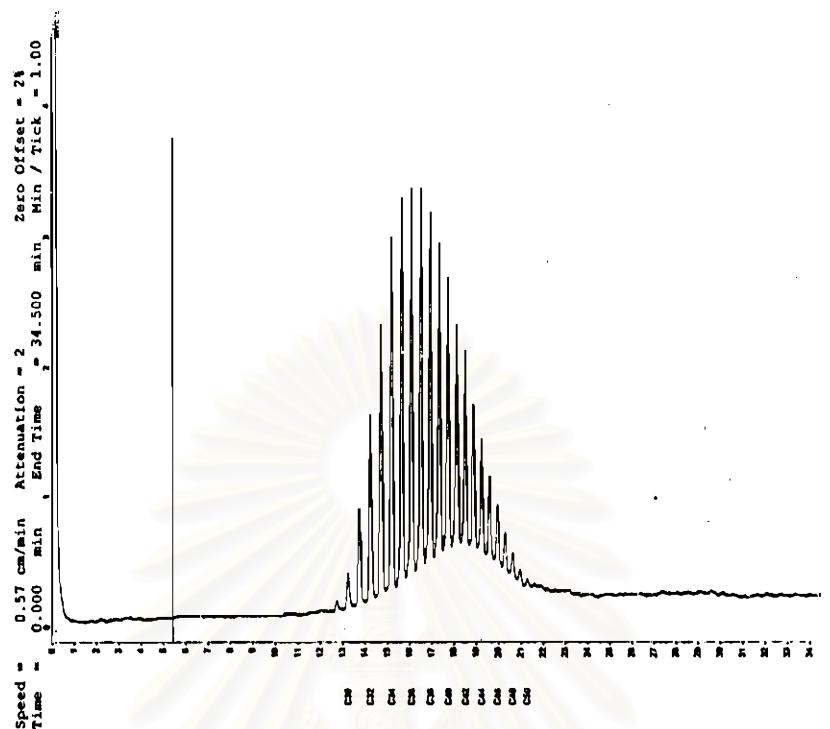
**Figure A2** GC chromatogram of 500SW slack wax



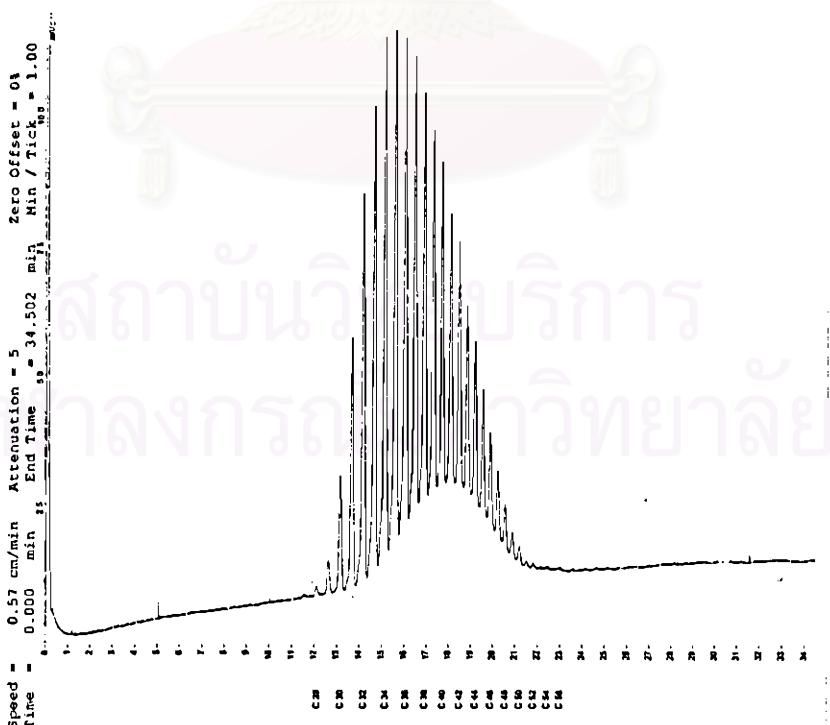
**Figure A3** GC chromatogram of 600SW slack wax



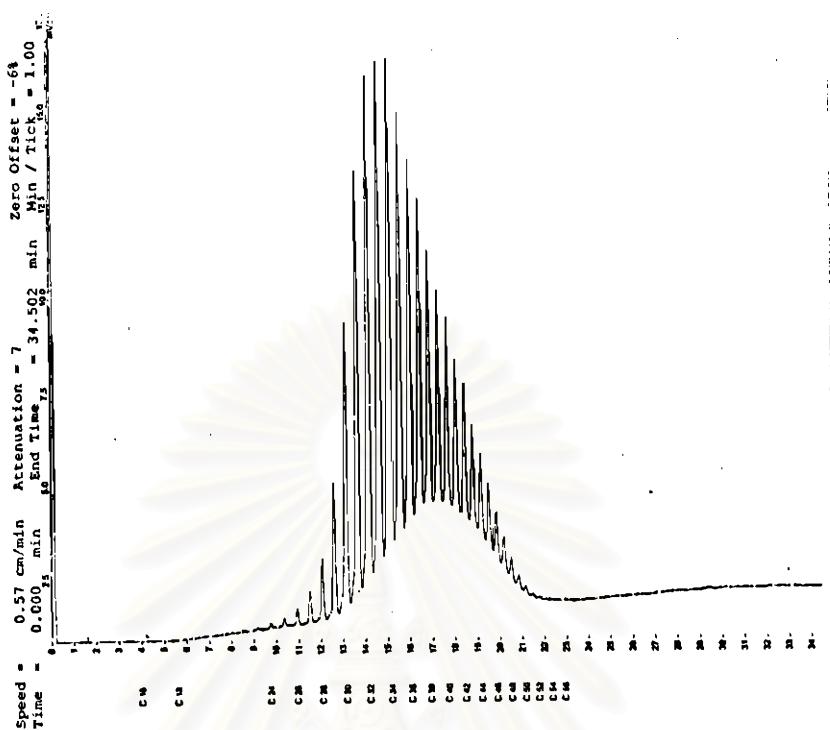
**Figure A4** GC chromatogram of wax cake from 1<sup>st</sup> extraction of 500SW at 40°C by using MEK



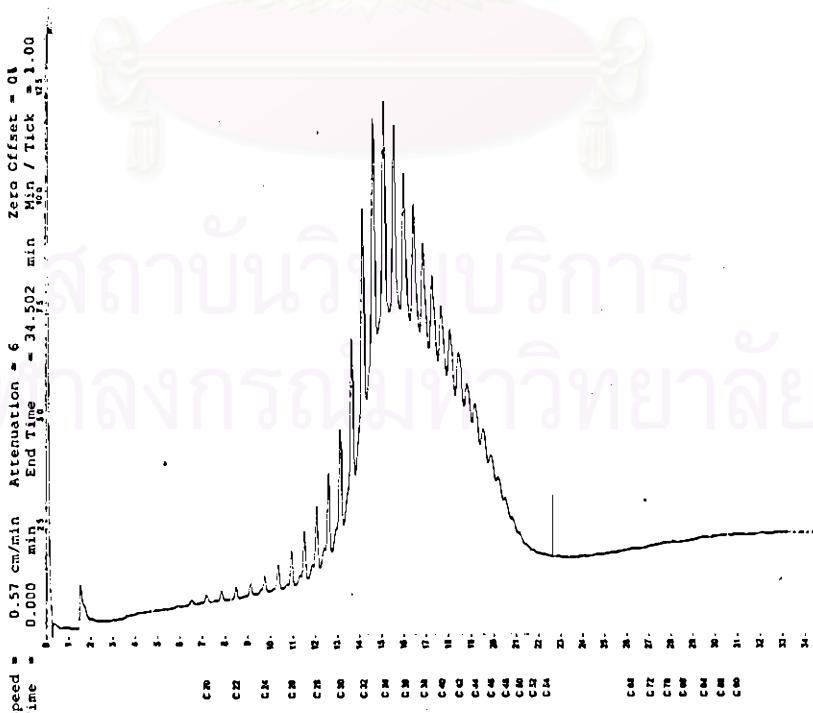
**Figure A5** GC chromatogram of wax cake from 1<sup>st</sup> extraction of 500SW at 45°C by using MEK



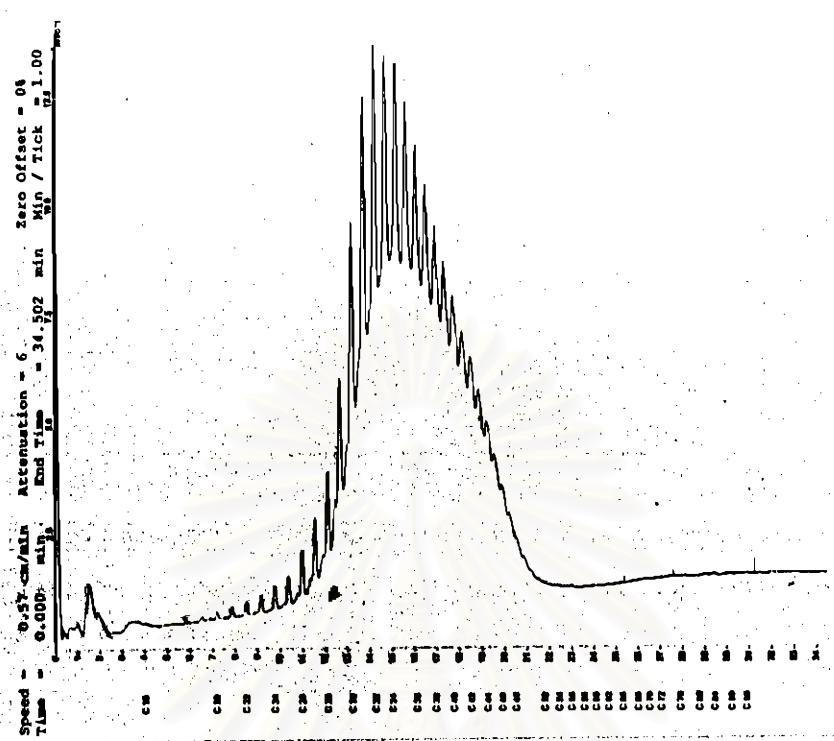
**Figure A6** GC chromatogram of wax cake from 1<sup>st</sup> extraction of 500SW at 50°C by using MEK



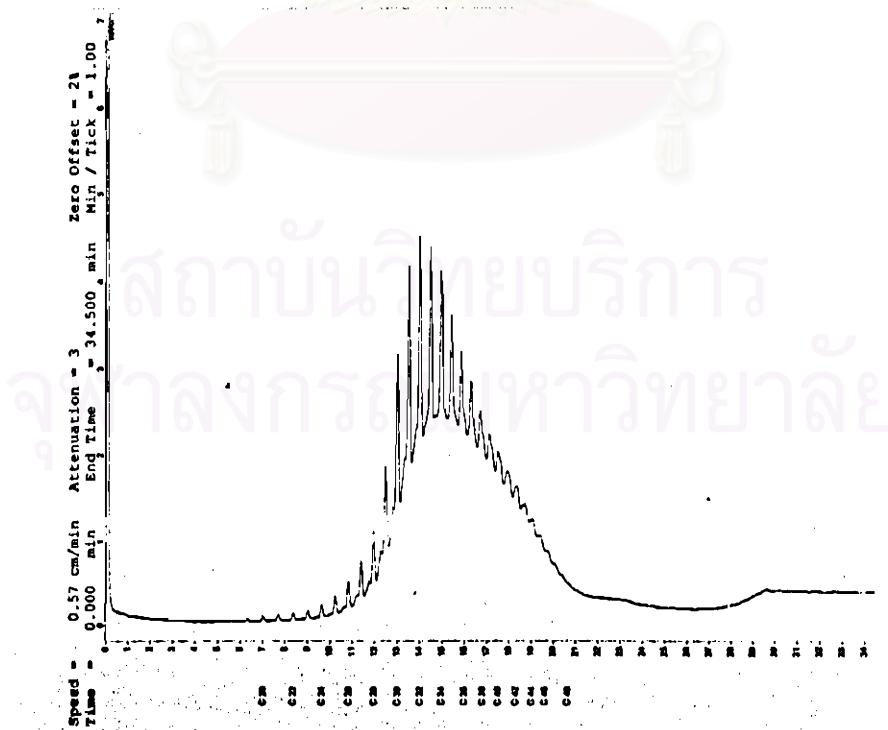
**Figure A7** GC chromatogram of wax cake from 1<sup>st</sup> extraction of 500SW at 55°C by using MEK



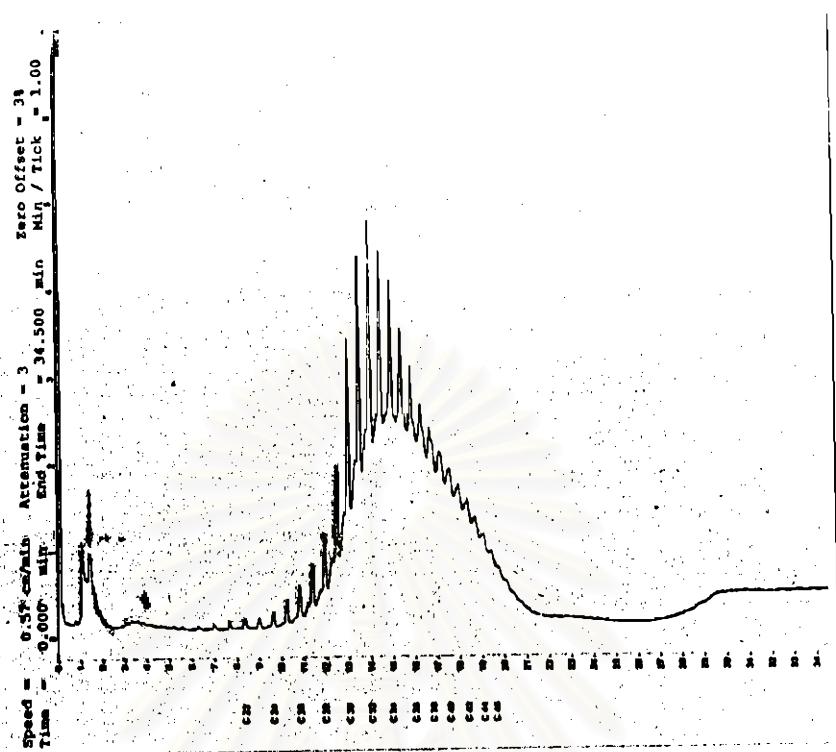
**Figure A8** GC chromatogram of soluble wax from 1<sup>st</sup> extraction of 500SW at 40°C by using MEK



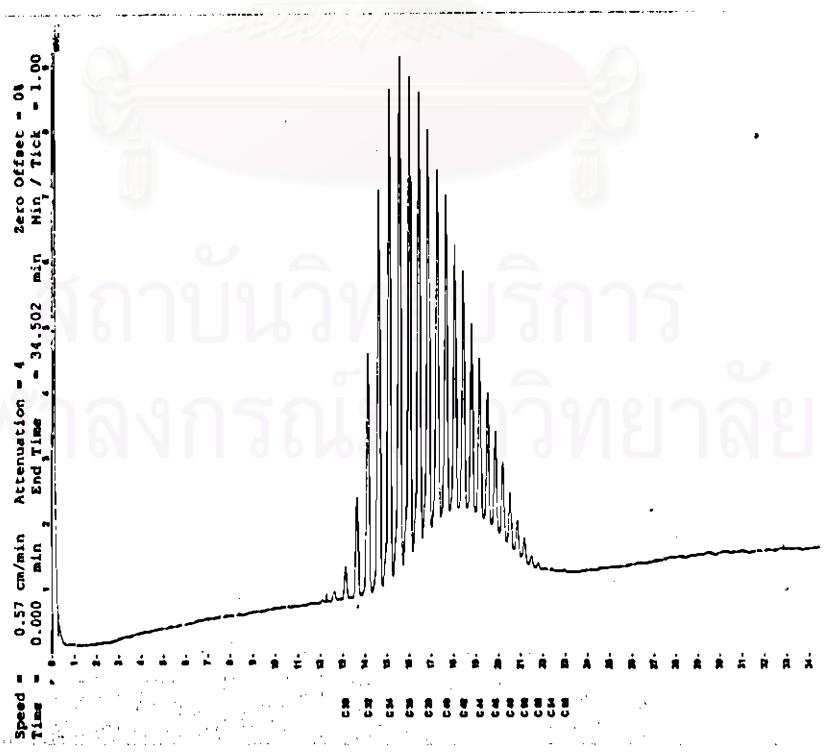
**Figure A9** GC chromatogram of soluble wax from 1<sup>st</sup> extraction of 500SW at 45°C by using MEK



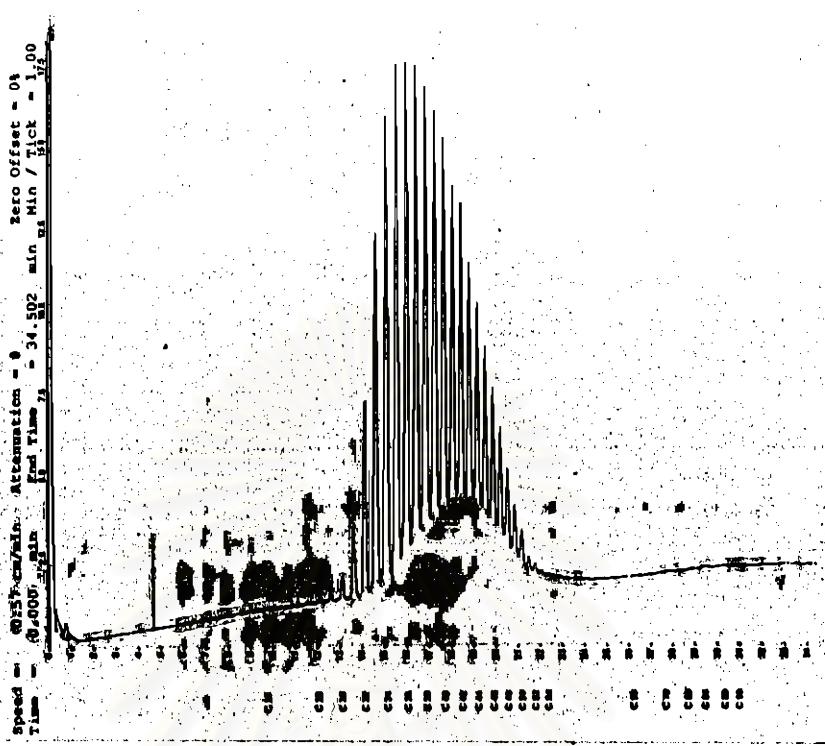
**Figure A10** GC chromatogram of soluble wax from 1<sup>st</sup> extraction of 500SW at 50°C by using MEK



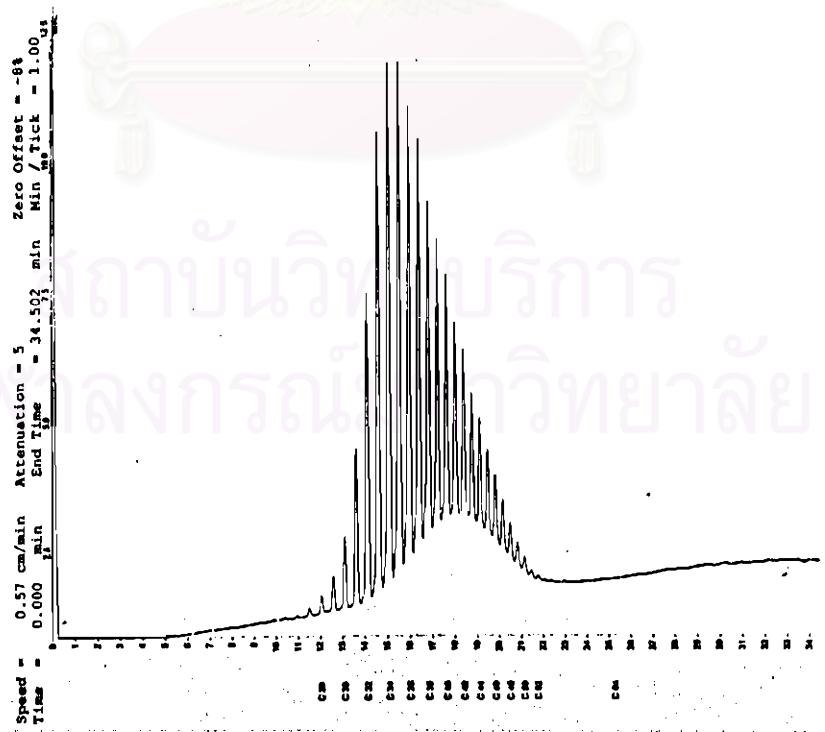
**Figure A11** GC chromatogram of soluble wax from 1<sup>st</sup> extraction of 500SW at 55°C by using MEK



**Figure A12** GC chromatogram of wax cake from 1<sup>st</sup> extraction of 600SW at 40°C by using MEK



**Figure A13** GC chromatogram of wax cake from 1<sup>st</sup> extraction of 600SW at 45°C by using MEK



**Figure A14** GC chromatogram of wax cake from 1<sup>st</sup> extraction of 600SW at 50°C by using MEK

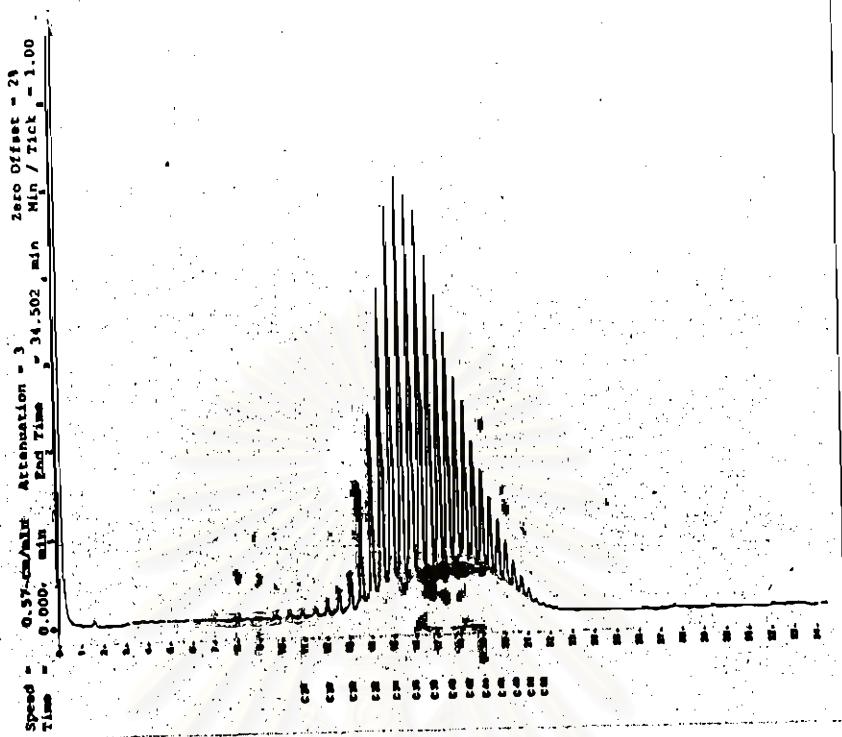
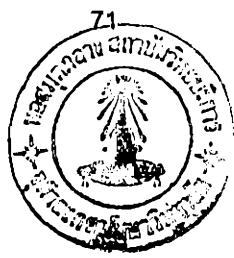


Figure A15 GC chromatogram of wax cake from 1<sup>st</sup> extraction of 600SW at 55°C by using MEK

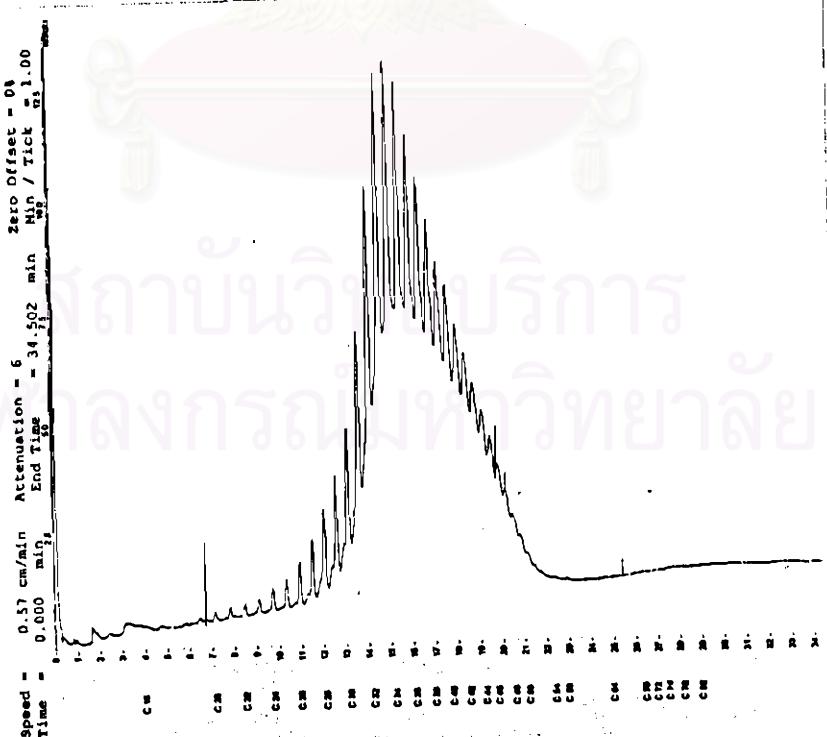
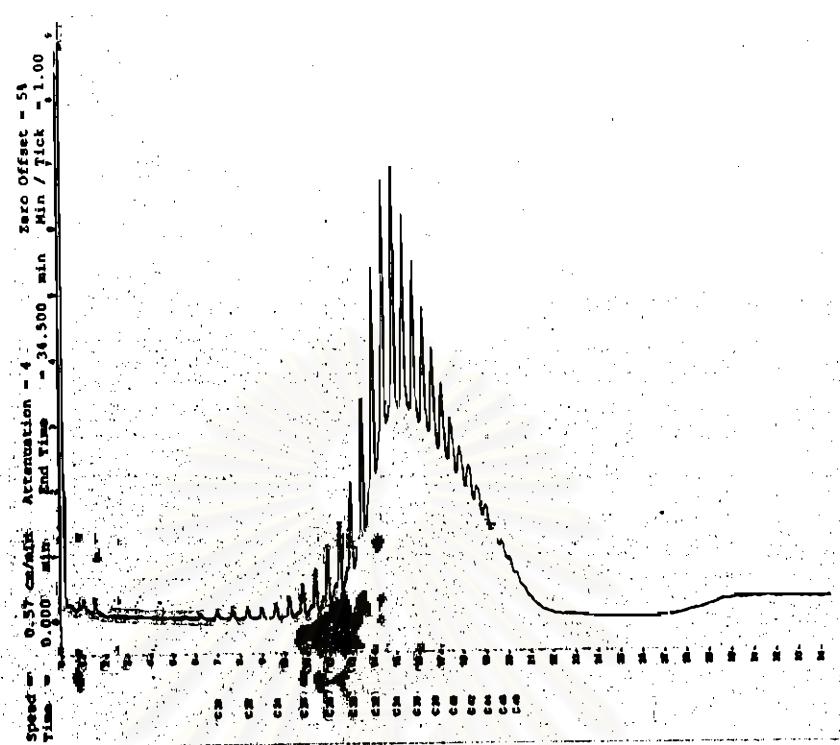
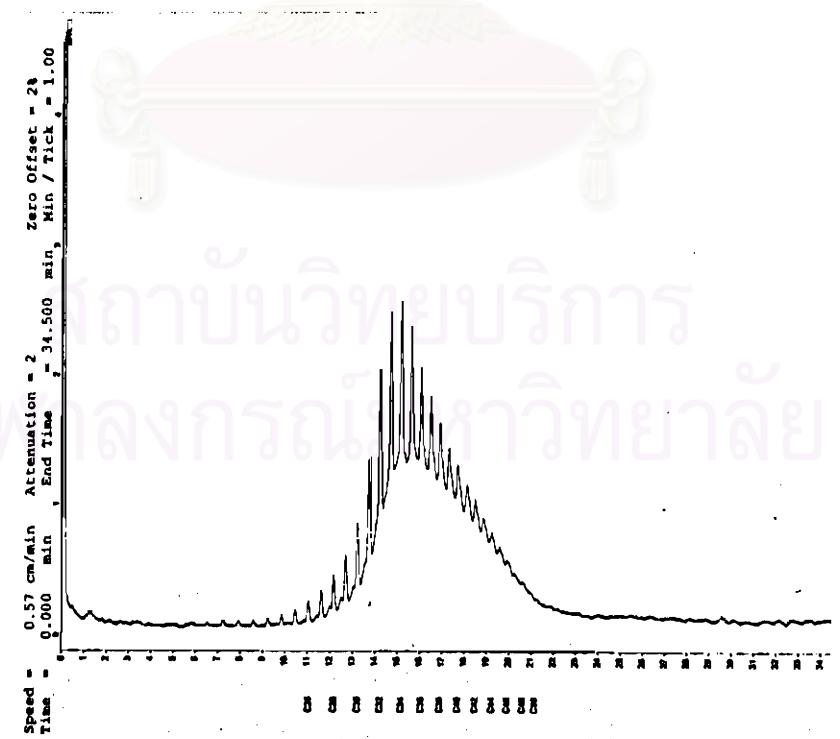


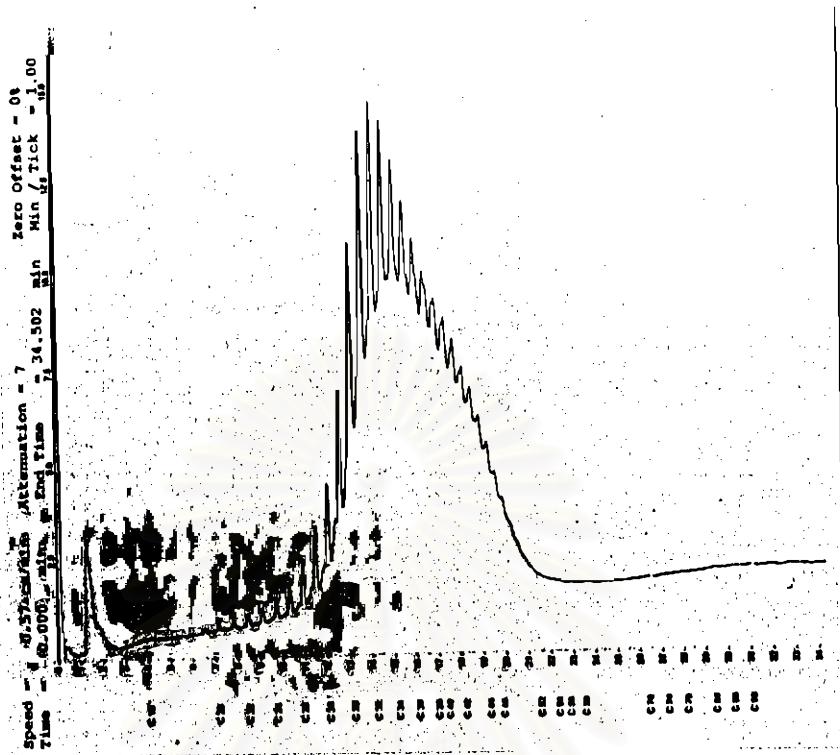
Figure A16 GC chromatogram of soluble wax from 1<sup>st</sup> extraction of 600SW at 40°C by using MEK



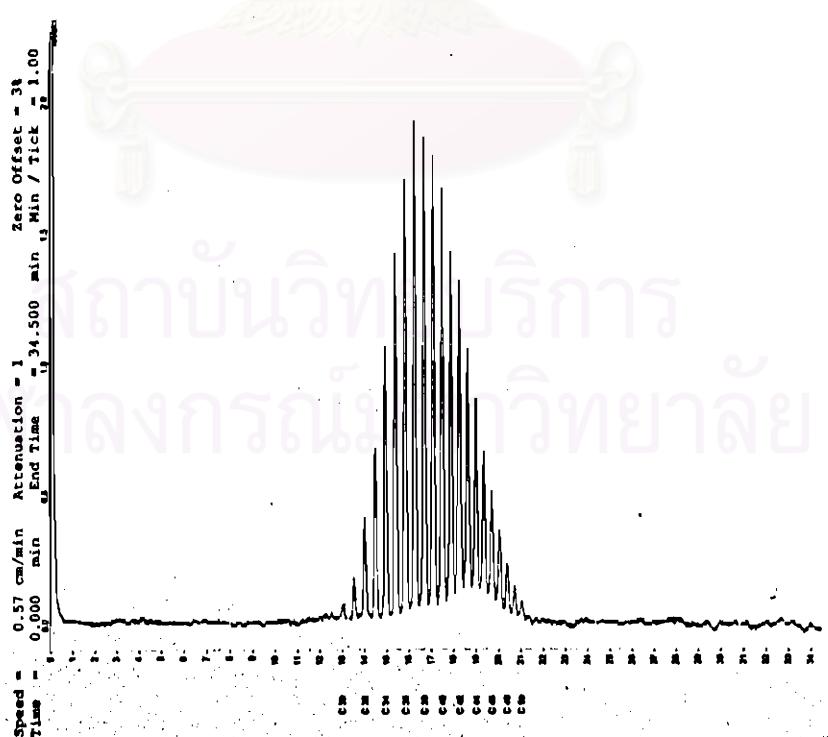
**Figure A17** GC chromatogram of soluble wax from 1<sup>st</sup> extraction of 600SW at 45°C by using MEK



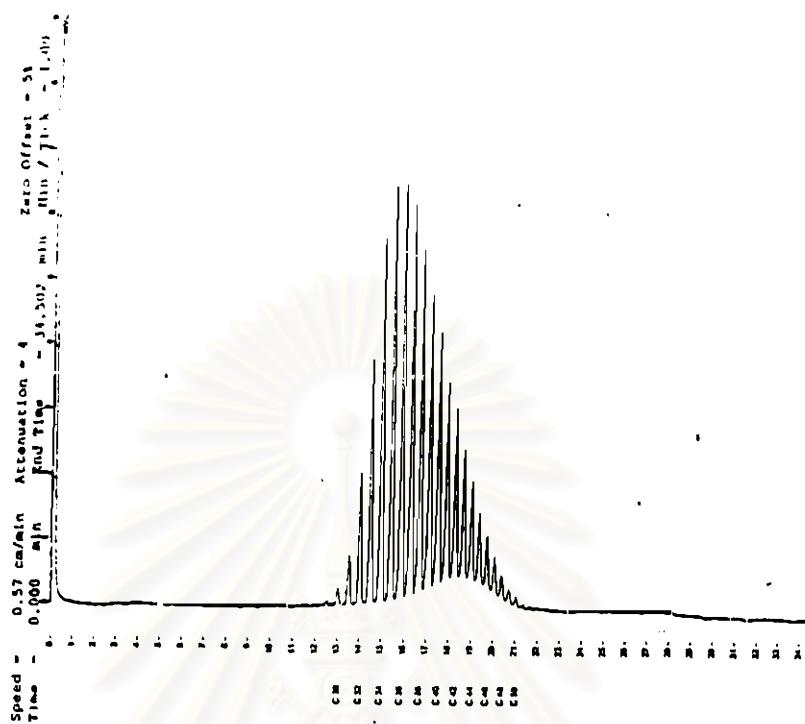
**Figure A18** GC chromatogram of soluble wax from 1<sup>st</sup> extraction of 600SW at 50°C by using MEK



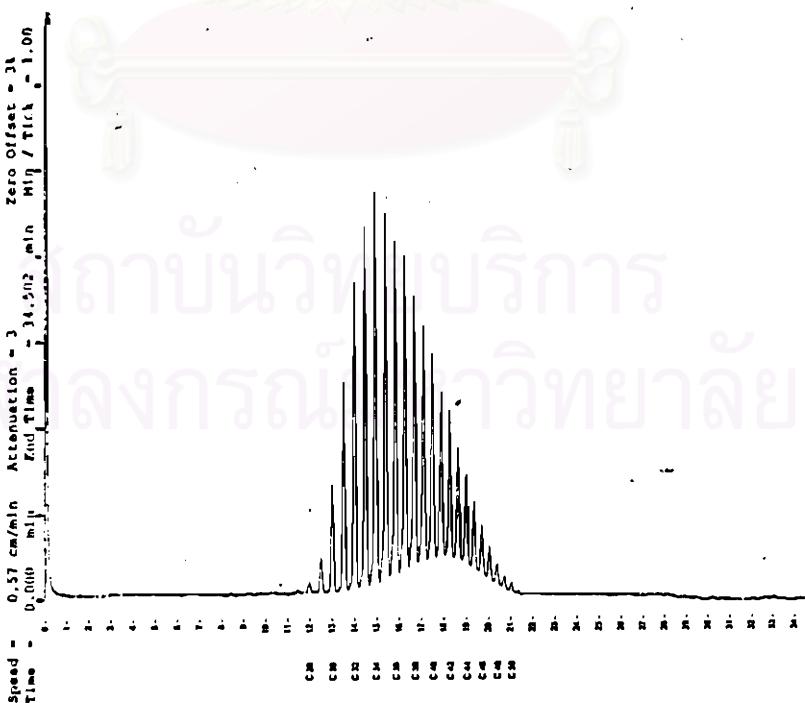
**Figure A19** GC chromatogram of soluble wax from 1<sup>st</sup> extraction of 600SW at 55°C by using MEK



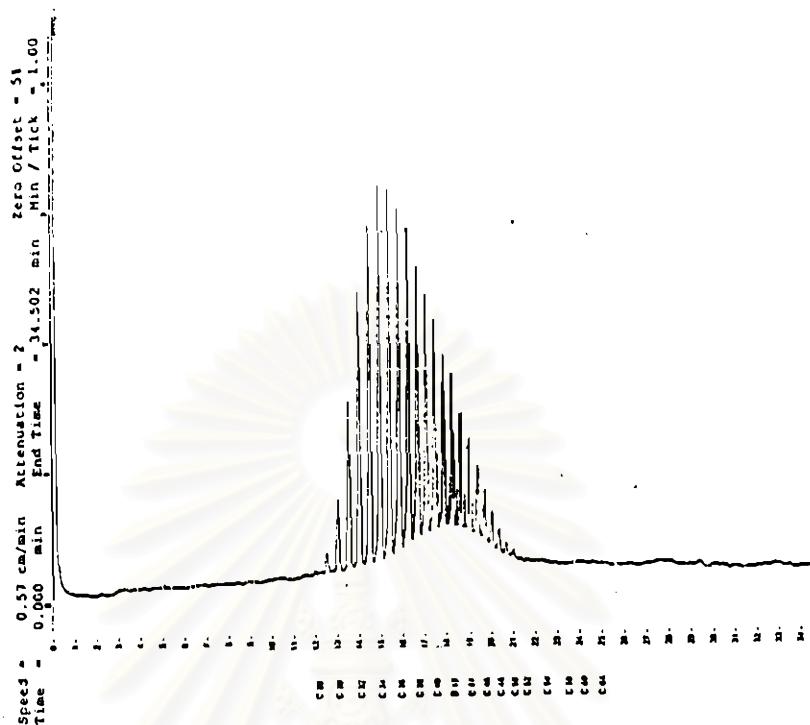
**Figure A20** GC chromatogram of wax cake from extraction of 500SW at 15°C by using toluene



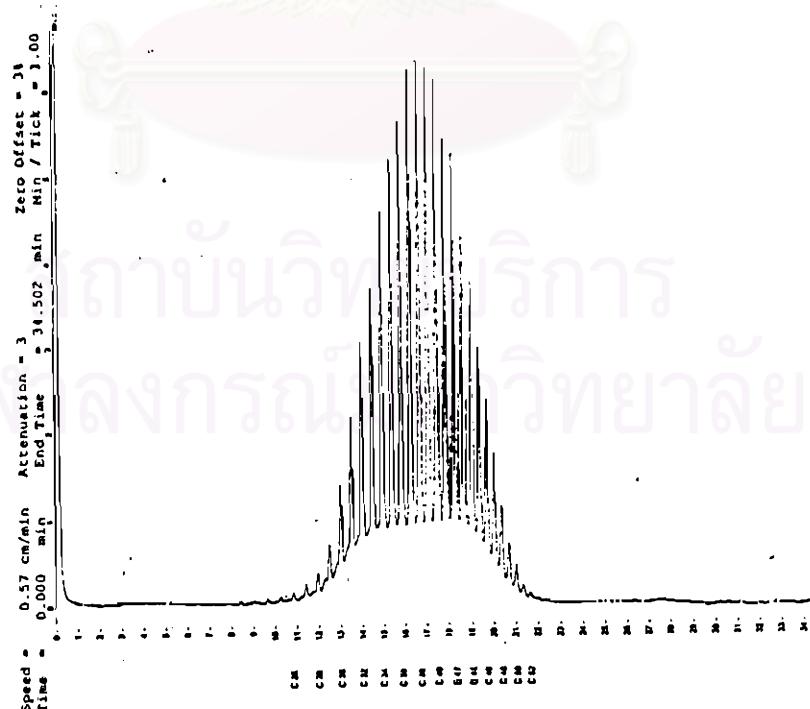
**Figure A21** GC chromatogram of wax cake from extraction of 500SW at 20°C by using toluene



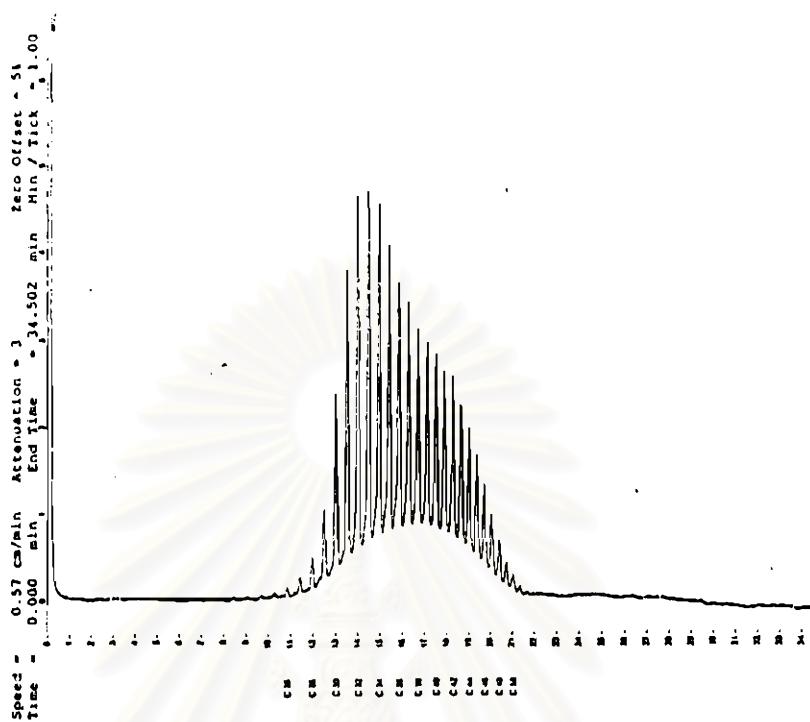
**Figure A22** GC chromatogram of wax cake from extraction of 500SW at 25°C by using toluene



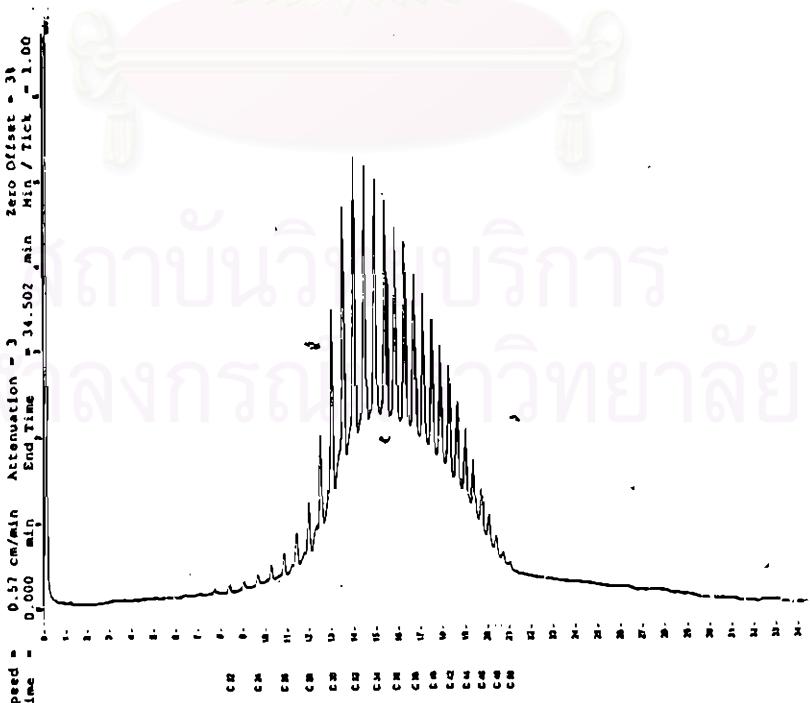
**Figure A23** GC chromatogram of wax cake from extraction of 500SW at 30°C by using toluene



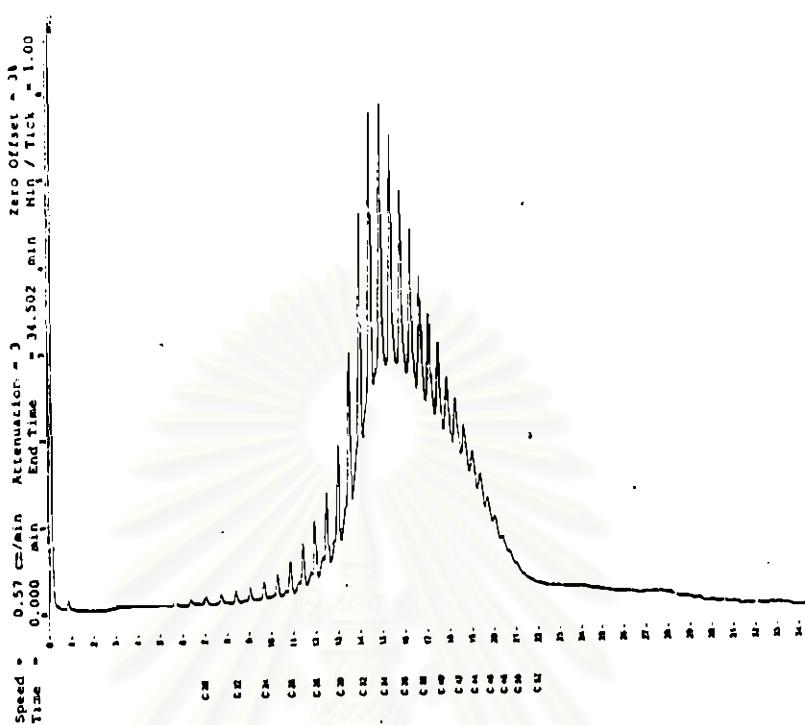
**Figure A24** GC chromatogram of wax cake from extraction of 500SW at 35°C by using toluene



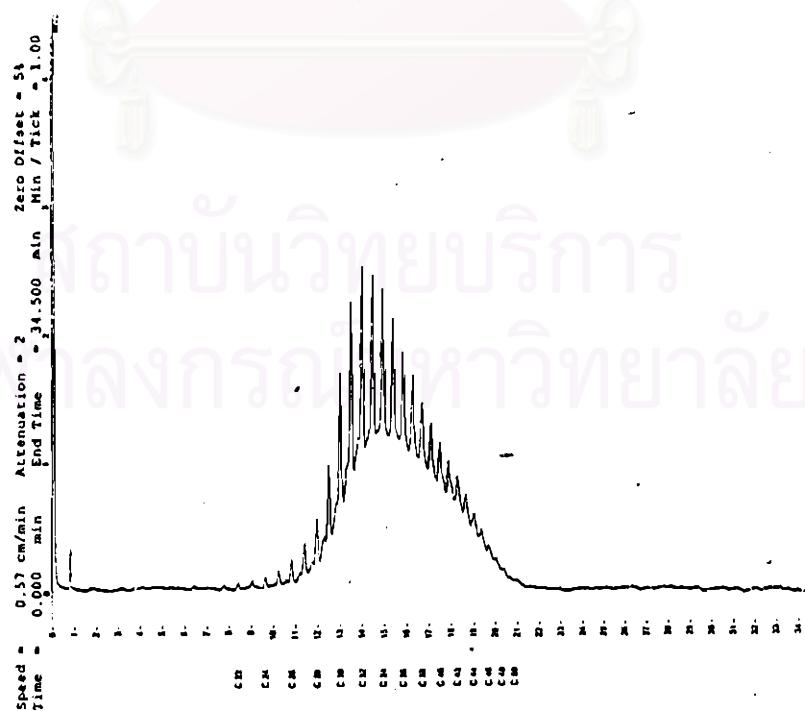
**Figure A25** GC chromatogram of wax cake from extraction of 500SW at 40°C by using toluene



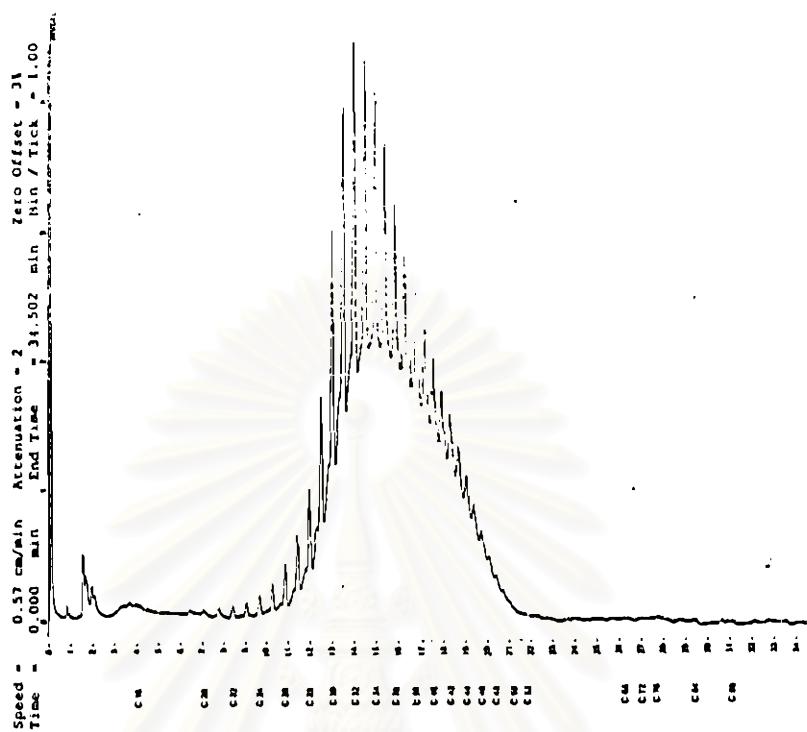
**Figure A26** GC chromatogram of wax cake from extraction of 500SW at 45°C by using toluene



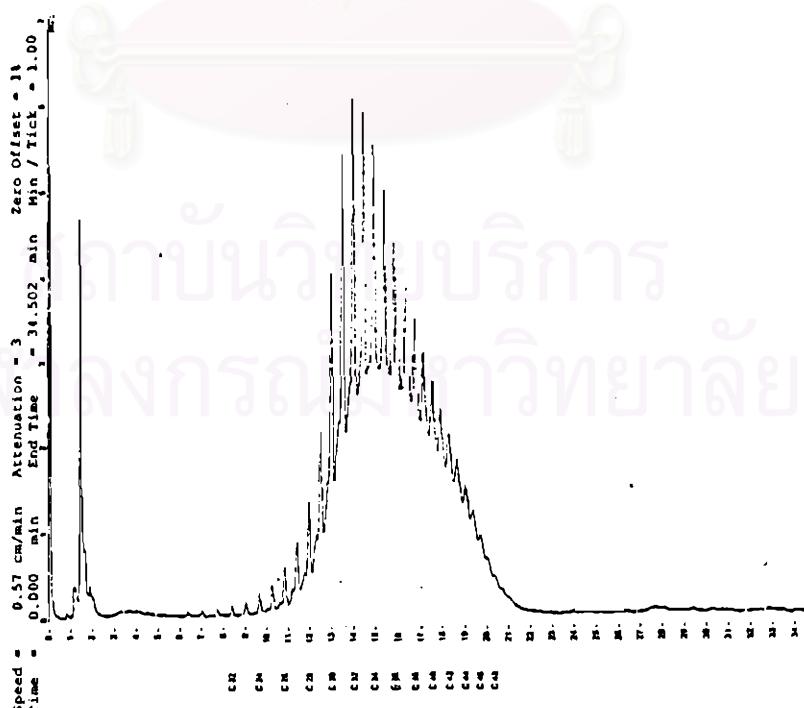
**Figure A27** GC chromatogram of soluble wax from extraction of 500SW at 15°C by using toluene



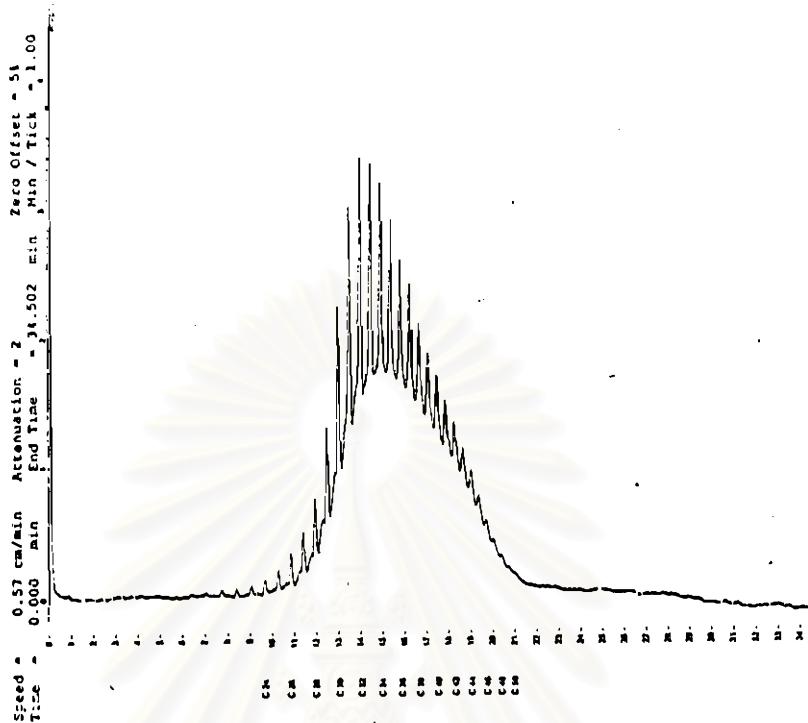
**Figure A28** GC chromatogram of soluble wax from extraction of 500SW at 20°C by using toluene



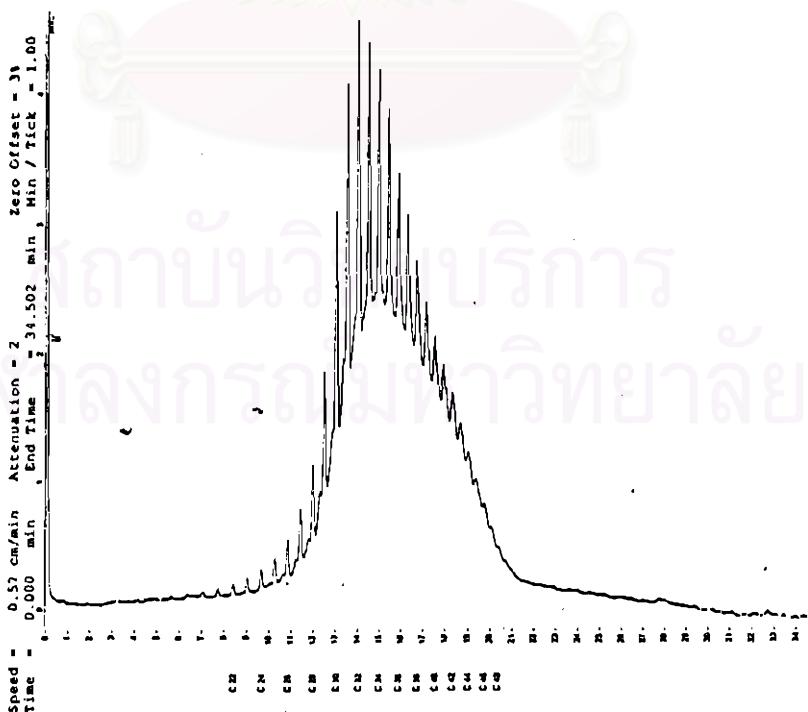
**Figure A29** GC chromatogram of soluble wax from extraction of 500SW at 25°C by using toluene



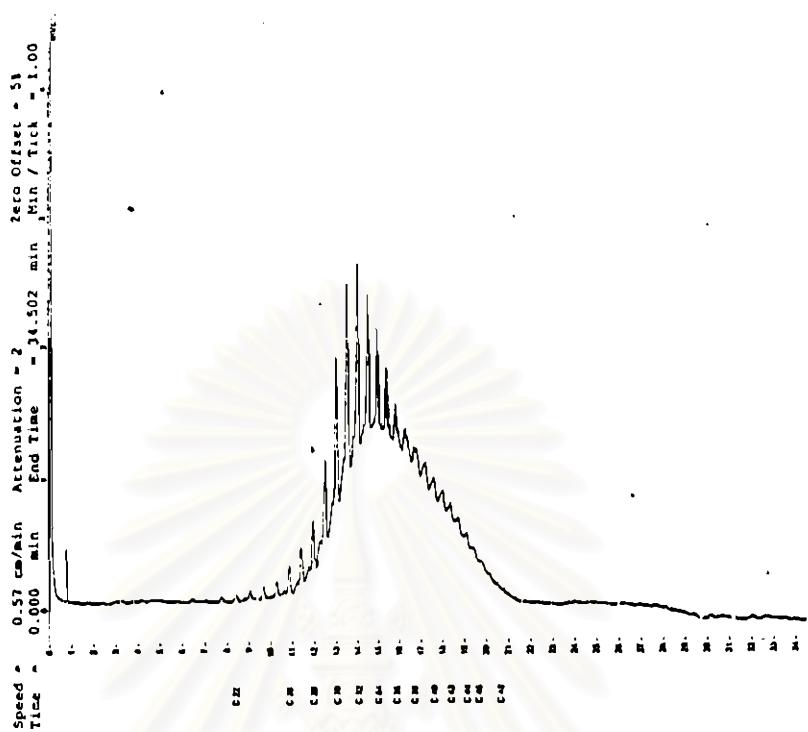
**Figure A30** GC chromatogram of soluble wax from extraction of 500SW at 30°C by using toluene



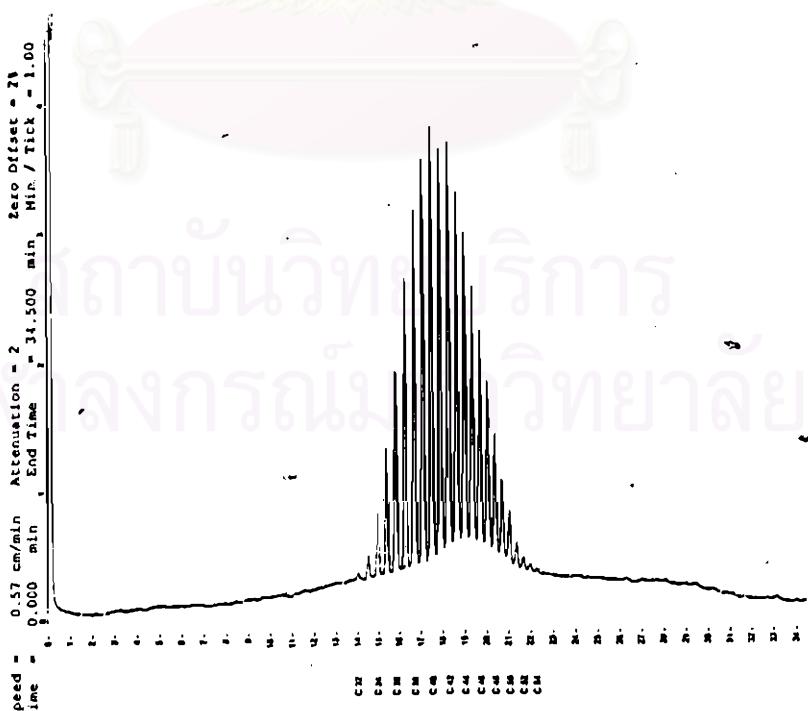
**Figure A31** GC chromatogram of soluble wax from extraction of 500SW at 35°C by using toluene



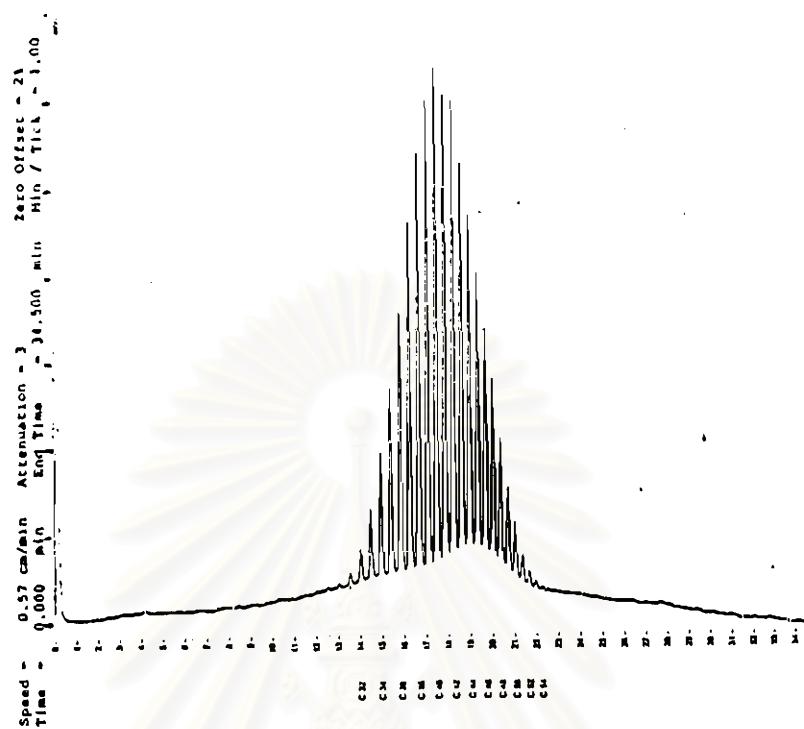
**Figure A32** GC chromatogram of soluble wax from extraction of 500SW at 40°C by using toluene



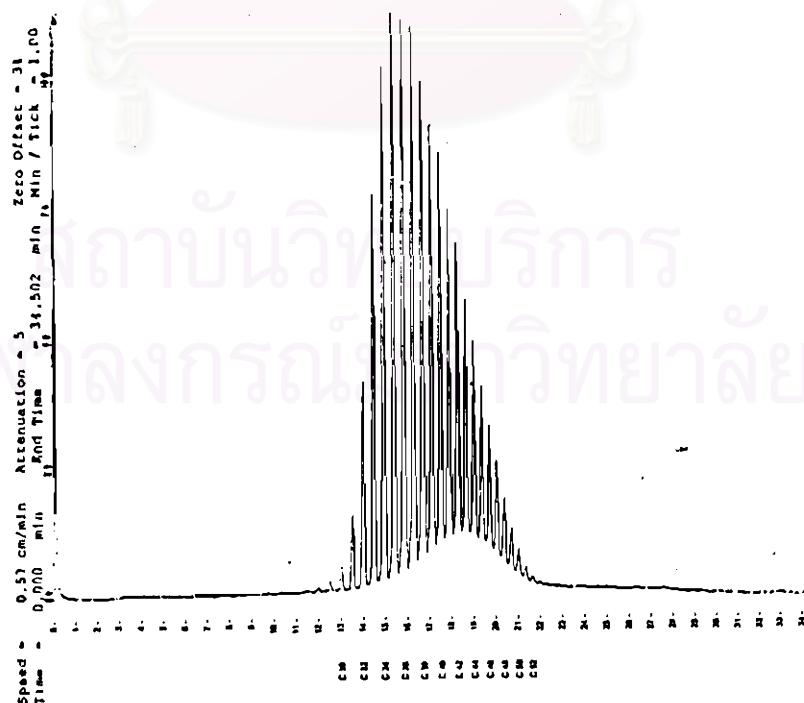
**Figure A33** GC chromatogram of soluble wax from extraction of 500SW at 45°C by using toluene



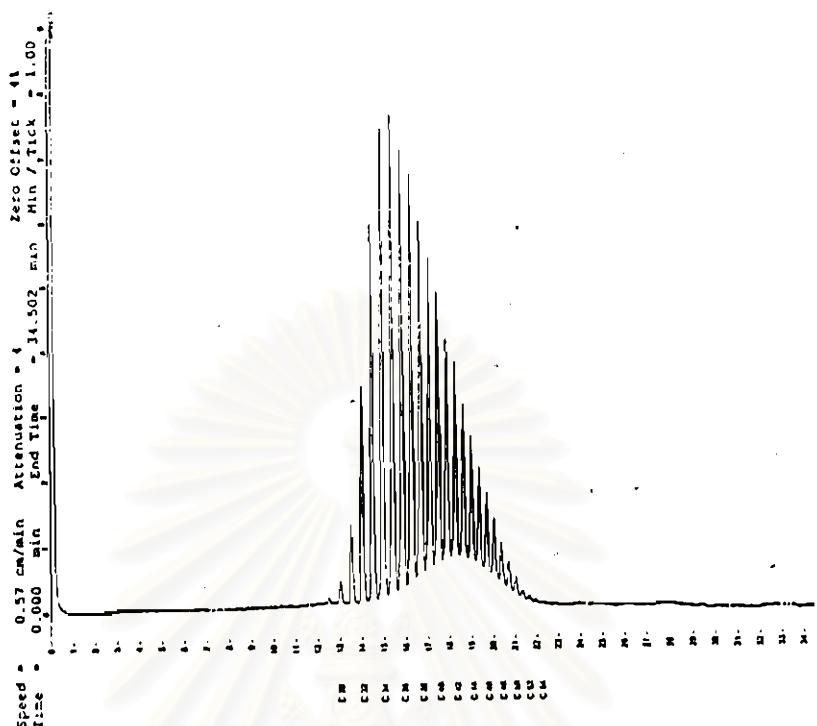
**Figure A34** GC chromatogram of wax cake from extraction of 600SW at 15°C by using toluene



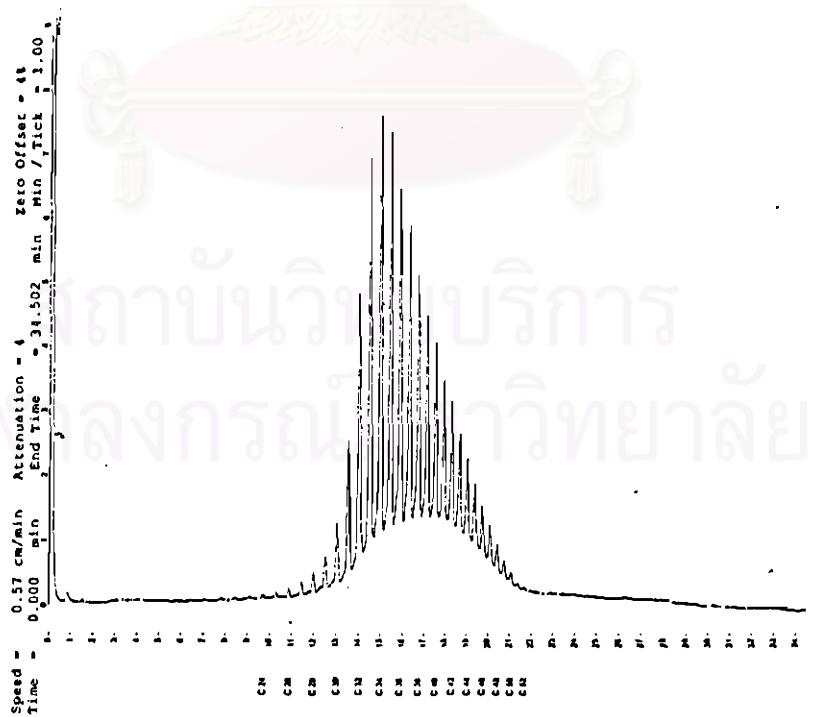
**Figure A35** GC chromatogram of wax cake from extraction of 600SW at 20°C by using toluene



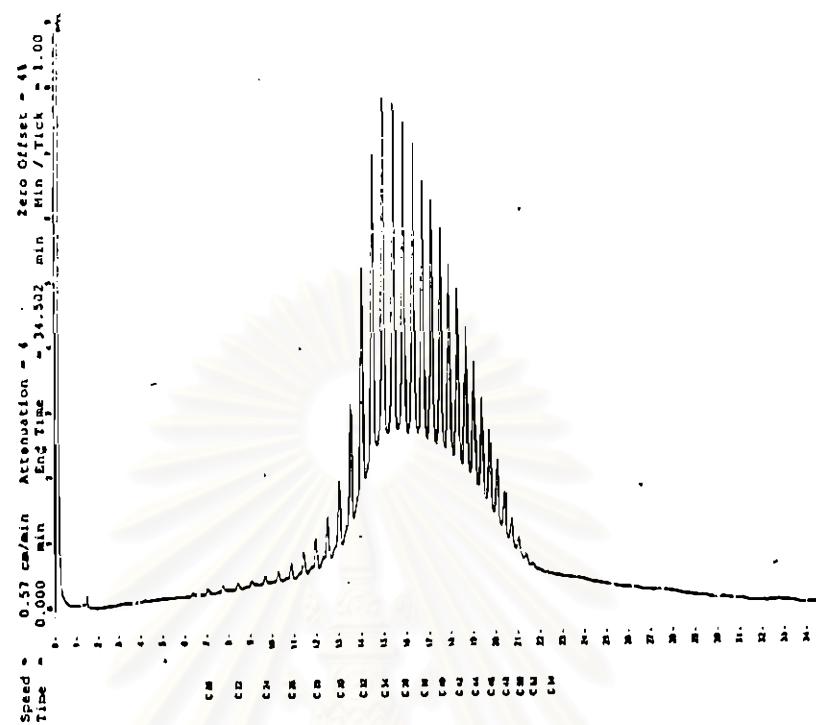
**Figure A36** GC chromatogram of wax cake from extraction of 600SW at 25°C by using toluene



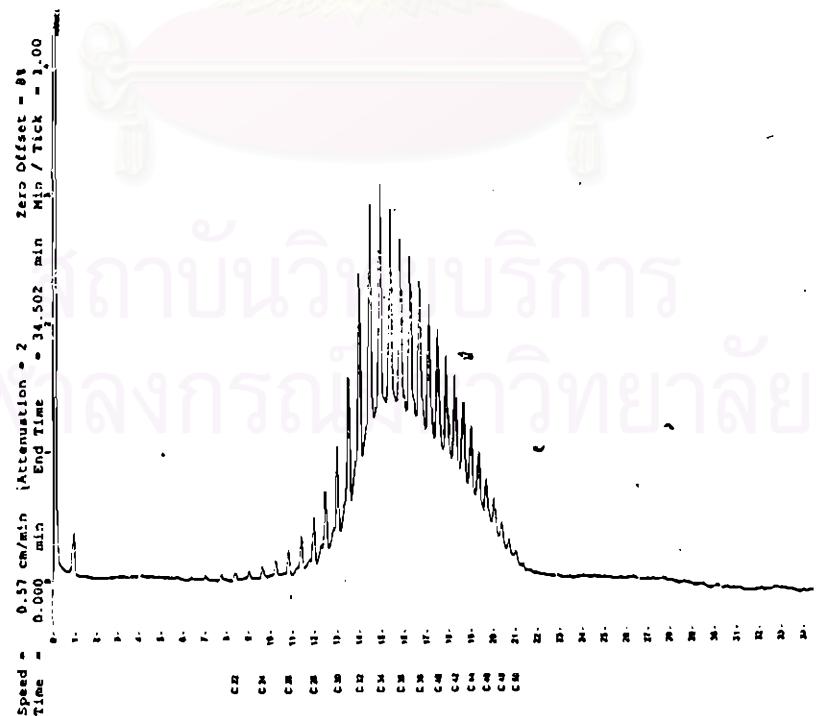
**Figure A37** GC chromatogram of wax cake from extraction of 600SW at 30°C by using toluene



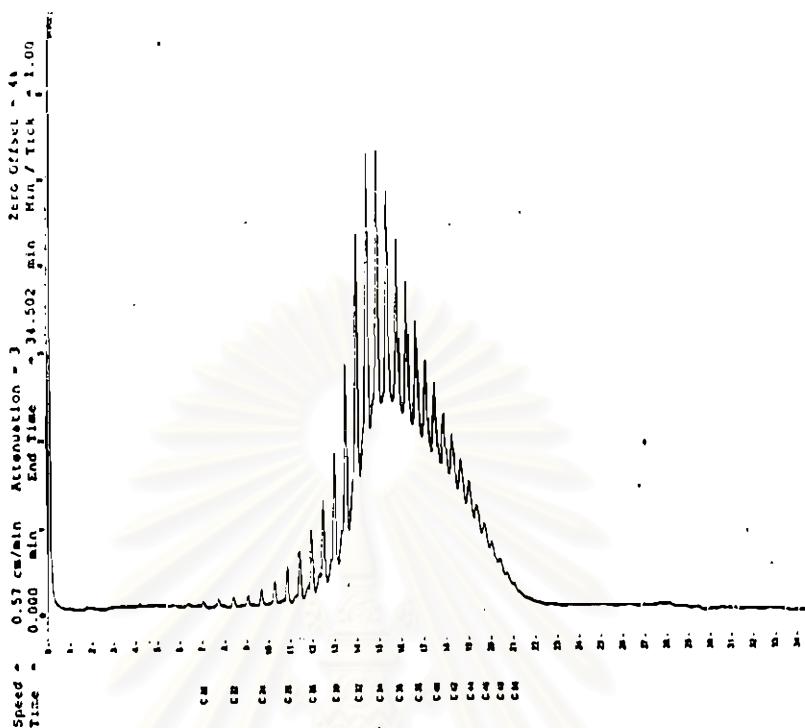
**Figure A38** GC chromatogram of wax cake from extraction of 600SW at 35°C by using toluene



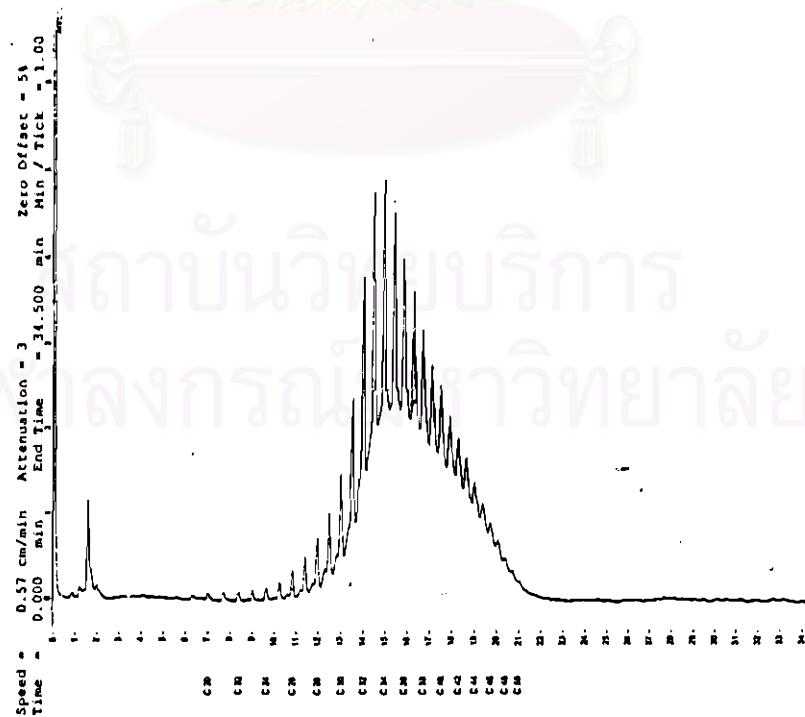
**Figure A39** GC chromatogram of wax cake from extraction of 600SW at 40°C by using toluene



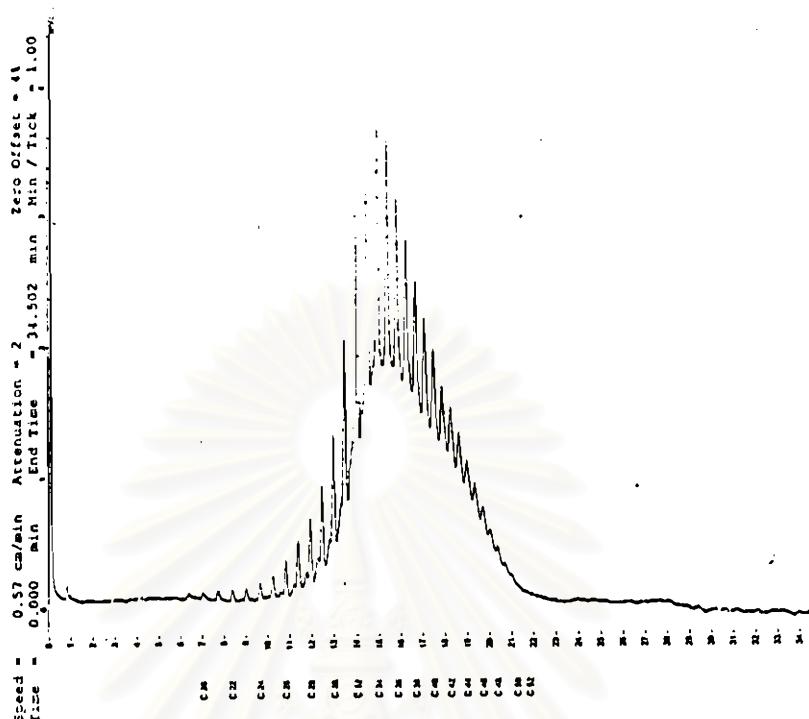
**Figure A40** GC chromatogram of wax cake from extraction of 600SW at 45°C by using toluene



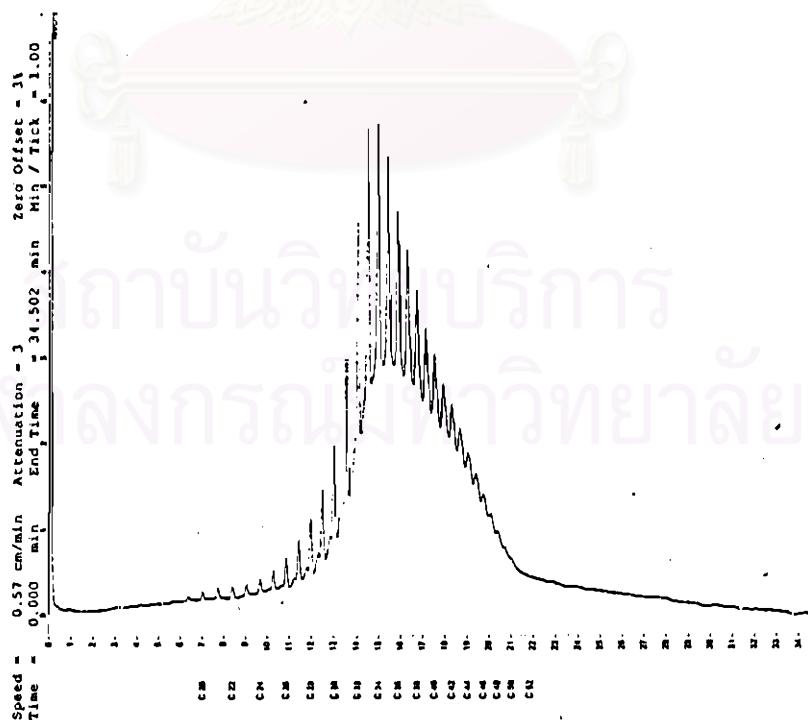
**Figure A41** GC chromatogram of soluble wax from extraction of 600SW at 15°C by using toluene



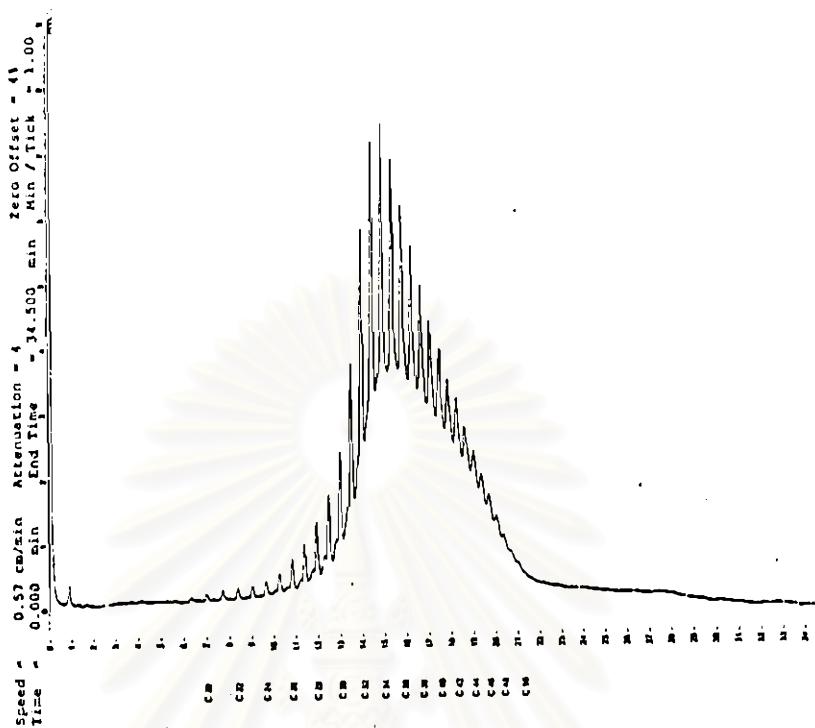
**Figure A42** GC chromatogram of soluble wax from extraction of 600SW at 20°C by using toluene



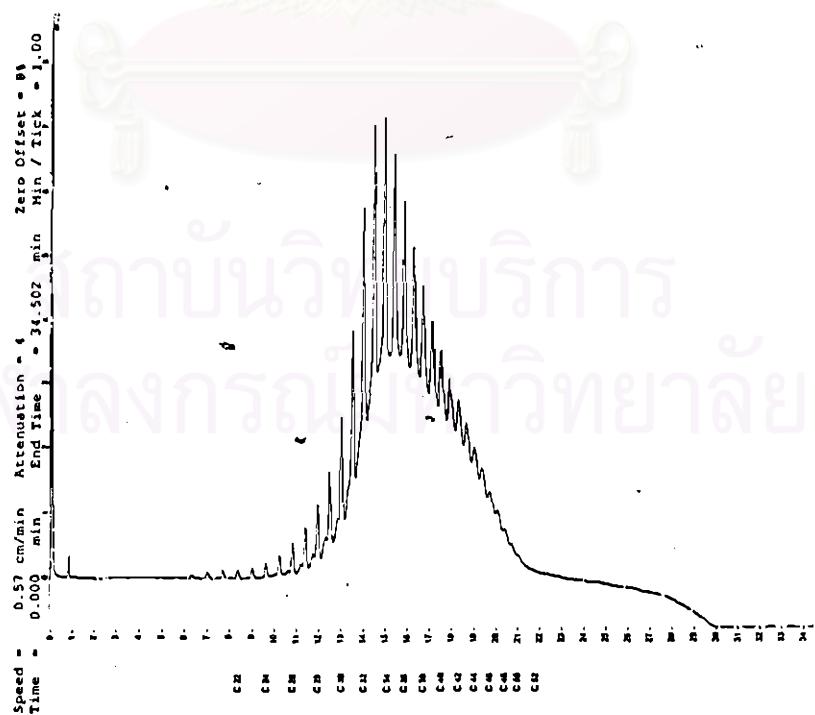
**Figure A43** GC chromatogram of soluble wax from extraction of 600SW at 25°C by using toluene



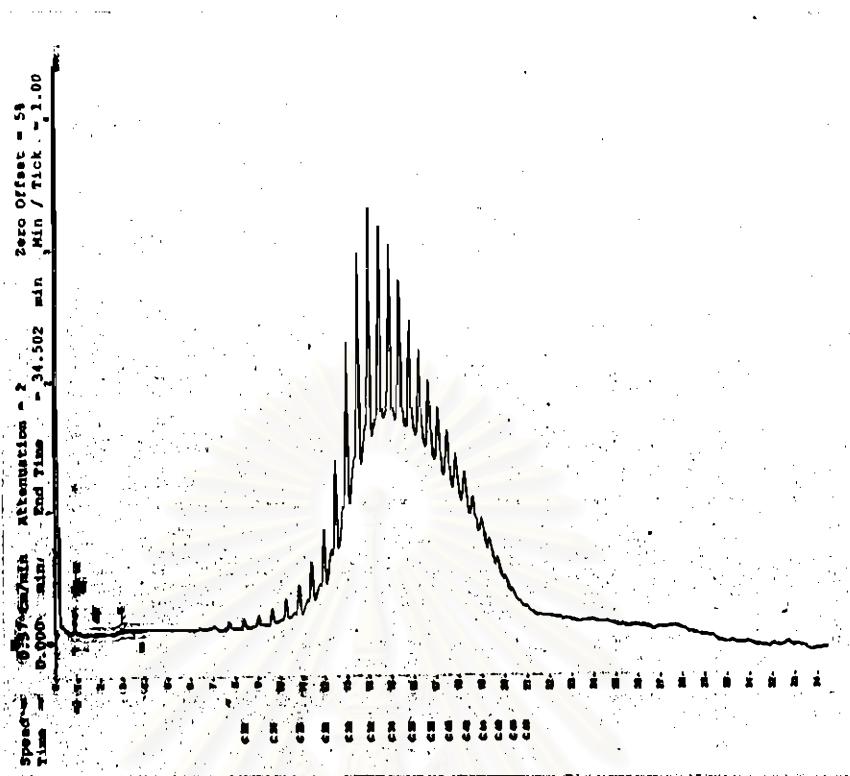
**Figure A44** GC chromatogram of soluble wax from extraction of 600SW at 30°C by using toluene



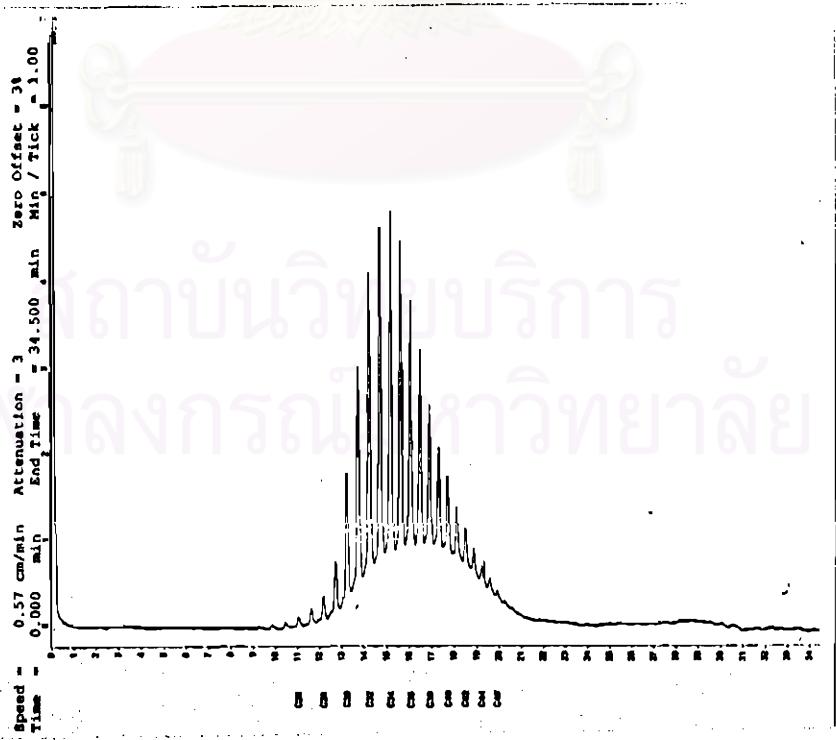
**Figure A45** GC chromatogram of soluble wax from extraction of 600SW at 35°C by using toluene



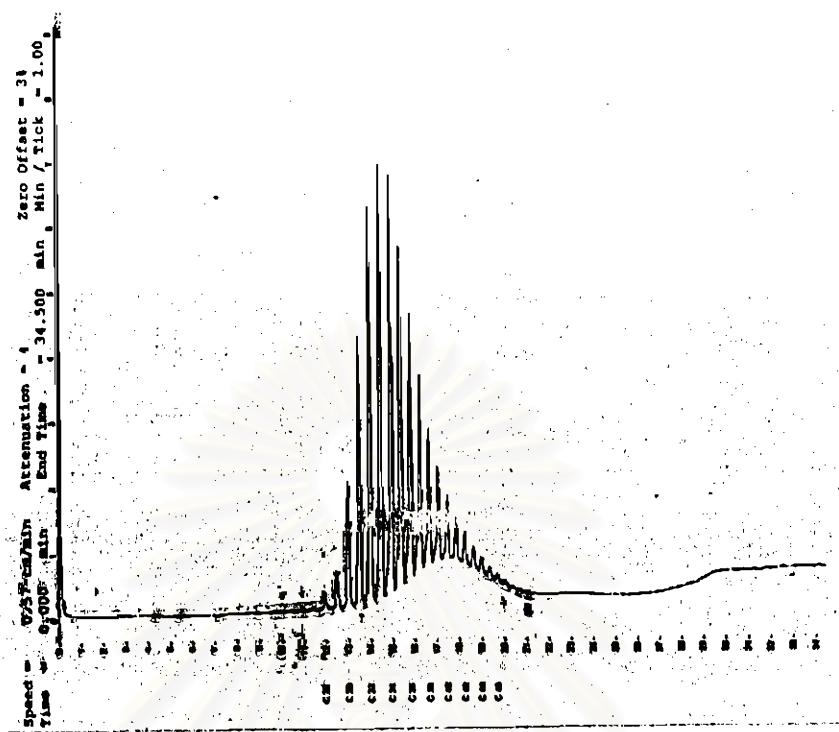
**Figure A46** GC chromatogram of soluble wax from extraction of 600SW at 40°C by using toluene



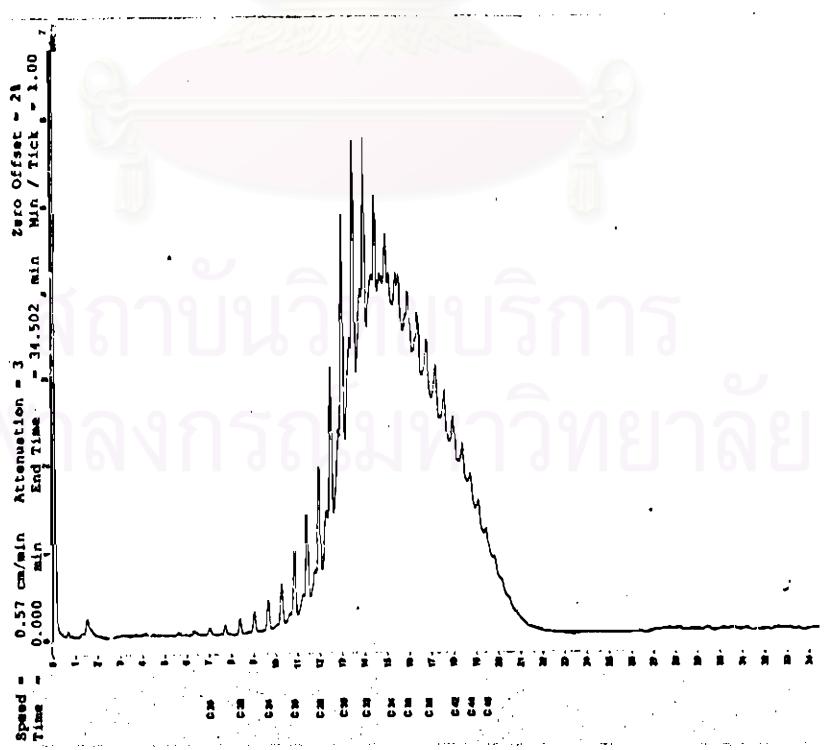
**Figure A47** GC chromatogram of soluble wax from extraction of 600SW at 45°C by using toluene



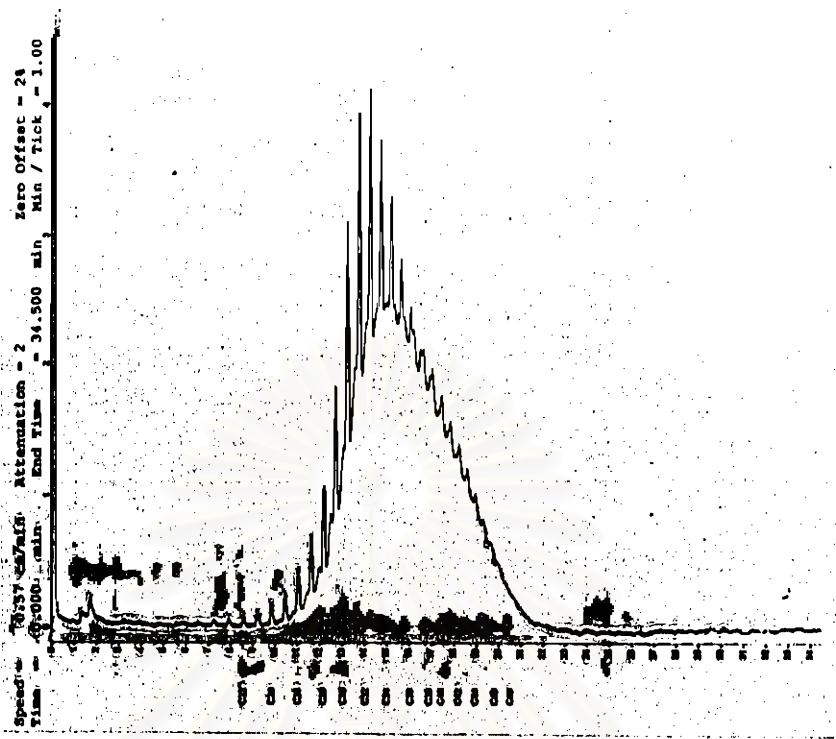
**Figure A48** GC chromatogram of wax cake from 2<sup>nd</sup> extraction of MEK-soluble wax (from 1<sup>st</sup> extraction of 500SW) at 45°C by using MEK



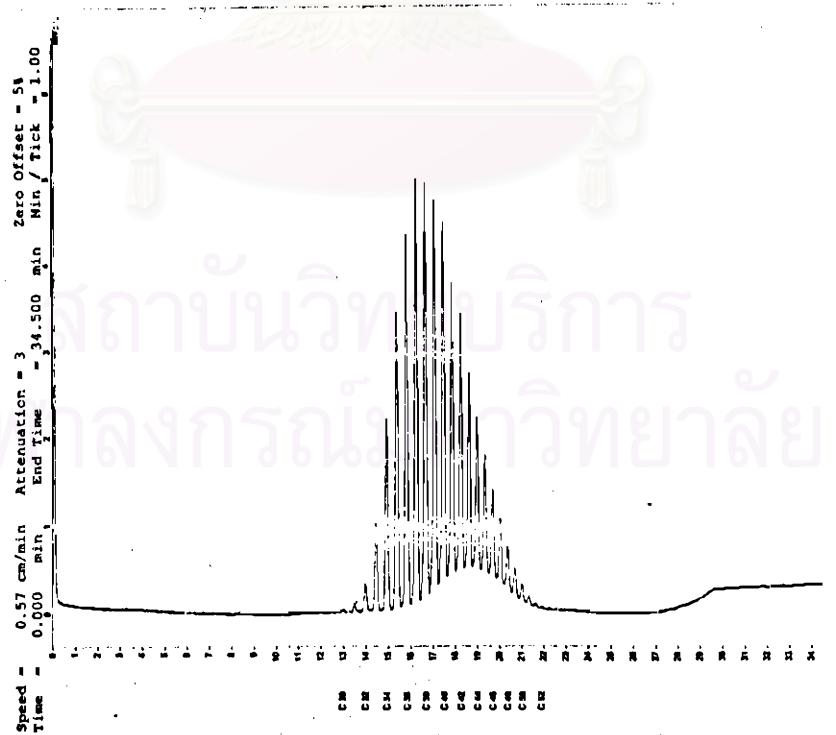
**Figure A49** GC chromatogram of wax cake from 2<sup>nd</sup> extraction of MEK-soluble wax (from 1<sup>st</sup> extraction of 500SW) at 50°C by using MEK



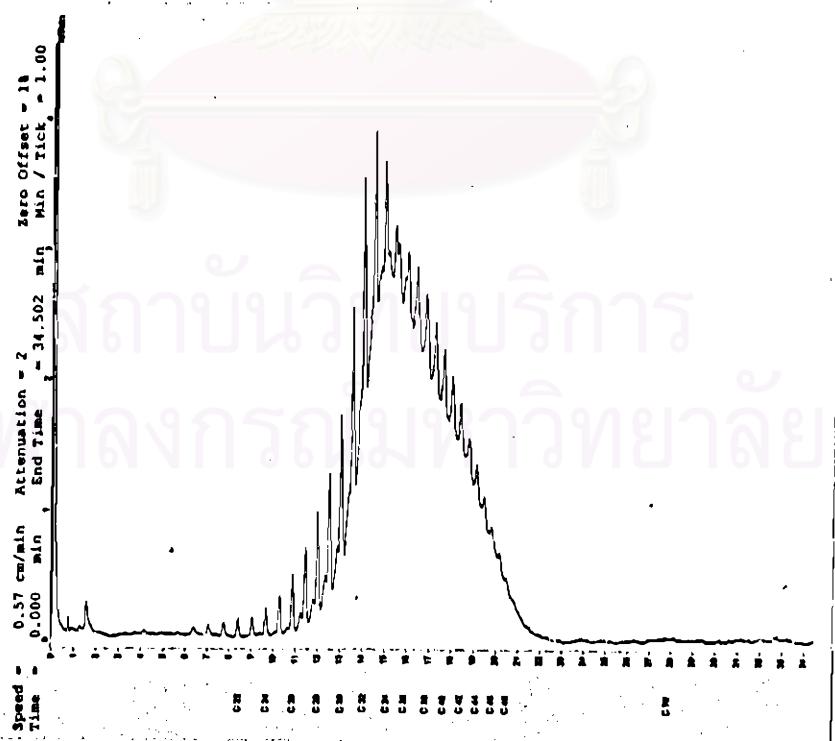
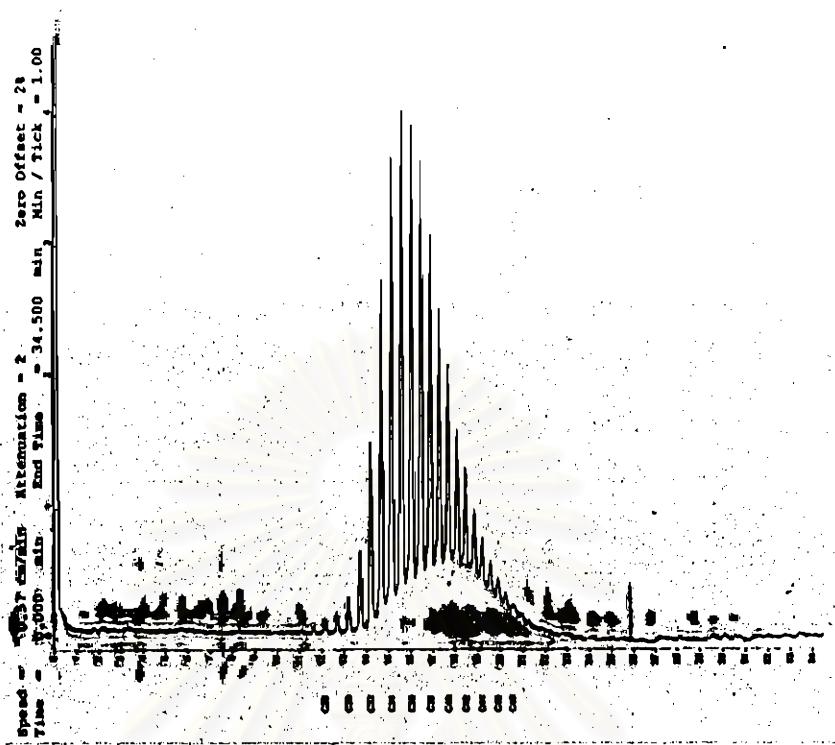
**Figure A50** GC chromatogram of soluble wax from 2<sup>nd</sup> extraction of MEK-soluble wax (from 1<sup>st</sup> extraction of 500SW) at 45°C by using MEK



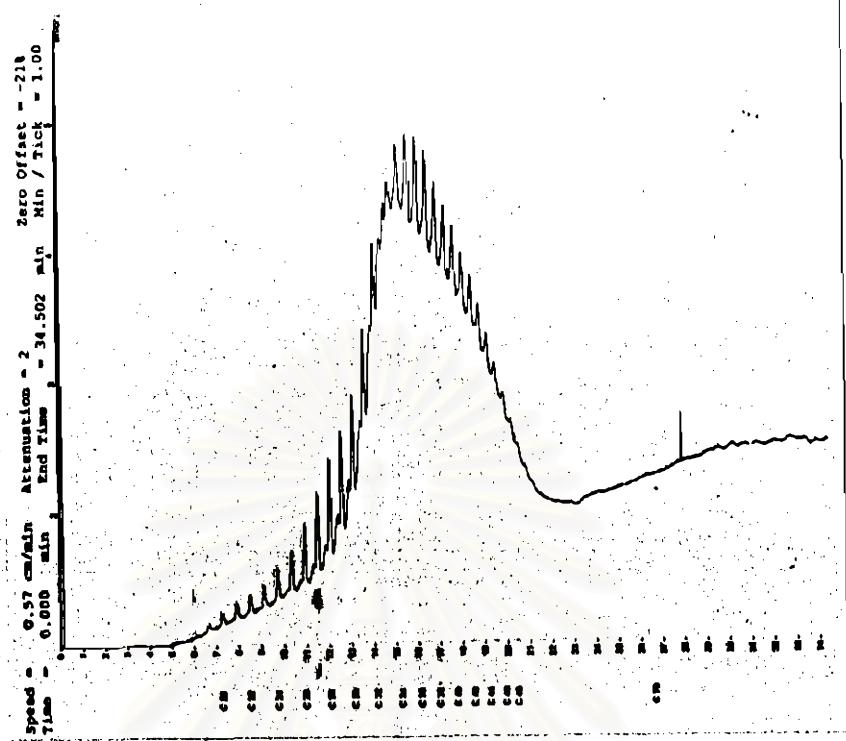
**Figure A51** GC chromatogram of soluble wax from 2<sup>nd</sup> extraction of MEK-soluble wax (from 1<sup>st</sup> extraction of 500SW) at 50°C by using MEK



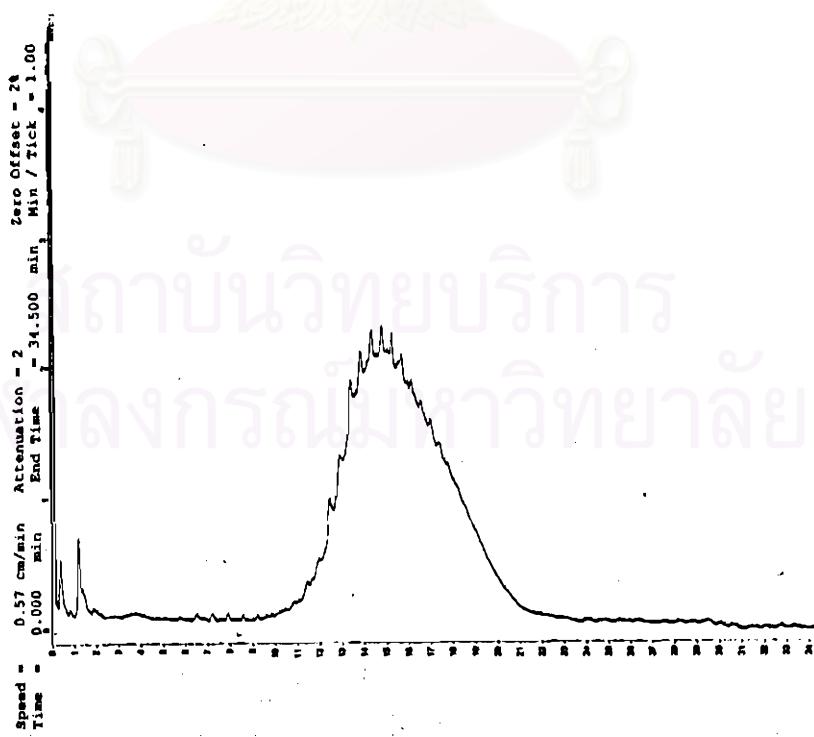
**Figure A52** GC chromatogram of wax cake from 2<sup>nd</sup> extraction of MEK-soluble wax (from 1<sup>st</sup> extraction of 600SW) at 45°C by using MEK



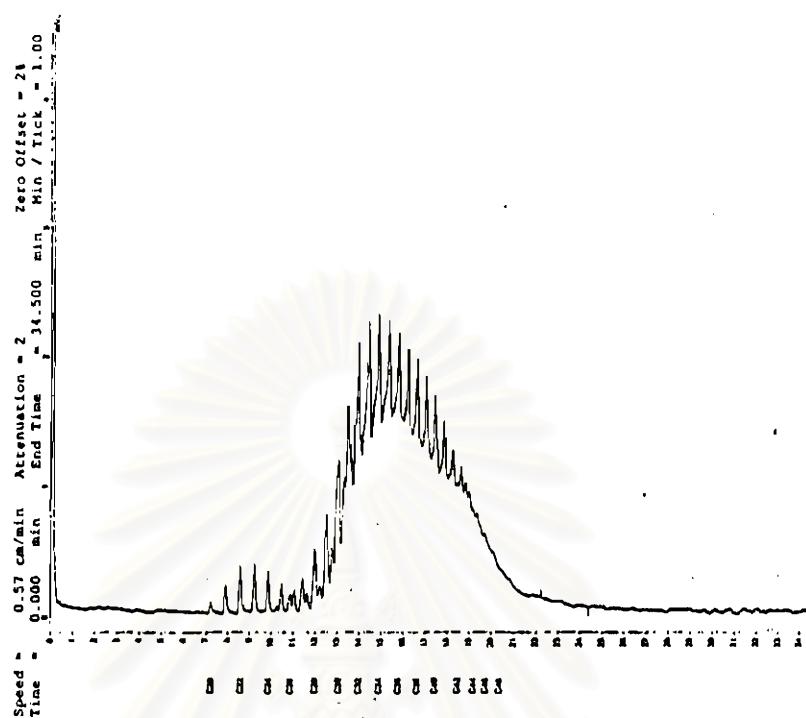
**Figure A54** GC chromatogram of soluble wax from 2<sup>nd</sup> extraction of MEK-soluble wax (from 1<sup>st</sup> extraction of 600SW) at 45°C by using MEK



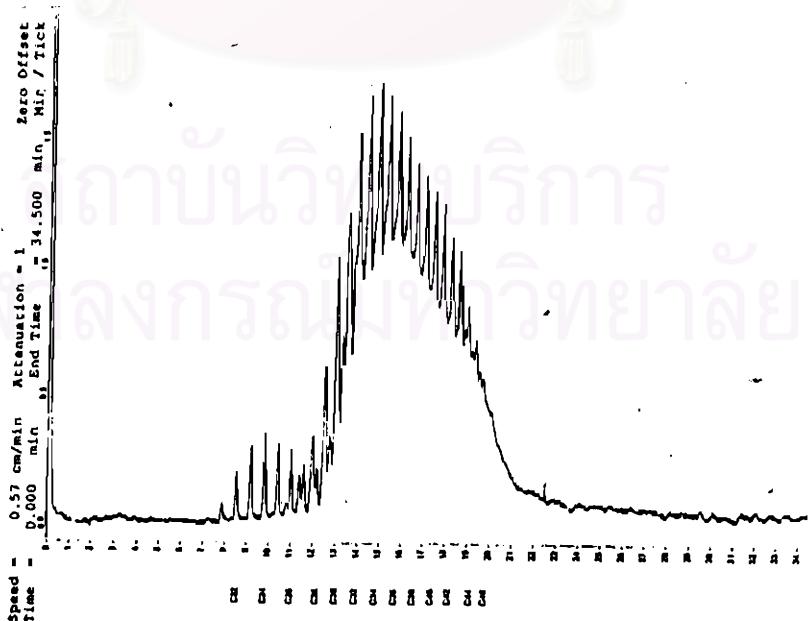
**Figure A55** GC chromatogram of soluble wax from 2<sup>nd</sup> extraction of MEK-soluble wax (from 1<sup>st</sup> extraction of 600SW) at 50°C by using MEK



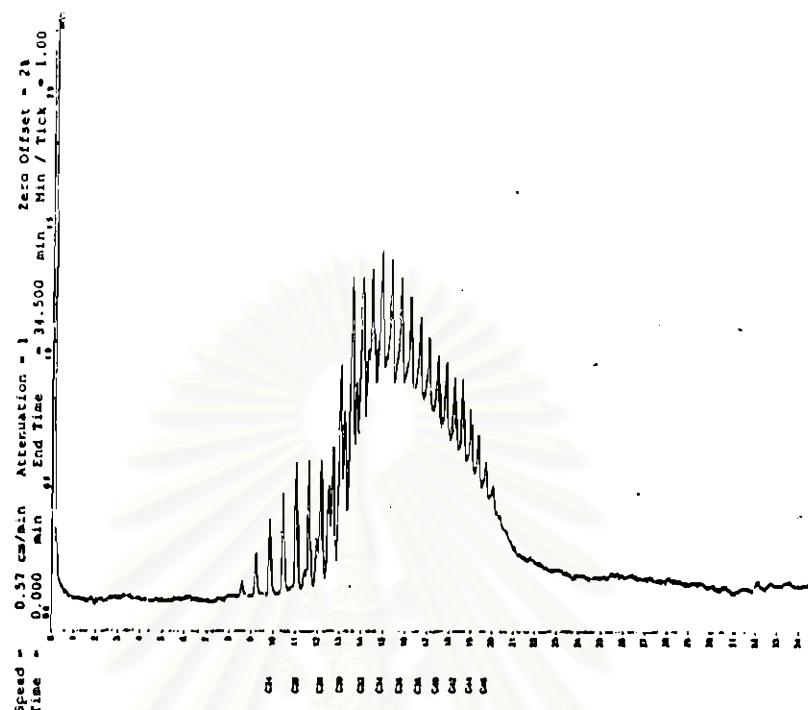
**Figure A56** GC chromatogram of residual oil from fractional crystallization of 500SW at -20°C in MEK



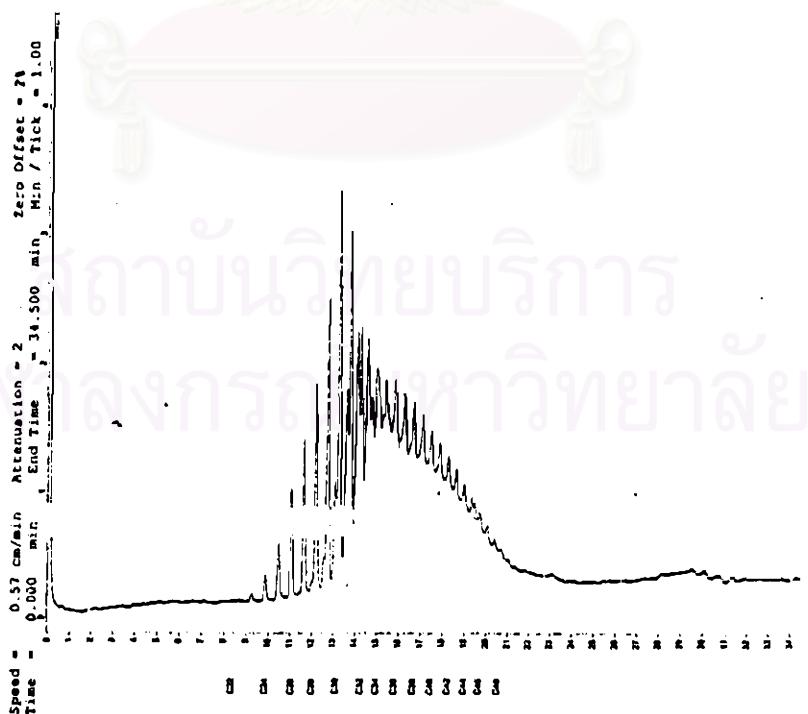
**Figure A57** GC chromatogram of crystallized wax from fractional crystallization of 500SW at  $-20^{\circ}\text{C}$  in MEK



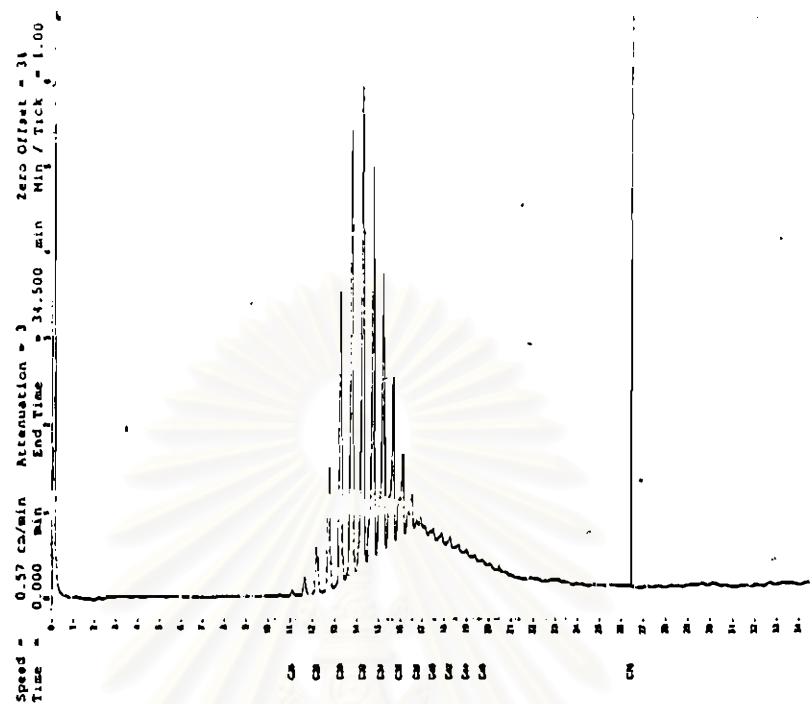
**Figure A58** GC chromatogram of crystallized wax from fractional crystallization of 500SW at  $-10^{\circ}\text{C}$  in MEK



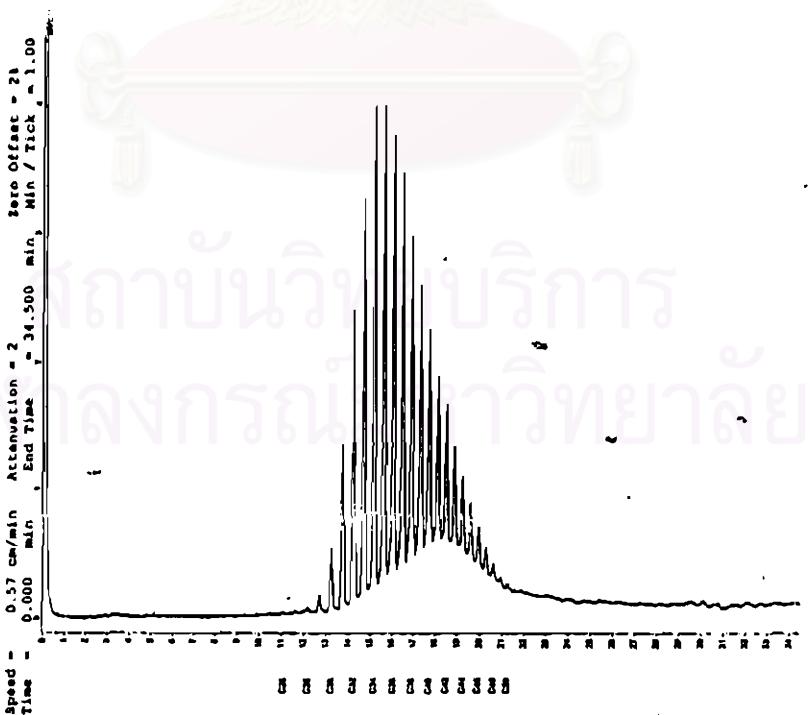
**Figure A59** GC chromatogram of crystallized wax from fractional crystallization of 500SW at 0°C in MEK



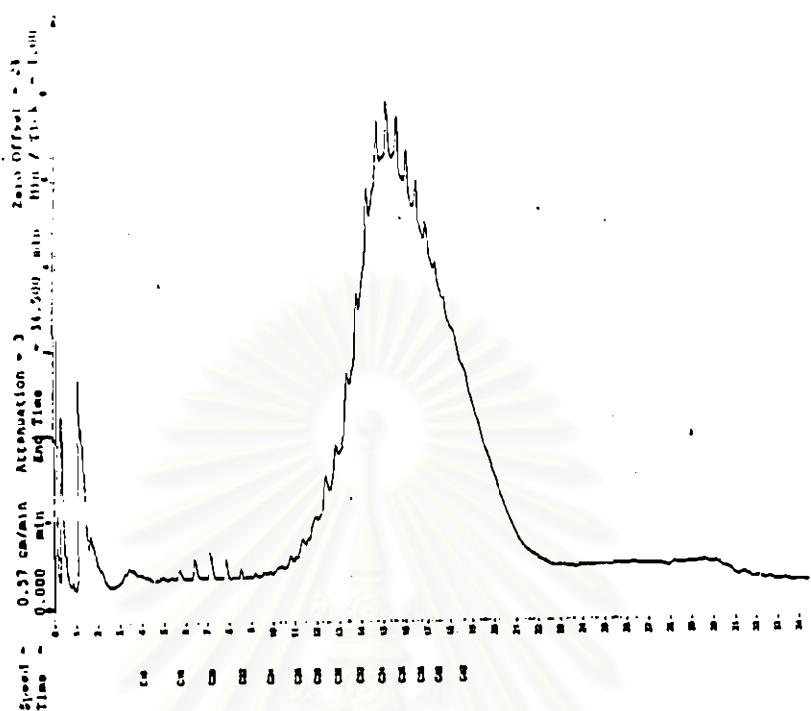
**Figure A60** GC chromatogram of crystallized wax from fractional crystallization of 500SW at 10°C in MEK



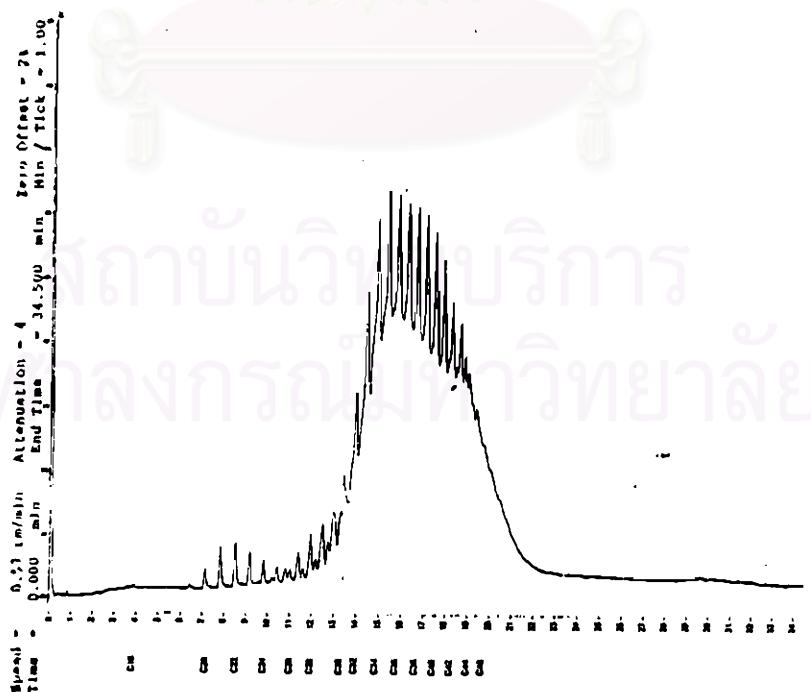
**Figure A61** GC chromatogram of crystallized wax from fractional crystallization of 500SW at 20°C in MEK



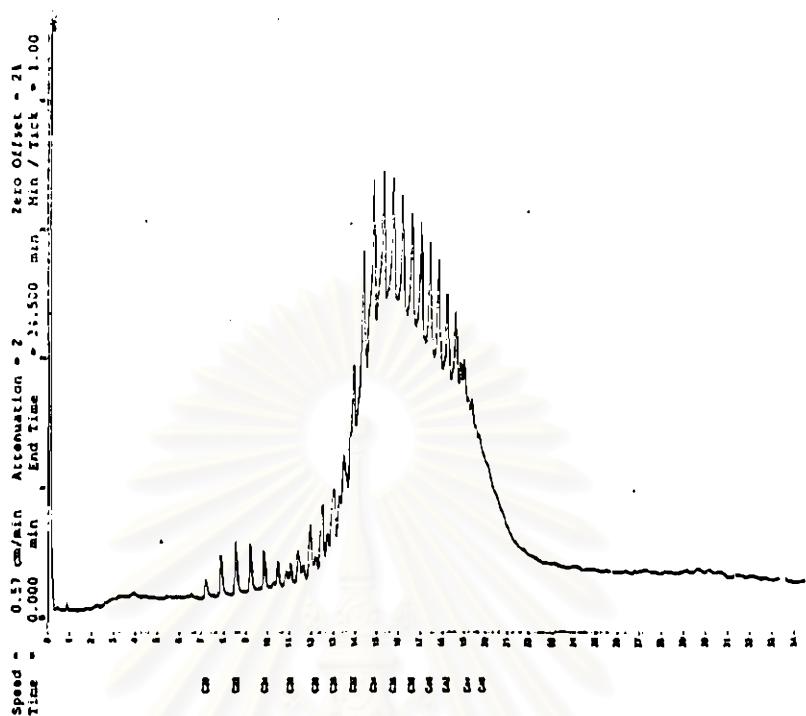
**Figure A62** GC chromatogram of crystallized wax from fractional crystallization of 500SW at 30°C in MEK



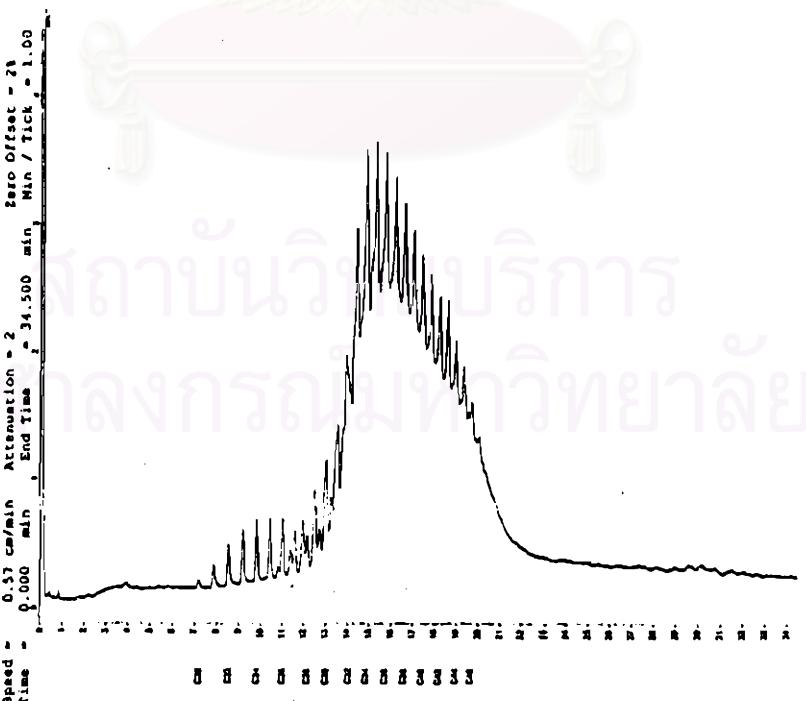
**Figure A63** GC chromatogram of residual oil from fractional crystallization of 600SW at -20°C in MEK



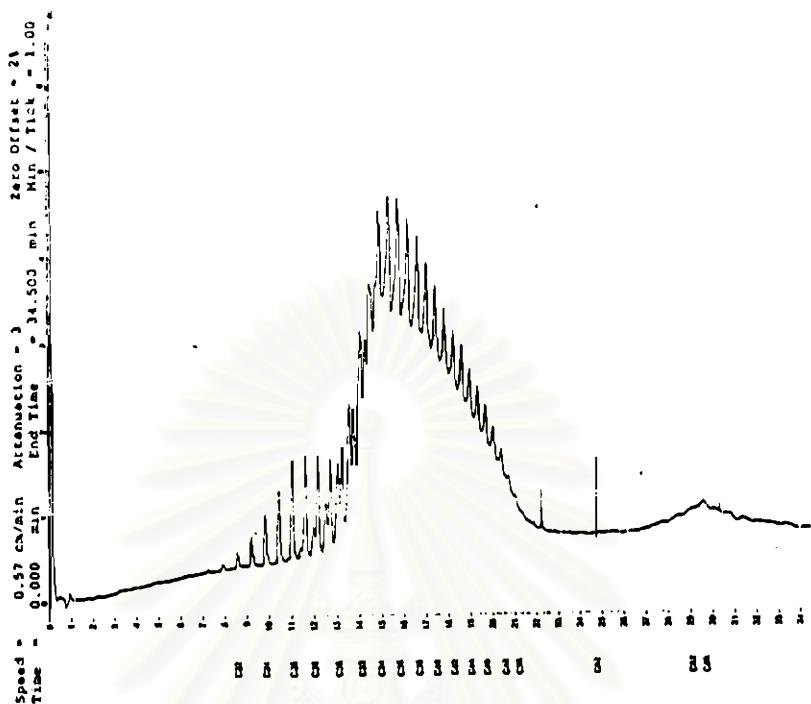
**Figure A64** GC chromatogram of crystallized wax from fractional crystallization of 600SW at -20°C in MEK



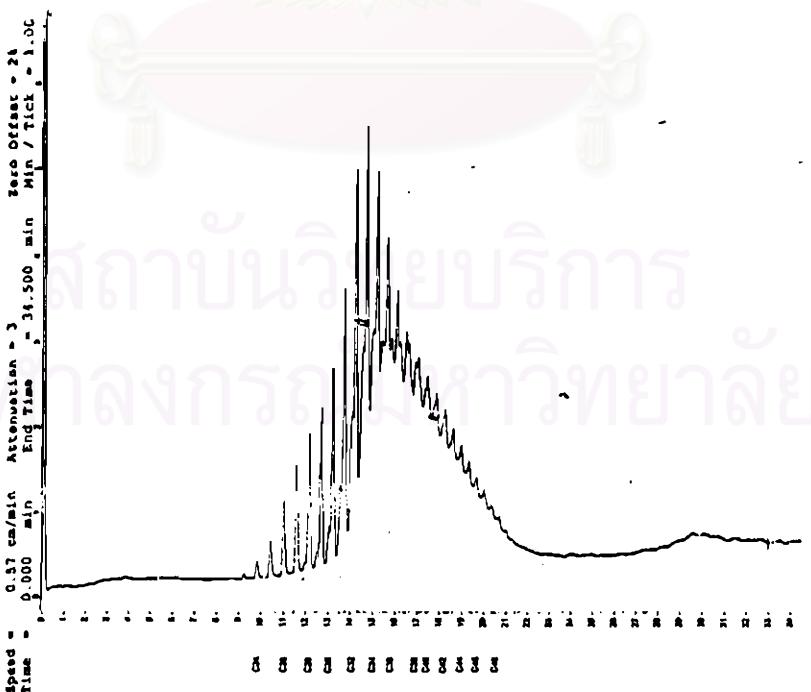
**Figure A65** GC chromatogram of crystallized wax from fractional crystallization of 600SW at -10°C in MEK



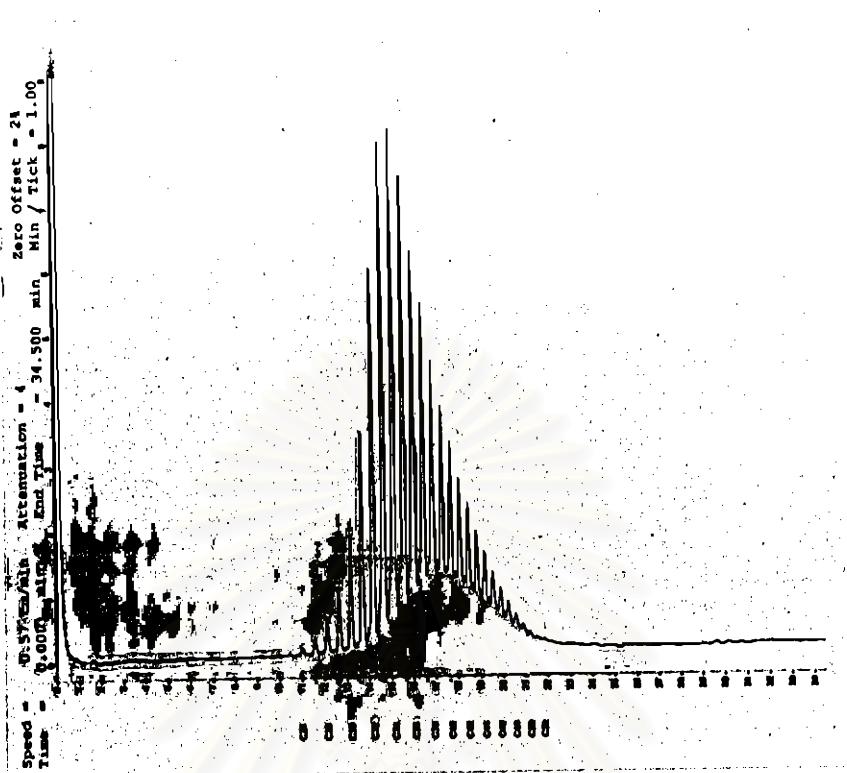
**Figure A66** GC chromatogram of crystallized wax from fractional crystallization of 600SW at 0°C in MEK



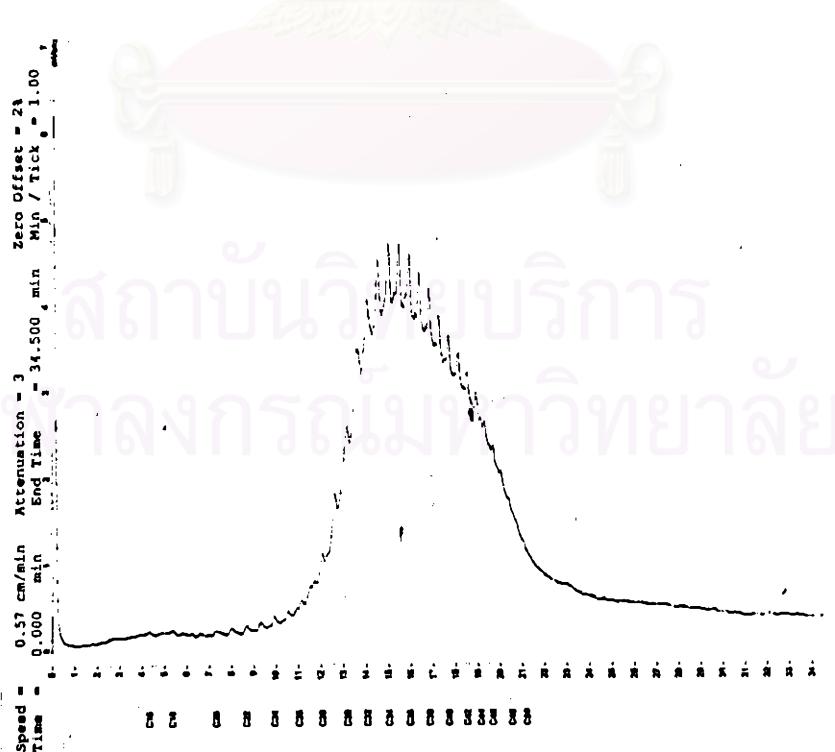
**Figure A67** GC chromatogram of crystallized wax from fractional crystallization of 600SW at 10°C in MEK



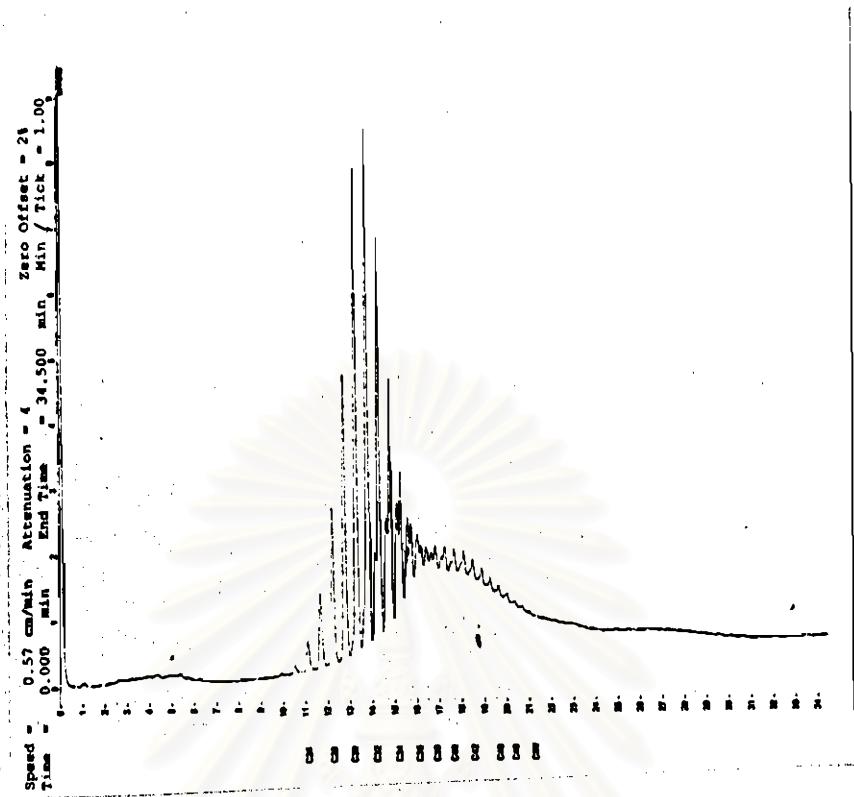
**Figure A68** GC chromatogram of crystallized wax from fractional crystallization of 600SW at 20°C in MEK



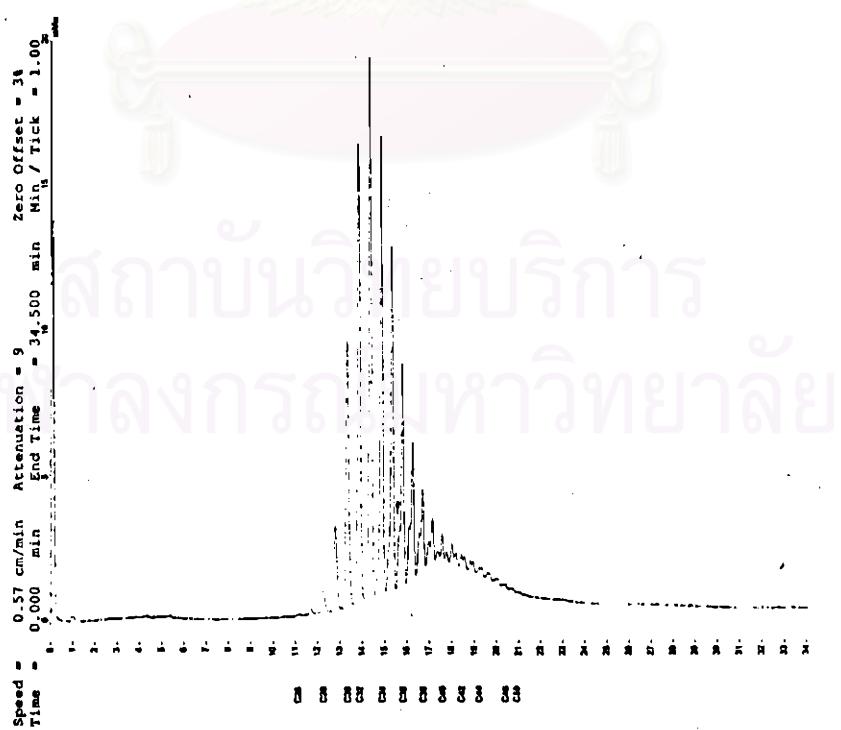
**Figure A69** GC chromatogram of crystallized wax from fractional crystallization of 600SW at 30°C in MEK



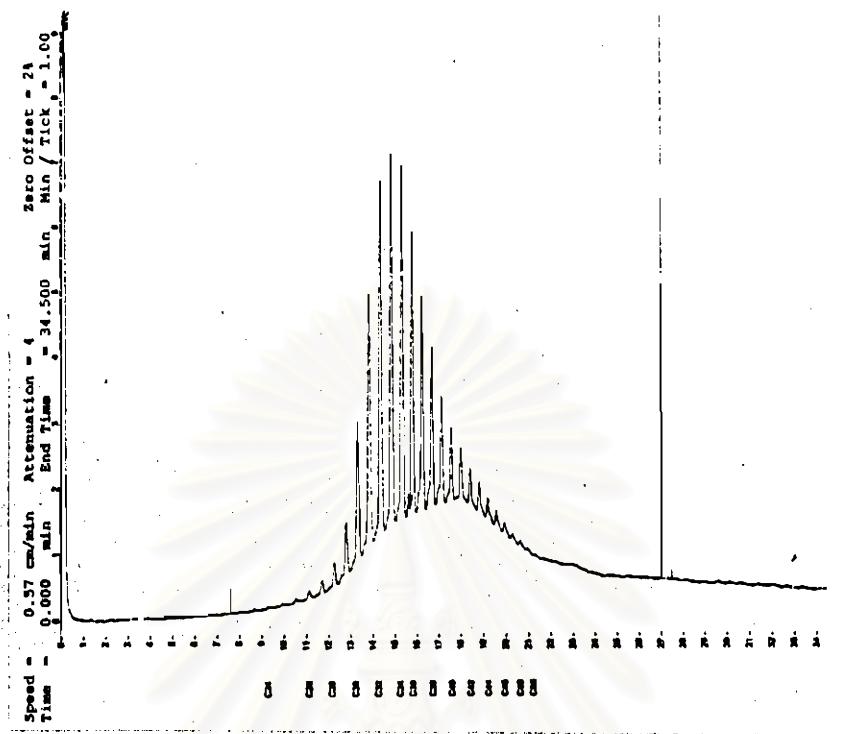
**Figure A70** GC chromatogram of residual oil from fractional crystallization of 500SW at -20°C in toluene



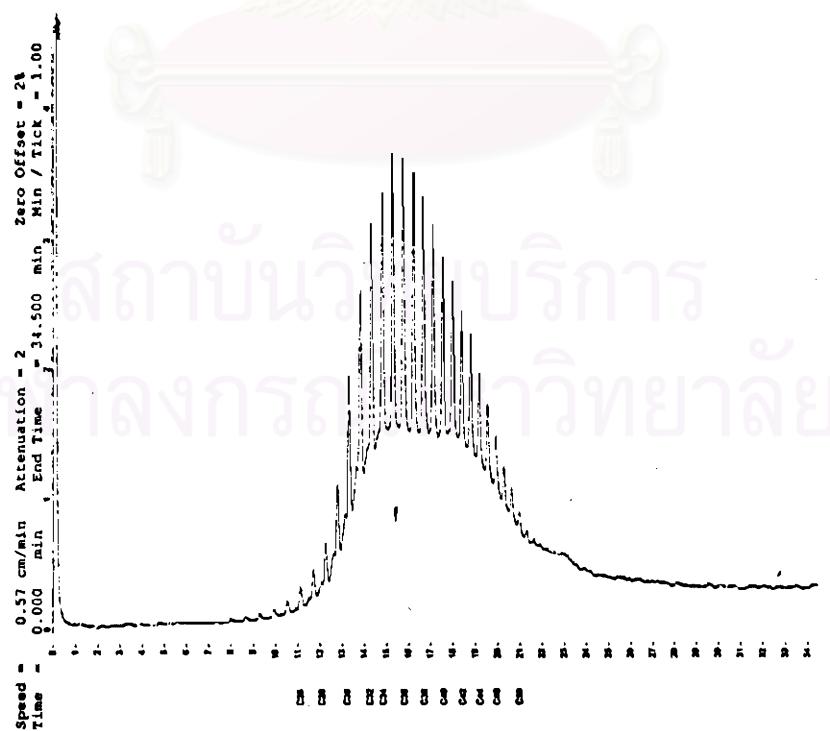
**Figure A71** GC chromatogram of crystallized wax from fractional crystallization of 500SW at 0°C in toluene



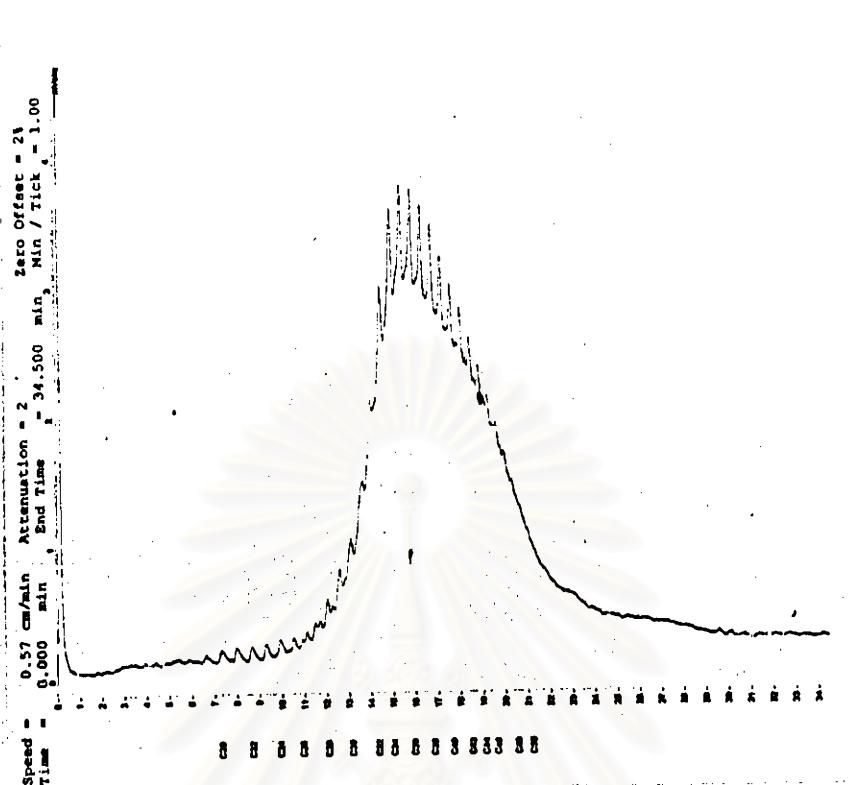
**Figure A72** GC chromatogram of crystallized wax from fractional crystallization of 500SW at 10°C in toluene



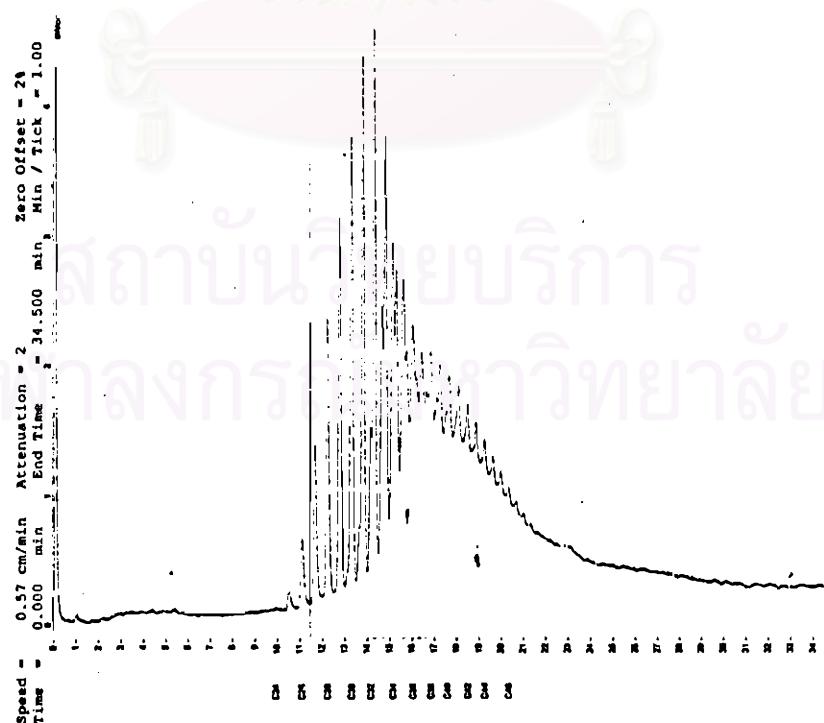
**Figure A73** GC chromatogram of crystallized wax from fractional crystallization of 500SW at 20°C in toluene



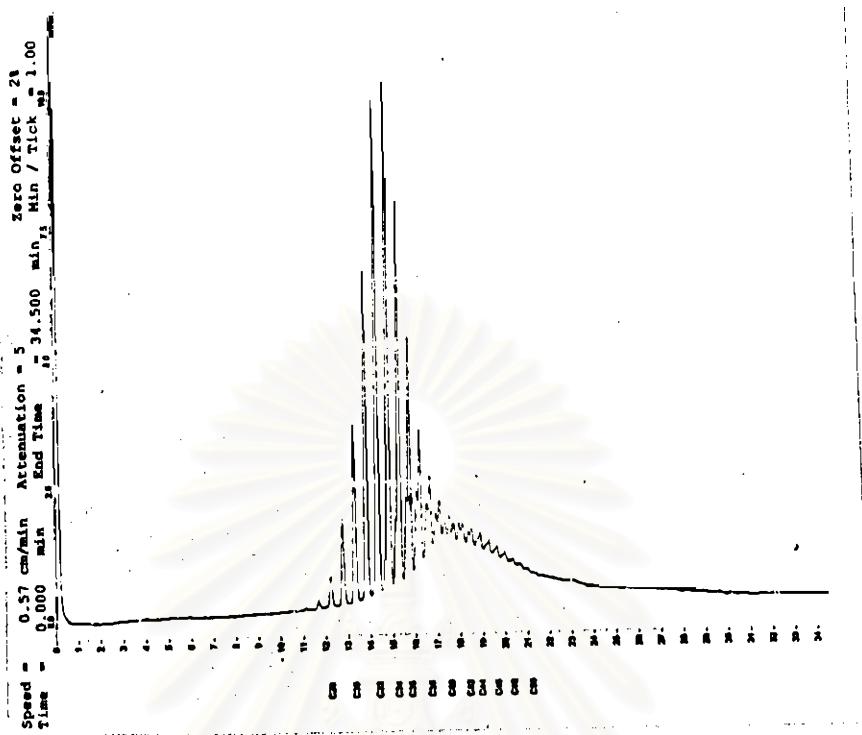
**Figure A74** GC chromatogram of crystallized wax from fractional crystallization of 500SW at 30°C in toluene



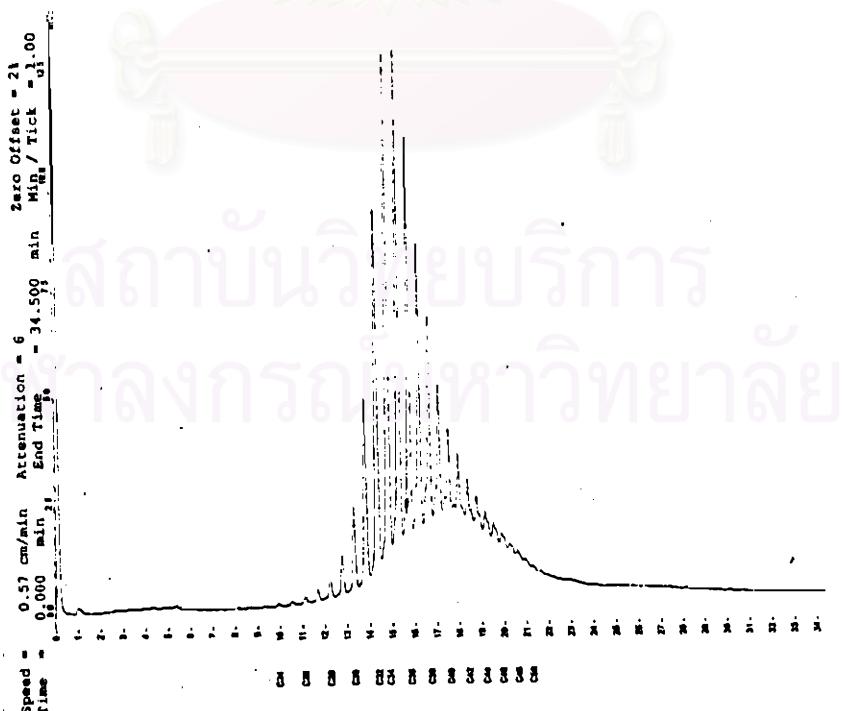
**Figure A75** GC chromatogram of residual oil from fractional crystallization of 600SW at -20°C in toluene



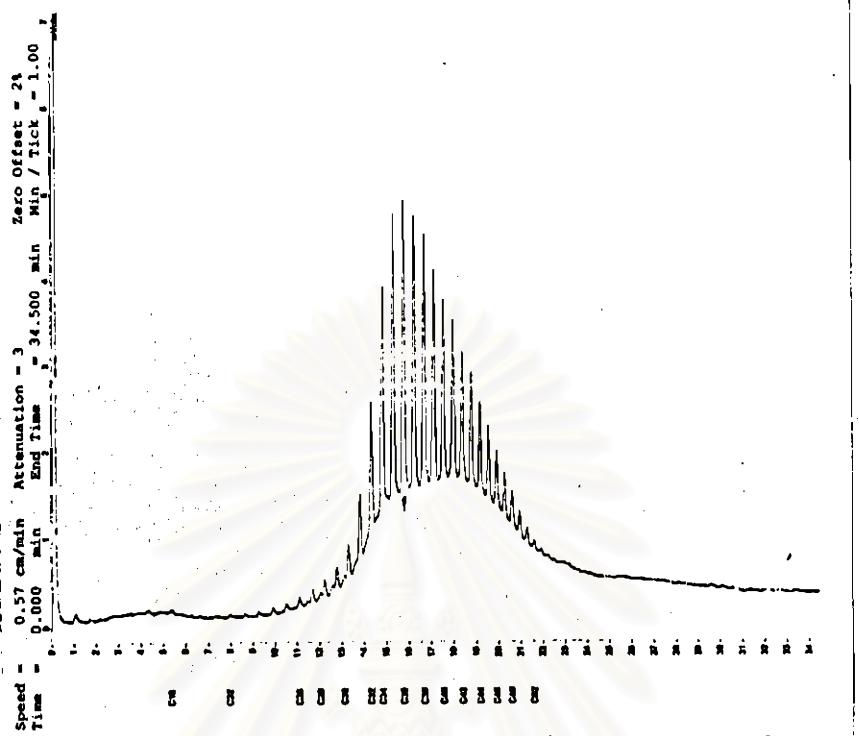
**Figure A76** GC chromatogram of crystallized wax from fractional crystallization of 600SW at 0°C in toluene



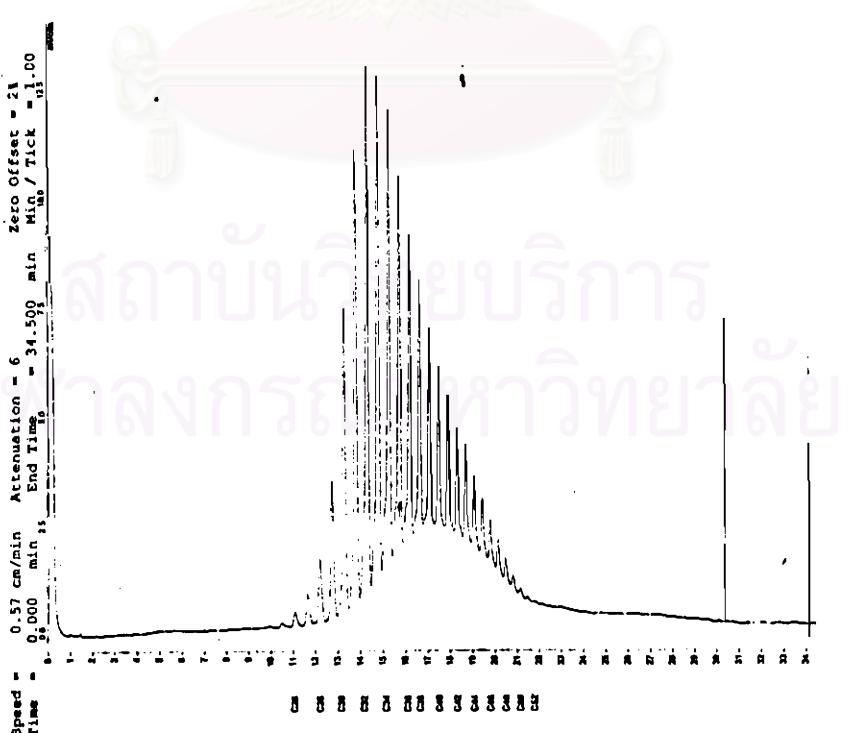
**Figure A77** GC chromatogram of crystallized wax from fractional crystallization of 600SW at 10°C in toluene



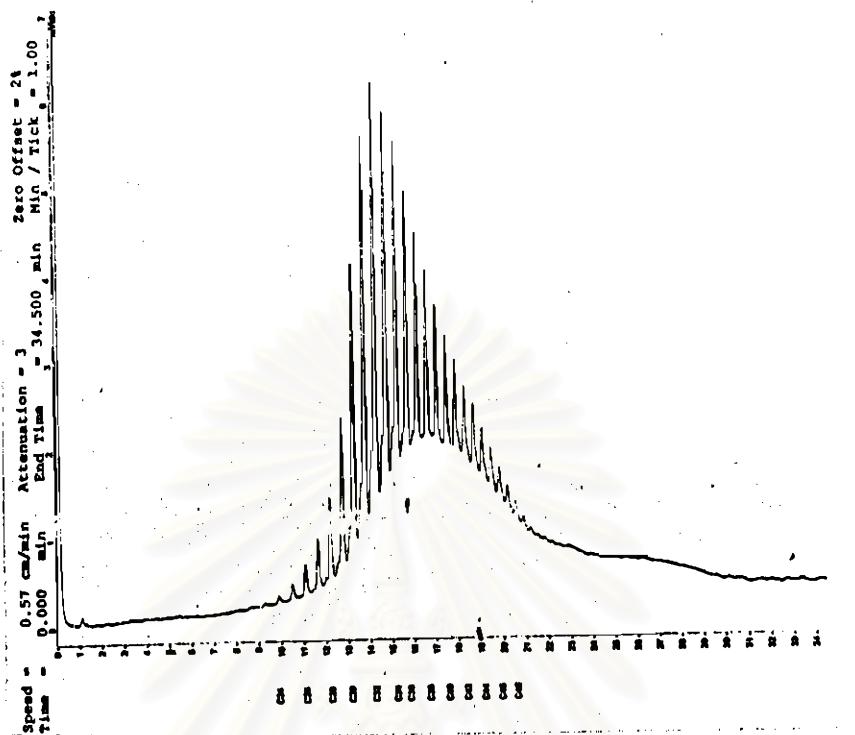
**Figure A78** GC chromatogram of crystallized wax from fractional crystallization of 600SW at 20°C in toluene



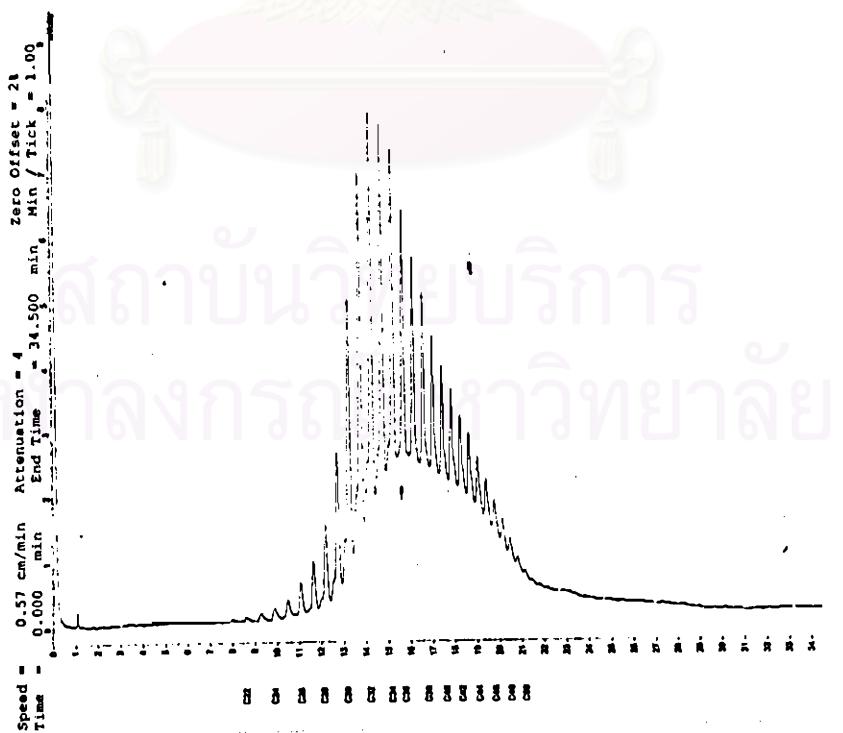
**Figure A79** GC chromatogram of crystallized wax from fractional crystallization of 600SW at 30°C in toluene



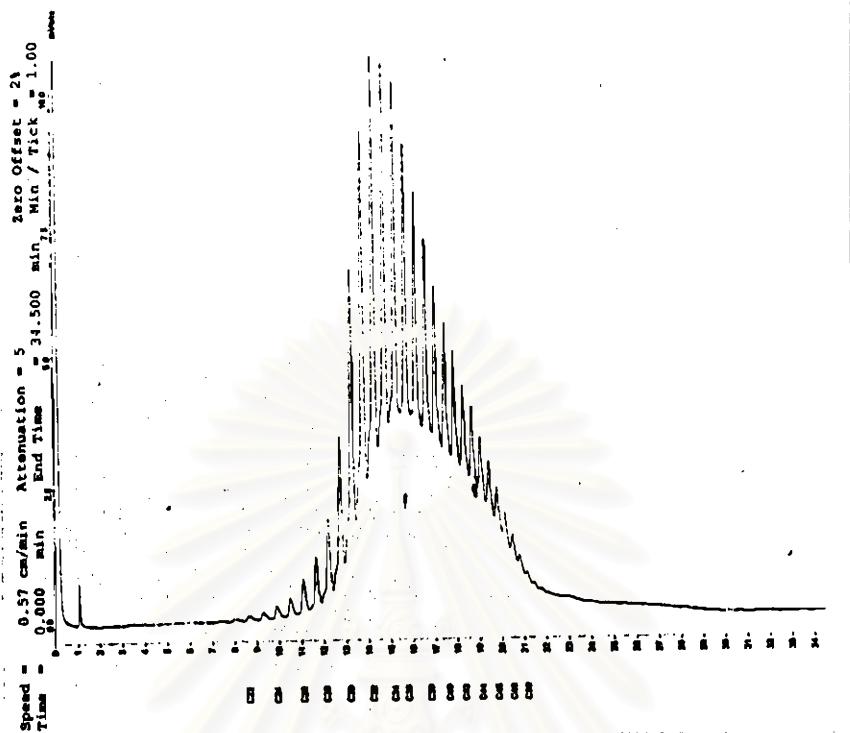
**Figure A80** GC chromatogram of wax cake from extraction of 1g.500SW / 100ml MEK at 20°C



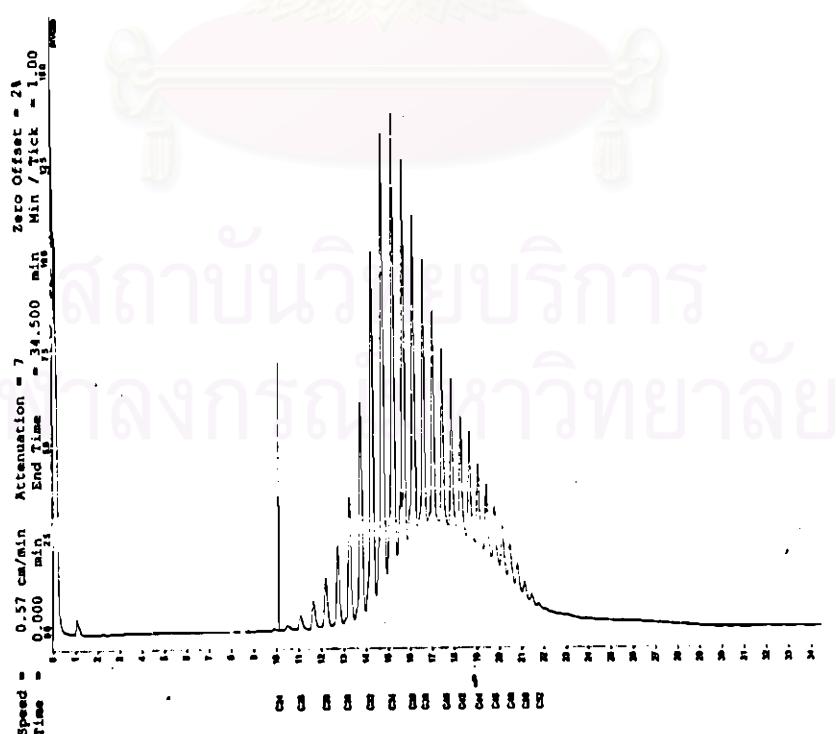
**Figure A81** GC chromatogram of wax cake from extraction of 5g.500SW / 100ml MEK at 20°C



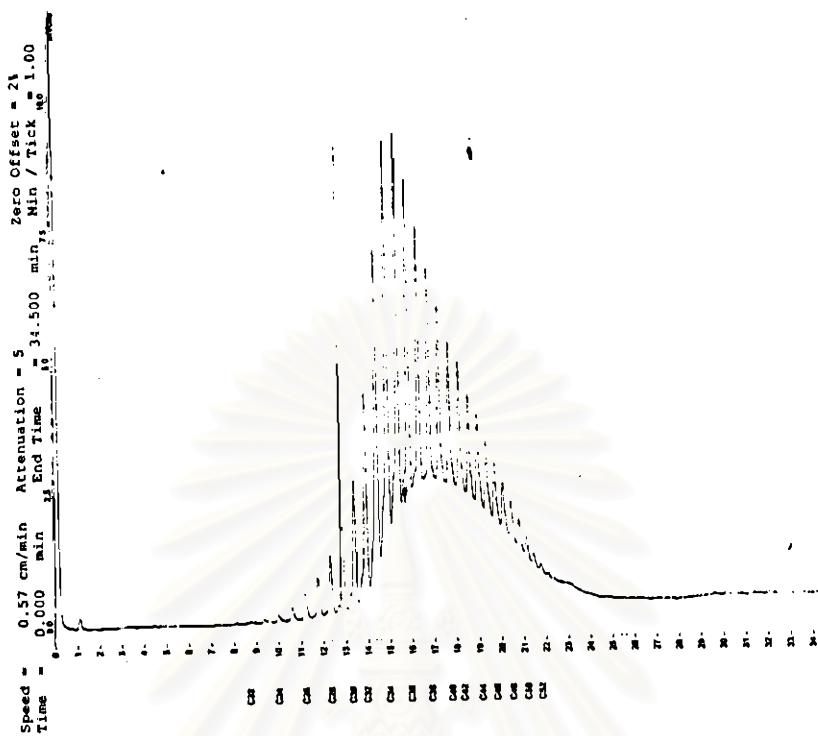
**Figure A82** GC chromatogram of wax cake from extraction of 10g.500SW / 100ml MEK at 20°C



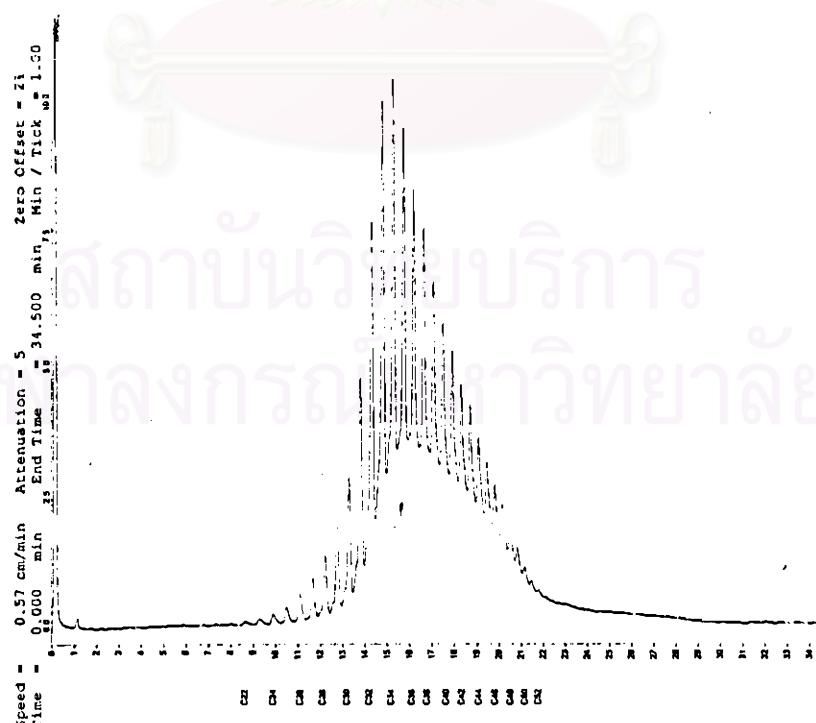
**Figure A83** GC chromatogram of wax cake from extraction of 15g.500SW / 100ml MEK at 20°C



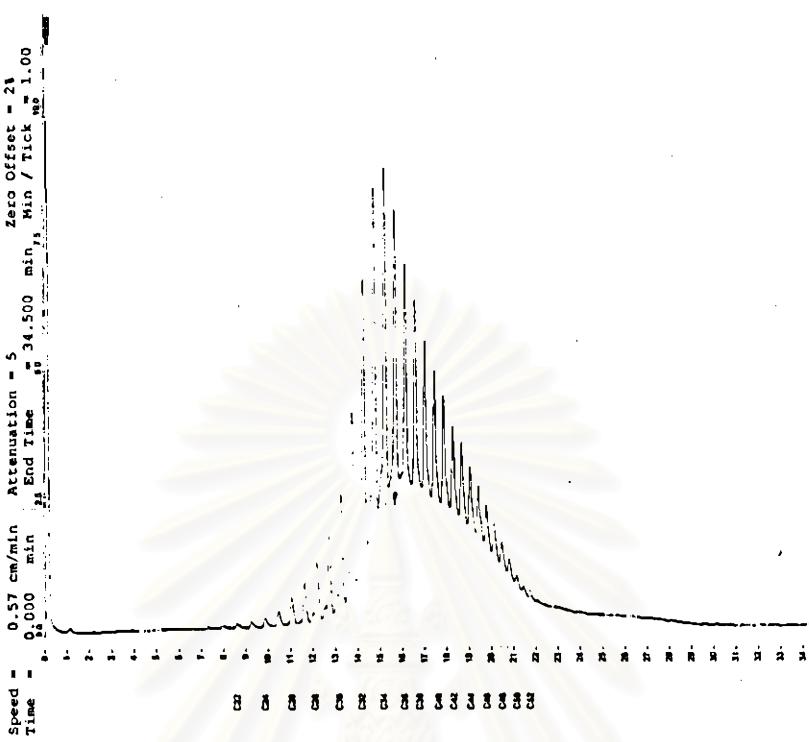
**Figure A84** GC chromatogram of wax cake from extraction of 1g.600SW / 100ml MEK at 20°C



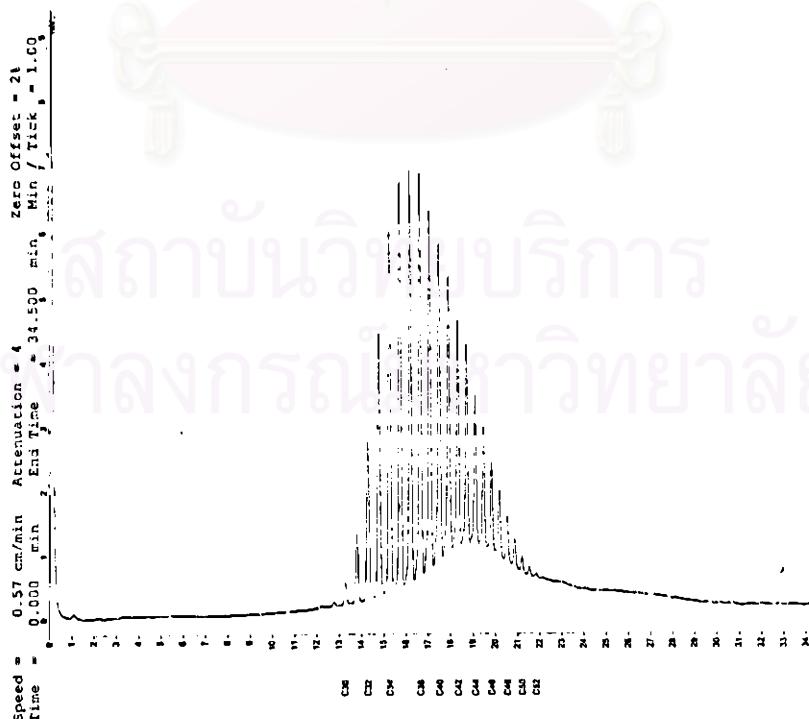
**Figure A85** GC chromatogram of wax cake from extraction of 5g.600SW / 100ml MEK at 20°C



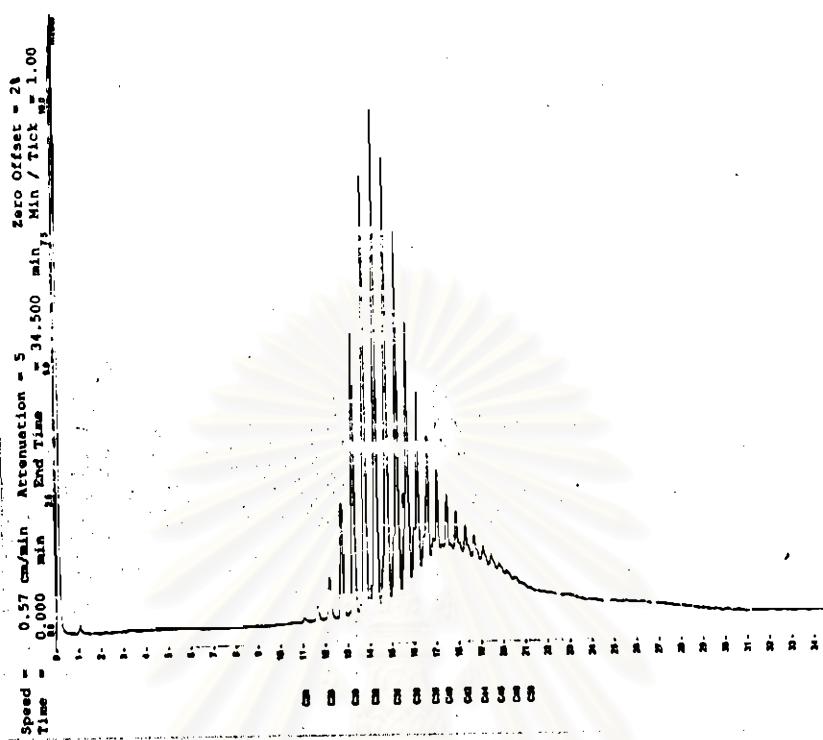
**Figure A86** GC chromatogram of wax cake from extraction of 10g.600SW / 100ml MEK at 20°C



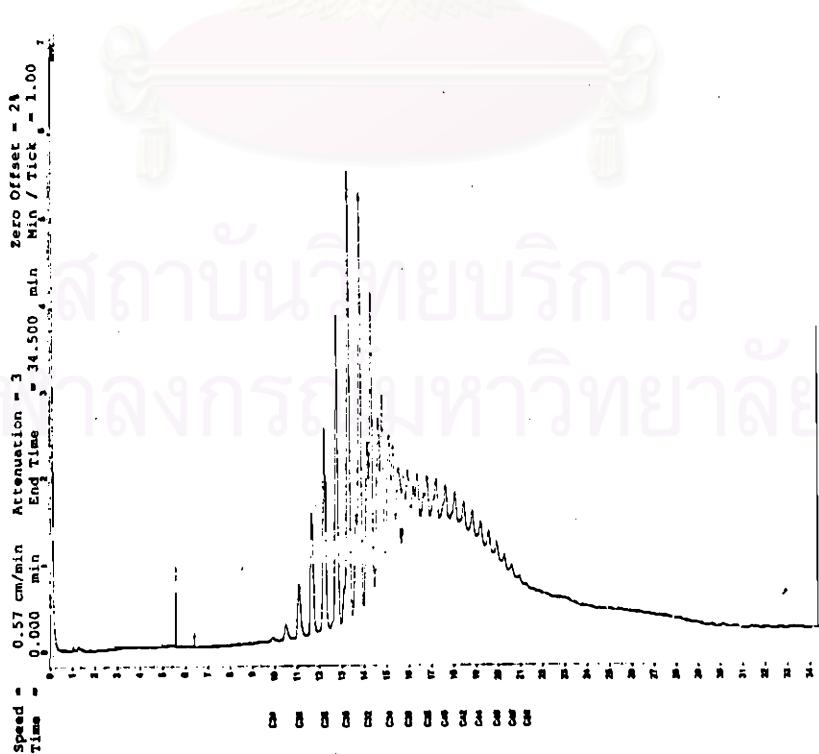
**Figure A87** GC chromatogram of wax cake from extraction of 15g.600SW / 100ml MEK at 20°C



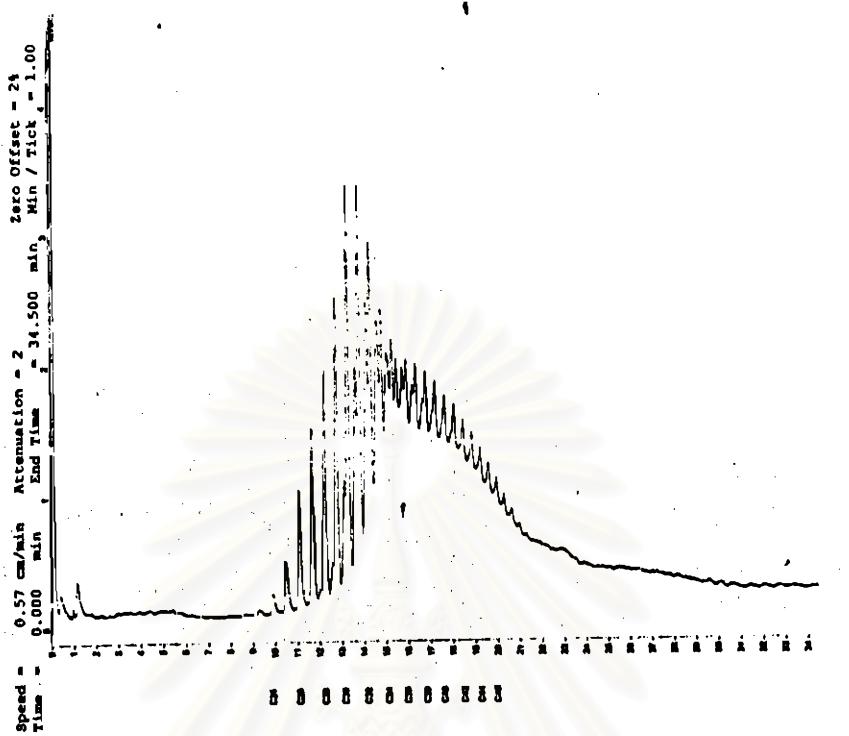
**Figure A88** GC chromatogram of wax cake from fractionation extraction of 500SW at 60°C by using MEK



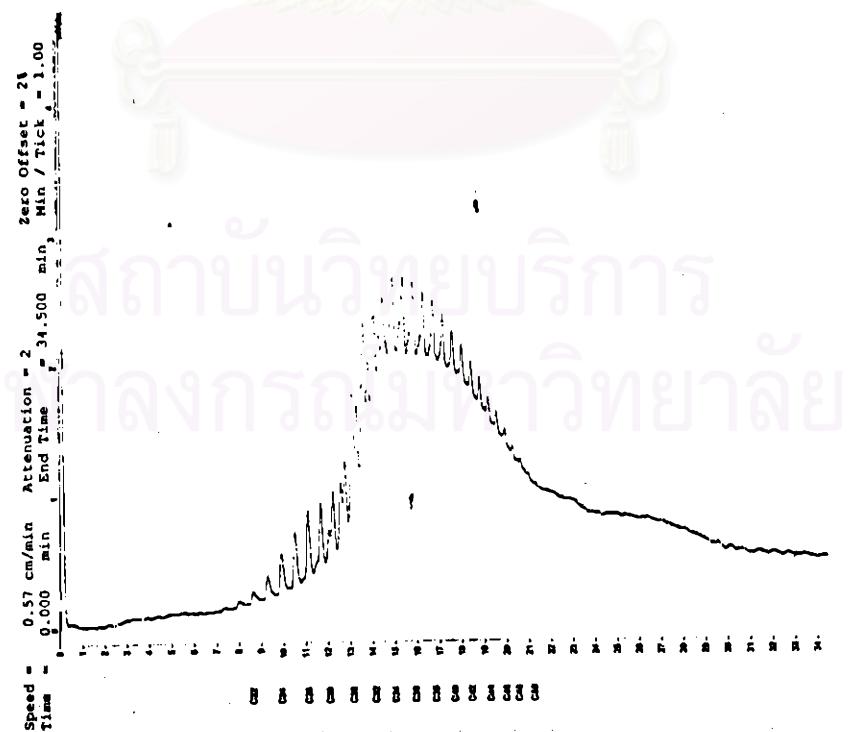
**Figure A89** GC chromatogram of extracted wax from fractionation extraction of 500SW at 60°C by using MEK



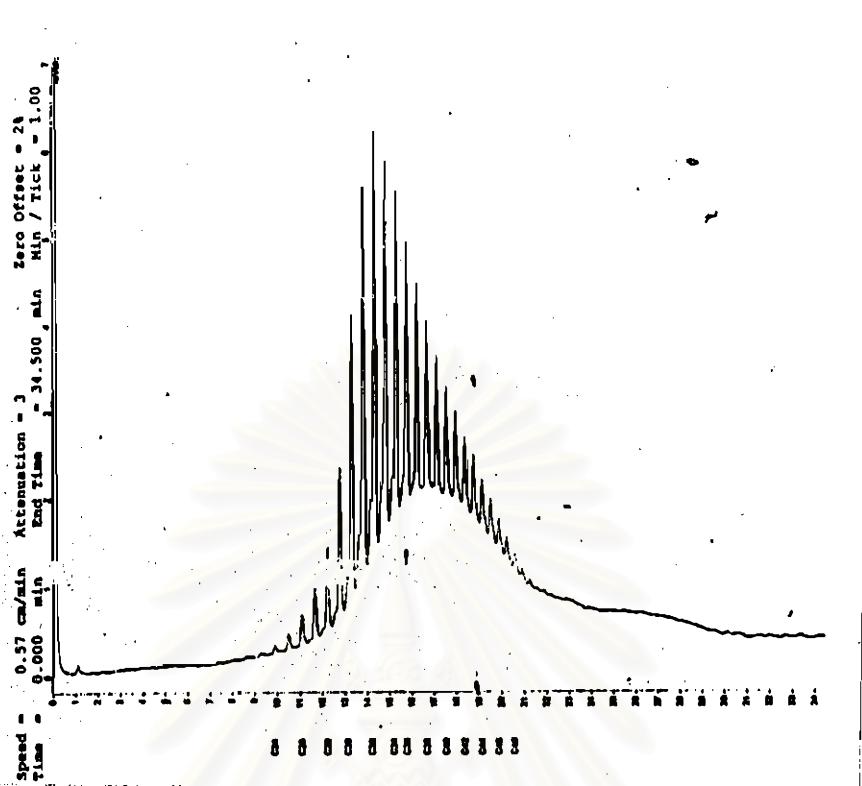
**Figure A90** GC chromatogram of extracted wax from fractionation extraction of 500SW at 50°C by using MEK



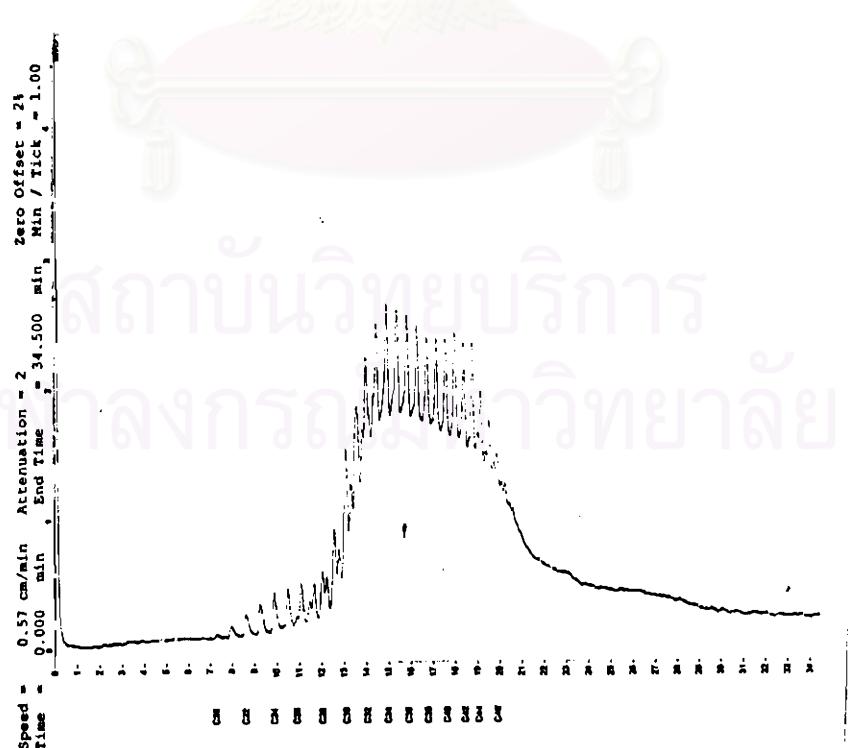
**Figure A91** GC chromatogram of extracted wax from fractionation extraction of 500SW at 40°C by using MEK



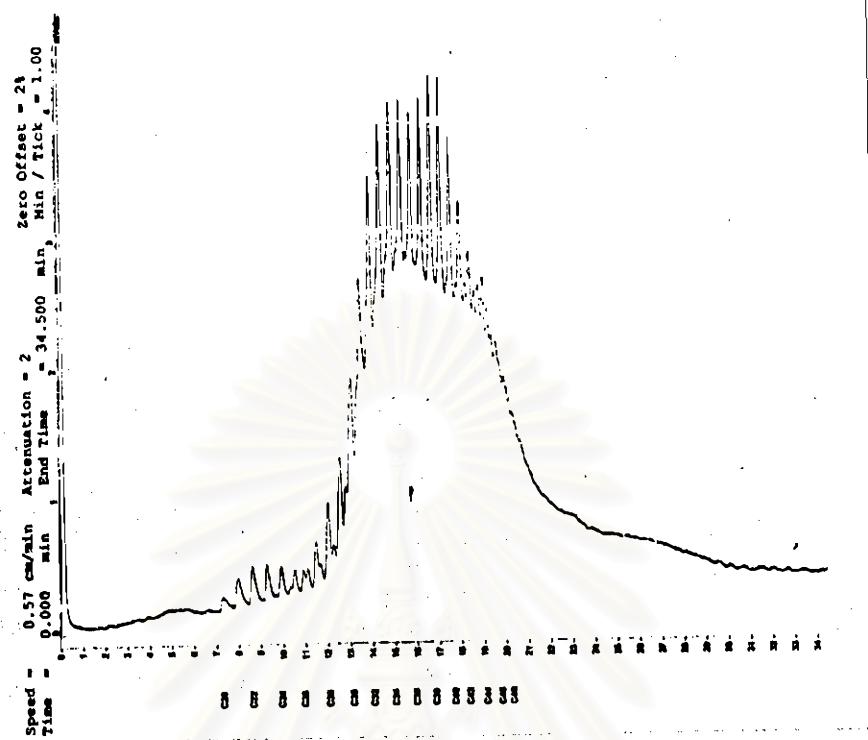
**Figure A92** GC chromatogram of extracted wax from fractionation extraction of 500SW at 30°C by using MEK



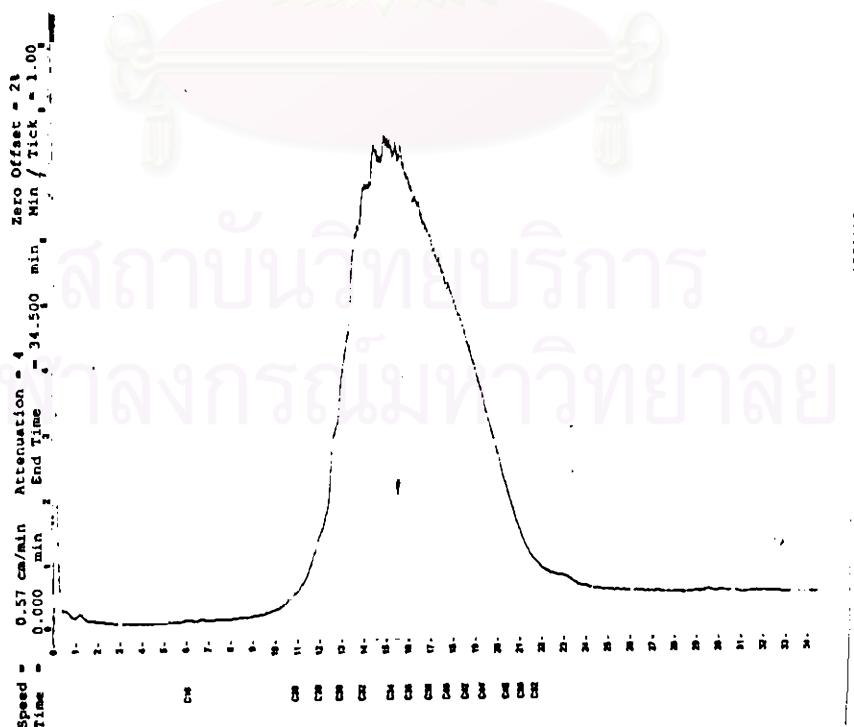
**Figure A93** GC chromatogram of extracted wax from fractionation extraction of 500SW at 20°C by using MEK



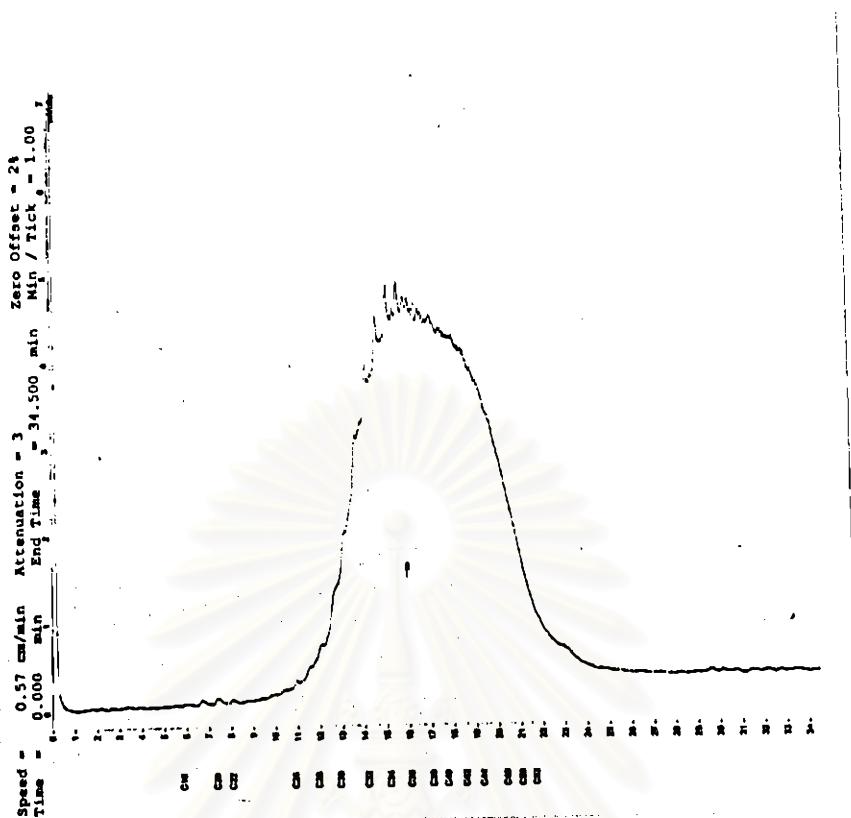
**Figure A94** GC chromatogram of crystallized wax from fractionation crystallization of 500SW at 10°C in MEK



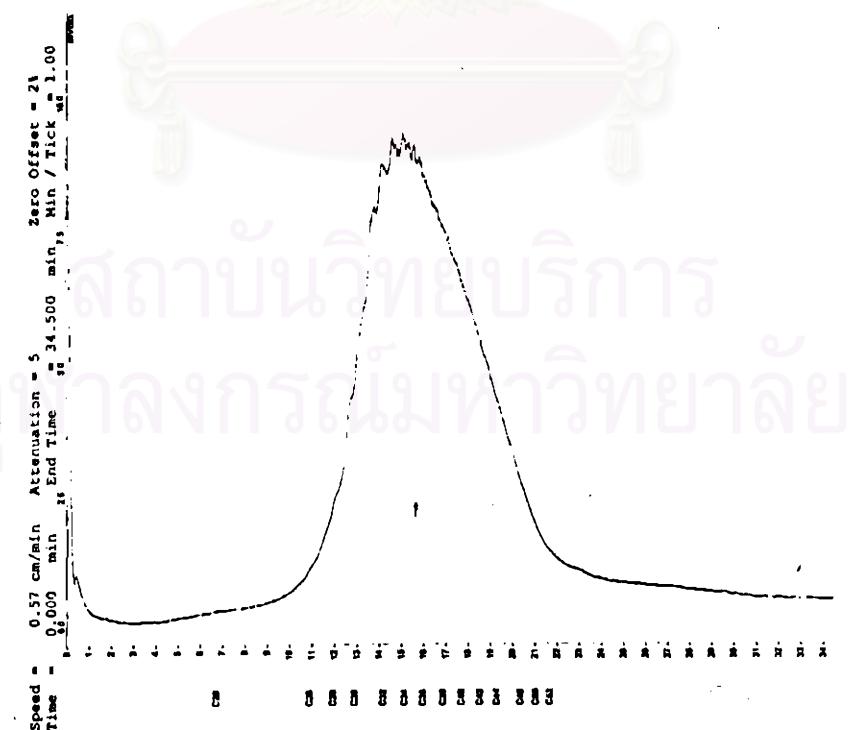
**Figure A95** GC chromatogram of crystallized wax from fractionation crystallization of 500SW at 0°C in MEK



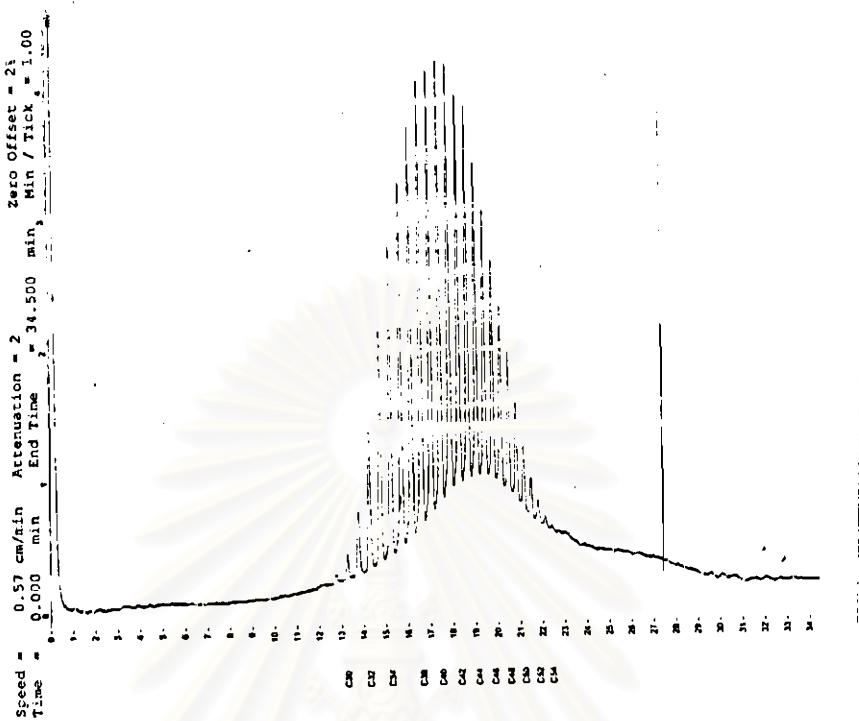
**Figure A96** GC chromatogram of waxy-oil from fractionation crystallization of 500SW at -10°C in MEK



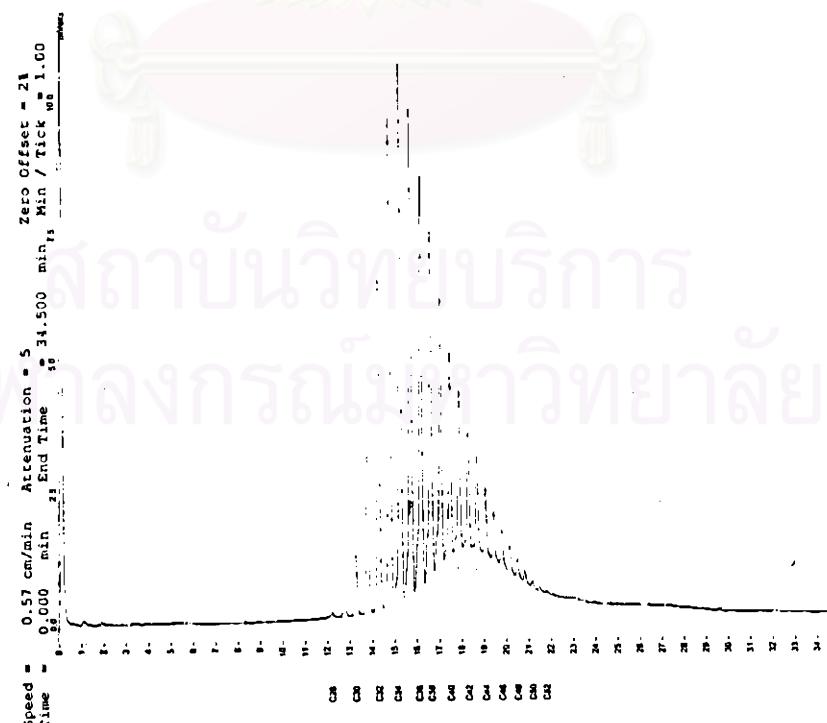
**Figure A97** GC chromatogram of waxy-oil from fractionation crystallization of 500SW at -20°C in MEK



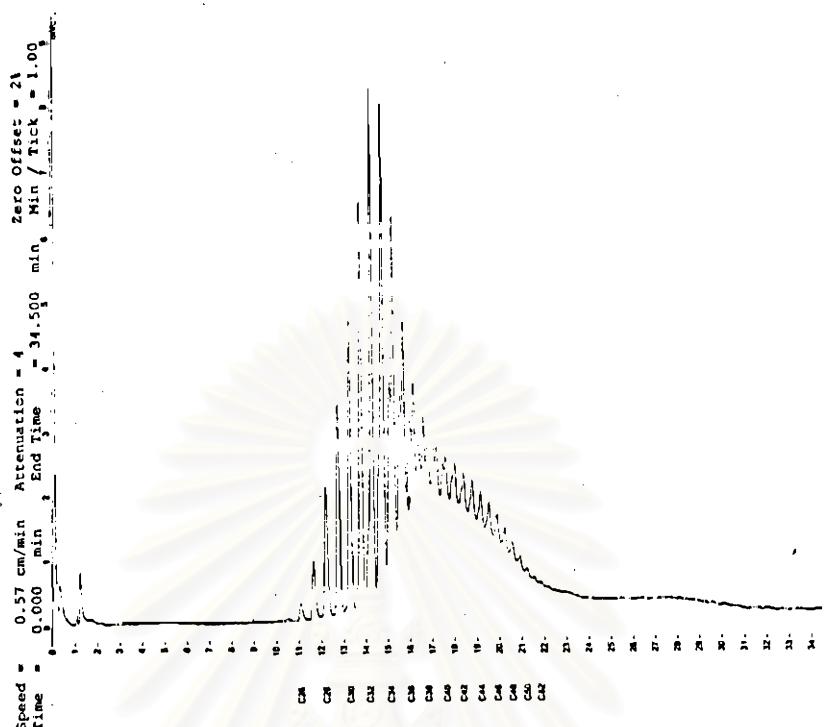
**Figure A98** GC chromatogram of residual oil from fractionation crystallization of 500SW at -20°C in MEK



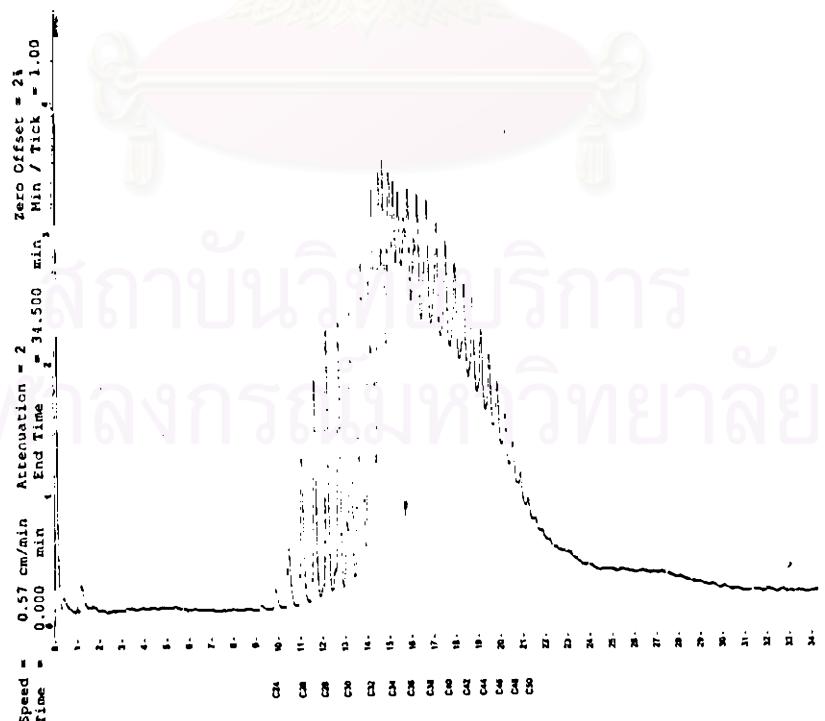
**Figure A99** GC chromatogram of wax cake from fractionation extraction of 600SW at 60°C by using MEK



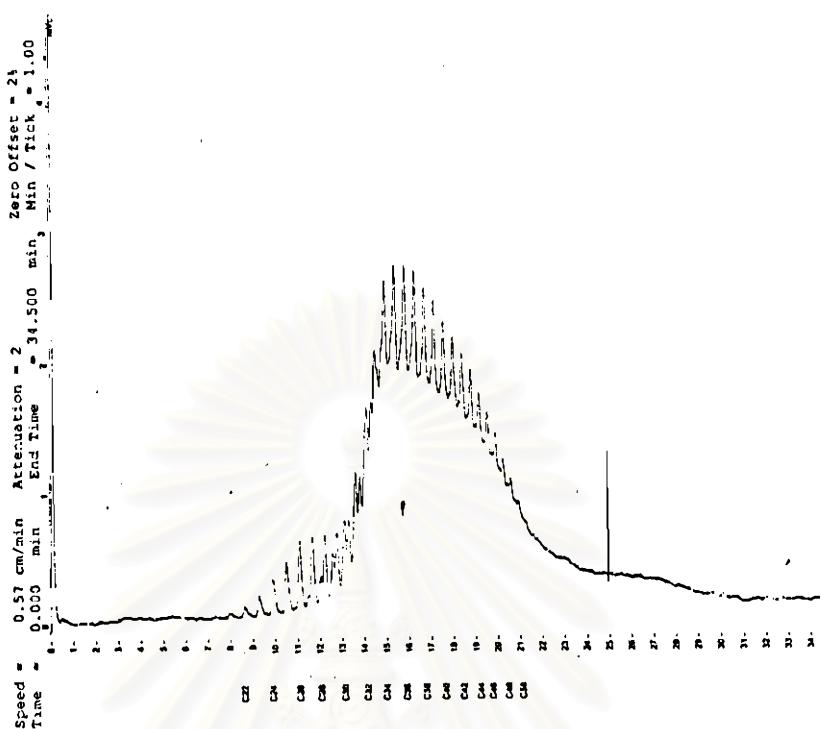
**Figure A100** GC chromatogram of extracted wax from fractionation extraction of 600SW at 60°C by using MEK



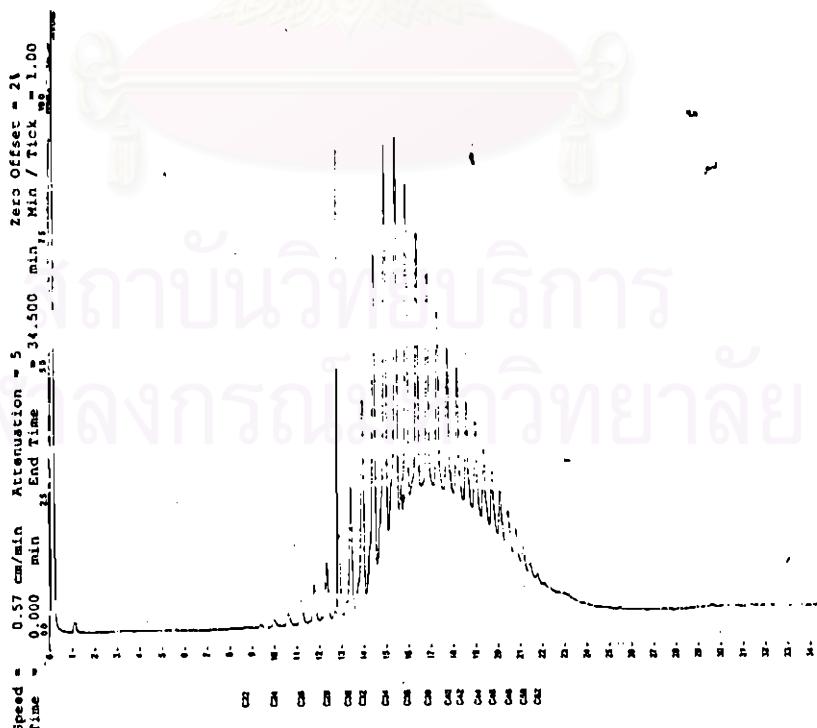
**Figure A101** GC chromatogram of extracted wax from fractionation extraction of 600SW at 50°C by using MEK



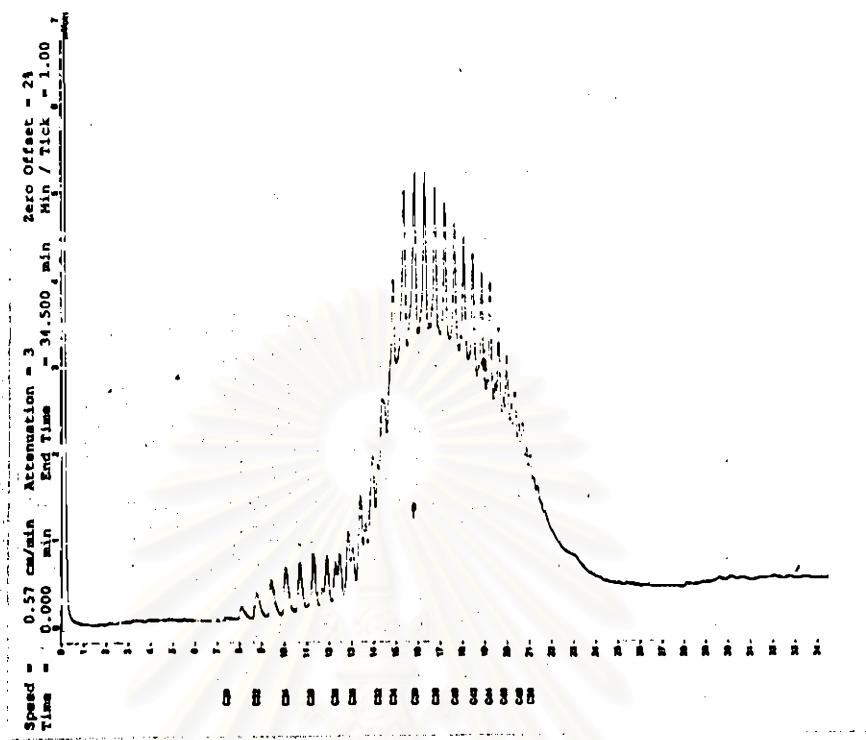
**Figure A102** GC chromatogram of extracted wax from fractionation extraction of 600SW at 40°C by using MEK



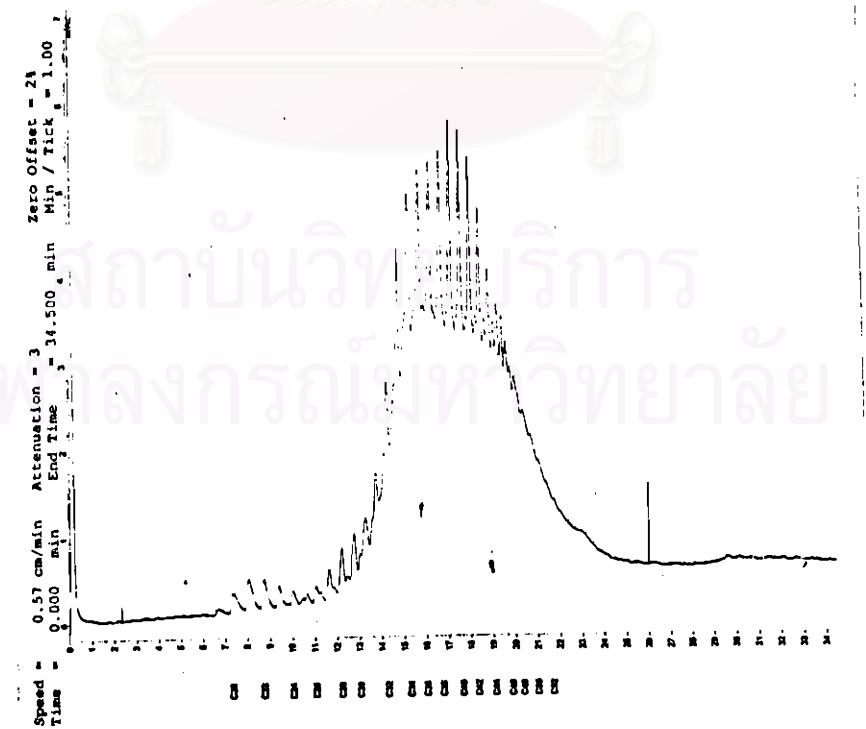
**Figure A103** GC chromatogram of extracted wax from fractionation extraction of 600SW at 30°C by using MEK



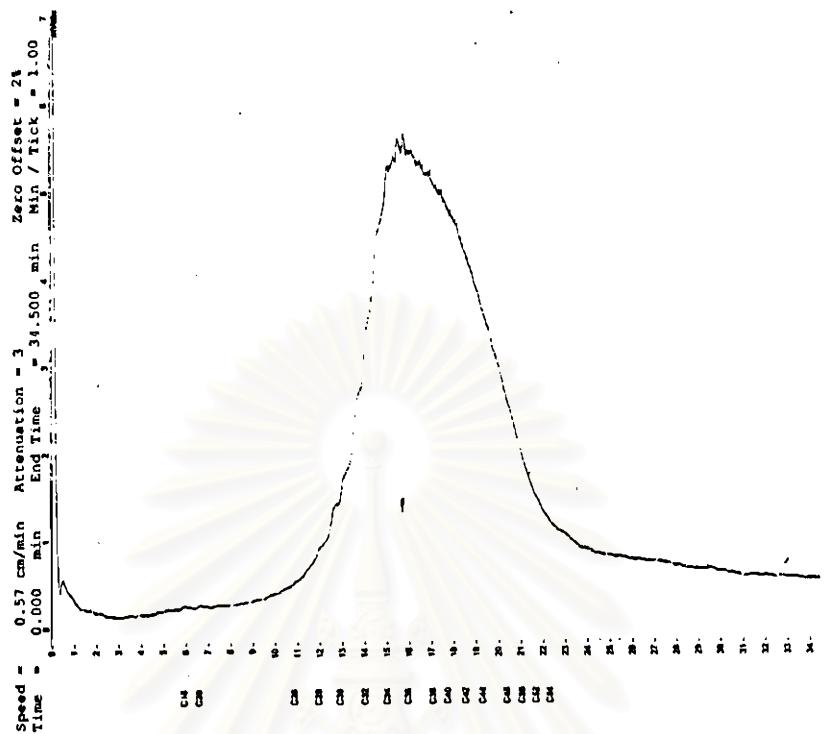
**Figure A104** GC chromatogram of extracted wax from fractionation extraction of 600SW at 20°C by using MEK



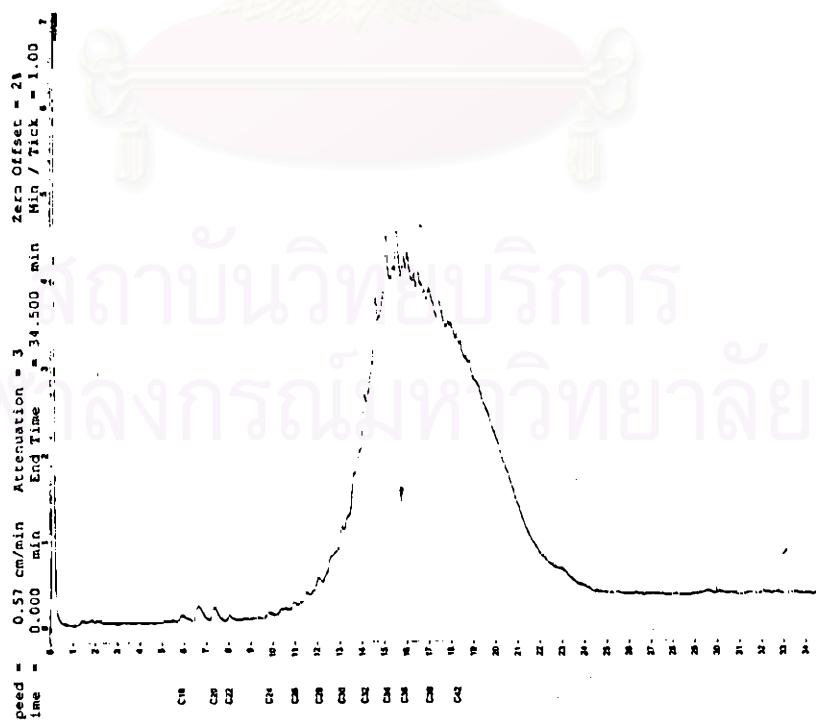
**Figure A105** GC chromatogram of crystallized wax from fractionation crystallization of 600SW at 10°C in MEK



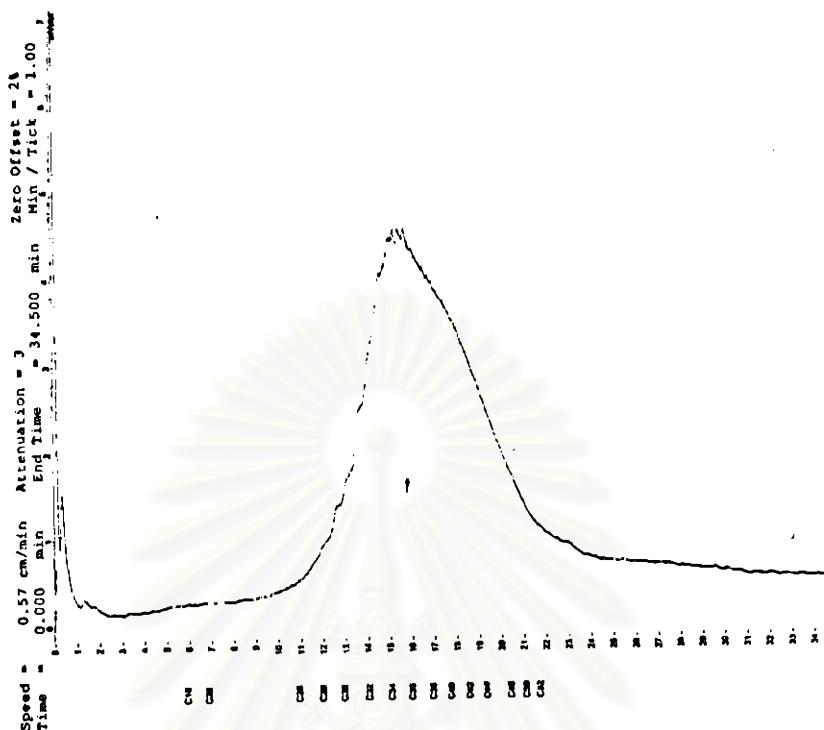
**Figure A106** GC chromatogram of crystallized wax from fractionation crystallization of 600SW at 0°C in MEK



**Figure A107** GC chromatogram of waxy-oil from fractionation crystallization of 600SW at -10°C in MEK



**Figure A108** GC chromatogram of waxy-oil from fractionation crystallization of 600SW at -20°C in MEK



**Figure A109** GC chromatogram of residual oil from fractionation crystallization of 600SW at -20°C in MEK

## APPENDIX B

**Table B1 Chromatographic data of normal paraffin standards (C<sub>19</sub> - C<sub>92</sub>)**

Standard of Normal Paraffins					Standard of Normal Paraffins				
Peak No.	Peak Name	t <sub>R</sub> (min)	t' <sub>R</sub>	Log t' <sub>R</sub>	Peak No.	Peak Name	t <sub>R</sub> (min)	t' <sub>R</sub>	Log t' <sub>R</sub>
1	CS <sub>2</sub>	0.068	-	-	20	C54	22.519	22.451	1.351
1	C16	4.091	4.023	0.604	21	C56	23.103	23.035	1.362
2	C18	5.619	5.551	0.744	22	C58	23.660	23.592	1.372
3	C20	7.100	7.032	0.847	23	C60	24.200	24.132	1.382
4	C22	8.471	8.403	0.924	24	C62	24.723	24.655	1.391
5	C24	9.759	9.691	0.986	25	C64	25.229	25.161	1.400
6	C26	10.964	10.896	1.037	26	C66	25.715	25.647	1.409
7	C28	12.096	12.028	1.080	27	C68	26.189	26.121	1.416
8	C30	13.159	13.091	1.116	28	C70	26.648	26.580	1.424
9	C32	14.165	14.097	1.149	29	C72	27.096	27.028	1.431
10	C34	15.117	15.049	1.177	30	C74	27.531	27.463	1.438
11	C36	16.022	15.954	1.202	31	C76	27.954	27.886	1.445
12	C38	16.881	16.813	1.225	32	C78	28.371	28.303	1.451
13	C40	17.702	17.634	1.246	33	C80	28.776	28.708	1.458
14	C42	18.484	18.416	1.265	34	C82	29.176	29.108	1.464
15	C44	19.231	19.163	1.282	35	C84	29.569	29.501	1.469
16	C46	19.944	19.876	1.298	36	C86	29.962	29.894	1.475
17	C48	20.631	20.563	1.313	37	C88	30.446	30.378	1.482
18	C50	21.284	21.216	1.326	38	C90	31.003	30.935	1.490
19	C52	21.914	21.846	1.339	39	C92	31.612	31.544	1.498

**Table B2 Chromatographic data of 500SW slack wax**

Total Non = 80.47% , N = 19.53%

P/Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
CS2	Solvent	0.073	-	-	-	-	-	N	15.909	15.836	-0.118	1.199	2692	1.19	
C19	N	6.321	-	-	-	59	0.03	C37	Non	16.334	-	-	-	12538	5.55
C20	N	7.033	6.960	-0.072	0.842	117	0.05	N	16.334	-	-	-	2348	1.04	
C21	N	7.732	-	-	-	140	0.06	C38	Non	16.755	-	-	-	10613	4.70
C22	N	8.396	8.323	-0.080	0.920	182	0.08	N	16.755	16.682	-0.131	1.222	1902	0.84	
C23	N	9.039	-	-	-	215	0.10	C39	Non	17.161	-	-	-	9311	4.12
C24	N	9.669	9.596	-0.095	0.982	280	0.12	N	17.161	-	-	-	1590	0.70	
C25	Non	10.276	-	-	-	177	0.08	C40	Non	17.557	-	-	-	8832	3.91
	N	10.276	-	-	-	394	0.17	N	17.557	17.484	-0.150	1.242	1486	0.66	
C26	Non	10.859	-	-	-	680	0.30	C41	Non	17.944	-	-	-	8004	3.54
	N	10.859	10.786	-0.110	1.032	552	0.24	N	17.944	-	-	-	1034	0.46	
C27	Non	11.247	-	-	-	1353	0.60	C42	Non	18.327	-	-	-	6555	2.90
	N	11.435	-	-	-	842	0.37	N	18.327	18.254	-0.162	1.261	889	0.39	
C28	Non	11.800	-	-	-	2695	1.19	C43	Non	18.691	-	-	-	5530	2.45
	N	11.991	11.918	-0.110	1.076	1024	0.45	N	18.691	-	-	-	740	0.33	
C29	Non	12.346	-	-	-	5062	2.24	C44	Non	19.063	-	-	-	4491	1.99
	N	12.535	-	-	-	1920	0.85	N	19.063	18.990	-0.173	1.278	598	0.26	
C30	Non	13.065	-	-	-	8286	3.67	C45	Non	19.406	-	-	-	3515	1.56
	N	13.065	12.992	-0.099	1.113	3564	1.58	N	19.406	-	-	-	382	0.17	
C31	Non	13.578	-	-	-	11770	5.21	C46	Non	19.741	-	-	-	2445	1.08
	N	13.578	-	-	-	4685	2.07	N	19.741	19.668	-0.208	1.293	236	0.10	
C32	Non	14.073	-	-	-	14310	6.33	C47	Non	20.078	-	-	-	1758	0.78
	N	14.073	14.000	-0.097	1.146	4738	2.10	N	20.078	-	-	-	177	0.08	
C33	Non	14.557	-	-	-	15336	6.79	C48	Non	20.402	-	-	-	1007	0.45
	N	14.557	-	-	-	3992	1.77	N	20.402	20.329	-0.234	1.308	119	0.05	
C34	Non	15.016	-	-	-	18395	8.14	C49	Non	20.719	-	-	-	263	0.12
	N	15.016	14.943	-0.106	1.174	3730	1.65	N	20.719	-	-	-	51	0.02	
C35	Non	15.472	-	-	-	14955	6.62	C50	Non	21.205	-	-	-	120	0.05
	N	15.472	-	-	-	3462	1.53	C51	Non	21.619	-	-	-	74	0.03
C36	Non	15.909	-	-	-	13756	6.09	C52	Non	21.835	-	-	-	41	0.02
								Total		226032				100.00	

**Table B3 Chromatographic data of 600SW slack wax**

Total Non = 77.17%, N = 22.83%

P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
CS2	Solvent	0.070	-	-	-	-	-		N	15.883	15.813	-0.141	1.199	1370	1.69
C19	N	6.418	-	-	-	40	0.05	C37	Non	16.304	-	-	-	4698	5.81
C20	N	7.033	6.963	-0.069	0.842	48	0.06		N	16.304	-	-	-	1134	1.40
C21	N	7.722	-	-	-	56	0.07	C38	Non	16.729	-	-	-	4402	5.45
C22	N	8.394	8.324	-0.079	0.920	68	0.08		N	16.729	16.659	-0.154	1.221	957	1.18
C23	N	9.052	-	-	-	75	0.09	C39	Non	17.136	-	-	-	3920	4.85
C24	N	9.677	9.607	-0.084	0.982	94	0.12		N	17.136	-	-	-	820	1.01
C25	Non	10.282	-	-	-	30	0.04	C40	Non	17.539	-	-	-	3482	4.31
	N	10.282	-	-	-	138	0.17		N	17.539	17.469	-0.165	1.242	725	0.90
C26	Non	10.863	-	-	-	48	0.06	C41	Non	17.928	-	-	-	3090	3.82
	N	10.863	10.793	-0.033	1.033	222	0.27		N	17.928	-	-	-	536	0.66
C27	Non	11.240	-	-	-	216	0.27	C42	Non	18.308	-	-	-	2837	3.51
	N	11.432	-	-	-	299	0.37		N	18.308	18.238	-0.178	1.260	482	0.60
C28	Non	11.801	-	-	-	435	0.54	C43	Non	18.673	-	-	-	2521	3.12
	N	11.984	11.914	-0.114	1.076	404	0.50		N	18.673	-	-	-	355	0.44
C29	Non	12.322	-	-	-	797	0.99	C44	Non	19.045	-	-	-	2123	2.63
	N	12.519	-	-	-	489	0.61		N	19.045	18.975	-0.188	1.278	265	0.33
C30	Non	12.877	-	-	-	1132	1.40	C45	Non	19.388	-	-	-	1753	2.17
	N	13.042	12.972	-0.119	1.113	745	0.92		N	19.388	-	-	-	242	0.30
C31	Non	13.553	-	-	-	1948	2.41	C46	Non	19.737	-	-	-	1297	1.60
	N	13.553	-	-	-	1123	1.39		N	19.737	19.667	-0.209	1.293	171	0.21
C32	Non	14.041	-	-	-	3181	3.94	C47	Non	20.081	-	-	-	1056	1.31
	N	14.041	13.971	-0.126	1.145	1782	2.20		N	20.081	-	-	-	132	0.16
C33	Non	14.524	-	-	-	4717	5.84	C48	Non	20.417	-	-	-	736	0.91
	N	14.524	-	-	-	1998	2.47		N	20.417	20.347	-0.216	1.308	89	0.11
C34	Non	14.984	-	-	-	5511	6.82	C49	Non	20.730	-	-	-	463	0.57
	N	14.984	14.914	-0.135	1.173	1868	2.31		N	20.730	-	-	-	48	0.06
C35	Non	15.443	-	-	-	6385	7.90	C50	Non	21.211	-	-	-	218	0.27
	N	15.443	-	-	-	1681	2.08	C51	Non	21.651	-	-	-	75	0.09
C36	Non	15.883	-	-	-	5241	6.48	C52	Non	21.842	-	-	-	58	0.07
										Total	80826			100.00	

**Table B4 Chromatographic data of wax cake from 1<sup>st</sup> extraction of 500SW at 40 °C by using MEK**

Total Non = 29.22%, N = 70.78%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1	CS1	Solvent	0.074	-	-	-	-	-		N	17.724	17.650	0.016	1.246	6591	3.97	
1	C28	N	12.092	12.018	-0.010	1.079	134	0.08	14	C41	Non	18.111	-	-	-	4668	2.81
2	C29	N	12.627	-	-	-	467	0.28		N	18.111	-	-	-	5104	3.07	
3	C30	Non	13.155	-	-	-	67	0.04	15	C42	Non	18.489	-	-	-	4919	2.96
	N	13.155	13.081	-0.010	1.116	1879	1.13		N	18.489	18.424	0.008	1.365	4298	2.59		
4	C31	Non	13.679	-	-	-	123	0.07	16	C43	Non	18.851	-	-	-	4261	2.56
	N	13.679	-	-	-	4445	2.67		N	18.851	-	-	-	3205	1.93		
5	C32	Non	14.181	-	-	-	282	0.17	17	C44	Non	19.208	-	-	-	3676	2.21
	N	14.181	14.107	0.010	1.149	7814	4.70		N	19.208	19.134	-0.029	1.381	2775	1.67		
6	C33	Non	14.687	-	-	-	699	0.42	18	C45	Non	19.559	-	-	-	3293	1.98
	N	14.687	-	-	-	10377	6.24		N	19.559	-	-	-	2171	1.31		
7	C34	Non	15.171	-	-	-	1101	0.66	19	C46	Non	19.902	-	-	-	1910	1.15
	N	15.171	15.097	0.048	1.178	12322	7.41		N	19.902	19.828	-0.048	1.397	1565	0.94		
8	C35	Non	15.632	-	-	-	1736	1.04	20	C47	Non	20.234	-	-	-	1711	1.03
	N	15.632	-	-	-	12378	7.45		N	20.234	-	-	-	1141	0.69		
9	C36	Non	16.076	-	-	-	2214	1.33	21	C48	Non	20.561	-	-	-	1332	0.80
	N	16.076	16.002	0.048	1.304	11747	7.07		N	20.561	20.487	-0.076	1.311	623	0.37		
10	C37	Non	16.506	-	-	-	2908	1.75	22	C49	Non	20.879	-	-	-	869	0.52
	N	16.506	-	-	-	10837	6.52		N	20.879	-	-	-	353	0.21		
11	C38	Non	16.923	-	-	-	3454	2.08	23	C50	Non	21.196	-	-	-	561	0.34
	N	16.923	16.849	0.036	1.226	9271	5.58		N	21.196	21.122	-0.094	1.324	194	0.12		
12	C39	Non	17.329	-	-	-	3987	2.40	24	C51	Non	21.503	-	-	-	246	0.15
	N	17.329	-	-	-	7878	4.74		N	21.503	-	-	-	84	0.05		
13	C40	Non	17.724	-	-	-	4556	2.74		Total		166226			100.00		

**Table B5 Chromatographic data of wax cake from 1<sup>st</sup> extraction of 500SW at 45 °C by using MEK**

Total Non = 31.87% , N = 68.13%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t <sub>A</sub>	Δt <sub>R</sub>	Log t <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t <sub>A</sub>	Δt <sub>R</sub>	Log t <sub>R</sub>	A	% wt	
1	C29	N	12.759	-	-	-	58	0.17	13	C41	Non	17.774	17.699	0.065	1.247	1568	4.72	
2	C30	N	13.269	13.194	0.103	1.120	226	0.68	14	C42	Non	18.163	-	-	-	967	2.91	
3	C31	Non	13.778	-	-	-	49	0.15	15	C43	Non	18.163	-	-	-	1257	3.79	
		N	13.778	-	-	-	582	1.75	16	C44	Non	18.542	-	-	-	934	2.81	
4	C32	Non	14.269	-	-	-	138	0.42	17	C45	Non	18.542	18.467	0.031	1.266	1095	3.30	
		N	14.269	14.194	0.097	1.152	1086	3.27	18	C46	Non	19.628	-	-	-	885	2.67	
5	C33	Non	14.748	-	-	-	219	0.66	19	C47	Non	19.628	-	-	-	789	2.38	
		N	14.748	-	-	-	1583	4.77	20	C48	Non	20.321	-	-	-	758	2.28	
6	C34	Non	15.320	-	-	-	301	0.91	21	C49	Non	20.321	19.197	0.034	1.283	616	1.85	
		N	15.220	15.145	0.096	1.180	2053	6.18	22	C50	Non	20.649	-	-	-	627	1.89	
7	C35	Non	15.671	-	-	-	428	1.29	14	C41	Non	20.649	19.911	0.035	1.299	437	1.32	
		N	15.671	-	-	-	2220	6.69	15	C42	Non	20.649	-	-	-	569	1.71	
8	C36	Non	16.112	-	-	-	309	1.53	16	C43	Non	20.649	20.574	0.011	1.313	310	0.93	
		N	16.112	16.037	0.083	1.205	2213	6.85	17	C44	Non	20.984	-	-	-	384	1.16	
9	C37	Non	16.545	-	-	-	673	2.03	18	C45	Non	20.984	21.217	0.001	1.326	193	0.58	
		N	16.545	-	-	-	2223	6.69	19	C46	Non	21.292	-	-	-	292	0.88	
10	C38	Non	16.964	-	-	-	727	2.19	20	C47	Non	21.292	-	-	-	110	0.33	
		N	16.964	16.889	0.076	1.227	2031	6.12	21	C48	Non	21.593	-	-	-	145	0.44	
11	C39	Non	17.376	-	-	-	813	2.45	22	C49	Non	21.593	-	-	-	65	0.20	
		N	17.376	-	-	-	1798	5.41	23	C50	Non	21.894	-	-	-	248	0.75	
12	C40	Non	17.774	-	-	-	917	2.76	24	C51	Non	21.894	-	-	-	50	0.13	
		N	17.759	17.674	0.040	1.247	4920	3.55	25	C52	Non	21.894	-	-	-	Total	33208	100.00

**Table B6 Chromatographic data of wax cake from 1<sup>st</sup> extraction of 500SW at 50 °C by using MEK**

Total Non = 36.44% , N = 63.56%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t <sub>A</sub>	Δt <sub>R</sub>	Log t <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t <sub>A</sub>	Δt <sub>R</sub>	Log t <sub>R</sub>	A	% wt	
1	C28	N	12.136	12.051	0.085	1.081	110	0.08	14	C41	Non	18.142	-	-	-	4806	3.47	
2	C29	N	12.643	-	-	-	497	0.36	15	C42	Non	18.522	-	-	-	3983	2.87	
3	C30	Non	13.189	-	-	-	122	0.09	16	C43	Non	18.522	18.437	0.021	1.265	4287	3.09	
		N	13.189	13.104	0.013	1.117	1702	1.23	17	C44	Non	18.883	-	-	-	3541	2.56	
4	C31	Non	13.713	-	-	-	165	0.12	18	C45	Non	18.883	-	-	-	2681	1.93	
		N	13.713	-	-	-	3908	2.82	19	C46	Non	19.239	-	-	-	3465	2.50	
5	C32	Non	14.220	-	-	-	441	0.32	20	C47	Non	19.239	19.154	-0.009	1.282	2271	1.64	
		N	14.220	14.135	0.038	1.150	6364	4.59	21	C48	Non	19.593	-	-	-	2757	1.99	
6	C33	Non	14.714	-	-	-	968	0.70	22	C49	Non	19.593	-	-	-	1728	1.25	
		N	14.714	-	-	-	7835	3.65	23	C50	Non	19.933	19.848	-0.028	1.297	2096	1.51	
7	C34	Non	15.193	-	-	-	1654	1.19	24	C51	Non	20.263	-	-	-	1269	0.92	
		N	15.193	15.108	0.059	1.179	8842	6.38	25	C52	Non	20.263	-	-	-	854	0.62	
8	C35	Non	15.649	-	-	-	2317	1.67	26	C53	Non	20.594	-	-	-	1080	0.78	
		N	15.649	-	-	-	8664	6.25	27	C54	Non	20.594	20.509	-0.054	1.311	547	0.39	
9	C36	Non	16.096	-	-	-	3072	2.22	28	C55	Non	20.904	-	-	-	699	0.50	
		N	16.096	16.011	0.057	1.304	8113	5.85	29	C56	Non	20.904	-	-	-	298	0.22	
10	C37	Non	16.528	-	-	-	3697	2.67	30	C57	Non	21.229	-	-	-	307	0.22	
		N	16.528	-	-	-	7426	5.36	31	C58	Non	21.229	21.144	-0.072	1.325	214	0.15	
11	C38	Non	16.949	-	-	-	4080	2.94	32	C59	Non	21.538	-	-	-	83	0.06	
		N	16.949	16.864	0.051	1.226	6485	4.68	33	C60	Non	21.538	-	-	-	71	0.05	
12	C39	Non	17.357	-	-	-	4304	3.11	34	C61	Non	21.847	-	-	-	49	0.04	
		N	17.357	-	-	-	5644	4.07	35	C62	Non	21.847	21.762	-0.084	1.337	53	0.04	
13	C40	Non	17.759	-	-	-	4771	3.44	36	C63	Non	21.847	-	-	-	Total	138587	100.00

**Table B7 Chromatographic data of wax cake from 1<sup>st</sup> extraction of 500SW at 55 °C by using MEK**

Total Non = 43.12%, N = 56.88%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>1</sub>	Solvent	0.073	-	-	-	-	-	16	C39	Non	16.923	16.848	0.035	1.226	6245	3.05
1	C24	N	9.778	9.703	0.012	0.986	94	0.05		N	17.329	-	-	-	6987	3.41	
2	C25	N	10.377	-	-	-	174	0.08		N	17.724	-	-	-	5093	2.48	
3	C26	N	10.962	10.887	-0.009	1.036	347	0.17		N	17.724	17.649	0.015	1.246	5962	3.40	
4	C27	Non	11.531	-	-	-	86	0.04		N	18.103	-	-	-	4119	2.01	
	N	11.531	-	-	-	-	651	0.32		N	18.103	-	-	-	6361	3.10	
5	C28	Non	12.091	-	-	-	159	0.08		N	18.484	18.409	-0.007	1.265	3074	1.50	
	N	12.091	12.016	-0.012	1.079	1.297	637	0.63		N	18.484	-	-	-	5554	2.71	
6	C29	Non	12.637	-	-	-	428	0.21		N	18.843	-	-	-	2778	1.36	
	N	12.637	-	-	-	-	3037	1.48		N	18.843	-	-	-	4719	2.30	
7	C30	Non	13.182	-	-	-	1017	0.50		N	19.204	-	-	-	2200	1.07	
	N	13.182	13.107	0.016	1.117	6881	3.36		N	19.204	19.129	-0.034	1.281	4259	2.08		
8	C31	Non	13.714	-	-	-	1952	0.95		N	19.551	-	-	-	1587	0.77	
	N	13.714	-	-	-	-	10684	5.21		N	19.551	-	-	-	3291	1.61	
9	C32	Non	14.226	-	-	-	3352	1.64		N	19.894	-	-	-	1258	0.61	
	N	14.226	14.151	0.054	1.150	12685	6.19		N	19.894	19.819	-0.057	1.297	2861	1.40		
10	C33	Non	14.717	-	-	-	4227	2.06		N	20.228	-	-	-	934	0.46	
	N	14.717	-	-	-	-	12812	6.25		N	20.228	-	-	-	1965	0.96	
11	C34	Non	15.191	-	-	-	5050	2.46		N	20.553	-	-	-	632	0.31	
	N	15.191	15.116	0.067	1.179	12407	6.05		N	20.553	20.478	-0.085	1.311	1345	0.66		
12	C35	Non	15.642	-	-	-	5855	2.86		N	20.886	-	-	-	382	0.19	
	N	15.642	-	-	-	-	10496	5.12		N	20.886	-	-	-	805	0.39	
13	C36	Non	16.081	-	-	-	5653	3.20		N	21.189	-	-	-	212	0.10	
	N	16.081	16.006	0.052	1.204	8844	4.32		N	21.189	21.114	-0.102	1.324	423	0.21		
14	C37	Non	16.513	-	-	-	6945	3.39		N	21.494	-	-	-	132	0.06	
	N	16.513	-	-	-	-	7480	3.65		N	21.494	-	-	-	52	0.03	
15	C38	Non	16.923	-	-	-	6992	3.41		Total		204955		100.00			

**Table B8 Chromatographic data of soluble wax from 1<sup>st</sup> extraction of 500SW at 40 °C by using MEK**

Total Non = 80.95%, N = 19.05%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>1</sub>	Solvent	0.073	-	-	-	-	-	24	C37	Non	16.076	16.003	0.049	1.204	2873	1.18
1	C19	N	6.524	-	-	-	112	0.05		N	16.512	-	-	-	15158	6.21	
2	C20	N	7.204	7.131	0.099	0.833	165	0.07		N	16.512	-	-	-	2747	1.13	
3	C21	N	7.859	-	-	-	195	0.08		N	16.927	-	-	-	12655	5.19	
4	C22	N	8.523	8.450	0.047	0.926	197	0.08		N	16.927	16.854	0.041	1.226	2334	0.96	
5	C23	N	9.154	-	-	-	218	0.09		N	17.336	-	-	-	12379	5.07	
6	C24	Non	9.762	-	-	-	105	0.04		N	17.336	-	-	-	1978	0.81	
	N	9.762	9.689	-0.002	0.986	354	0.15		N	17.723	17.650	0.016	1.246	10928	4.48		
7	C25	Non	10.368	-	-	-	231	0.09		N	17.723	17.650	0.016	1.246	1501	0.62	
	N	10.368	-	-	-	-	490	0.20		N	18.121	-	-	-	9840	4.03	
8	C26	Non	10.771	-	-	-	398	0.16		N	18.121	-	-	-	1106	0.45	
9		N	10.962	10.889	-0.007	1.036	631	0.26		N	18.496	-	-	-	9051	3.71	
10	C27	Non	11.328	-	-	-	744	0.30		N	18.496	18.423	0.007	1.265	1071	0.44	
11		N	11.536	-	-	-	886	0.36		N	18.862	-	-	-	7445	3.05	
12	C28	Non	11.899	-	-	-	1329	0.54		N	18.862	-	-	-	883	0.36	
13		N	12.094	12.021	-0.007	1.079	1168	0.48		N	19.212	19.139	-0.024	1.281	6416	2.63	
14	C29	Non	12.438	-	-	-	2290	0.94		N	19.212	-	-	-	753	0.31	
15		N	12.636	-	-	-	1507	0.62		N	19.565	-	-	-	5594	2.29	
16	C30	Non	12.996	-	-	-	3664	1.50		N	19.565	-	-	-	631	0.26	
17		N	13.170	13.097	0.006	1.117	1903	0.78		N	19.886	-	-	-	4594	1.88	
18	C31	Non	13.694	-	-	-	6366	2.61		N	19.886	19.813	-0.063	1.296	304	0.12	
	N	13.694	-	-	-	-	3007	1.23		N	20.227	-	-	-	3292	1.35	
19	C32	Non	14.205	-	-	-	10181	4.17		N	20.227	-	-	-	203	0.08	
	N	14.205	14.132	0.035	1.150	4917	2.02		N	20.349	-	-	-	2641	1.08		
20	C33	Non	14.702	-	-	-	14699	6.03		N	20.349	20.476	-0.087	1.311	166	0.07	
	N	14.702	-	-	-	-	5563	2.28		N	20.863	-	-	-	1591	0.65	
21	C34	Non	15.181	-	-	-	19456	7.98		N	20.863	-	-	-	98	0.04	
	N	15.181	15.108	0.059	1.179	4639	1.90		N	21.167	-	-	-	1644	0.67		
22	C35	Non	15.639	-	-	-	18256	7.48		N	21.733	-	-	-	611	0.25	
	N	15.639	-	-	-	-	3868	1.59		N	22.113	-	-	-	194	0.08	
23	C36	Non	16.076	-	-	-	15738	6.45		Total		243958		100.00			

**Table B9** Chromatographic data of soluble wax from 1<sup>st</sup> extraction of 500SW at 45 °C by using MEK

Total Non = 83.35%, N = 16.65

P/ No.	P/ Na	Group	t <sub>m</sub> , min	t <sub>R</sub>	Δt <sub>R</sub>	Log t <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>m</sub> , min	t <sub>R</sub>	Δt <sub>R</sub>	Log t <sub>R</sub>	A	% wt
1	C19	N	6.542	-	-	-	103	0.03	22	C36	Non	15.703	-	-	-	3745	1.17
2	C20	N	7.212	7.135	0.103	0.853	145	0.05	23	C37	Non	16.142	-	-	-	19818	6.21
3	C21	N	7.877	-	-	-	211	0.07	23	C37	Non	16.363	-	-	-	2695	0.84
4	C22	N	8.333	8.456	0.053	0.927	219	0.07	23	C37	N	16.363	-	-	-	18601	5.83
5	C23	N	9.170	-	-	-	280	0.09	24	C38	Non	16.987	-	-	-	2428	0.76
6	C24	Non	9.794	-	-	-	181	0.06	24	C38	N	16.987	16.910	0.097	1.238	16000	5.01
		N	9.794	9.717	0.026	0.987	436	0.14	25	C39	Non	17.382	-	-	-	1879	0.59
7	C25	Non	10.406	-	-	-	486	0.15	25	C39	N	17.382	-	-	-	14560	4.56
		N	10.406	-	-	-	542	0.17	26	C40	Non	17.783	-	-	-	1502	0.47
8	C26	Non	10.802	-	-	-	1063	0.33	26	C40	N	17.783	17.706	0.072	1.248	13079	4.10
9		N	10.998	10.921	0.025	1.038	837	0.26	27	C41	Non	18.166	-	-	-	1453	0.46
10	C27	Non	11.399	-	-	-	1851	0.58	27	C41	N	18.166	-	-	-	11603	3.63
11		N	11.579	-	-	-	1388	0.43	28	C42	Non	18.342	-	-	-	1284	0.40
12	C28	Non	11.946	-	-	-	1623	1.13	28	C42	N	18.342	18.465	0.049	1.266	9932	3.11
13		N	12.143	12.066	0.038	1.081	1646	0.52	29	C43	Non	18.895	-	-	-	1049	0.33
14	C29	Non	12.497	-	-	-	7143	2.24	29	C43	N	18.895	-	-	-	8881	2.78
15		N	12.700	-	-	-	2635	0.83	30	C44	Non	19.282	-	-	-	666	0.21
16	C30	Non	13.249	-	-	-	11824	3.70	30	C44	N	19.282	19.205	0.042	1.283	6692	2.10
		N	13.249	13.172	0.081	1.119	4930	1.55	31	C45	Non	19.584	-	-	-	583	0.18
17	C31	Non	13.779	-	-	-	17409	5.45	31	C45	N	19.584	-	-	-	5689	1.78
		N	13.779	-	-	-	6439	2.02	32	C46	Non	19.941	-	-	-	399	0.12
18	C32	Non	14.294	-	-	-	21642	6.78	32	C46	N	19.941	19.864	-0.012	1.298	3049	0.96
		N	14.294	14.217	0.120	1.152	3984	1.87	33	C47	Non	20.244	-	-	-	301	0.09
19	C33	Non	14.779	-	-	-	22859	7.16	33	C47	N	20.244	-	-	-	2081	0.65
		N	14.779	-	-	-	4751	1.49	34	C48	Non	20.543	-	-	-	188	0.06
20	C34	Non	15.249	-	-	-	24423	7.65	34	C48	N	20.543	-	-	-	1225	0.38
		N	15.249	15.172	0.123	1.181	4395	1.38	35	C49	Non	20.872	-	-	-	813	0.25
21	C35	Non	15.703	-	-	-	21306	6.67	35	C49	N	20.872	-	-	-	243	0.08
									36	C50	Non	21.351	-	-	-	Total	319209 100.00

**Table B10** Chromatographic data of soluble wax from 1<sup>st</sup> extraction of 500SW at 50 °C by using MEK

Total Non = 84.27%, N = 15.73%

P/ No.	P/ Na	Group	t <sub>m</sub> , min	t <sub>R</sub>	Δt <sub>R</sub>	Log t <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>m</sub> , min	t <sub>R</sub>	Δt <sub>R</sub>	Log t <sub>R</sub>	A	% wt
1	C20	N	7.023	6.947	-0.085	0.841	47	0.05	21	C35	Non	15.439	-	-	-	6453	7.15
2	C21	N	7.709	-	-	-	48	0.05	21	C35	N	15.439	-	-	-	1006	1.11
3	C22	N	8.364	8.288	-0.115	0.918	52	0.06	22	C36	Non	15.876	-	-	-	5314	5.89
4	C23	N	9.047	-	-	-	65	0.07	22	C36	N	15.876	15.800	-0.154	1.198	678	0.75
5	C24	Non	9.651	-	-	-	44	0.05	23	C37	Non	16.302	-	-	-	5119	5.67
		N	9.651	9.575	-0.116	0.981	99	0.11	23	C37	N	16.302	-	-	-	626	0.69
6	C25	Non	10.262	-	-	-	133	0.15	24	C38	Non	16.726	-	-	-	4414	4.89
		N	10.262	-	-	-	133	0.15	24	C38	N	16.726	16.65	-0.163	1.221	444	0.49
7	C26	Non	10.853	-	-	-	318	0.35	25	C39	Non	17.132	-	-	-	3991	4.42
		N	10.852	10.776	-0.120	1.032	241	0.27	25	C39	N	17.132	-	-	-	392	0.43
8	C27	Non	11.234	-	-	-	645	0.71	26	C40	Non	17.517	-	-	-	3534	3.91
9		N	11.429	-	-	-	332	0.37	26	C40	N	17.517	17.441	-0.193	1.241	317	0.35
10	C28	Non	11.784	-	-	-	1115	1.23	27	C41	Non	17.931	-	-	-	3138	3.48
		N	11.981	11.905	-0.123	1.075	459	0.51	27	C41	N	17.931	-	-	-	246	0.27
11	C29	Non	12.344	-	-	-	2189	2.42	28	C42	Non	18.382	-	-	-	2666	2.95
12		N	12.522	-	-	-	735	0.81	28	C42	N	18.382	18.306	-0.110	1.262	232	0.26
13	C30	Non	12.861	-	-	-	3455	3.83	29	C43	Non	18.731	-	-	-	2321	2.57
14		N	13.041	12.965	-0.126	1.112	1374	1.52	29	C43	N	18.731	-	-	-	159	0.18
15	C31	Non	13.377	-	-	-	5006	5.54	30	C44	Non	19.097	-	-	-	1907	2.11
16		N	13.553	-	-	-	1756	1.94	30	C44	N	19.097	19.021	-0.142	1.279	83	0.09
17	C32	Non	14.041	-	-	-	5909	6.54	31	C45	Non	19.458	-	-	-	1453	1.61
		N	14.041	13.965	-0.132	1.145	1770	1.96	31	C45	N	19.458	-	-	-	68	0.08
18	C33	Non	14.519	-	-	-	6148	6.81	32	C46	Non	19.634	-	-	-	1206	1.34
		N	14.519	-	-	-	1510	1.67	33	C47	Non	20.003	-	-	-	823	0.91
19	C34	Non	14.984	-	-	-	8002	8.86	34	C48	Non	20.458	-	-	-	534	0.59
		N	14.984	14.908	-0.141	1.173	1329	1.47	35	C49	Non	20.792	-	-	-	251	0.28
									35	C49	N	20.792	-	-	-	Total	90289 100.00

**Table B11 Chromatographic data of soluble wax from 1<sup>st</sup> extraction of 500SW at 55 °C by using MEK**

Total Non = 84.49%, N = 15.51%

P/No.	P/Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/No.	P/Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>1</sub>	Solvent	0.069	-	-	-	-	-	23	C36	Non	15.855	-	-	-	5712	6.22
1	C21	N	7.704	-	-	-	72	0.08	23		N	15.855	15.786	-0.168	1.198	617	0.67
2	C22	N	8.384	8.315	-0.088	0.919	90	0.10	24	C37	Non	16.401	-	-	-	5533	6.02
3	C23	N	9.004	-	-	-	88	0.10	24		N	16.401	-	-	-	126	0.14
4	C24	N	9.642	9.573	-0.118	0.981	138	0.15	25	C38	Non	16.794	-	-	-	4727	5.14
5	C25	Non	10.253	-	-	-	116	0.13	25		N	16.794	16.725	-0.088	1.223	178	0.19
6	C26	Non	10.627	-	-	-	309	0.34	26	C39	Non	17.139	-	-	-	4033	4.39
7		N	10.834	10.765	-0.131	1.032	374	0.30	26		N	17.139	-	-	-	377	0.41
8	C27	Non	11.199	-	-	-	678	0.74	27	C40	Non	17.549	-	-	-	3639	3.96
9		N	11.413	-	-	-	387	0.42	27		N	17.549	17.480	-0.154	1.242	282	0.31
10	C28	Non	11.776	-	-	-	1166	1.27	28	C41	Non	17.986	-	-	-	2903	3.16
11		N	11.958	11.889	-0.139	1.075	525	0.57	28		N	17.986	-	-	-	149	0.16
12	C29	Non	12.304	-	-	-	2174	2.37	29	C42	Non	18.374	-	-	-	2761	3.01
13		N	12.501	-	-	-	458	0.93	29		N	18.374	18.305	-0.111	1.262	150	0.16
14	C30	Non	12.856	-	-	-	3528	3.84	30	C43	Non	18.718	-	-	-	2312	2.52
15		N	13.026	12.957	-0.134	1.112	1554	1.69	30		N	18.718	-	-	-	132	0.14
16	C31	Non	13.403	-	-	-	5167	5.62	31	C44	Non	19.078	-	-	-	1864	2.03
17		N	13.533	-	-	-	1985	2.16	31		N	19.078	19.009	-0.154	1.278	118	0.13
18	C32	Non	13.889	-	-	-	5909	6.43	32	C45	Non	19.440	-	-	-	1398	1.52
19		N	14.021	13.952	-0.145	1.144	1939	2.11	32		N	19.440	-	-	-	74	0.08
20	C33	Non	14.502	-	-	-	6290	6.85	33	C46	Non	19.634	-	-	-	1129	1.23
		N	14.502	-	-	-	1606	1.75	33		N	19.634	19.565	-0.311	1.291	57	0.06
21	C34	Non	14.964	-	-	-	8000	8.71	34	C47	Non	20.009	-	-	-	728	0.79
		N	14.964	14.895	-0.154	1.173	1331	1.45	35	C48	Non	20.654	-	-	-	466	0.51
22	C35	Non	15.420	-	-	-	6664	7.25	36	C49	Non	20.911	-	-	-	311	0.34
		N	15.420	-	-	-	960	1.04	37	C50	Non	21.201	-	-	-	113	0.12
															Total	91877	100.00

**Table B12 Chromatographic data of wax cake from 1<sup>st</sup> extraction of 600SW at 40 °C by using MEK**

Total Non = 30.73%, N = 69.27%

P/No.	P/Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/No.	P/Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>1</sub>	Solvent	0.074	-	-	-	-	-			N	18.099	-	-	-	3474	3.79
1	C29	N	12.644	-	-	-	107	0.12	14	C42	Non	18.475	-	-	-	2977	3.25
2	C30	N	13.162	(13.088	-0.003	1.116	382	0.42			N	18.475	18.401	-0.015	1.264	2365	2.58
3	C31	N	13.672	-	-	-	1162	1.27	15	C43	Non	18.843	-	-	-	2469	2.70
4	C32	Non	14.173	-	-	-	78	0.09			N	18.843	-	-	-	2121	2.32
		N	14.173	14.099	0.002	1.149	2928	3.20	16	C44	Non	19.203	-	-	-	2171	2.37
5	C33	Non	14.666	-	-	-	270	0.29			N	19.203	19.129	-0.034	1.281	1826	1.99
		N	14.666	-	-	-	5086	5.55	17	C45	Non	19.558	-	-	-	1819	1.99
6	C34	Non	15.143	-	-	-	538	0.59			N	19.558	-	-	-	1460	1.59
		N	15.143	15.069	0.020	1.178	6412	7.00	18	C46	Non	19.900	-	-	-	1543	1.69
7	C35	Non	15.603	-	-	-	885	0.97			N	19.900	19.826	-0.050	1.297	1096	1.20
		N	15.603	-	-	-	6644	7.26	19	C47	Non	20.239	-	-	-	1375	1.50
8	C36	Non	16.048	-	-	-	1272	1.39			N	20.239	-	-	-	845	0.92
		N	16.048	15.974	0.030	1.203	6369	6.96	20	C48	Non	20.567	-	-	-	961	1.05
9	C37	Non	16.482	-	-	-	1609	1.76			N	20.567	20.493	-0.070	1.311	588	0.64
10	C38	Non	16.903	-	-	-	5975	6.53	21	C49	Non	20.890	-	-	-	582	0.64
		N	16.903	16.829	0.016	1.226	5266	5.75			N	20.890	-	-	-	366	0.40
11	C39	Non	17.310	-	-	-	2218	2.42	22	C50	Non	21.206	-	-	-	384	0.42
		N	17.310	-	-	-	4574	5.00			N	21.206	21.132	-0.084	1.324	242	0.26
12	C40	Non	17.713	-	-	-	2260	2.47	23	CS1	Non	21.521	-	-	-	217	0.24
		N	17.713	17.639	0.005	1.246	3982	4.35			N	21.521	-	-	-	116	0.13
13	C41	Non	18.099	-	-	-	2510	2.74	24	CS2	Non	21.829	-	-	-	56	0.06
											N	21.829	21.755	-0.091	1.337	75	0.08
															Total	91567	100.00

**Table B13 Chromatographic data of wax cake from 1<sup>st</sup> extraction of 600SW at 45 °C by using MEK**

Total Non = 33.39%, N = 66.61%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>1</sub>	Solvent	0.072	-	-	-	-	-	14	C41	Non	18.132	-	-	-	6455	2.97
1	C28	N	12.083	12.013	-0.015	1.079	61	0.03			N	18.132	-	-	-	8113	3.73
2	C29	N	12.623	-	-	-	123	0.06	15	C42	Non	18.514	-	-	-	6875	3.16
3	C30	N	13.146	13.074	-0.017	1.116	446	0.20			N	18.514	18.442	0.026	1.265	7220	3.32
4	C31	Non	13.658	-	-	-	62	0.03	16	C43	Non	18.874	-	-	-	6014	2.76
		N	13.658	-	-	-	1743	0.80			N	18.874	-	-	-	5738	2.64
5	C32	Non	14.168	-	-	-	271	0.12	17	C44	Non	19.230	-	-	-	5641	2.59
		N	14.168	14.096	-0.001	1.149	5089	2.34			N	19.230	19.158	-0.005	1.282	4995	2.29
6	C33	Non	14.672	-	-	-	781	0.36	18	C45	Non	19.580	-	-	-	4652	2.14
		N	14.672	-	-	-	9677	4.45			N	19.580	-	-	-	4018	1.85
7	C34	Non	15.160	-	-	-	1490	0.68	19	C46	Non	19.922	-	-	-	4034	1.85
		N	15.160	15.088	0.039	1.178	13012	5.98			N	19.922	19.850	-0.026	1.297	30K2	1.42
8	C35	Non	15.626	-	-	-	2318	1.06	20	C47	Non	20.251	-	-	-	3391	1.56
		N	15.626	-	-	-	14327	6.58			N	20.251	-	-	-	2336	1.07
9	C36	Non	16.081	-	-	-	3313	1.52	21	C48	Non	20.574	-	-	-	2473	1.14
7		N	16.081	16.009	0.053	1.204	14102	6.48			N	20.574	20.502	-0.061	1.311	1623	0.75
10	C37	Non	16.516	-	-	-	4296	1.97	22	C49	Non	20.889	-	-	-	1783	0.82
		N	16.516	-	-	-	13568	6.23			N	20.889	-	-	-	1055	0.48
11	C38	Non	16.936	-	-	-	5132	2.36	23	C50	Non	21.201	-	-	-	1011	0.46
		N	16.936	16.864	0.051	1.226	12209	5.61			N	21.201	21.129	-0.087	1.324	788	0.36
12	C39	Non	17.345	-	-	-	5567	2.56	24	C51	Non	21.522	-	-	-	606	0.28
		N	17.345	-	-	-	11082	5.09			N	21.522	-	-	-	320	0.15
13	C40	Non	17.743	-	-	-	6107	2.81	25	C52	Non	21.813	-	-	-	417	0.19
		N	17.743	17.671	0.037	1.247	10049	4.62			N	21.813	21.741	-0.105	1.337	218	0.10
												Total	217683			100.00	

**Table B14 Chromatographic data of wax cake from 1<sup>st</sup> extraction of 600SW at 50 °C by using MEK**

Total Non = 35.01%, N = 64.99%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>1</sub>	Solvent	0.075	-	-	-	-	-	15	C41	Non	18.074	-	-	-	3713	3.19
1	C27	N	11.511	-	-	-	92	0.08			N	18.074	-	-	-	2836	2.44
2	C28	N	12.080	12.005	-0.023	1.079	274	0.24	16	C42	Non	18.454	-	-	-	3727	3.20
3	C29	N	12.616	-	-	-	565	0.49			N	18.454	18.379	-0.037	1.264	2406	2.07
4	C30	Non	13.142	-	-	-	88	0.08	17	C43	Non	18.821	-	-	-	3225	2.77
		N	13.142	13.067	-0.024	1.116	1110	0.95			N	18.821	-	-	-	1806	1.55
5	C31	Non	13.656	-	-	-	203	0.17	18	C44	Non	19.179	-	-	-	2761	2.37
		N	13.656	-	-	-	2422	2.08			N	19.179	19.104	-0.059	1.281	1574	1.35
6	C32	Non	14.165	-	-	-	309	0.27	19	C45	Non	19.530	-	-	-	2337	2.01
		N	14.165	14.09	-0.007	1.148	4980	4.28			N	19.530	-	-	-	1283	1.10
7	C33	Non	14.658	-	-	-	776	0.67	20	C46	Non	19.876	-	-	-	1882	1.62
		N	14.658	-	-	-	7575	6.51			N	19.876	19.801	-0.075	1.296	1017	0.87
8	C34	Non	15.139	-	-	-	1237	1.06	21	C47	Non	20.212	-	-	-	1479	1.27
		N	15.139	15.064	0.015	1.177	8733	7.51			N	20.212	-	-	-	823	0.71
9	C35	Non	15.598	-	-	-	1669	1.43	22	C48	Non	20.544	-	-	-	1126	0.97
		N	15.598	-	-	-	8482	7.29			N	20.544	20.469	-0.094	1.311	493	0.42
10	C36	Non	16.039	-	-	-	2168	1.86	23	C49	Non	20.863	-	-	-	819	0.70
		N	16.039	15.964	0.01	1.203	7632	6.36			N	20.863	-	-	-	309	0.27
11	C37	Non	16.471	-	-	-	2619	2.23	24	C50	Non	21.184	-	-	-	461	0.40
		N	16.471	-	-	-	6730	5.78			N	21.184	21.109	-0.107	1.324	203	0.17
12	C38	Non	16.887	-	-	-	2952	2.54	25	C51	Non	21.490	-	-	-	293	0.25
		N	16.887	16.812	-0.001	1.225	5642	4.85			N	21.490	-	-	-	100	0.09
13	C39	Non	17.292	-	-	-	3269	2.81	26	C52	Non	21.799	-	-	-	54	0.05
		N	17.292	-	-	-	4670	4.01			N	21.799	21.724	-0.122	1.336	60	0.05
14	C40	Non	17.690	-	-	-	3566	3.06				Total	116359			100.00	

**Table B15** Chromatographic data of wax cake from 1<sup>st</sup> extraction of 600SW at 55 °C by using MEK

Total Non = 39.22%, N = 60.78%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
tm	CS <sub>1</sub>	Solvent	0.068	-	-	-	-	-	15	C40	Non	17.173	-	-	-	2360	4.38
1	C26	N	10.911	10.843	-0.051	1.035	59	0.09			N	17.566	-	-	-	1677	3.12
2	C27	N	11.459	-	-	-	66	0.12			N	17.566	17.498	-0.136	1.242	2010	3.73
3	C28	N	12.036	11.968	-0.06	1.078	109	0.20	16	C41	Non	17.958	-	-	-	1557	2.89
4	C29	N	12.557	-	-	-	198	0.37			N	17.958	-	-	-	1532	2.85
5	C30	Non	13.076	-	-	-	51	0.09	17	C42	Non	18.337	-	-	-	1547	2.87
		N	13.076	13.008	-0.063	1.114	359	0.67			N	18.337	18.269	-0.147	1.261	1319	2.45
6	C31	Non	13.589	-	-	-	239	0.43	18	C43	Non	18.706	-	-	-	1398	2.60
		N	13.589	-	-	-	721	1.34			N	18.706	-	-	-	968	1.80
7	C32	Non	14.074	-	-	-	640	1.19	19	C44	Non	19.063	-	-	-	1325	2.46
		N	14.074	14.006	-0.091	1.146	1594	2.96			N	19.063	18.995	-0.168	1.278	765	1.42
8	C33	Non	14.558	-	-	-	815	1.51	20	C45	Non	19.425	-	-	-	1086	2.02
		N	14.558	-	-	-	2631	4.89			N	19.425	-	-	-	587	1.09
9	C34	Non	15.021	-	-	-	1119	2.08	21	C46	Non	19.767	-	-	-	948	1.76
		N	15.021	14.953	-0.096	1.174	3341	6.21			N	19.767	19.699	-0.177	1.294	438	0.81
10	C35	Non	15.474	-	-	-	1232	2.29	22	C47	Non	20.109	-	-	-	655	1.22
		N	15.474	-	-	-	3522	6.54			N	20.109	-	-	-	338	0.63
11	C36	Non	15.917	-	-	-	1366	2.54	23	C48	Non	20.436	-	-	-	576	1.07
		N	15.917	15.849	-0.105	1.2	3400	6.32			N	20.436	20.368	-0.195	1.308	218	0.41
12	C37	Non	16.347	-	-	-	1393	2.59	24	C49	Non	20.766	-	-	-	325	0.60
		N	16.347	-	-	-	3202	5.95			N	20.766	-	-	-	127	0.24
13	C38	Non	16.764	-	-	-	1428	2.65	25	C50	Non	21.077	-	-	-	200	0.37
		N	16.764	16.696	-0.117	1.222	2784	5.17			N	21.077	21.009	-0.207	1.322	74	0.14
14	C39	Non	17.173	-	-	-	1542	2.87							Total	53821	100.00

**Table B16** Chromatographic data of soluble wax from 1<sup>st</sup> extraction of 600SW at 40 °C by using MEK

Total Non = 78.63%, N = 21.37%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	
tm	CS <sub>1</sub>	Solvent	0.073	-	-	-	-	-	22	C37	Non	16.115	16.042	0.088	1.205	3882	1.46	
1	C19	N	6.499	-	-	-	78	0.03			N	16.542	-	-	-	16956	6.36	
2	C20	N	7.182	7.109	-0.077	0.851	161	0.06			N	16.542	-	-	-	3497	1.31	
3	C21	N	7.856	-	-	-	201	0.08	23	C38	Non	16.968	-	-	-	13833	5.19	
4	C22	N	8.526	8.453	0.05	0.927	220	0.08			N	16.968	16.895	0.082	1.227	2914	1.09	
5	C23	N	9.156	-	-	-	263	0.10	24	C39	Non	17.362	-	-	-	13321	4.99	
6	C24	N	9.77	9.697	0.006	0.986	394	0.15			N	17.362	-	-	-	2200	0.82	
7	C25	N	10.387	-	-	-	535	0.20	25	C40	Non	17.764	-	-	-	11885	4.46	
8	C26	Non	10.977	-	-	-	131	0.05			N	17.764	17.691	0.057	1.247	1954	0.73	
		N	10.977	10.904	0.008	1.037	762	0.29	26	C41	Non	18.153	-	-	-	10582	3.97	
9	C27	Non	11.336	-	-	-	680	0.25			N	18.153	-	-	-	1460	0.55	
10		N	11.552	-	-	-	1074	0.40	27	C42	Non	18.522	-	-	-	9237	3.46	
11	C28	Non	12.106	-	-	-	940	0.35			N	18.522	18.449	0.033	1.265	1405	0.53	
		N	12.106	12.033	0.005	1.08	1752	0.66	28	C43	Non	18.881	-	-	-	8705	3.26	
12	C29	Non	12.454	-	-	-	2209	0.83			N	18.881	-	-	-	1010	0.38	
13		N	12.636	-	-	-	1850	0.69	29	C44	Non	19.241	-	-	-	6862	2.57	
14	C30	Non	12.999	-	-	-	3641	1.37			N	19.241	19.168	0.005	1.282	786	0.29	
15		N	13.187	13.114	0.023	1.117	2420	0.91	30	C45	Non	19.591	-	-	-	5965	2.24	
16	C31	Non	13.717	-	-	-	6185	2.32			N	19.591	-	-	-	620	0.23	
		N	13.717	-	-	-	3852	1.44	31	C46	Non	19.841	-	-	-	5084	1.91	
17	C32	Non	14.241	-	-	-	11341	4.25			N	19.841	19.768	-0.108	1.295	424	0.16	
		N	14.241	14.168	0.071	1.151	5639	2.11	32	C47	Non	20.266	-	-	-	3623	1.36	
18	C33	Non	14.739	-	-	-	16470	6.18			N	20.266	-	-	-	266	0.10	
		N	14.739	-	-	-	6405	2.40	33	C48	Non	20.579	-	-	-	2590	0.97	
19	C34	Non	15.217	-	-	-	17778	6.67			N	20.579	20.506	-0.057	1.311	196	0.07	
		N	15.217	15.144	0.095	1.18	5911	2.22	34	C49	Non	20.884	-	-	-	1754	0.66	
20	C35	Non	15.671	-	-	-	19335	7.25			N	20.884	-	-	-	137	0.05	
		N	15.671	-	-	-	4737	1.78	35	C50	Non	20.884	-	-	-	1049	0.39	
21	C36	Non	16.115	-	-	-	18770	7.04							772	0.29		
									36	C51	Non	21.119	-	-	-	Total	266703	100.00

**Table B17** Chromatographic data of soluble wax from 1<sup>st</sup> extraction of 600SW at 45 °C by using MEK

Total Non = 79.36%, N = 20.64%

P/No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1	CS <sub>1</sub>	Solvent	0.068	-	-	-	-	-	23	C36	Non	15.859	-	-	-	8616	6.78
1	C19	N	6.266	-	-	-	50	0.04		N	15.859	15.791	-0.163	1.198	1961	1.54	
2	C20	N	6.994	6.926	-0.106	0.840	114	0.09	24	C37	Non	16.291	-	-	-	7876	6.19
3	C21	N	7.688	-	-	-	134	0.11		N	16.291	-	-	-	1616	1.37	
4	C22	N	8.371	8.303	-0.100	0.919	139	0.11	25	C38	Non	16.708	-	-	-	6746	5.31
5	C23	N	9.007	-	-	-	140	0.11		N	16.708	16.640	-0.173	1.221	1235	0.97	
6	C24	N	9.641	9.573	-0.118	0.981	178	0.14	26	C39	Non	17.122	-	-	-	6189	4.87
7	C25	Non	10.256	-	-	-	98	0.08		N	17.122	-	-	-	954	0.75	
		N	10.256	-	-	-	236	0.19	27	C40	Non	17.511	-	-	-	5444	4.28
8	C26	Non	10.828	-	-	-	213	0.17		N	17.511	17.443	-0.191	1.241	777	0.61	
		N	10.828	10.760	-0.136	1.031	361	0.28	28	C41	Non	17.910	-	-	-	4768	3.75
9	C27	Non	11.295	-	-	-	446	0.35		N	17.910	-	-	-	548-	0.43	
10		N	11.406	-	-	-	492	0.39	29	C42	Non	18.301	-	-	-	4377	3.44
11	C28	Non	11.767	-	-	-	789	0.62		N	18.301	18.233	-0.183	1.260	513	0.40	
12		N	11.954	11.886	-0.142	1.075	668	0.53	30	C43	Non	18.657	-	-	-	3639	2.88
13	C29	Non	12.294	-	-	-	1370	1.08		N	18.657	-	-	-	351	0.28	
14		N	12.493	-	-	-	816	0.64	31	C44	Non	19.036	-	-	-	3182	2.50
15	C30	Non	12.834	-	-	-	2149	1.69		N	19.036	18.968	-0.195	1.278	276	0.22	
16		N	13.014	12.946	-0.145	1.112	1079	0.85	32	C45	Non	19.447	-	-	-	2456	1.93
17	C31	Non	13.403	-	-	-	3490	2.74		N	19.447	-	-	-	196	0.15	
18		N	13.530	-	-	-	1693	1.33	33	C46	Non	19.706	-	-	-	2016	1.59
19	C32	Non	14.021	-	-	-	5497	4.32		N	19.706	19.638	-0.238	1.293	151	0.12	
		N	14.021	13.953	-0.144	1.144	2893	2.28	34	C47	Non	20.082	-	-	-	1561	1.23
20	C33	Non	14.503	-	-	-	7648	6.01		N	20.082	-	-	-	77	0.06	
		N	14.503	-	-	-	3141	2.47	35	C48	Non	20.344	-	-	-	1090	0.86
21	C34	Non	14.966	-	-	-	9688	7.62		N	20.344	-	-	-	811	0.64	
		N	14.966	14.898	-0.151	1.173	3011	2.37	36	C49	Non	20.647	-	-	-	554	0.44
22	C35	Non	15.423	-	-	-	9748	7.67		N	20.647	-	-	-	424	0.33	
		N	15.423	-	-	-	2444	1.92	37	C50	Non	20.998	-	-	-	Total	127149 100.00

**Table B18** Chromatographic data of soluble wax from 1<sup>st</sup> extraction of 600SW at 50 °C by using MEK

Total Non = 81.18%, N = 18.82%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>2</sub>	Solvent	0.075	-	-	-	-	-	17	C38	N	16.51B	-	-	-	503	1.17
1	C24	N	9.864	9.789	0.098	0.990	48	0.11			N	16.924	-	-	-	2456	5.70
2	C25	N	10.477	-	-	-	72	0.17			N	16.924	16.849	0.036	1.226	411	0.95
3	C26	N	11.069	10.994	0.098	1.041	114	0.26	18	C39	Non	17.334	-	-	-	2174	5.04
4	C27	Non	11.634	-	-	-	45	0.10			N	17.334	-	-	-	317	0.74
		N	11.634	-	-	-	154	0.36	19	C40	Non	17.744	-	-	-	1884	4.37
5	C28	Non	12.182	-	-	-	201	0.47			N	17.744	17.669	0.035	1.247	249	0.58
		N	12.182	12.107	0.079	1.083	204	0.47	20	C41	Non	18.128	-	-	-	1674	3.88
6	C29	Non	12.524	-	-	-	396	0.92			N	18.128	-	-	-	215	0.50
7		N	12.719	-	-	-	254	0.59	21	C42	Non	18.507	-	-	-	1424	3.30
8	C30	Non	13.052	-	-	-	669	1.55			N	18.507	18.432	0.016	1.265	189	0.44
9		N	13.243	13.168	0.077	1.119	340	0.79	22	C43	Non	18.894	-	-	-	1243	2.88
10	C31	Non	13.755	-	-	-	1222	2.83			N	18.894	-	-	-	110	0.26
		N	13.755	-	-	-	546	1.27	23	C44	Non	19.254	-	-	-	1042	2.42
11	C32	Non	14.246	-	-	-	1963	4.55			N	19.254	19.179	0.016	1.282	100	0.23
		N	14.246	14.171	0.074	1.151	839	1.95	24	C45	Non	19.601	-	-	-	895	2.08
12	C33	Non	14.731	-	-	-	2835	6.57			N	19.601	-	-	-	70	0.16
		N	14.731	-	-	-	965	2.24	25	C46	Non	19.956	-	-	-	616	1.43
13	C34	Non	15.184	-	-	-	3763	8.73			N	19.956	19.881	0.005	1.298	46	0.11
		N	15.184	15.109	0.06	1.179	983	2.28	26	C47	Non	20.298	-	-	-	532	1.23
14	C35	Non	15.648	-	-	-	3502	8.12	27	C48	Non	20.628	-	-	-	378	0.88
		N	15.648	-	-	-	797	1.85	28	C49	Non	20.853	-	-	-	228	0.53
15	C36	Non	16.081	-	-	-	2938	6.81	29	C50	Non	21.155	-	-	-	159	0.37
		N	16.081	16.006	0.052	1.204	589	1.37	30	C51	Non	21.514	-	-	-	55	0.13
16	C37	Non	16.518	-	-	-	2714	6.29							Total	43123	100.00

**Table B19** Chromatographic data of soluble wax from 1<sup>st</sup> extraction of 600SW at 55 °C by using MEK

Total Non = 86.57% , N = 13.43%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1	CS <sub>1</sub>	Solvent	0.076	-	-	-	-	-	22	C36	Non	15.646	-	-	-	-	2152 0.62
1	C19	N	6.539	-	-	-	133	0.04	22		N	16.09	-	-	-	-	21059 6.09
2	C20	N	7.197	7.121	0.089	0.852	161	0.05	22		N	16.09	16.014	0.06	1.204	1984	0.57
3	C21	N	7.853	-	-	-	223	0.06	23	C37	Non	16.515	-	-	-	-	19551 5.65
4	C22	N	8.503	8.427	0.074	0.925	232	0.07	23		N	16.515	-	-	-	-	1716 0.50
5	C23	N	9.127	-	-	-	280	0.08	24	C38	Non	17.024	-	-	-	-	17496 5.06
6	C24	Non	9.760	-	-	-	72	0.02	24		N	17.024	16.948	0.135	1.229	1151	0.33
		N	9.760	9.684	-0.007	0.986	518	0.15	25	C39	Non	17.426	-	-	-	-	15701 4.54
7	C25	Non	10.367	-	-	-	515	0.15	25		N	17.428	-	-	-	-	1154 0.33
		N	10.367	-	-	-	643	0.19	26	C40	Non	17.809	-	-	-	-	14107 4.08
8	C36	Non	10.759	-	-	-	1060	0.31	26		N	17.809	17.733	0.099	1.248	1025	0.30
9		N	10.962	10.886	-0.001	1.036	985	0.28	27	C41	Non	18.211	-	-	-	-	12389 3.58
10	C27	- Non	11.336	-	-	-	2129	0.62	27		N	18.211	-	-	-	-	680 0.20
11		N	11.537	-	-	-	1400	0.40	28	C42	Non	18.575	-	-	-	-	12273 3.55
12	C28	Non	11.974	-	-	-	3889	1.12	28		N	18.575	18.499	0.083	1.267	568	0.16
13		N	12.101	12.025	-0.003	1.08	1888	0.55	29	C43	Non	18.919	-	-	-	-	8658 2.50
14	C29	Non	12.461	-	-	-	7775	2.25	29		N	18.919	-	-	-	-	420 0.12
15		N	12.659	-	-	-	3066	0.89	30	C44	Non	19.283	-	-	-	-	7460 2.16
16	C30	Non	13.203	-	-	-	13062	3.78	30		N	19.283	19.207	0.044	1.283	416	0.12
		N	13.203	13.127	0.036	1.118	5391	1.56	31	C45	Non	19.620	-	-	-	-	6500 1.88
17	C31	Non	13.728	-	-	-	19374	5.60	31		N	19.620	-	-	-	-	267 0.08
		N	13.728	-	-	-	6534	1.89	32	C46	Non	19.884	-	-	-	-	4068 1.18
18	C32	Non	14.238	-	-	-	22186	6.41	32		N	19.884	19.808	-0.068	1.296	149	0.04
		N	14.238	14.162	0.065	1.151	6169	1.78	33	C47	Non	19.974	-	-	-	-	3308 0.96
19	C33	Non	14.725	-	-	-	24608	7.11	33		N	20.583	-	-	-	-	2938 0.85
		N	14.725	-	-	-	4283	1.24	34	C48	Non	20.583	-	-	-	-	2298 0.66
20	C34	Non	15.193	-	-	-	28607	8.27	34		N	20.803	-	-	-	-	1637 0.47
		N	15.193	15.117	0.068	1.179	2891	0.84	35	C49	Non	21.119	-	-	-	-	913 0.26
21	C35	Non	15.646	-	-	-	25570	7.39	35		N	21.586	-	-	-	-	129 0.10
									36	C50	Non	21.832	-	-	-	-	Total 346011 100.00

**Table B20** Chromatographic data of wax cake from extraction of 500SW at 15 °C by using toluene

Total Non = 14.63% , N = 85.37%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1	CS <sub>1</sub>	Solvent	0.070	-	-	-	-	-	12	C41	Non	17.931	-	-	-	-	206 1.24
1	C30	N	13.033	12.963	-0.128	1.112	54	0.32	12		N	17.931	-	-	-	-	1076 6.46
2	C31	N	13.562	-	-	-	113	0.68	13	C42	Non-	18.309	-	-	-	-	284 1.71
3	C32	N	14.048	13.978	-0.119	1.145	297	1.78	13		N	18.309	18.239	-0.177	1.261	946	5.68
4	C33	N	14.523	-	-	-	500	3.00	14	C43	Non	18.683	-	-	-	-	300 1.80
5	C34	N	14.986	14.916	-0.133	1.173	812	4.88	14		N	18.683	-	-	-	-	714 4.29
6	C35	Non	15.439	-	-	-	62	0.37	15	C44	Non	19.042	-	-	-	-	278 1.67
		N	15.439	-	-	-	1094	6.57	15		N	19.042	18.972	-0.191	1.278	570	3.42
7	C36	Non	15.880	-	-	-	79	0.47	16	C45	Non	19.40	-	-	-	-	249 1.50
		N	15.880	15.810	-0.144	1.198	1297	7.79	16		N	19.40	-	-	-	-	425 2.55
8	C37	Non	16.314	-	-	-	128	0.77	17	C46	Non	19.741	-	-	-	-	179 1.07
		N	16.314	-	-	-	1438	8.63	17		N	19.741	19.671	-0.205	1.293	313	1.88
9	C38	Non	16.732	-	-	-	147	0.88	18	C47	Non	20.093	-	-	-	-	145 0.87
		N	16.732	16.662	-0.151	1.221	1438	8.63	18		N	20.093	-	-	-	-	215 1.29
10	C39	Non	17.141	-	-	-	148	0.89	19	C48	Non	20.423	-	-	-	-	76 0.46
		N	17.141	-	-	-	1364	8.19	20	C49	N	20.423	20.353	-0.210	1.308	135	0.81
11	C40	Non	17.542	-	-	-	156	0.94	21	C50	N	20.750	-	-	-	-	77 0.46
		N	17.542	17.472	-0.162	1.242	1290	7.75	22	C51	N	21.072	21.002	-0.214	1.322	50	0.30
									22						Total 16655	100.00	

**Table B21 Chromatographic data of wax cake from extraction of 500SW at 20 °C by using toluene**

Total Non = 18.60% , N = 81.40%

P/ No.	P/ Na	Group	t <sub>R</sub> . min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> . min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>1</sub>	Solvent	0.068	-	-	-	-	-	13	C41	Non	17.539	17.471	-0.163	1.242	3215	5.68
1	C29	N	12.517	-	-	-	57	0.10			N	17.930	-	-	-	943	1.67
2	C30	Non	13.044	-	-	-	57	0.10			N	17.930	-	-	-	2549	4.50
		N	13.044	12.976	-0.115	1.113	190	0.34	14	C42	Non	18.305	-	-	-	1028	1.82
3	C31	Non	13.542	-	-	-	80	0.14			N	18.305	18.237	-0.176	1.260	2148	3.79
		N	13.542	-	-	-	594	1.05	15	C43	Non	18.676	-	-	-	1123	1.98
4	C32	Non	14.036	-	-	-	112	0.20			N	18.676	-	-	-	1535	2.71
		N	14.036	13.968	-0.129	1.147	1598	2.82	16	C44	Non	19.043	-	-	-	980	1.73
5	C33	Non	14.517	-	-	-	154	0.27			N	19.043	18.975	-0.188	1.278	1189	2.10
		N	14.517	-	-	-	3009	5.32	17	C45	Non	19.396	-	-	-	840	1.48
6	C34	Non	14.983	-	-	-	193	0.34			N	19.396	-	-	-	883	1.56
		N	14.983	14.915	-0.134	1.173	4440	7.84	18	C46	Non	19.745	-	-	-	661	1.17
7	C35	Non	15.440	-	-	-	254	0.45			N	19.745	19.677	-0.199	1.293	620	1.10
		N	15.440	-	-	-	5056	8.93	19	C47	Non	20.086	-	-	-	554	0.98
8	C36	Non	15.885	-	-	-	357	0.63			N	20.086	-	-	-	409	0.72
		N	15.885	15.817	-0.137	1.199	5100	9.01	20	C48	Non	20.419	-	-	-	322	0.57
9	C37	Non	16.316	-	-	-	453	0.80			N	20.419	20.351	-0.212	1.308	255	0.45
		N	16.316	-	-	-	4925	8.70	21	C49	Non	20.742	-	-	-	171	0.30
10	C38	Non	16.733	-	-	-	580	1.02			N	20.742	-	-	-	138	0.24
		N	16.733	16.665	-0.148	1.221	4318	7.63	22	C50	Non	21.069	-	-	-	115	0.20
11	C39	Non	17.141	-	-	-	710	1.25			N	21.069	21.001	-0.215	1.322	90	0.16
		N	17.141	-	-	-	3718	6.57	23	C51	N	21.376	-	-	-	42	0.07
12	C40	Non	17.539	-	-	-	843	1.49							Total	56610	100.00

**Table B22 Chromatographic data of wax cake from extraction of 500SW at 25 °C by using toluene**

Total Non = 24.61% , N = 75.39%

P/ No.	P/ Na	Group	t <sub>R</sub> . min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> . min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>1</sub>	Solvent	0.067	-	-	-	-	-	13	C40	Non	17.544	-	-	-	1048	2.21
1	C28	N	12.007	11.940	-0.088	1.077	97	0.20			N	17.544	17.477	-0.157	1.242	1913	4.03
2	C29	Non	12.530	-	-	-	43	0.09	14	C41	Non	17.934	-	-	-	1075	2.36
		N	12.530	-	-	-	305	0.64			N	17.934	-	-	-	1516	3.19
3	C30	Non	13.048	-	-	-	50	0.11	15	C42	Non	18.309	-	-	-	1050	2.21
		N	13.048	12.981	-0.110	1.113	962	2.03			N	18.309	18.242	-0.174	1.261	1320	2.78
4	C31	Non	13.554	-	-	-	100	0.21	16	C43	Non	18.684	-	-	-	956	2.01
		N	13.554	-	-	-	1894	3.99			N	18.684	-	-	-	986	2.08
5	C32	Non	14.050	-	-	-	142	0.30	17	C44	Non	19.048	-	-	-	832	1.75
		N	14.050	13.983	-0.114	1.145	2867	6.04			N	19.048	18.981	-0.182	1.278	801	1.69
6	C33	Non	14.528	-	-	-	239	0.55	18	C45	Non	19.401	-	-	-	672	1.42
		N	14.528	-	-	-	3301	6.95			N	19.401	-	-	-	582	1.23
7	C34	Non	14.996	-	-	-	341	0.72	19	C46	Non	19.750	19.683	-0.193	1.294	539	1.14
		N	14.996	14.929	-0.120	1.174	3665	7.72			N	19.750	-	-	-	424	0.89
8	C35	Non	15.449	-	-	-	442	0.93	20	C47	Non	20.093	-	-	-	378	0.80
		N	15.449	-	-	-	3519	7.41			N	20.093	-	-	-	301	0.63
9	C36	Non	15.886	-	-	-	613	1.29	21	C48	Non	20.426	-	-	-	249	0.52
		N	15.886	15.819	-0.135	1.199	3244	6.83			N	20.426	20.359	-0.204	1.308	194	0.41
10	C37	Non	16.319	-	-	-	769	1.62	22	C49	Non	20.752	-	-	-	148	0.31
		N	16.319	-	-	-	2978	6.27			N	20.752	-	-	-	112	0.24
11	C38	Non	16.736	-	-	-	908	1.91	23	C50	Non	21.077	-	-	-	75	0.16
		N	16.736	16.669	-0.144	1.221	2544	5.36			N	21.077	21.010	-0.206	1.322	72	0.15
12	C39	Non	17.145	-	-	-	950	2.00	24	C51	Non	21.397	-	-	-	42	0.09
		N	17.145	-	-	-	2192	4.62							Total	47470	100.00

**Table B23** Chromatographic data of wax cake from extraction of 500SW at 30 °C by using toluene

Total Non = 26.90%, N = 73.10%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>1</sub>	Solvent	0.061	-	-	-	-	-	12	C40	Non	17.558	-	-	-	700	2.29
1	C29	Non	12.549	-	-	-	55	0.18		N	17.558	17.497	-0.137	1.242	1283	4.19	
	N	12.549	-	-	-	-	116	0.38	13	C41	Non	17.944	-	-	-	731	2.39
2	C30	Non	13.077	-	-	-	56	0.18		N	17.944	-	-	-	1022	3.34	
	N	13.077	13.016	-0.075	1.114	1.114	429	1.40	14	C42	Non	18.324	-	-	-	737	2.41
3	C31	Non	13.581	-	-	-	105	0.34		N	18.324	18.263	-0.153	1.261	886	2.89	
	N	13.581	-	-	-	-	972	3.18	15	C43	Non	18.691	-	-	-	664	2.17
4	C32	Non	14.073	-	-	-	140	0.46		N	18.691	-	-	-	680	2.22	
	N	14.073	14.012	-0.085	1.146	1.146	1639	5.35	16	C44	Non	19.052	-	-	-	580	1.89
5	C33	Non	14.551	-	-	-	236	0.84		N	19.052	18.991	-0.172	1.278	541	1.77	
	N	14.551	-	-	-	-	1902	6.21	17	C45	Non	19.403	-	-	-	506	1.65
6	C34	Non	15.019	-	-	-	274	0.90		N	19.403	-	-	-	378	1.24	
	N	15.019	14.958	-0.091	1.174	1.174	2259	7.38	18	C46	Non	19.750	--	-	-	401	1.31
7	C35	Non	15.471	-	-	-	291	0.95		N	19.750	19.689	-0.187	1.294	273	0.89	
	N	15.471	-	-	-	-	2256	7.37	19	C47	Non	20.084	-	-	-	299	0.98
8	C36	Non	15.911	-	-	-	371	1.21		N	20.084	-	-	-	187	0.61	
	N	15.911	15.85	-0.104	1.2	1.2	2122	6.93	20	C48	Non	20.420	-	-	-	202	0.66
9	C37	Non	16.340	-	-	-	467	1.53		N	20.420	20.359	-0.204	1.308	110	0.36	
	N	16.340	-	-	-	-	2001	6.54	21	C49	Non	20.746	-	-	-	127	0.41
10	C38	Non	16.755	-	-	-	556	1.82		N	20.746	-	-	-	61	0.20	
	N	16.755	16.694	-0.119	1.222	1.222	1754	5.73	22	C50	Non	21.072	-	-	-	66	0.22
11	C39	Non	17.161	-	-	-	619	2.02		N	21.072	21.011	-0.205	1.322	43	0.14	
	N	17.161	-	-	-	-	1490	4.87		Total		30607		100.00			

**Table B24** Chromatographic data of wax cake from extraction of 500SW at 35 °C by using toluene

Total Non = 43.97%, N = 56.03%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>1</sub>	Solvent	0.068	-	-	-	-	-	17	C40	Non	17.166	-	-	-	4165	4.67
1	C26	N	10.877	10.809	-0.087	1.033	49	0.05		N	17.568	-	-	-	2224	2.49	
2	C27	Non	11.457	-	-	-	119	0.13		N	17.568	17.500	-0.134	1.243	4033	4.52	
3	C28	Non	12.011	-	-	-	377	0.42	18	C41	Non	17.957	-	-	-	2184	2.45
	N	12.011	11.943	-0.085	1.077	1.077	162	0.18		N	17.957	-	-	-	3608	4.04	
4	C29	Non	12.341	-	-	-	755	0.85	19	C42	Non	18.335	-	-	-	2147	2.41
	N	12.337	-	-	-	-	323	0.36		N	18.335	18.267	-0.149	1.261	3426	3.84	
5	C30	Non	12.896	-	-	-	1301	1.46	20	C43	Non	18.701	-	-	-	2012	2.26
	N	13.064	12.996	-0.095	1.113	1.113	688	0.77		N	18.701	-	-	-	2723	3.05	
7	C31	Non	13.568	-	-	-	1924	2.16	21	C44	Non	19.069	-	-	-	1879	2.11
	N	13.568	-	-	-	-	1108	1.24		N	19.069	19.001	-0.162	1.278	2236	2.51	
9	C32	Non	14.057	-	-	-	2177	2.44	22	C45	Non	19.417	-	-	-	1587	1.78
	N	14.057	13.989	-0.108	1.145	1.145	1773	1.99		N	19.417	-	-	-	1722	1.93	
10	C33	Non	14.540	-	-	-	2412	2.70	23	C46	Non	19.767	-	-	-	1308	1.47
	N	14.540	-	-	-	-	2193	2.46		N	19.767	19.699	-0.177	1.294	1312	1.47	
11	C34	Non	15.006	-	-	-	2696	3.02	24	C47	Non	20.106	-	-	-	1007	1.13
	N	15.006	14.938	-0.111	1.174	1.174	2809	3.15		N	20.106	-	-	-	916	1.03	
12	C35	Non	15.460	-	-	-	2406	2.70	25	C48	Non	20.439	-	-	-	633	0.71
	N	15.460	-	-	-	-	3309	3.71		N	20.439	20.371	-0.192	1.309	550	0.62	
13	C36	Non	15.905	-	-	-	2439	2.73	26	C49	Non	20.765	-	-	-	473	0.53
	N	15.905	15.837	-0.117	1.199	1.199	3725	4.18		N	20.765	-	-	-	314	0.35	
14	C37	Non	16.336	-	-	-	2308	2.59	27	C50	Non	21.088	-	-	-	209	0.23
	N	16.336	-	-	-	-	4172	4.68		N	21.088	21.020	-0.196	1.322	203	0.23	
15	C38	Non	16.758	-	-	-	2287	2.56	28	C51	Non	21.400	-	-	-	114	0.13
	N	16.758	16.69	-0.123	1.222	1.222	4215	4.72		N	21.400	-	-	-	90	0.10	
16	C39	Non	17.166	-	-	-	2230	2.52	29	C52	N	21.710	21.642	-0.204	1.335	40	0.04
										Total		89210		100.00			

**Table B25 Chromatographic data of wax cake from extraction of 500SW at 40 °C by using toluene**

Total Non = 46.08%, N = 53.92%

P/ No	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
lm	CS <sub>1</sub>	Solvent	0.067	-	-	-	-	-	15	C39	Non	17.144	-	-	-	1983	3.05
1	C26	N	10.873	10.806	-0.090	1.033	70	0.11	16	C40	Non	17.542	-	-	-	1662	2.56
2	C27	Non	11.441	-	-	-	124	0.19	17	C41	Non	17.933	-	-	-	1734	2.67
		N	11.441	-	-	-	127	0.20	18	C42	Non	18.313	-	-	-	1670	2.57
3	C28	Non	11.995	-	-	-	284	0.44	19	C43	Non	18.679	-	-	-	1356	2.09
		N	11.995	11.928	-0.100	1.076	263	0.40	20	C44	Non	19.046	-	-	-	1207	1.86
4	C29	Non	12.344	-	-	-	556	0.86	21	C45	Non	19.402	-	-	-	961	1.48
5		N	12.531	-	-	-	674	1.04	22	C46	Non	19.747	-	-	-	877	1.35
6	C30	Non	13.050	-	-	-	923	1.42	23	C47	Non	20.087	-	-	-	799	1.23
		N	13.050	12.983	-0.108	1.113	1574	2.42	24	C48	Non	20.422	-	-	-	558	0.86
7	C31	Non	13.556	-	-	-	1336	2.06	25	C49	Non	20.752	-	-	-	513	0.79
		N	13.556	-	-	-	2588	3.98	26	C50	Non	21.069	-	-	-	387	0.60
8	C32	Non	14.048	-	-	-	1588	2.44	27	C51	Non	21.384	-	-	-	190	0.29
		N	14.048	13.981	-0.116	1.145	3228	4.97				Total	65012	100.00			
9	C33	Non	14.526	-	-	-	1818	2.80									
		N	14.526	-	-	-	3228	4.97									
10	C34	Non	14.993	-	-	-	1944	2.99									
		N	14.993	14.926	-0.123	1.173	3094	4.76									
11	C35	Non	15.444	-	-	-	2103	3.23									
		N	15.444	-	-	-	2717	4.18									
12	C36	Non	15.884	-	-	-	2107	3.24									
		N	15.884	15.817	-0.137	1.199	2348	3.61									
13	C37	Non	16.313	-	-	-	2013	3.10									
		N	16.313	-	-	-	2097	3.23									
14	C38	Non	16.732	-	-	-	2142	3.29									
		N	16.732	16.665	-0.148	1.221	1827	2.81									

**Table B26 Chromatographic data of wax cake from extraction of 500SW at 45 °C by using toluene**

Total Non = 72.72%, N = 27.28%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
lm	CS <sub>1</sub>	Solvent	0.071	-	-	-	-	-	20	C37	Non	15.921	15.850	-0.104	1.300	1720	1.73
1	C21	N	7.779	-	-	-	40	0.04	21	C38	Non	16.767	-	-	-	5008	5.04
2	C22	Non	8.424	-	-	-	64	0.06	22	C39	Non	16.346	-	-	-	1628	1.64
		N	8.424	8.353	-0.050	0.921	45	0.05	23	C40	Non	16.767	-	-	-	4136	4.17
3	C23	Non	9.083	-	-	-	171	0.17	24	C41	Non	17.177	-	-	-	17.177	1.35
		N	9.083	-	-	-	59	0.06	25	C42	Non	17.177	-	-	-	4009	4.04
4	C24	Non	9.698	-	-	-	301	0.30	26	C43	Non	17.573	-	-	-	1344	1.35
		N	9.698	9.650	-0.041	0.984	113	0.11	27	C44	Non	17.573	-	-	-	3473	3.50
5	C25	Non	10.307	-	-	-	453	0.46	28	C45	Non	17.972	-	-	-	1218	1.23
		N	10.307	-	-	-	146	0.15	29	C46	Non	19.772	-	-	-	3265	3.31
6	C26	Non	10.896	-	-	-	524	0.53	30	C47	Non	19.772	-	-	-	1025	1.03
		N	10.896	10.825	-0.071	1.034	207	0.21	31	C48	Non	20.118	-	-	-	2845	2.87
7	C27	Non	11.297	-	-	-	898	0.90	32	C49	Non	20.118	-	-	-	931	0.94
8		N	11.472	-	-	-	305	0.31	33	C50	Non	20.118	-	-	-	2451	2.47
9	C28	Non	11.807	-	-	-	1294	1.30	34	C51	Non	20.118	-	-	-	730	0.74
10		N	12.020	11.949	-0.079	1.077	432	0.44	35							2123	2.14
11	C29	Non	12.359	-	-	-	1961	1.97	36							567	0.57
12		N	12.556	-	-	-	951	0.96	37							1231	1.24
13	C30	Non	13.081	-	-	-	3107	3.13	38							442	0.45
		N	13.081	13.010	-0.081	1.114	1629	1.64	39							49	0.33
14	C31	Non	13.591	-	-	-	4348	4.38	40							838	0.84
		N	13.591	-	-	-	2203	2.22	41							233	0.23
15	C32	Non	14.081	-	-	-	4943	4.98	42							44	0.45
		N	14.081	14.010	-0.087	1.146	2619	2.64	43							49	0.33
16	C33	Non	14.561	-	-	-	5339	5.40	44							549	0.55
		N	14.561	-	-	-	2383	2.40	45							68	0.07
17	C34	Non	15.028	-	-	-	6052	6.09	46							355	0.36
		N	15.028	15.057	0.008	1.177	2213	2.23	47							69	0.07
18	C35	Non	15.477	-	-	-	5475	5.51	48							49	0.05
		N	15.477	-	-	-	1922	1.94	49							49	0.05
19	C36	Non	15.921	-	-	-	5105	5.14	50							69	0.07

Total 99300 100.00

**Table B27 Chromatographic data of soluble wax from extraction of 500SW at 15 °C by using toluene**

Total Non = 78.30%, N = 21.70%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	Λ	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	Λ	% wt
im	CS <sub>2</sub>	Solvent	0.072	-	-	-	-	-	24	C37	Non	16.339	-	-	-	6548	6.05
1	C19	N	6.352	-	-	-	65	0.06	25	C38	Non	16.759	-	-	-	1414	1.31
2	C30	N	6.968	6.896	-0.136	0.838	82	0.08	26	C39	Non	16.759	16.687	-0.126	1.222	5676	5.25
3	C21	N	7.762	-	-	-	87	0.08	27	C40	Non	17.167	-	-	-	5052	4.67
4	C22	N	8.429	8.357	-0.046	0.922	94	0.09	28	C41	Non	17.167	17.494	-0.140	1.242	1192	1.10
5	C23	N	9.083	-	-	-	110	0.10	29	C42	Non	18.337	-	-	-	1036	0.96
6	C24	N	9.692	9.620	-0.071	0.983	151	0.14	30	C43	Non	18.699	-	-	-	4520	4.18
7	C25	Non	10.299	-	-	-	100	0.09	31	C44	Non	18.699	-	-	-	839	0.78
		N	10.299	-	-	-	192	0.18	32	C45	Non	19.420	-	-	-	677	0.63
8	C26	Non	10.658	-	-	-	193	0.18	33	C46	Non	19.770	-	-	-	3452	3.19
9		N	10.882	10.81	-0.086	1.033	296	0.27	34	C47	Non	19.770	18.994	-0.169	1.278	576	0.53
10	C27	Non	11.262	-	-	-	432	0.40	35	C48	Non	19.420	-	-	-	3297	3.05
11		N	11.453	-	-	-	389	0.36	36	C49	Non	20.739	-	-	-	451	0.42
12	C28	Non	11.803	-	-	-	706	0.65	37	C50	Non	21.039	-	-	-	2653	2.45
13		N	12.007	11.935	-0.093	1.076	510	0.47	38	C51	Non	21.307	-	-	-	1270	1.17
14	C29	Non	12.346	-	-	-	1016	0.94	39	C52	Non	21.935	-	-	-	161	0.15
15		N	12.541	-	-	-	799	0.74	Total			108160	-	-	-	244	0.23
16	C30	Non	12.895	-	-	-	1766	1.63	Total			100.00	-	-	-	1897	1.75
17		N	13.068	12.996	-0.095	1.113	857	0.79					-	-	-	193	0.18
18	C31	Non	13.578	-	-	-	2837	2.62					-	-	-	648	0.60
		N	13.578	-	-	-	1315	1.22					-	-	-	41	0.04
19	C32	Non	14.067	-	-	-	4567	4.22					-	-	-	120	1.17
		N	14.067	13.995	-0.102	1.145	2304	2.13					-	-	-	161	0.15
20	C33	Non	14.552	-	-	-	6292	5.82					-	-	-	993	0.92
		N	14.552	-	-	-	2676	2.47					-	-	-	91	0.08
21	C34	Non	15.016	-	-	-	8196	7.58					-	-	-	648	0.60
		N	15.016	15.056	0.007	1.177	2366	2.37					-	-	-	41	0.04
22	C35	Non	15.472	-	-	-	7653	7.08					-	-	-	461	0.43
		N	15.472	-	-	-	2103	1.94					-	-	-	448	0.41
23	C36	Non	15.910	-	-	-	7012	6.48					-	-	-	232	0.21
		N	15.910	15.838	-0.072	1.199	1644	1.52	Total			100.00	-	-	-		

**Table B28 Chromatographic data of soluble wax from extraction of 500SW at 20 °C by using toluene**

Total Non = 80.16%, N = 19.84%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	Λ	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	Λ	% wt
im	CS <sub>2</sub>	Solvent	0.075	-	-	-	-	-	20	C36	Non	15.874	-	-	-	3036	6.11
1	C22	N	8.446	8.371	-0.032	0.922	40	0.08	21	C37	Non	15.874	15.799	-0.155	1.198	564	1.13
2	C23	Non	9.064	-	-	-	47	0.09	22	C38	Non	16.315	-	-	-	2611	5.25
		N	9.064	-	-	-	45	0.09	23	C39	Non	16.315	-	-	-	507	1.02
3	C24	Non	9.689	-	-	-	54	0.11	24	C40	Non	16.734	-	-	-	2545	5.12
		N	9.689	9.614	-0.077	0.982	54	0.11	25	C41	Non	16.734	16.659	-0.154	1.221	431	0.87
4	C25	Non	10.288	-	-	-	92	0.19	26	C42	Non	17.14	-	-	-	3021	4.07
		N	10.288	-	-	-	87	0.18	27	C43	Non	17.14	-	-	-	334	0.67
5	C26	Non	10.892	-	-	-	165	0.33	28	C44	Non	17.539	-	-	-	1905	3.83
		N	10.892	10.817	-0.079	1.034	142	0.29	29	C45	Non	17.539	17.464	-0.170	1.242	310	0.62
6	C27	Non	11.238	-	-	-	329	0.66	30	C46	Non	17.929	-	-	-	1614	3.25
7		N	11.454	-	-	-	198	0.40	31	C47	Non	17.929	-	-	-	241	0.48
8	C28	Non	11.807	-	-	-	605	1.22	32	C48	Non	18.311	-	-	-	1388	2.79
9		N	11.998	11.923	-0.105	1.076	266	0.54	33	C49	Non	18.311	18.236	-0.180	1.260	217	0.44
10	C29	Non	12.344	-	-	-	1152	2.32	34	C50	Non	18.673	-	-	-	1217	2.45
11		N	12.536	-	-	-	432	0.87	Total			18.673	-	-	-	164	0.33
12	C30	Non	12.858	-	-	-	1803	3.63					-	-	-	991	1.99
13		N	13.054	12.979	-0.112	1.113	799	1.61					-	-	-	724	1.46
14	C31	Non	13.390	-	-	-	2690	5.41					-	-	-	88	0.18
15		N	13.557	-	-	-	973	1.96					-	-	-	574	1.15
16	C32	Non	14.051	-	-	-	2984	6.00					-	-	-	53	0.11
		N	14.051	13.976	-0.121	1.145	1218	2.45					-	-	-	40	0.08
17	C33	Non	14.528	-	-	-	3316	6.67					-	-	-	376	0.76
		N	14.528	-	-	-	968	1.95					-	-	-	123	0.25
18	C34	Non	14.986	-	-	-	4007	8.06					-	-	-	342	0.49
		N	14.986	14.911	-0.138	1.173	863	1.74					-	-	-	63	0.13
19	C35	Non	15.446	-	-	-	3171	6.38					-	-	-	718	1.44
		N	15.446	-	-	-	-	-	Total			15.446	-	-	-	49709	100.00

**Table B29** Chromatographic data of soluble wax from extraction of 500SW at 25 °C by using toluene

Total Non = 80.22%, N = 19.78%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>2</sub>	Solvent	0.067	-	-	-	-	-	20	C37	Non	16.323	-	-	-	4893	5.58
1	C21	N	7.782	-	-	-	55	0.06		N	16.323	-	-	-	850	0.97	
2	C22	N	8.436	8.369	-0.034	0.922	70	0.08	21	C38	Non	16.742	-	-	-	4103	4.68
3	C23	N	9.076	-	-	-	57	0.07		N	16.742	16.675	-0.138	1.222	744	0.85	
4	C24	N	9.687	9.620	-0.071	0.983	99	0.11	22	C39	Non	17.149	-	-	-	3849	4.39
5	C25	Non	10.294	-	-	-	132	0.15		N	17.149	-	-	-	611	0.70	
		N	10.294	-	-	-	128	0.15	23	C40	Non	17.552	-	-	-	3116	3.55
6	C26	Non	10.874	-	-	-	236	0.27		N	17.552	17.485	-0.149	1.242	510	0.58	
		N	10.874	10.807	-0.089	1.033	257	0.29	24	C41	Non	17.931	-	-	-	3023	3.45
7	C27	Non	11.448	-	-	-	556	0.63		N	17.931	-	-	-	428	0.49	
		N	11.448	-	-	-	351	0.40	25	C42	Non	18.317	-	-	-	2536	2.89
8	C28	Non	11.805	-	-	-	1073	1.22		N	18.317	18.25	-0.166	1.261	358	0.41	
9		N	12.001	11.934	-0.064	1.076	449	0.31	26	C43	Non	18.683	-	-	-	2285	2.61
10	C29	Non	12.333	-	-	-	1912	2.18		N	18.683	-	-	-	248	0.28	
11		N	12.540	-	-	-	769	0.88	27	C44	Non	19.053	-	-	-	1742	1.99
12	C30	Non	12.881	-	-	-	3185	3.63		N	19.053	18.986	-0.177	1.278	203	0.23	
13		N	13.058	12.991	-0.100	1.113	1460	1.67	28	C45	Non	19.398	-	-	-	1389	1.58
14	C31	Non	13.564	-	-	-	4539	5.18		N	19.398	-	-	-	141	0.16	
		N	13.564	-	-	-	1816	2.07	29	C46	Non	19.747	-	-	-	1051	1.20
15	C32	Non	14.058	-	-	-	5318	6.07		N	19.747	19.68	-0.196	1.294	105	0.12	
		N	14.058	13.991	-0.106	1.145	1976	2.25	30	C47	Non	20.058	-	-	-	732	0.83
16	C33	Non	14.536	-	-	-	5890	6.72		N	20.058	-	-	-	55	0.06	
		N	14.536	-	-	-	1788	2.04	31	C48	Non	20.404	-	-	-	487	0.56
17	C34	Non	15.001	-	-	-	6705	7.65		N	20.404	20.337	-0.226	1.308	41	0.05	
		N	15.001	14.934	-0.115	1.174	1535	1.75	32	C49	Non	20.643	-	-	-	301	0.34
18	C35	Non	15.451	-	-	-	5922	6.73		N	20.923	-	-	-	203	0.23	
		N	15.451	-	-	-	1235	1.41	34	C51	Non	21.241	-	-	-	140	0.16
19	C36	Non	15.892	-	-	-	4965	5.66		N	21.241	-	-	-	49	0.06	
		N	15.892	15.825	-0.129	1.199	1003	1.14	35	C52	Non	21.561	-	-	-	Total	87674 100.00

**Table B30** Chromatographic data of soluble wax from extraction of 500SW at 30 °C by using toluene

Total Non = 80.92%, N = 19.08%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>2</sub>	Solvent	0.072	-	-	-	-	-	21	C36	Non	15.901	-	-	-	7084	5.81
1	C21	N	7.741	-	-	-	78	0.06		N	15.901	15.829	-0.125	1.199	1298	1.07	
2	C22	N	8.411	8.339	-0.064	0.921	82	0.07	22	C37	Non	16.338	-	-	-	6979	5.73
3	C23	Non	9.063	-	-	-	52	0.04		N	16.338	-	-	-	1155	0.95	
		N	9.063	-	-	-	121	0.10	23	C38	Non	16.755	-	-	-	5969	4.90
4	C24	Non	9.679	-	-	-	106	0.09		N	16.755	16.683	-0.130	1.222	942	0.77	
		N	9.679	9.621	-0.07	0.983	159	0.13	24	C39	Non	17.166	-	-	-	5263	4.32
5	C25	Non	10.289	-	-	-	253	0.21		N	17.166	-	-	-	784	0.64	
		N	10.289	-	-	-	194	0.16	25	C40	Non	17.559	-	-	-	4651	3.82
6	C26	Non	10.873	-	-	-	414	0.34		N	17.559	17.487	-0.147	1.242	669	0.55	
		N	10.873	10.801	-0.095	1.033	351	0.29	26	C41	Non	17.955	-	-	-	4047	3.32
7	C27	Non	11.241	-	-	-	823	0.68		N	17.955	-	-	-	521	0.43	
8		N	11.455	-	-	-	464	0.38	27	C42	Non	18.335	-	-	-	3447	2.83
9	C28	Non	11.804	-	-	-	1446	1.19		N	18.335	18.263	-0.153	1.261	447	0.37	
10		N	12.005	11.933	-0.095	1.076	639	0.52	28	C43	Non	18.683	-	-	-	3272	2.69
11	C29	Non	12.349	-	-	-	2605	2.14		N	18.683	-	-	-	332	0.27	
12		N	12.542	-	-	-	1076	0.88	29	C44	Non	19.069	-	-	-	2516	2.07
13	C30	Non	12.899	-	-	-	4367	3.58		N	19.069	18.997	-0.166	1.278	263	0.22	
14		N	13.068	12.996	-0.095	1.113	1981	1.63	30	C45	Non	19.410	-	-	-	1998	1.64
15	C31	Non	13.404	-	-	-	5962	4.89		N	19.410	-	-	-	182	0.15	
16		N	13.578	-	-	-	2397	2.13	31	C46	Non	19.745	-	-	-	1586	1.30
17	C32	Non	14.074	-	-	-	7513	6.17		N	19.745	19.673	-0.203	1.293	132	0.11	
		N	14.074	14.002	-0.095	1.146	2685	2.20	32	C47	Non	19.962	-	-	-	1118	0.92
18	C33	Non	14.552	-	-	-	7634	6.27		N	19.962	-	-	-	65	0.05	
		N	14.552	-	-	-	2298	1.89	33	C48	Non	20.391	-	-	-	722	0.59
19	C34	Non	15.016	-	-	-	9960	8.18		N	20.391	-	-	-	449	0.37	
		N	15.016	14.944	-0.105	1.174	2104	1.73	34	C49	Non	20.696	-	-	-	320	0.26
20	C35	Non	15.470	-	-	-	7734	6.36		N	20.696	-	-	-	207	0.17	
		N	15.470	-	-	-	1626	1.33	35	C50	Non	21.306	-	-	-	68	0.06
		N	21.306	-	-	-	-	-	36	C51	Non	21.654	-	-	-	Total	121830 100.00

**Table B31** Chromatographic data of soluble wax from extraction of 500SW at 35 °C by using toluene

Total Non = 81.48%, N = 18.52%

P/ No	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>1</sub>	Solvent	0.072	-	-	-	-	-	20	C37	Non	16.319	-	-	-	3929	5.51
1	C23	N	9.041	-	-	-	72	0.10		N	16.319	-	-	-	720	1.01	
2	C24	N	9.682	9.610	-0.081	0.982	89	0.12	21	C38	Non	16.741	-	-	-	3612	5.06
3	C25	Non	10.295	-	-	-	136	0.19		N	16.741	16.669	-0.144	1.231	565	0.79	
		N	10.295	-	-	-	101	0.14	22	C39	Non	17.152	-	-	-	3084	4.32
4	C26	Non	10.871	-	-	-	226	0.32		N	17.152	-	-	-	490	0.69	
		N	10.871	10.799	-0.097	1.033	190	0.27	23	C40	Non	17.548	-	-	-	2744	3.85
5	C27	Non	11.239	-	-	-	439	0.62		N	17.548	17.476	-0.158	1.242	441	0.62	
6		N	11.434	-	-	-	288	0.40	24	C41	Non	17.933	-	-	-	2572	3.61
7	C28	Non	11.789	-	-	-	868	1.22		N	17.933	-	-	-	343	0.48	
8		N	11.999	11.927	-0.101	1.076	351	0.49	25	C42	Non	18.320	-	-	-	2080	2.92
9	C29	Non	12.343	-	-	-	1600	2.24		N	18.320	18.248	-0.168	1.261	295	0.41	
10		N	12.534	-	-	-	550	0.77	26	C43	Non	18.688	-	-	-	1858	2.60
11	C30	Non	12.881	-	-	-	3472	3.47		N	18.688	-	-	-	218	0.31	
12		N	13.054	12.982	-0.109	1.113	1133	1.59	27	C44	Non	19.046	-	-	-	1497	2.10
13	C31	Non	13.395	-	-	-	3713	5.21		N	19.046	18.974	-0.902	1.278	175	0.25	
14		N	13.565	-	-	-	1270	1.78	28	C45	Non	19.400	-	-	-	1190	1.67
15	C32	Non	14.054	-	-	-	4096	5.74		N	19.400	-	-	-	118	0.17	
		N	14.054	13.982	-0.115	1.145	1574	2.21	29	C46	Non	19.751	-	-	-	904	1.27
16	C33	Non	14.534	-	-	-	5274	7.39		N	19.751	(19.679)	-0.197	1.294	78	0.11	
		N	14.534	-	-	-	1263	1.77	30	C47	Non	20.049	-	-	-	602	0.84
17	C34	Non	15.002	-	-	-	5129	7.19		N	20.049	-	-	-	50	0.07	
		N	15.002	14.930	-0.119	1.174	1106	1.55	31	C48	Non	20.404	-	-	-	453	0.64
18	C35	Non	15.451	-	-	-	4710	6.60		N	20.494	-	-	-	318	0.45	
		N	15.451	-	-	-	960	1.35	32	C49	Non	20.694	-	-	-	194	0.27
19	C36	Non	15.891	-	-	-	4144	5.81		N	21.003	-	-	-	185	0.26	
		N	15.891	15.819	-0.135	1.199	769	1.08	33	C50	Non	21.307	-	-	-	93	0.13
									34	C51	Non	21.604	-	-	-		
									35	C52	Non	21.604	-	-	-		
															Total	71331	100.00

**Table B32** Chromatographic data of soluble wax from extraction of 500SW at 40 °C by using toluene

Total Non = 82.73%, N = 17.27%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>1</sub>	Solvent	0.075	-	-	-	-	-	21	C36	Non	15.479	-	-	-	1198	1.30
1	C21	N	7.746	-	-	-	45	0.05		N	15.916	-	-	-	5915	6.40	
2	C22	N	8.431	8.356	-0.047	0.921	91	0.10		N	15.916	15.841	-0.113	1.199	935	1.01	
3	C23	N	9.064	-	-	-	108	0.12	22	C37	Non	16.351	-	-	-	4707	5.09
4	C24	Non	9.708	-	-	-	59	0.06		N	16.351	-	-	-	806	0.87	
		N	9.708	9.633	-0.058	0.983	130	0.14	23	C38	Non	16.769	-	-	-	4625	5.00
5	C25	Non	10.311	-	-	-	222	0.24		N	16.769	16.769	-0.044	1.224	683	0.74	
		N	10.311	-	-	-	159	0.17	24	C39	Non	17.174	-	-	-	3904	4.22
6	C26	Non	10.898	-	-	-	423	0.46		N	17.174	-	-	-	504	0.55	
		N	10.898	10.823	-0.073	1.034	220	0.24	25	C40	Non	17.573	-	-	-	3535	3.82
7	C27	Non	11.248	-	-	-	799	0.86		N	17.573	17.498	-0.136	1.242	375	0.41	
8		N	11.471	-	-	-	272	0.29	26	C41	Non	17.968	-	-	-	3289	3.56
9	C28	Non	11.817	-	-	-	1243	1.34		N	17.968	-	-	-	345	0.37	
10		N	12.023	11.948	-0.08	1.077	432	0.47	27	C42	Non	18.334	-	-	-	2721	2.94
11	C29	Non	12.376	-	-	-	2202	2.38		N	18.334	18.259	-0.157	1.261	296	0.32	
12		N	12.559	-	-	-	714	0.77	28	C43	Non	18.707	-	-	-	2423	2.62
13	C30	Non	12.924	-	-	-	3324	3.60		N	18.707	-	-	-	307	0.22	
14		N	13.078	13.033	-0.088	1.114	1517	1.64	29	C44	Non	19.072	-	-	-	1923	2.08
15	C31	Non	13.424	-	-	-	4969	5.37		N	19.072	18.997	-0.166	1.278	157	0.17	
16		N	13.592	-	-	-	1711	1.85	30	C45	Non	19.425	-	-	-	1458	1.58
17	C32	Non	14.083	-	-	-	5542	5.99		N	19.425	-	-	-	133	0.14	
		N	14.083	14.008	-0.089	1.146	2017	2.18	31	C46	Non	19.769	-	-	-	1120	1.21
18	C33	Non	14.562	-	-	-	7582	8.20		N	19.769	19.694	-0.182	1.394	90	0.10	
		N	14.562	-	-	-	1461	1.58	32	C47	Non	20.039	-	-	-	807	0.87
19	C34	Non	15.021	-	-	-	6392	6.91		N	20.372	-	-	-	516	0.56	
		N	15.021	14.946	-0.103	1.174	1360	1.47	34	C49	Non	20.691	-	-	-	386	0.42
20	C35	Non	15.479	-	-	-	6143	6.65		N	20.901	-	-	-	251	0.27	
															Total	92450	100.00

**Table B33 Chromatographic data of soluble wax from extraction of 500SW at 45 °C by using toluene**

Total Non = 85.61%, N = 14.39%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>1</sub>	Solvent	0.066	-	-	-	-	-	20	C36	Non	15.434	-	-	-	393	0.77
1	C22	N	8.403	8.337	-0.066	0.921	50	0.10	21	C37	Non	15.873	-	-	-	3098	6.10
2	C23	N	9.061	-	-	-	65	0.13	22	C38	Non	16.421	-	-	-	259	0.51
3	C24	N	9.667	9.601	-0.060	0.982	74	0.15	23	C39	Non	16.421	-	-	-	97	0.19
4	C25	Non	10.276	-	-	-	52	0.10	24	C40	Non	16.828	-	-	-	2584	5.09
		N	10.276	-	-	-	88	0.17	25	C41	Non	17.254	-	-	-	165	0.32
5	C26	Non	10.614	-	-	-	144	0.28	26	C42	Non	17.254	-	-	-	1811	3.57
6		N	10.868	10.802	-0.094	1.033	150	0.30	27	C43	Non	17.628	-	-	-	1431	2.82
7	C27	Non	11.231	-	-	-	353	0.69	28	C44	Non	17.987	-	-	-	122	0.24
8		N	11.435	-	-	-	222	0.44	29	C45	Non	18.395	-	-	-	1303	2.57
9	C28	Non	11.778	-	-	-	712	1.40	30	C46	Non	18.753	-	-	-	991	1.95
10		N	11.991	11.925	-0.103	1.076	296	0.58	31	C47	Non	19.132	-	-	-	408	0.80
11	C29	Non	12.301	-	-	-	1268	2.50	32	C48	Non	19.329	-	-	-	279	0.55
12		N	12.523	-	-	-	482	0.95	33	C49	Non	19.646	-	-	-	206	0.41
13	C30	Non	12.862	-	-	-	2093	4.12	34	C50	Non	20.004	-	-	-	161	0.32
14		N	13.043	12.977	-0.114	1.113	877	1.73							Total	50794	100.00
15	C31	Non	13.546	-	-	-	2988	5.88									
		N	13.546	-	-	-	1016	2.00									
16	C32	Non	14.040	-	-	-	3389	6.67									
		N	14.040	13.974	-0.123	1.145	1076	2.12									
17	C33	Non	14.514	-	-	-	3707	7.30									
		N	14.514	-	-	-	843	1.66									
18	C34	Non	14.976	-	-	-	4321	8.51									
		N	14.976	14.910	-0.139	1.173	549	1.08									
19	C35	Non	15.434	-	-	-	3656	7.20									

**Table B34 Chromatographic data of wax cake from extraction of 600SW at 15 °C by using toluene**

Total Non = 20.69%, N = 79.31%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>1</sub>	Solvent	0.072	-	-	-	-	-	12	C43	Non	18.712	-	-	-	617	1.91
1	C32	N	14.063	13.991	-0.106	1.145	66	0.20	13	C44	Non	18.712	-	-	-	2117	6.54
2	C33	N	14.342	-	-	-	133	0.41	14	C45	Non	19.073	-	-	-	688	2.13
3	C34	Non	15.011	-	-	-	78	0.24	15	C46	Non	19.379	-	-	-	1833	"5.66
		N	15.011	14.939	-0.110	1.174	374	1.16	16	C47	Non	19.779	-	-	-	701	2.17
4	C35	Non	15.465	-	-	-	122	0.38	17	C48	Non	19.779	-	-	-	1504	4.65
		N	15.465	-	-	-	735	2.27	18	C49	Non	20.120	-	-	-	587	1.81
5	C36	Non	15.906	-	-	-	171	0.53	19	C50	Non	20.120	-	-	-	1259	3.89
		N	15.906	15.834	-0.120	1.199	1177	3.64	20	C51	Non	20.454	-	-	-	457	1.41
6	C37	Non	16.339	-	-	-	214	0.66	21	C52	Non	20.454	-	-	-	1007	3.11
		N	16.339	-	-	-	1705	5.27									
7	C38	Non	16.761	-	-	-	267	0.83									
		N	16.761	16.689	-0.124	1.222	2100	6.49									
8	C39	Non	17.170	-	-	-	301	0.93									
		N	17.170	-	-	-	2389	7.38									
9	C40	Non	17.569	-	-	-	375	1.16									
		N	17.569	17.497	-0.137	1.242	2585	7.99									
10	C41	Non	17.961	-	-	-	451	1.39									
		N	17.961	-	-	-	2482	7.67									
11	C42	Non	18.341	-	-	-	539	1.67									
		N	18.341	18.269	-0.147	1.261	2489	7.69									

Total 32361 100.00

**Table B35** Chromatographic data of wax cake from extraction of 600SW at 20 °C by using toluene

Total Non = 23.26%, N = 16.74%

**Table B36** Chromatographic data of wax cake from extraction of 600SW at 25 °C by using toluene

Total Non = 24.67% , N = 75.33%

P/ No.	P/ No.	Group	t <sub>h</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ No.	Group	t <sub>h</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	C51	Solvent	0.068	-	-	-	-	-	13	C41	Non	17.973	-	-	-	2493	2.13
1	C29	N	12.551	-	-	-	137	0.12			N	17.973	-	-	-	4923	4.20
2	C30	Non	13.076	-	-	-	40	0.03	14	C42	Non	18.351	-	-	-	2596	2.22
		N	13.076	13.008	-0.083	1.114	379	0.32			N	18.351	18.283	-0.133	1.262	4430	3.78
3	C31	Non	13.576	-	-	-	88	0.08	15	C43	Non	18.719	-	-	-	2514	2.15
		N	13.576	-	-	-	1113	0.95			N	18.719	-	-	-	3472	3.96
4	C32	Non	14.070	-	-	-	255	0.22	16	C44	Non	19.080	-	-	-	2409	2.06
		N	14.070	14.002	-0.095	1.146	3171	2.71			N	19.080	19.012	-0.151	1.279	2883	2.46
5	C33	Non	14.558	-	-	-	354	0.30	17	C45	Non	19.435	-	-	-	2243	1.91
		N	14.558	-	-	-	5950	5.08			N	19.435	-	-	-	2282	1.95
6	C34	Non	15.033	-	-	-	566	0.48	18	C46	Non	19.776	-	-	-	1807	1.54
		N	15.033	14.965	-0.084	1.175	8009	6.84			N	19.776	19.708	-0.168	1.294	1802	1.54
7	C35	Non	15.487	-	-	-	766	0.65	19	C47	Non	20.118	-	-	-	1477	1.26
		N	15.487	-	-	-	8746	7.47			N	20.118	-	-	-	1378	1.18
8	C36	Non	15.929	-	-	-	1009	0.86	20	C48	Non	20.430	-	-	-	1142	0.97
		N	15.929	15.861	-0.093	1.200	8699	7.43			N	20.450	20.382	-0.181	1.309	936	0.80
9	C37	Non	16.361	-	-	-	1302	1.11	21	C49	Non	20.775	-	-	-	854	0.73
		N	16.361	-	-	-	8429	7.20			N	20.775	-	-	-	595	0.51
10	C38	Non	16.780	-	-	-	1661	1.42	22	C50	Non	21.094	-	-	-	581	0.50
		N	16.780	16.712	-0.101	1.223	7558	6.45			N	21.094	21.026	-0.190	1.322	373	0.32
11	C39	Non	17.184	-	-	-	1990	1.70	23	C51	Non	21.406	-	-	-	303	0.26
		N	17.184	-	-	-	6703	5.72			N	21.406	-	-	-	173	0.15
12	C40	Non	17.581	-	-	-	2276	1.94	24	C52	Non	21.714	-	-	-	176	0.15
		N	17.581	17.513	-0.121	1.243	6012	5.13			N	21.714	21.646	-0.200	1.335	87	0.07
															Total	117142	100.00

**Table B37 Chromatographic data of wax cake from extraction of 600SW at 30 °C by using toluene**

Total Non = 24.89%, N = 75.11%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
im	CS <sub>1</sub>	Solvent	0.070	-	-	-	-	-			N	17.945	-	-	-	2663	3.66
1	C39	N	12.521	-	-	-	51	0.07	14	C42	Non	18.323	-	-	-	1717	2.36
2	C30	N	13.056	12.986	-0.105	1.113	289	0.40	15	C43	Non	18.694	-	-	-	1598	2.20
3	C31	Non	13.559	-	-	-	42	0.06			N	18.694	-	-	-	1791	2.46
	N	13.559	-	-	-	-	896	1.23	16	C44	Non	19.056	-	-	-	1484	2.04
4	C32	Non	14.054	-	-	-	82	0.11			N	19.056	18.986	-0.177	1.278	1468	2.02
	N	14.054	13.984	-0.113	1.145	2554	3.51	17	C45	Non	19.406	-	-	-	1323	1.82	
5	C33	Non	14.536	-	-	-	158	0.22			N	19.406	-	-	-	1141	1.57
	N	14.536	-	-	-	-	4554	6.26	18	C46	Non	19.754	-	-	-	1102	1.51
6	C34	Non	15.005	-	-	-	319	0.44	19	C47	Non	20.093	-	-	-	873	1.20
	N	15.005	14.935	-0.114	1.174	5729	7.87			N	20.093	-	-	-	679	0.93	
7	C35	Non	15.462	-	-	-	459	0.63	20	C48	Non	20.426	-	-	-	661	0.91
	N	15.462	-	-	-	-	5913	8.13			N	20.426	20.356	-0.207	1.308	453	0.62
8	C36	Non	15.902	-	-	-	631	0.87	21	C49	Non	20.753	-	-	-	472	0.65
	N	15.902	15.832	-0.122	1.199	5605	7.70			N	20.753	-	-	-	283	0.39	
9	C37	Non	16.333	-	-	-	851	1.17	22	C50	Non	21.072	-	-	-	334	0.46
	N	16.333	-	-	-	-	5235	7.19			N	21.072	21.002	-0.214	1.322	175	0.24
10	C38	Non	16.751	-	-	-	1110	1.53	23	C51	Non	21.386	-	-	-	262	0.36
	N	16.751	16.681	-0.132	1.222	4546	6.25			N	21.386	-	-	-	78	0.11	
11	C39	Non	17.157	-	-	-	1335	1.83	24	C52	Non	21.687	-	-	-	175	0.24
	N	17.157	-	-	-	-	3878	5.33			N	21.687	21.617	-0.229	1.334	55	0.08
12	C40	Non	17.555	-	-	-	1485	2.04			Total	72764					100.00
	N	17.555	17.485	-0.149	1.242	3370	4.63										
13	C41	Non	17.945	-	-	-	1633	2.25									

**Table B38 Chromatographic data of wax cake from extraction of 600SW at 35 °C by using toluene**

Total Non = 48.63%, N = 51.37%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
im	CS <sub>1</sub>	Solvent	0.068	-	-	-	-	-	14	C39	Non	17.153	-	-	-	3023	3.52
1	C26	N	10.873	10.807	-0.089	1.033	116	0.13			N	17.153	-	-	-	2468	2.87
2	C27	Non	11.450	-	-	-	47	0.05	15	C40	Non	17.553	-	-	-	2917	3.39
	N	11.450	-	-	-	-	178	0.21			N	17.553	17.485	-0.149	1.342	2105	2.45
3	C28	Non	11.998	-	-	-	175	0.20	16	C41	Non	17.939	-	-	-	2807	3.27
	N	11.998	11.930	-0.098	1.076	252	0.29			N	17.939	-	-	-	1617	1.88	
4	C29	Non	12.526	-	-	-	350	0.41	17	C42	Non	18.323	-	-	-	2518	2.93
	N	12.526	-	-	-	-	418	0.49			N	18.323	18.255	-0.161	1.261	1437	1.67
5	C30	Non	13.055	-	-	-	577	0.67	18	C43	Non	18.692	-	-	-	2272	2.64
	N	13.055	12.987	-0.104	1.113	736	0.86			N	18.692	-	-	-	1130	1.31	
6	C31	Non	13.561	-	-	-	967	1.13	19	C44	Non	19.052	-	-	-	1907	2.32
	N	13.561	-	-	-	-	1586	1.85			N	19.052	18.984	-0.179	1.278	890	1.04
7	C32	Non	14.056	-	-	-	1619	1.88	20	C45	Non	19.409	-	-	-	1603	1.87
	N	14.056	13.988	-0.109	1.145	3247	3.78			N	19.409	-	-	-	682	0.79	
8	C33	Non	14.536	-	-	-	2304	2.68	21	C46	Non	19.756	-	-	-	1303	1.52
	N	14.536	-	-	-	-	4728	5.50			N	19.756	19.688	-0.188	1.294	555	0.65
9	C34	Non	15.007	-	-	-	2743	3.19	22	C47	Non	20.099	-	-	-	1012	1.18
	N	15.007	14.939	-0.110	1.174	5216	6.07			N	20.099	-	-	-	436	0.51	
10	C35	Non	15.458	-	-	-	2771	3.22	23	C48	Non	20.433	-	-	-	719	0.84
	N	15.458	-	-	-	-	4883	5.68			N	20.433	20.365	-0.198	1.308	285	0.33
11	C36	Non	15.899	-	-	-	2964	3.45	24	C49	Non	20.757	-	-	-	531	0.62
	N	15.899	15.831	-0.123	1.199	4199	4.89			N	20.757	-	-	-	170	0.20	
12	C37	Non	16.327	-	-	-	3047	3.55	25	C50	Non	21.080	-	-	-	316	0.37
	N	16.327	-	-	-	-	3679	4.28			N	21.080	21.012	-0.204	1.322	122	0.14
13	C38	Non	16.750	-	-	-	3068	3.57	26	C51	Non	21.386	-	-	-	241	0.28
	N	16.750	16.682	-0.131	1.222	3015	3.51			Total	83951					100.00	

**Table B39 Chromatographic data of wax cake from extraction of 600SW at 40 °C by using toluene**

Total Non = 63.16%, N = 36.84%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
Im	CS <sub>1</sub>	Solvent	0.069	-	-	-	-	-	23	C38	Non	16.761	-	-	-	5435	4.32
1	C20	N	7.076	7.007	-0.025	0.845	80	0.06	23	C38	N	16.761	16.692	-0.121	1.222	3215	2.56
2	C21	N	7.749	-	-	-	94	0.07	24	C39	Non	17.170	-	-	-	4947	1.93
3	C22	N	8.424	8.355	-0.048	0.921	109	0.09	24	C39	N	17.170	-	-	-	2939	2.34
4	C23	N	9.084	-	-	-	117	0.09	25	C40	Non	17.569	-	-	-	4740	3.77
5	C24	N	9.702	9.633	-0.058	0.983	104	0.06	25	C40	N	17.569	17.500	-0.134	1.243	2690	2.14
6	C25	N	10.302	-	-	-	130	0.10	26	C41	Non	17.954	-	-	-	4387	3.49
7	C26	N	10.877	10.808	-0.088	1.033	207	0.16	26	C41	N	17.954	-	-	-	2254	1.79
8	C27	Non	11.348	-	-	-	213	0.17	27	C42	Non	18.338	-	-	-	3999	3.18
9		N	11.459	-	-	-	282	0.22	27	C42	N	18.338	18.269	-0.147	1.261	2106	1.67
10	C28	Non	11.801	-	-	-	460	0.37	28	C43	Non	18.705	-	-	-	3739	2.97
11		N	12.011	11.942	-0.086	1.077	375	0.30	28	C43	N	18.705	-	-	-	1743	1.39
-12	C29	Non	12.366	-	-	-	756	0.60	29	C44	Non	19.066	-	-	-	3128	2.49
13		N	12.546	-	-	-	643	0.51	29	C44	N	19.066	18.997	-0.166	1.278	1420	1.13
14	C30	Non	12.876	-	-	-	1327	1.06	30	C45	Non	19.421	-	-	-	2745	2.18
15		N	13.066	12.997	-0.094	1.113	834	0.66	30	C45	N	19.421	-	-	-	1104	0.88
16	C31	Non	13.579	-	-	-	2194	1.74	31	C46	Non	19.766	-	-	-	2264	1.80
		N	13.575	-	-	-	1482	1.18	31	C46	N	19.766	19.697	-0.179	1.294	848	0.67
17	C32	Non	14.071	-	-	-	3721	2.96	32	C47	Non	20.107	-	-	-	1803	1.43
		N	14.071	14.002	-0.093	1.146	2671	2.12	32	C47	N	20.107	-	-	-	670	0.53
18	C33	Non	14.532	-	-	-	5473	4.35	33	C48	Non	20.433	-	-	-	1349	1.07
		N	14.552	-	-	-	3730	2.97	33	C48	N	20.433	20.364	-0.199	1.308	447	0.36
19	C34	Non	15.021	-	-	-	6249	4.97	34	C49	Non	20.760	-	-	-	973	0.77
		N	15.021	14.952	-0.097	1.174	4151	3.30	34	C49	N	20.760	-	-	-	278	0.22
20	C35	Non	15.472	-	-	-	6273	4.99	35	C50	Non	21.085	-	-	-	796	0.63
		N	15.472	-	-	-	3975	3.16	35	C50	N	21.085	21.016	-0.200	1.322	179	0.14
21	C36	Non	15.913	-	-	-	5837	4.64	36	C51	Non	21.396	-	-	-	506	0.40
		N	15.913	15.844	-0.110	1.199	3745	2.98	36	C51	N	21.396	-	-	-	87	0.07
22	C37	Non	16.343	-	-	-	5783	4.60	37	C52	Non	21.702	-	-	-	336	0.27
		N	16.345	-	-	-	3580	2.85	37	C52	N	21.702	21.633	-0.213	1.335	43	0.03
															Total	125765	100.00

**Table B40 Chromatographic data of wax cake from extraction of 600SW at 45 °C by using toluene**

Total Non = 73.97%, N = 26.03%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
Im	CS <sub>1</sub>	Solvent	0.084	-	-	-	-	-	20	C37	Non	16.301	-	-	-	3184	5.42
1	C22	N	8.403	8.319	-0.084	0.920	55	0.09	20	C37	N	16.301	-	-	-	974	1.66
2	C23	N	9.044	-	-	-	72	0.12	21	C38	Non	16.726	-	-	-	3145	5.36
3	C24	N	9.689	9.605	-0.086	0.982	95	0.16	21	C38	N	16.726	16.642	-0.171	1.221	851	1.45
4	C25	Non	10.289	-	-	-	84	0.14	22	C39	Non	17.135	-	-	-	2505	4.27
		N	10.289	-	-	-	115	0.20	22	C39	N	17.135	-	-	-	836	1.42
5	C26	Non	10.869	-	-	-	95	0.16	23	C40	Non	17.534	-	-	-	2368	4.03
		N	10.869	10.783	-0.111	1.032	154	0.26	23	C40	N	17.534	17.450	-0.184	1.241	747	1.27
6	C27	Non	11.254	-	-	-	196	0.33	24	C41	Non	17.919	-	-	-	2260	3.85
		N	11.421	-	-	-	240	0.41	24	C41	N	17.919	-	-	-	544	0.93
7	C28	Non	11.776	-	-	-	381	0.65	25	C42	Non	18.306	-	-	-	2016	3.43
		N	11.996	11.912	-0.116	1.075	290	0.49	25	C42	N	18.306	18.222	-0.194	1.260	523	0.89
8	C29	Non	12.329	-	-	-	670	1.14	26	C43	Non	18.679	-	-	-	1607	2.74
		N	12.517	-	-	-	371	0.63	26	C43	N	18.679	-	-	-	489	0.83
9	C30	Non	12.851	-	-	-	934	1.59	27	C44	Non	19.041	-	-	-	1448	2.47
		N	13.044	12.960	-0.131	1.112	593	1.01	27	C44	N	19.041	18.957	-0.206	1.277	369	0.63
10	C31	Non	13.552	-	-	-	1495	2.55	28	C45	Non	19.396	-	-	-	1256	2.14
		N	13.552	-	-	-	857	1.46	28	C45	N	19.396	-	-	-	275	0.47
11	C32	Non	14.041	-	-	-	2288	3.90	29	C46	Non	19.743	-	-	-	939	1.60
		N	14.041	13.957	-0.140	1.144	1262	2.15	29	C46	N	19.743	19.659	-0.217	1.293	306	0.35
12	C33	Non	14.521	-	-	-	3167	5.39	30	C47	Non	20.089	-	-	-	711	1.21
		N	14.521	-	-	-	1410	2.40	30	C47	N	20.089	-	-	-	173	0.29
13	C34	Non	14.983	-	-	-	4147	7.06	31	C48	Non	20.417	-	-	-	503	0.86
		N	14.983	14.899	-0.150	1.173	1334	2.27	31	C48	N	20.417	20.333	-0.230	1.308	91	0.15
14	C35	Non	15.439	-	-	-	3986	6.79	32	C49	Non	20.747	-	-	-	318	0.54
		N	15.439	-	-	-	1190	2.03	32	C49	N	20.747	-	-	-	58	0.10
15	C36	Non	15.878	-	-	-	3464	3.90	33	C50	Non	21.063	-	-	-	277	0.47
		N	15.878	15.794	-0.160	1.198	1064	1.81	33	C50	N	21.063	20.981	-0.235	1.321	47	0.08
															Total	58729	100.00

**Table B41 Chromatographic data of soluble wax from extraction of 600SW at 15 °C by using toluene**

Total Non = 75.49%, N = 24.51%

P/ No.	P/ Na	Group	t <sub>a</sub> , min	t <sub>r</sub>	Δt <sub>r</sub>	Log t <sub>r</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>a</sub> , min	t <sub>r</sub>	Δt <sub>r</sub>	Log t <sub>r</sub>	A	% wt	
im	CS <sub>1</sub>	Solvent	0.075	-	-	-	-	-	21	C36	Non	15.888	-	-	-	6258	6.55	
1	C20	N	7.064	6.989	-0.043	0.844	42	0.04	21		N	15.888	15.813	-0.141	1.199	1546	1.62	
2	C21	Non	7.759	-	-	-	52	0.05	22	C37	Non	16.322	-	-	-	5724	5.99	
		N	7.759	-	-	-	46	0.05	22		N	16.322	-	-	-	1431	1.50	
3	C22	Non	8.417	-	-	-	56	0.06	23	C38	Non	16.739	-	-	-	4892	5.12	
		N	8.417	8.342	-0.061	0.921	65	0.07	23		N	16.739	16.664	-0.149	1.221	1211	1.27	
4	C23	Non	9.057	-	-	-	58	0.06	24	C39	Non	17.148	-	-	-	4417	4.62	
		N	9.057	-	-	-	109	0.11	24		N	17.148	-	-	-	925	0.97	
5	C24	Non	9.682	-	-	-	87	0.09	25	C40	Non	17.542	-	-	-	3953	4.14	
		N	9.682	9.607	-0.084	0.982	133	0.14	25		N	17.542	17.467	-0.167	1.242	790	0.83	
6	C25	Non	10.285	-	-	-	115	0.12	26	C41	Non	17.935	-	-	-	3464	3.62	
		N	10.285	-	-	-	205	0.21	26		N	17.935	-	-	-	608	0.64	
7	C26	Non	10.868	-	-	-	197	0.21	27	C42	Non	18.318	-	-	-	3203	3.35	
		N	10.868	10.793	-0.103	1.033	314	0.33	27		N	18.318	18.243	-0.173	1.261	552	0.58	
8	C27	Non	11.229	-	-	-	295	0.31	28	C43	Non	18.677	-	-	-	2740	2.87	
9		N	11.439	-	-	-	441	0.46	28		N	18.677	-	-	-	426	0.45	
10	C28	Non	11.807	-	-	-	522	0.55	29	C44	Non	19.050	-	-	-	2363	2.47	
11		N	11.990	11.913	-0.113	1.076	585	0.61	29		N	19.050	18.975	-0.188	1.278	347	0.36	
12	C29	Non	12.339	-	-	-	875	0.92	30	C45	Non	19.396	-	-	-	1915	2.00	
13		N	12.528	-	-	-	755	0.79	30		N	19.396	-	-	-	231	0.24	
14	C30	Non	12.877	-	-	-	1308	1.37	31	C46	Non	19.744	-	-	-	1607	1.68	
15		N	13.049	12.974	-0.117	1.113	1012	1.06	31		N	19.744	19.669	-0.207	1.293	181	0.19	
16	C31	Non	13.558	-	-	-	2377	0.49	32	C47	Non	20.079	-	-	-	1102	1.15	
		N	13.558	-	-	-	1404	1.47	32		N	20.079	-	-	-	133	0.14	
17	C32	Non	14.049	-	-	-	3540	3.70	33	C48	Non	20.418	-	-	-	834	0.87	
		N	14.049	13.974	-0.123	1.145	2508	2.62	33		N	20.418	20.343	-0.220	1.308	92	0.10	
18	C33	Non	14.531	-	-	-	5063	5.30	34	C49	Non	20.718	-	-	-	618	0.65	
		N	14.531	-	-	-	2836	2.97	34		N	20.718	-	-	-	44	0.05	
19	C34	Non	14.993	-	-	-	6836	7.15	35	C50	Non	21.044	-	-	-	338	0.35	
		N	14.993	14.920	-0.129	1.173	2519	2.64	36	C51	Non	21.286	-	-	-	209	0.22	
20	C35	Non	15.451	-	-	-	6973	7.29	37	C52	Non	21.616	-	-	-	169	0.18	
		N	15.451	-	-	-	1938	2.03	37		N	21.616	-	-	-	Total	95391	100.00

**Table B42 Chromatographic data of soluble wax from extraction of 600SW at 20 °C by using toluene**

Total Non = 77.13%, N = 22.87%

P/ No.	P/ Na	Group	t <sub>a</sub> , min	t <sub>r</sub>	Δt <sub>r</sub>	Log t <sub>r</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>a</sub> , min	t <sub>r</sub>	Δt <sub>r</sub>	Log t <sub>r</sub>	A	% wt	
im	CS <sub>1</sub>	Solvent	0.072	-	-	-	-	-	24	C37	Non	15.897	15.825	-0.129	1.199	1450	1.63	
1	C19	N	6.336	-	-	-	42	0.05	24		N	15.897	-	-	-	5298	5.97	
2	C20	N	7.037	6.965	-0.067	0.842	76	0.09	25	C38	Non	16.329	-	-	-	1315	1.48	
3	C21	N	7.747	-	-	-	89	0.10	25		N	16.329	-	-	-	4873	5.49	
4	C22	N	8.414	8.342	-0.061	0.921	92	0.10	26	C39	Non	16.745	-	-	-	4105	4.62	
5	C23	N	9.054	-	-	-	98	0.11	26		N	16.745	16.673	-0.140	1.222	1043	1.17	
6	C24	N	9.671	9.600	-0.091	0.982	110	0.12	27	C40	Non	17.156	-	-	-	891	1.00	
7	C25	N	10.292	-	-	-	152	0.17	27		N	17.156	-	-	-	3938	4.43	
8	C26	Non	10.653	-	-	-	57	0.06	28	C41	Non	17.546	-	-	-	2708	3.05	
9		N	10.874	10.802	-0.094	1.033	246	0.28	28		N	17.546	-	-	-	618	0.70	
10	C27	Non	11.254	-	-	-	200	0.23	29	C42	Non	18.319	-	-	-	2998	3.38	
11		N	11.445	-	-	-	336	0.38	29		N	18.319	18.247	-0.169	1.261	479	0.54	
12	C28	Non	11.803	-	-	-	433	0.49	30	C43	Non	18.687	-	-	-	2708	3.05	
13		N	11.999	11.927	-0.101	1.076	454	0.51	30		N	18.687	-	-	-	393	0.44	
14	C29	Non	12.333	-	-	-	878	0.99	31	C44	Non	19.052	-	-	-	2146	2.42	
15		N	12.528	-	-	-	564	0.64	31		N	19.052	18.980	-0.183	1.278	306	0.34	
16	C30	Non	12.881	-	-	-	1368	1.54	32	C45	Non	19.404	-	-	-	1836	2.07	
17		N	13.061	12.989	-0.102	1.113	721	0.81	32		N	19.404	-	-	-	231	0.26	
18	C31	Non	13.564	-	-	-	2263	2.55	33	C46	Non	19.755	-	-	-	1376	1.55	
		N	13.564	-	-	-	1175	1.32	33		N	19.755	19.683	-0.193	1.294	178	0.20	
19	C32	Non	14.059	-	-	-	3634	4.09	34	C47	Non	20.087	-	-	-	1088	1.23	
		N	14.059	13.987	-0.11	1.145	2011	2.26	34		N	20.087	-	-	-	118	0.13	
20	C33	Non	14.541	-	-	-	5295	3.96	35	C48	Non	20.42	-	-	-	732	0.82	
		N	14.541	-	-	-	2307	2.60	35		N	20.42	20.348	-0.215	1.308	64	0.07	
21	C34	Non	15.008	-	-	-	6783	7.64	36	C49	Non	20.743	-	-	-	563	0.63	
		N	15.008	14.936	-0.113	1.174	2158	2.43	36		N	20.743	-	-	-	301	0.34	
22	C35	Non	15.458	-	-	-	6414	7.22	37	C50	Non	20.42	-	-	-	165	0.19	
		N	15.458	-	-	-	1803	2.03	37		N	20.42	-	-	-	Total	88813	100.00

**Table B43 Chromatographic data of soluble wax from extraction of 600SW at 25 °C by using toluene**

Total Non = 78.24%, N = 21.76%

P/ No	P/ Na	Group	t <sub>R</sub> . min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No	P/ Na	Group	t <sub>R</sub> . min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>2</sub>	Solvent	0.075	-	-	-	-	-	22	C37	Non	16.313	-	-	-	4570	6.26
1	C20	N	7.068	6.993	-0.039	0.844	62	0.08	23	C38	Non	16.716	-	-	-	963	1.32
2	C21	N	7.741	-	-	-	88	0.12	24	C39	Non	16.716	16.641	-0.172	1.221	3797	5.20
3	C22	N	8.398	8.323	-0.080	0.920	94	0.13	25	C40	Non	17.141	-	-	-	3304	4.52
4	C23	N	9.044	-	-	-	101	0.14	26	C41	Non	17.141	-	-	-	706	0.97
5	C24	N	9.685	9.610	-0.081	0.982	113	0.15	27	C42	Non	17.534	-	-	-	3092	4.23
6	C25	N	10.275	-	-	-	156	0.21	28	C43	Non	17.534	17.459	-0.175	1.242	595	0.81
7	C26	Non	10.858	-	-	-	152	0.21	29	C44	Non	18.311	-	-	-	2619	3.59
		N	10.858	10.783	-0.113	1.032	217	0.30	30	C45	Non	18.311	18.236	-0.180	1.260	436	0.60
8	C27	Non	11.238	-	-	-	360	0.49	31	C46	Non	19.740	-	-	-	2087	2.86
9		N	11.435	-	-	-	243	0.33	32	C47	Non	19.740	19.665	-0.211	1.393	336	0.46
10	C28	Non	11.792	-	-	-	500	0.68	33	C48	Non	20.053	-	-	-	1816	2.49
11		N	11.988	11.913	-0.115	1.076	381	0.52	34	C49	Non	20.053	20.330	0.233	1.308	216	0.30
12	C29	Non	12.333	-	-	-	806	1.10	35	C50	Non	20.716	-	-	-	1514	2.07
13		N	12.521	-	-	-	487	0.67	36	C51	Non	20.716	-	-	-	154	0.21
14	C30	Non	12.870	-	-	-	1249	1.71	37	C52	Non	21.286	-	-	-	122	0.17
15		N	13.045	12.970	-0.121	1.112	636	0.87								Total	73045 100.00
16	C31	Non	13.550	-	-	-	2089	2.86									
		N	13.550	-	-	-	911	1.25									
17	C32	Non	14.042	-	-	-	3113	4.26									
		N	14.042	13.967	-0.130	1.145	1583	2.17									
18	C33	Non	14.523	-	-	-	4217	5.77									
		N	14.523	-	-	-	1789	2.45									
19	C34	Non	14.985	-	-	-	5562	7.61									
		N	14.985	14.910	-0.139	1.173	1684	2.31									
20	C35	Non	15.438	-	-	-	5311	7.27									
		N	15.438	-	-	-	1357	1.86									
21	C36	Non	15.879	-	-	-	4562	6.29									
		N	15.879	15.804	-0.150	1.198	1071	1.47									

**Table B44 Chromatographic data of soluble wax from extraction of 600SW at 30 °C by using toluene**

Total Non = 78.39%, N = 21.61%

P/ No.	P/ Na	Group	t <sub>R</sub> . min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> . min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>2</sub>	Solvent	0.069	-	-	-	-	-	22	C37	Non	16.334	-	-	-	6075	6.02
1	C20	N	7.065	6.996	-0.036	0.844	50	0.05	23	C38	Non	16.756	-	-	-	1435	1.42
2	C21	N	7.758	-	-	-	102	0.10	24	C39	Non	16.756	16.687	-0.126	1.222	5556	5.51
3	C22	N	8.416	8.347	-0.056	0.921	121	0.12	25	C40	Non	17.165	-	-	-	4688	4.65
4	C23	N	9.073	-	-	-	124	0.12	26	C41	Non	17.165	-	-	-	961	0.95
5	C24	N	9.688	9.619	-0.072	0.983	136	0.13	27	C42	Non	17.559	-	-	-	4346	4.31
6	C25	N	10.300	-	-	-	181	0.18	28	C43	Non	17.559	17.490	-0.144	1.242	804	0.80
7	C26	N	10.876	10.807	-0.089	1.033	260	0.26	29	C44	Non	18.046	-	-	-	4160	4.12
8	C27	Non	11.257	-	-	-	200	0.20	30	C45	Non	18.046	18.260	0.231	1.261	592	0.59
9		N	11.451	-	-	-	363	0.36	31	C46	Non	19.695	-	-	-	3456	3.43
10	C28	Non	11.809	-	-	-	456	0.45	32	C47	Non	19.695	-	-	-	457	0.45
11		N	12.007	11.938	-0.090	1.076	494	0.49	33	C48	Non	20.407	-	-	-	3190	3.16
12	C29	Non	12.349	-	-	-	878	0.87	34	C49	Non	20.407	-	-	-	372	0.37
13		N	12.541	-	-	-	640	0.63	35	C50	Non	21.286	-	-	-	225	0.31
14	C30	Non	12.877	-	-	-	1484	1.47	36	C51	Non	21.286	-	-	-	142	0.19
15		N	13.066	12.997	-0.094	1.113	848	0.84	37	C52	Non	21.606	-	-	-	683	0.68
16	C31	Non	13.573	-	-	-	2647	2.62									
		N	13.573	-	-	-	1259	1.25									
17	C32	Non	14.065	-	-	-	4135	4.10									
		N	14.065	13.996	-0.101	1.146	2187	2.17									
18	C33	Non	14.546	-	-	-	6026	5.97									
		N	14.546	-	-	-	2519	2.50									
19	C34	Non	15.012	-	-	-	7722	7.65									
		N	15.012	14.943	-0.106	1.174	2336	2.32									
20	C35	Non	15.461	-	-	-	7224	7.16									
		N	15.461	-	-	-	1917	1.90									
21	C36	Non	15.904	-	-	-	6515	6.46									
		N	15.904	15.835	-0.119	1.199	1531	1.52									

Total 100902 100.00

**Table B45 Chromatographic data of soluble wax from extraction of 600SW at 35 °C by using toluene**

Total Non = 78.42%, N = 21.58%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>1</sub> Solvent		0.076	-	-	-	-	-
1	C19	N	6.343	-	-	-	67	0.05
2	C20	N	7.041	6.965	-0.067	0.842	109	0.08
3	C21	N	7.737	-	-	-	121	0.09
4	C22	N	8.405	8.329	-0.074	0.920	127	0.09
5	C23	N	9.052	-	-	-	145	0.11
6	C24	N	9.677	9.601	-0.09	0.982	171	0.13
7	C25	N	10.282	-	-	-	236	0.18
8	C26	Non	10.637	-	-	-	144	0.11
9		N	10.859	10.783	-0.113	1.052	314	0.23
10	C27	Non	11.249	-	-	-	373	0.28
11		N	11.436	-	-	-	486	0.36
12	C28	Non	11.791	-	-	-	822	0.61
13		N	11.983	11.907	-0.121	1.075	542	0.40
14	C29	Non	12.337	-	-	-	1299	0.97
15		N	12.528	-	-	-	818	0.61
16	C30	Non	12.869	-	-	-	2054	1.53
17		N	13.051	12.975	-0.116	1.113	1077	0.80
18	C31	Non	13.557	-	-	-	3223	2.40
		N	13.557	-	-	-	1894	1.41
19	C32	Non	14.052	-	-	-	5503	4.09
		N	14.052	13.976	-0.121	1.145	2910	2.16
20	C33	Non	14.531	-	-	-	7891	5.87
		N	14.531	-	-	-	3344	2.49
21	C34	Non	15.000	-	-	-	10511	7.82
		N	15.000	14.924	-0.125	1.173	3184	2.37
22	C35	Non	15.456	-	-	-	9755	7.25
		N	15.456	-	-	-	2520	1.87
23	C36	Non	15.894	-	-	-	8902	6.62
		N	15.894	-	-	-	Total	134481 100.00

**Table B46 Chromatographic data of soluble wax from extraction of 600SW at 40 °C by using toluene**

Total Non = 78.74%, N = 21.26%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>1</sub> Solvent		0.073	-	-	-	-	-
1	C21	N	7.733	-	-	-	95	0.07
2	C22	N	8.403	8.330	-0.073	0.920	111	0.08
3	C23	N	9.048	-	-	-	141	0.10
4	C24	Non	9.672	-	-	-	53	0.04
		N	9.672	9.599	-0.092	0.982	173	0.13
5	C25	Non	10.276	-	-	-	184	0.13
		N	10.276	-	-	-	235	0.17
6	C26	Non	10.651	-	-	-	263	0.19
7		N	10.863	10.790	-0.106	1.033	419	0.30
8	C27	Non	11.238	-	-	-	423	0.31
9		N	11.431	-	-	-	584	0.42
10	C28	Non	11.793	-	-	-	808	0.59
11		N	11.986	11.913	-0.115	1.076	802	0.58
12	C29	Non	12.332	-	-	-	1395	1.01
13		N	12.524	-	-	-	1096	0.80
14	C30	Non	12.875	-	-	-	2365	1.64
15		N	13.051	12.978	-0.113	1.113	1432	1.04
16	C31	Non	13.559	-	-	-	3751	2.72
		N	13.559	-	-	-	2110	1.53
17	C32	Non	14.054	-	-	-	5834	4.24
		N	14.054	13.981	-0.116	1.145	3032	2.20
18	C33	Non	14.534	-	-	-	8319	6.04
		N	14.534	-	-	-	3297	2.39
19	C34	Non	15.001	-	-	-	10637	7.72
		N	15.001	14.928	-0.121	1.174	3109	2.26
20	C35	Non	15.454	-	-	-	10397	7.55
		N	15.454	-	-	-	2488	1.81
21	C36	Non	15.893	-	-	-	8472	6.15
		N	15.893	-	-	-	Total	137720 100.00

**Table B47 Chromatographic data of soluble wax from extraction of 600SW at 45 °C by using toluene**

Total Non = 80.85%, N = 19.15%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt		
tm	CS <sub>1</sub>	Solvent	0.076	-	-	-	-	-	19	C36	Non	15.887	-	-	-	860	1.31		
1	C22	N	8.398	8.327	-0.076	0.92	41	0.06		N	15.887	-	-	-	4054	6.16			
2	C23	Non	9.044	-	-	-	63	0.10		N	15.887	15.816	-0.138	1.199	663	1.01			
		N	9.044	-	-	-	74	0.11	20	C37	Non	16.317	-	-	-	3701	5.63		
3	C24	Non	9.69	-	-	-	104	0.16		N	16.317	-	-	-	588	0.89			
		N	9.69	9.619	-0.072	0.983	97	0.15	21	C38	Non	16.735	-	-	-	3150	4.79		
4	C25	Non	10.285	-	-	-	173	0.26		N	16.735	16.664	-0.149	1.221	488	0.74			
		N	10.285	-	-	-	118	0.18	22	C39	Non	17.144	-	-	-	2728	4.15		
5	C26	Non	10.632	-	-	-	300	0.46		N	17.144	-	-	-	418	0.64			
6		N	10.866	10.795	-0.101	1.033	186	0.28	23	C40	Non	17.545	-	-	-	2619	3.98		
7	C27	Non	11.252	-	-	-	527	0.80		N	17.545	17.474	-0.16	1.242	370	0.56			
8		N	11.431	-	-	-	271	0.41	24	C41	Non	17.931	-	-	-	2218	3.37		
9	C28	Non	11.809	-	-	-	937	1.42		N	17.931	-	-	-	282	0.43			
10		N	11.995	11.924	-0.104	1.076	315	0.48	25	C42	Non	18.319	-	-	-	1852	2.82		
11	C29	Non	12.297	-	-	-	1458	2.22		N	18.319	18.248	-0.168	1.261	253	0.38			
12		N	12.53	-	-	-	674	1.02	26	C43	Non	18.683	-	-	-	1604	2.44		
13	C30	Non	13.052	-	-	-	2382	3.62		N	18.683	-	-	-	193	0.29			
		N	13.052	12.981	-0.11	1.113	1145	1.74	27	C44	Non	19.044	-	-	-	1282	1.95		
14	C31	Non	13.562	-	-	-	3560	5.41		N	19.044	18.973	-0.19	1.278	155	0.24			
		N	13.562	-	-	-	1483	2.25	28	C45	Non	19.395	-	-	-	1032	1.57		
15	C32	Non	14.047	-	-	-	3826	5.82		N	19.395	-	-	-	105	0.16			
		N	14.047	13.976	-0.121	1.145	1513	2.30	29	C46	Non	19.747	-	-	-	727	1.11		
16	C33	Non	14.528	-	-	-	4775	7.26		N	19.747	19.676	-0.2	1.293	85	0.13			
		N	14.528	-	-	-	1193	1.81	30	C47	Non	20.051	-	-	-	523	0.80		
17	C34	Non	14.991	-	-	-	4744	7.21			31	C48	Non	20.381	-	-	-	334	0.51
		N	14.991	14.92	-0.129	1.173	1025	1.56			32	C49	Non	20.641	-	-	-	185	0.28
18	C35	Non	15.445	-	-	-	4223	6.42			33	C50	Non	20.948	-	-	-	110	0.17
															Total	65786	100.00		

**Table B48 Chromatographic data of wax cake from 2<sup>nd</sup> extraction of MEK-soluble wax (from 1<sup>st</sup> extraction of 500SW) at 45 °C by using MEK**

Total Non = 28.64%, N = 71.36%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
tm	CS <sub>1</sub>	Solvent	0.068	-	-	-	-	-	12	C39	Non	17.107	-	-	-	1472	2.84
1	C28	N	11.972	11.904	-0.124	1.075	116	0.22		N	17.107	-	-	-	1233	2.38	
2	C29	N	12.495	-	-	-	420	0.81	13	C40	Non	17.503	-	-	-	1738	3.36
3	C30	N	13.015	12.947	-0.144	1.112	1523	2.94		N	17.503	17.435	-0.199	1.241	711	1.37	
4	C31	Non	13.525	-	-	-	93	0.18	14	C41	Non	17.892	-	-	-	1757	3.40
		N	13.525	-	-	-	3233	6.25		N	17.892	-	-	-	436	0.84	
5	C32	Non	14.020	-	-	-	188	0.36	15	C42	Non	18.277	-	-	-	1395	2.70
		N	14.020	13.952	-0.145	1.144	4969	9.60		N	18.277	18.209	-0.207	1.260	358	0.69	
6	C33	Non	14.499	-	-	-	303	0.59	16	C43	Non	18.649	-	-	-	1025	1.98
		N	14.499	-	-	-	5150	9.95		N	18.649	-	-	-	260	0.50	
7	C34	Non	14.968	-	-	-	461	0.89	17	C44	Non	19.009	-	-	-	850	1.64
		N	14.968	14.900	-0.149	1.173	5104	9.86		N	19.009	18.941	-0.222	1.277	197	0.38	
8	C35	Non	15.418	-	-	-	695	1.34	18	C45	Non	19.369	-	-	-	637	1.23
		N	15.418	-	-	-	4614	8.92		N	19.369	-	-	-	135	0.26	
9	C36	Non	15.859	-	-	-	880	1.70	19	C46	Non	19.725	-	-	-	429	0.83
		N	15.859	15.791	-0.163	1.198	3580	6.92		N	19.725	19.657	-0.219	1.293	95	0.18	
10	C37	Non	16.283	-	-	-	1015	1.96	20	C47	Non	20.060	-	-	-	332	0.64
		N	16.283	-	-	-	2755	5.32		N	20.060	-	-	-	58	0.11	
11	C38	Non	16.701	-	-	-	1419	2.74	21	C48	Non	20.361	-	-	-	132	0.26
		N	16.701	16.633	-0.180	1.220	1936	3.74		N	20.361	20.293	-0.270	1.307	42	0.08	
															Total	51748	100.00

**Table B49 Chromatographic data of wax cake from 2<sup>nd</sup> extraction of MEK-soluble wax (from 1<sup>st</sup> extraction of 500SW) at 50 °C by using MEK**

Total Non = 56.50%, N = 43.50%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
un	CS <sub>1</sub>	Solvent	0.079	-	-	-	-	-	14	C38	Non	16.546	-	-	-	1739	3.22
1	C25	N	10.532	-	-	-	48	0.09	15	C39	Non	16.963	-	-	-	2311	4.28
2	C26	N	11.079	11.000	0.104	1.041	72	0.13	16	C40	Non	16.963	16.884	0.071	1.227	1250	2.32
3	C27	N	11.661	-	-	-	136	0.25	17	C41	Non	17.366	-	-	-	2193	4.06
4	C28	Non	12.211	-	-	-	119	0.23	18	C42	Non	17.366	17.685	0.051	1.247	876	1.62
		N	12.211	12.132	0.104	1.083	247	0.46	19	C43	Non	18.153	-	-	-	2118	3.92
5	C29	Non	12.751	-	-	-	453	0.84	20	C44	Non	18.153	-	-	-	629	1.17
		N	12.751	-	-	-	453	0.84	21	C45	Non	18.526	-	-	-	1782	3.30
6	C30	Non	13.271	-	-	-	923	1.71	22	C46	Non	18.526	18.447	0.031	1.265	391	0.72
		N	13.271	13.192	0.101	1.120	1100	2.04	23	C47	Non	18.899	-	-	-	1498	2.78
7	C31	Non	13.781	-	-	-	1435	2.66	24	C48	Non	18.899	-	-	-	1245	2.31
		N	13.781	-	-	-	1988	3.68	25	C49	Non	19.264	-	-	-	213	0.39
8	C32	Non	14.281	-	-	-	1914	3.55	26	C50	Non	19.264	19.185	0.022	1.282	996	1.85
		N	14.281	14.202	0.105	1.152	2713	5.03							131	0.28	
9	C33	Non	14.759	-	-	-	2107	3.90							736	1.36	
		N	14.759	-	-	-	3007	5.57							106	0.20	
10	C34	Non	15.222	-	-	-	2286	4.24							574	1.06	
		N	15.222	15.143	0.094	1.180	3092	5.73							76	0.14	
11	C35	Non	15.676	-	-	-	2314	4.29							371	0.69	
		N	15.676	-	-	-	2677	4.96							226	0.42	
12	C36	Non	16.111	-	-	-	2336	4.33							141	0.26	
		N	16.111	16.032	0.078	1.204	2191	4.06							63	0.12	
13	C37	Non	16.546	-	-	-	2349	4.35							Total	53968 100.00	

**Table B50 Chromatographic data of soluble wax from 2<sup>nd</sup> extraction of MEK-soluble wax (from 1<sup>st</sup> extraction of 500SW) at 45 °C by using MEK**

Total Non = 83.12%, N = 14.88%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
un	CS <sub>1</sub>	Solvent	0.076	-	-	-	-	-	18	C37	Non	16.096	16.020	0.066	1.204	322	0.81
1	C25	N	10.483	-	-	-	51	0.13	19	C38	Non	16.526	-	-	-	2237	5.60
2	C26	Non	11.084	-	-	-	72	0.18	20	C39	Non	16.526	-	-	-	259	0.65
		N	11.084	11.0078	0.112	1.041	104	0.26	21	C40	Non	16.929	-	-	-	2009	5.03
3	C27	Non	11.643	-	-	-	172	0.43	22	C41	Non	16.929	16.853	0.040	1.226	195	0.49
		N	11.645	-	-	-	159	0.40	23	C42	Non	17.346	-	-	-	1725	4.32
4	C28	Non	11.984	-	-	-	441	1.10	24	C43	Non	17.346	-	-	-	167	0.42
		N	12.193	12.117	0.089	1.083	207	0.32	25	C44	Non	17.760	-	-	-	1487	3.72
6	C29	Non	12.533	-	-	-	981	2.46	26	C45	Non	17.760	17.684	0.050	1.247	139	0.35
7		N	12.733	-	-	-	315	0.79	27	C46	Non	18.134	-	-	-	1277	3.20
8	C30	Non	13.076	-	-	-	1672	4.19	28	C47	Non	18.134	-	-	-	114	0.29
9		N	13.251	13.175	0.084	1.119	604	1.51	29	C48	Non	18.517	-	-	-	1091	2.73
10	C31	Non	13.601	-	-	-	2423	6.07	30	C49	Non	18.517	18.441	0.025	1.265	100	0.25
11		N	13.762	-	-	-	765	1.92	31	C50	Non	18.876	-	-	-	944	2.36
12	C32	Non	14.074	-	-	-	2858	7.16	32			18.876	-	-	-	57	0.14
13		N	14.251	14.175	0.078	1.151	740	1.85	33	C44	Non	19.236	-	-	-	733	1.84
14	C33	Non	14.734	-	-	-	3577	8.96	34	C45	Non	19.236	19.160	-0.003	1.282	42	0.11
		N	14.734	-	-	-	631	1.58	35	C46	Non	19.482	-	-	-	599	1.50
15	C34	Non	15.193	-	-	-	3110	7.79	36	C47	Non	19.822	-	-	-	488	1.22
		N	15.193	15.117	0.068	1.179	562	1.41	37	C48	Non	20.187	-	-	-	306	0.77
16	C35	Non	15.633	-	-	-	3059	7.66	38	C49	Non	20.523	-	-	-	185	0.46
		N	15.633	-	-	-	407	1.02	39	C50	Non	20.868	-	-	-	78	0.20
17	C36	Non	16.096	-	-	-	2456	6.15							Total	39920 100.00	

**Table B51** Chromatographic data of soluble wax from 2<sup>nd</sup> extraction of MEK-soluble wax  
(from 1<sup>st</sup> extraction of 500SW) at 50 °C by using MEK

Total Non = 88.67%, N = 11.33%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
un	CS <sub>1</sub>	Solvent	0.074	-	-	-	-	-	24		N	15.726	-	-	-	428	0.36
1	C20	N	7.299	7.225	0.193	0.858	48	0.04	25	C36	Non	16.000	-	-	-	7126	6.04
2	C21	N	7.887	-	-	-	65	0.06	26		N	16.049	15.975	0.021	1.203	310	0.36
3	C22	N	8.517	8.443	0.040	0.926	102	0.09	27	C37	Non	16.576	-	-	-	6753	5.72
4	C23	N	9.149	-	-	-	195	0.17		N	16.576	-	-	-	541	0.46	
5	C24	Non	9.773	-	-	-	33	0.03	28	C38	Non	16.985	-	-	-	6325	5.36
	N	9.773	9.690	0.008	0.986	308	0.18		N	16.985	16.911	0.098	1.228	474	0.40		
6	C25	Non	10.375	-	-	-	133	0.11	29	C39	Non	17.385	-	-	-	6195	5.25
	N	10.375	-	-	-	-	286	0.24		N	17.385	-	-	-	386	0.33	
7	C26	Non	10.960	-	-	-	356	0.30	30	C40	Non	17.781	-	-	-	5116	4.33
	N	10.960	10.886	-0.010	1.036	453	0.38		N	17.781	17.707	0.073	1.248	245	0.21		
8	C27	Non	11.531	-	-	-	661	0.56	31	C41	Non	18.128	-	-	-	4504	3.81
	N	11.531	-	-	-	-	660	0.56		N	18.128	-	-	-	246	0.21	
9	C28	Non	11.885	-	-	-	1468	1.24	32	C42	Non	18.533	-	-	-	4028	3.41
10		N	12.091	12.017	-0.011	1.079	739	0.63		N	18.533	18.459	0.043	1.266	261	0.22	
11	C29	Non	12.442	-	-	-	2730	2.31	33	C43	Non	18.872	-	-	-	2980	2.52
12		N	12.632	-	-	-	1068	0.90		N	18.872	-	-	-	287	0.24	
13	C30	Non	12.986	-	-	-	4400	3.90	34	C44	Non	19.265	-	-	-	2319	1.96
14		N	13.164	13.090	-0.001	1.116	1629	1.38		N	19.265	19.191	0.028	1.283	205	0.17	
15	C31	Non	13.497	-	-	-	6728	5.70	35	C45	Non	19.601	-	-	-	2001	1.69
16		N	13.682	-	-	-	1727	1.46		N	19.601	-	-	-	97	0.08	
17	C32	Non	13.981	-	-	-	8131	6.89	36	C46	Non	19.920	-	-	-	1738	1.49
18		N	14.176	14.102	0.005	1.149	1285	1.09		N	19.920	19.846	-0.03	1.297	41	0.03	
19	C33	Non	14.477	-	-	-	10046	8.51	37	C47	Non	19.926	-	-	-	692	0.59
20		N	14.638	-	-	-	308	0.43	38	C48	Non	20.476	-	-	-	377	0.32
21	C34	Non	15.023	-	-	-	10256	8.69	39	C49	Non	20.733	-	-	-	109	0.09
22		N	15.177	15.103	0.054	1.179	173	0.15	40	C50	Non	21.253	-	-	-	52	0.04
23	C35	Non	15.568	-	-	-	9933	8.41							Total	118077 100.00	

**Table B52** Chromatographic data of wax cake from 2<sup>nd</sup> extraction of MEK-soluble wax  
(from 1<sup>st</sup> extraction of 600SW) at 45 °C by using MEK

Total Non = 24.55%, N = 75.45%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
un	CS <sub>1</sub>	Solvent	0.069	-	-	-	-	-	13	C43	Non	18.279	18.210	-0.206	1.260	2338	5.09
1	C31	N	13.326	-	-	-	76	0.17		N	18.649	-	-	-	1191	2.59	
2	C32	N	14.001	13.932	-0.165	1.144	251	0.55		N	18.649	-	-	-	1710	3.72	
3	C33	N	14.479	-	-	-	772	1.68	14	C44	Non	19.013	-	-	-	1125	2.45
4	C34	N	14.954	14.885	-0.164	1.172	1728	3.76		N	19.013	18.944	-0.219	1.277	1315	2.86	
5	C35	Non	15.408	-	-	-	132	0.29	15	C45	Non	19.365	-	-	-	1018	2.22
	N	15.408	-	-	-	-	2705	5.89		N	19.365	-	-	-	1015	2.21	
6	C36	Non	15.847	-	-	-	222	0.48	16	C46	Non	19.714	-	-	-	868	1.89
	N	15.847	15.778	-0.176	1.198	3413	7.43		N	19.714	19.645	-0.231	1.293	748	1.63		
7	C37	Non	16.283	-	-	-	316	0.69	17	C47	Non	20.056	-	-	-	690	1.50
	N	16.283	-	-	-	-	3897	8.48		N	20.056	-	-	-	534	1.16	
8	C38	Non	16.702	-	-	-	483	1.05	18	C48	Non	20.387	-	-	-	552	1.20
	N	16.702	16.633	-0.180	1.220	3839	8.36		N	20.387	20.318	-0.245	1.307	347	0.76		
9	C39	Non	17.111	-	-	-	591	1.30	19	C49	Non	20.702	-	-	-	369	0.80
	N	17.111	-	-	-	-	3617	7.87		N	20.702	-	-	-	228	0.50	
10	C40	Non	17.514	-	-	-	944	2.06	20	C50	Non	21.039	-	-	-	238	0.52
	N	17.514	17.445	-0.189	1.241	3271	7.12		N	21.039	20.970	-0.246	1.321	134	0.29		
11	C41	Non	17.899	-	-	-	1067	2.32	21	C51	Non	21.330	-	-	-	193	0.42
	N	17.899	-	-	-	-	2650	5.77		N	21.330	-	-	-	69	0.15	
12	C42	Non	18.279	-	-	-	1079	2.35	22	C52	Non	21.907	-	-	-	96	0.21
															Total	45931 100.00	

**Table B53 Chromatographic data of wax cake from 2<sup>nd</sup> extraction of MEK-soluble wax (from 1<sup>st</sup> extraction of 600SW) at 50 °C by using MEK**

Total Non = 41.75%, N = 58.25%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>3</sub> Solvent		0.073	-	-	-	-	-	13	C40	Non	17.733	-	-	-	1326	3.66
1	C28	N	12.177	12.104	0.076	1.082	81	0.22			N	17.733	17.660	0.026	1.246	1130	3.12
2	C29	N	12.711	-	-	-	110	0.30	14	C41	Non	18.123	-	-	-	1327	3.67
3	C30	N	13.238	13.165	0.074	1.119	200	0.55			N	18.123	-	-	-	730	2.02
4	C31	Non	13.744	-	-	-	105	0.29	15	C42	Non	18.504	-	-	-	1227	3.39
		N	13.744	-	-	-	453	1.25			N	18.504	18.431	0.015	1.265	536	1.48
5	C32	Non	14.233	-	-	-	252	0.70	16	C43	Non	18.878	-	-	-	1089	3.01
		N	14.233	14.160	0.063	1.151	1052	2.91			N	18.878	-	-	-	344	0.95
6	C33	Non	14.716	-	-	-	536	1.48	17	C44	Non	19.237	-	-	-	865	2.39
		N	14.716	-	-	-	1884	5.21			N	19.237	19.164	0.001	1.282	254	0.70
7	C34	Non	15.185	-	-	-	765	2.11	18	C45	Non	19.598	-	-	-	663	1.83
		N	15.185	15.112	0.063	1.179	2340	7.02			N	19.598	-	-	-	163	0.45
8	C35	Non	15.641	-	-	-	853	2.36	19	C46	Non	19.946	-	-	-	527	1.46
		N	15.641	-	-	-	2744	7.58			N	19.946	19.873	-0.003	1.298	130	0.36
9	C36	Non	16.081	-	-	-	1032	2.85	20	C47	Non	20.284	-	-	-	351	0.97
		N	16.081	16.008	0.054	1.204	2682	7.41			N	20.284	-	-	-	74	0.20
10	C37	Non	16.510	-	-	-	1121	3.10	21	C48	Non	20.584	-	-	-	276	0.76
		N	16.510	-	-	-	2415	6.67			N	20.584	20.511	-0.052	1.311	62	0.17
11	C38	Non	16.931	-	-	-	1251	3.46	22	C49	Non	20.904	-	-	-	144	0.40
		N	16.931	16.858	0.043	1.226	1978	5.47			N	20.904	-	-	-	43	0.12
12	C39	Non	17.336	-	-	-	1299	3.59	23	C50	Non	21.241	-	-	-	101	0.28
		N	17.336	-	-	-	1473	4.07							Total	36188	100.00

**Table B54 Chromatographic data of soluble wax from 2<sup>nd</sup> extraction of MEK-soluble wax (from 1<sup>st</sup> extraction of 600SW) at 45 °C by using MEK**

Total Non = 87.60%, N = 12.40%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	
1m	CS <sub>3</sub> Solvent		0.075	-	-	-	-	-	17	C38	Non	16.518	-	-	-	503	1.17	
1	C24	N	9.864	9.789	0.098	0.990	48	0.11			N	16.924	-	-	-	2456	5.70	
2	C25	N	10.477	-	-	-	72	0.17	18	C39	Non	16.924	16.849	0.036	1.226	411	0.95	
3	C26	N	11.069	10.994	0.098	1.041	114	0.26			N	17.334	-	-	-	2174	5.04	
4	C27	Non	11.634	-	-	-	45	0.10	19	C40	Non	17.334	-	-	-	317	0.74	
		N	11.634	-	-	-	154	0.36			N	17.744	-	-	-	1884	4.37	
5	C28	Non	12.182	-	-	-	201	0.47	20	C41	Non	17.744	17.669	0.035	1.247	249	0.58	
		N	12.182	12.107	0.079	1.083	204	0.47			N	18.128	-	-	-	1674	3.88	
6	C29	Non	12.524	-	-	-	396	0.92			N	18.128	-	-	-	215	0.50	
7		N	12.719	-	-	-	254	0.59	21	C42	Non	18.507	-	-	-	1424	3.30	
8	C30	Non	13.052	-	-	-	669	1.55			N	18.507	18.432	0.016	1.265	189	0.44	
9		N	13.243	13.168	0.077	1.119	340	0.79	22	C43	Non	18.894	-	-	-	1243	2.88	
10	C31	Non	13.755	-	-	-	1222	2.83			N	18.894	-	-	-	110	0.26	
		N	13.755	-	-	-	546	1.27	23	C44	Non	19.254	-	-	-	1042	2.42	
11	C32	Non	14.246	-	-	-	1963	4.53			N	19.254	19.179	0.016	1.282	100	0.23	
		N	14.246	14.171	0.074	1.151	839	1.95	24	C45	Non	19.601	-	-	-	895	2.08	
12	C33	Non	14.731	-	-	-	2835	6.57			N	19.601	-	-	-	70	0.16	
		N	14.731	-	-	-	965	2.24	25	C46	Non	19.956	-	-	-	616	1.43	
13	C34	Non	15.184	-	-	-	3763	8.73			N	19.956	19.881	0.005	1.298	46	0.11	
		N	15.184	15.109	0.06	1.179	983	2.28	26	C47	Non	20.298	-	-	-	532	1.23	
14	C35	Non	15.648	-	-	-	3502	8.12			N	20.298	-	-	-	378	0.88	
		N	15.648	-	-	-	797	1.85	27	C48	Non	20.628	-	-	-	228	0.53	
15	C36	Non	16.081	-	-	-	2938	6.81			N	20.628	-	-	-	159	0.37	
		N	16.081	16.006	0.052	1.204	589	1.37	28	C49	Non	20.855	-	-	-	55	0.13	
16	C37	Non	16.518	-	-	-	2714	6.29			N	20.855	-	-	-	Total	43123	100.00



**Table B55 Chromatographic data of soluble wax from 2<sup>nd</sup> extraction of MEK-soluble wax (from 1<sup>st</sup> extraction of 600SW) at 50 °C by using MEK**

Total Non = 89.65% , N = 10.35%

P/ No.	P/ Na	Group	t <sub>R</sub> . min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> . min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	
tm	CS <sub>1</sub>	Solvent	0.068	-	-	-	-	-	23	C36	Non	15.859	-	-	-	8616	6.78	
1	C19	N	6.266	-	-	-	50	0.04		N	N	15.859	15.791	-0.163	1.198	1961	1.54	
2	C20	N	6.994	6.926	-0.106	0.840	114	0.09	24	C37	Non	16.291	-	-	-	7876	6.19	
3	C21	N	7.688	-	-	-	134	0.11		N	N	16.291	-	-	-	1616	1.27	
4	C22	N	8.371	8.303	-0.100	0.919	139	0.11	25	C38	Non	16.708	-	-	-	6746	5.31	
5	C23	N	9.007	-	-	-	140	0.11		N	N	16.708	16.640	-0.173	1.221	1235	0.97	
6	C24	N	9.641	9.573	-0.118	0.981	178	0.14	26	C39	Non	17.122	-	-	-	6189	4.87	
7	C25	Non	10.256	-	-	-	98	0.08		N	N	17.122	-	-	-	954	0.75	
		N	10.256	-	-	-	236	0.19	27	C40	Non	17.511	-	-	-	5444	4.28	
8	C26	Non	10.828	-	-	-	213	0.17		N	N	17.511	17.443	-0.191	1.241	777	0.61	
		N	10.828	10.760	-0.136	1.031	361	0.28	28	C41	Non	17.910	-	-	-	4768	3.75	
9	C27	Non	11.295	-	-	-	446	0.35		N	N	17.910	-	-	-	548	0.43	
10		N	11.406	-	-	-	492	0.39	29	C42	Non	18.301	-	-	-	4377	3.44	
11	C28	Non	11.767	-	-	-	789	0.62		N	N	18.301	18.233	-0.183	1.260	513	0.40	
12		N	11.954	11.886	-0.142	1.075	668	0.53	30	C43	Non	18.657	-	-	-	3659	2.88	
13	C29	Non	12.294	-	-	-	1370	1.08		N	N	18.657	-	-	-	351	0.28	
14		N	12.493	-	-	-	816	0.64	31	C44	Non	19.036	-	-	-	3182	2.50	
15	C30	Non	12.834	-	-	-	2149	1.69		N	N	19.036	18.968	-0.195	1.278	276	0.22	
16		N	13.014	12.946	-0.145	1.112	1079	0.85	32	C45	Non	19.447	-	-	-	2456	1.93	
17	C31	Non	13.403	-	-	-	3490	2.74		N	N	19.447	-	-	-	196	0.15	
18		N	13.530	-	-	-	1693	1.33	33	C46	Non	19.706	-	-	-	2016	1.39	
19	C32	Non	14.021	-	-	-	5497	4.32		N	N	19.706	19.638	-0.238	1.293	151	0.12	
		N	14.021	13.953	-0.144	1.144	2893	2.28	34	C47	Non	20.082	-	-	-	1561	1.23	
20	C33	Non	14.503	-	-	-	7648	6.01		N	N	20.082	-	-	-	77	0.06	
		N	14.503	-	-	-	3141	2.47	35	C48	Non	20.344	-	-	-	1090	0.86	
21	C34	Non	14.966	-	-	-	9688	7.62		N	N	20.647	-	-	-	811	0.64	
		N	14.966	14.898	-0.151	1.173	3011	2.37	36	C49	Non	20.998	-	-	-	554	0.44	
22	C35	Non	15.423	-	-	-	9748	7.67		N	N	21.289	-	-	-	424	0.33	
		N	15.423	-	-	-	2444	1.92	38	C51	Non	21.289	-	-	-	Total	127149	100.00

**Table B56 Chromatographic data residual oil from fractional crystallization of 500SW at -20 °C in MEK**

Total Non = 96.82% , N = 3.18%

P/ No.	P/ Na	Group	t <sub>R</sub> . min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> . min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	
tm	CS <sub>1</sub>	Solvent	0.075	-	-	-	-	-	16	C34	Non	14.879	-	-	-	6496	9.94	
1	C19	N	6.499	-	-	-	51	0.08		N	N	14.879	14.804	-0.245	1.170	184	0.28	
2	C20	N	7.204	7.129	-0.097	0.853	66	0.10	17	C35	Non	15.333	-	-	-	5211	7.97	
3	C21	N	7.907	-	-	-	59	0.09		N	N	15.333	-	-	-	108	0.17	
4	C22	N	8.586	8.511	-0.108	0.929	47	0.07	18	C36	Non	15.761	-	-	-	5083	7.78	
5	C23	N	9.257	-	-	-	44	0.07		N	N	15.761	15.686	-0.268	1.195	91	0.14	
6	C24	N	-	-	-	-	0	0.00	19	C37	Non	16.198	-	-	-	4232	6.47	
7	C25	N	-	-	-	-	0	0.00		N	N	16.198	-	-	-	82	0.13	
8	C26	Non	10.871	-	-	-	195	0.30	20	C38	Non	16.632	-	-	-	3674	5.62	
		N	10.871	10.796	-0.100	1.033	40	0.06		N	N	16.632	16.557	-0.256	1.218	74	0.11	
9	C27	Non	11.459	-	-	-	557	0.85	21	C39	Non	17.036	-	-	-	3182	4.87	
		N	11.459	-	-	-	68	0.10		N	N	17.036	-	-	-	79	0.12	
10	C28	Non	12.010	-	-	-	915	1.40	22	C40	Non	17.413	-	-	-	3080	4.71	
		N	12.010	11.935	-0.093	1.076	48	0.07		N	N	17.413	17.338	-0.296	1.238	69	0.11	
11	C29	Non	12.486	-	-	-	2018	3.09	23	C41	Non	18.034	-	-	-	2950	4.51	
		N	12.486	-	-	-	240	0.37	24	C42	Non	18.328	-	-	-	2667	4.08	
12	C30	Non	12.967	-	-	-	2618	4.00	25	C43	Non	18.691	-	-	-	1466	2.24	
		N	12.967	12.892	-0.199	1.110	192	0.29	26	C44	Non	19.049	-	-	-	1341	2.03	
13	C31	Non	13.486	-	-	-	4496	6.88		N	N	19.430	-	-	-	915	1.40	
		N	13.486	-	-	-	163	0.25	27	C45	Non	19.796	-	-	-	603	0.92	
14	C32	Non	13.934	-	-	-	4701	7.19		N	N	20.128	-	-	-	434	0.66	
		N	13.934	13.859	-0.238	1.141	218	0.33	28	C46	Non	20.455	-	-	-	274	0.42	
15	C33	Non	14.438	-	-	-	5984	9.15		N	N	20.772	-	-	-	156	0.24	
		N	14.438	-	-	-	158	0.24	29	C47	Non	21.117	-	-	-	43	0.07	
									30	C48	Non	21.117	-	-	-	Total	65372	100.00

**Table B57 Chromatographic data of crystallized wax from fractional crystallization of 500SW at -20 °C in MEK**

Total Non = 84.77% , N = 15.23%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt		
0m	CS <sub>1</sub>	Solvent	0.079	-	-	-	-	-	22	C35	Non	15.783	-	-	-	4866	8.48		
1	C20	N	7.134	7.155	0.123	0.854	80	0.14		N	15.783	-	-	-	547	0.95			
2	C21	N	7.926	-	-	-	306	0.36	23	C36	Non	16.221	-	-	-	3330	6.13		
3	C22	N	8.584	8.505	0.102	0.929	314	0.55		N	16.221	16.142	0.188	1.207	542	0.94			
4	C23	N	9.246	-	-	-	323	0.56	24	C37	Non	16.641	-	-	-	3347	5.83		
5	C24	N	9.873	9.794	0.103	0.990	254	0.44		N	16.641	-	-	-	495	0.86			
6	C25	N	10.484	-	-	-	195	0.34	25	C38	Non	17.058	-	-	-	2925	5.10		
7	C26	Non	10.881	-	-	-	104	0.18		N	17.058	16.979	0.166	1.229	447	0.78			
8		N	11.069	10.990	0.094	1.040	120	0.21	26	C39	Non	17.459	-	-	-	2392	4.17		
9	C27	Non	11.441	-	-	-	258	0.45		N	17.459	-	-	-	422	0.74			
10		N	11.644	-	-	-	93	0.16	27	C40	Non	17.854	-	-	-	2181	3.80		
11	C28	Non	12.001	-	-	-	597	0.97		N	17.854	17.775	0.141	1.249	334	0.58			
12		N	12.219	12.140	0.112	1.084	87	0.15	28	C41	Non	18.247	-	-	-	2047	3.57		
13	C29	Non	12.541	-	-	-	1143	1.99		N	18.247	-	-	-	183	0.32			
14		N	12.789	-	-	-	105	0.18	29	C42	Non	18.618	-	-	-	1762	3.07		
15	C30	Non	13.061	-	-	-	2221	3.87		N	18.618	18.539	0.123	1.268	96	0.17			
16		N	13.321	13.242	0.151	1.121	248	0.43	30	C43	Non	18.833	-	-	-	1577	2.75		
17	C31	Non	13.489	-	-	-	2991	5.21			31	C44	Non	19.184	-	-	-	1201	2.09
18		N	13.971	-	-	-	939	1.64	32	C45	Non	19.358	-	-	-	1062	1.85		
19	C32	Non	14.441	-	-	-	3677	6.41		N	19.736	-	-	-	884	1.54			
	N	14.441	14.362	0.265	1.157	945	1.65	33	C46	Non	20.046	-	-	-	566	0.99			
20	C33	Non	14.906	-	-	-	3825	6.67		N	20.366	-	-	-	415	0.72			
	N	14.906	-	-	-	987	1.72	34	C47	Non	20.722	-	-	-	294	0.51			
21	C34	Non	15.352	-	-	-	4742	8.26		N	21.125	-	-	-	76	0.13			
	N	15.352	15.273	0.224	1.183	780	1.36	35	C48	Non	-	-	-	-	Total	57385 100.00			

**Table B58 Chromatographic data of crystallized wax from fractional crystallization of 500SW at -10 °C in MEK**

Total Non = 82.96% , N = 17.04%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
0m	CS <sub>1</sub>	Solvent	0.077	-	-	-	-	-	21	C36	Non	16.191	-	-	-	2893	6.92
1	C21	N	7.912	-	-	-	66	0.16		N	16.191	16.114	0.160	1.207	406	0.97	
2	C22	N	8.554	8.477	0.074	0.928	160	0.38	22	C37	Non	16.631	-	-	-	3486	5.95
3	C23	N	9.211	-	-	-	235	0.56		N	16.631	-	-	-	322	0.77	
4	C24	N	9.844	9.767	0.076	0.989	254	0.61	23	C38	Non	17.034	-	-	-	2274	5.44
5	C25	N	10.458	-	-	-	223	0.53		N	17.034	16.957	0.144	1.229	361	0.86	
6	C26	N	11.044	10.967	0.071	1.040	181	0.43	24	C39	Non	17.444	-	-	-	2061	4.93
7	C27	Non	11.413	-	-	-	124	0.30		N	17.444	-	-	-	334	0.80	
8		N	11.611	-	-	-	128	0.31	25	C40	Non	17.840	-	-	-	1733	4.15
9	C28	Non	11.972	-	-	-	306	0.73		N	17.840	17.763	0.129	1.249	330	0.79	
10		N	12.194	12.117	0.089	1.083	102	0.24	26	C41	Non	18.218	-	-	-	1419	3.40
11	C29	Non	12.524	-	-	-	747	1.79		N	18.218	-	-	-	161	0.62	
12		N	12.748	-	-	-	68	0.16	27	C42	Non	18.601	-	-	-	1188	2.84
13	C30	Non	13.052	-	-	-	1808	4.33		N	18.601	18.524	0.108	1.267	257	0.61	
14		N	13.397	13.220	0.129	1.121	168	0.40	28	C43	Non	18.814	-	-	-	969	2.32
15	C31	Non	13.501	-	-	-	2034	4.87		N	18.977	-	-	-	119	0.28	
16		N	13.961	-	-	-	633	1.51	29	C44	Non	19.177	-	-	-	810	1.94
17	C32	Non	14.421	-	-	-	2301	5.51		N	19.341	19.264	0.101	1.284	72	0.17	
	N	14.421	14.344	0.247	1.156	659	1.58	30	C45	Non	19.689	-	-	-	693	1.66	
18	C33	Non	14.882	-	-	-	2830	6.77		N	19.828	-	-	-	550	1.32	
	N	14.882	-	-	-	719	1.72	31	C46	Non	20.186	-	-	-	485	1.16	
19	C34	Non	15.335	-	-	-	2938	7.03		N	20.354	-	-	-	448	1.07	
	N	15.335	15.258	0.209	1.183	597	1.43	32	C47	Non	20.702	-	-	-	396	0.95	
20	C35	Non	15.779	-	-	-	3065	7.33		N	21.271	-	-	-	117	0.28	
	N	15.779	-	-	-	466	1.11	33	C48	Non	-	-	-	-	Total	41796 100.00	

**Table B59 Chromatographic data of crystallized wax from fractional crystallization of 500SW at 0 °C in MEK**

Total Non = 82.42% , N = 17.58%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>1</sub>	Solvent	0.078	-	-	-	-	-	22	C37	Non	16.635	-	-	-	1865	5.48
1	C23	N	9.211	-	-	-	116	0.34			N	16.635	-	-	-	246	0.72
2	C24	N	9.841	9.763	0.073	0.989	212	0.62	23	C38	Non	17.036	-	-	-	1625	4.77
3	C25	N	10.453	-	-	-	380	0.82			N	17.036	16.958	0.145	1.229	190	0.56
4	C26	N	11.047	10.969	0.073	1.040	365	1.07	24	C39	Non	17.446	-	-	-	1397	4.10
5	C27	Non	11.421	-	-	-	68	0.20			N	17.446	-	-	-	187	0.55
6		N	11.618	-	-	-	384	1.13	25	C40	Non	17.845	-	-	-	1346	3.95
7	C28	Non	11.976	-	-	-	212	0.62			N	17.845	17.767	0.133	1.249	205	0.60
8		N	12.172	12.094	0.066	1.082	359	1.05	26	C41	Non	18.218	-	-	-	1075	3.16
9	C29	Non	12.536	-	-	-	479	1.41			N	18.218	-	-	-	308	0.61
10		N	12.719	-	-	-	343	1.01	27	C42	Non	18.601	-	-	-	964	2.83
11	C30	Non	13.059	-	-	-	1176	3.46			N	18.601	18.523	0.107	1.267	228	0.67
12		N	13.251	13.173	0.082	1.119	324	0.95	28	C43	Non	18.972	-	-	-	870	2.56
13	C31	Non	13.569	-	-	-	2029	5.96			N	18.972	-	-	-	173	0.51
14		N	13.774	-	-	-	155	0.46	29	C44	Non	19.323	-	-	-	696	2.05
15	C32	Non	14.056	-	-	-	2585	7.60			N	19.323	19.245	0.082	1.284	132	0.39
16		N	14.288	14.210	0.113	1.152	121	0.36	30	C45	Non	19.663	-	-	-	622	1.83
17	C33	Non	14.453	-	-	-	3358	9.87			N	19.663	-	-	-	98	0.29
18		N	14.901	-	-	-	456	1.34	31	C46	Non	20.021	-	-	-	482	1.42
19	C34	Non	15.345	-	-	-	2302	6.76			N	20.021	19.943	0.067	1.299	50	0.15
		N	15.345	15.267	0.218	1.183	404	1.19	32	C47	Non	20.256	-	-	-	351	1.03
20	C35	Non	15.776	-	-	-	2176	6.39			N	20.256	-	-	-	236	0.69
		N	15.776	-	-	-	415	1.22	33	C48	Non	20.529	-	-	-	103	0.30
21	C36	Non	16.204	-	-	-	1971	5.79			N	20.867	-	-	-	63	0.19
		N	16.204	16.126	0.172	1.207	331	0.97	34	C49	Non	21.178	-	-	-		
									35	C50	Non	21.178	-	-	-	Total	34033 100.00

**Table B60 Chromatographic data of crystallized wax from fractional crystallization of 500SW at 10 °C in MEK**

Total Non = 73.93% , N = 26.07%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>1</sub>	Solvent	0.079	-	-	-	-	-	21	C38	Non	16.702	-	-	-	2495	4.91
1	C23	N	9.273	-	-	-	80	0.16			N	16.702	16.623	-0.190	1.220	370	0.73
2	C24	N	9.896	9.817	0.126	0.991	165	0.32	22	C39	Non	17.108	-	-	-	2414	4.75
3	C25	N	10.514	-	-	-	322	0.63			N	17.108	-	-	-	327	0.64
4	C26	N	11.094	11.015	0.119	1.041	557	1.10	23	C40	Non	17.509	-	-	-	1973	3.88
5	C27	N	11.671	-	-	-	902	1.78			N	17.509	17.430	-0.204	1.241	267	0.53
6	C28	N	12.239	12.150	0.122	1.084	1189	2.34	24	C41	Non	17.907	-	-	-	1877	3.70
7	C29	Non	12.578	-	-	-	111	0.22			N	17.907	-	-	-	237	0.47
8		N	12.767	-	-	-	1659	3.27	25	C42	Non	18.281	-	-	-	1560	3.07
9	C30	Non	13.139	-	-	-	1042	2.05			N	18.281	18.202	-0.214	1.260	173	0.34
10		N	13.292	13.213	0.122	1.121	2176	4.28	26	C43	Non	18.659	-	-	-	1493	2.94
11	C31	Non	13.632	-	-	-	2088	4.11			N	18.659	-	-	-	151	0.30
12		N	13.803	-	-	-	1764	3.47	27	C44	Non	19.029	-	-	-	1257	2.47
13	C32	Non	14.127	-	-	-	3311	6.52			N	19.029	18.950	-0.213	1.277	113	0.22
14		N	14.297	14.218	0.121	1.152	892	1.76	28	C45	Non	19.382	-	-	-	1215	2.39
15	C33	Non	14.604	-	-	-	3359	6.61			N	19.382	-	-	-	84	0.17
16		N	14.793	-	-	-	314	0.62	29	C46	Non	19.723	-	-	-	677	1.33
17	C34	Non	15.020	-	-	-	2512	4.95			N	19.723	19.644	-0.232	1.293	59	0.12
		N	15.020	14.941	-0.108	1.174	298	0.59	30	C47	Non	20.085	-	-	-	575	1.13
18	C35	Non	15.427	-	-	-	3227	6.35			N	20.085	-	-	-	61	0.12
		N	15.427	-	-	-	310	0.61	31	C48	Non	20.407	-	-	-	485	0.95
19	C36	Non	15.859	-	-	-	2819	5.55			N	20.619	-	-	-	315	0.62
		N	15.859	15.780	-0.174	1.198	379	0.75	32	C49	Non	20.936	-	-	-	179	0.35
20	C37	Non	16.279	-	-	-	2437	4.80			N	20.936	-	-	-	134	0.26
		N	16.279	-	-	-	391	0.77	33	C50	Non	21.235	-	-	-		
									34	C51	Non	21.235	-	-	-	Total	50795 100.00

**Table B61 Chromatographic data of crystallized wax from fractional crystallization of 500SW at 20 °C in MEK**

Total Non = 48.22% , N = 51.78%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>1</sub>	Solvent	0.073	-	-	-	-	-	15	C38	Non	16.760	-	-	-	1790	4.34
1	C26	N	11.081	11.008	0.112	1.041	54	0.13	16		N	16.944	16.871	0.058	1.227	118	0.29
2	C27	N	11.646	-	-	-	155	0.38	17	C39	Non	17.337	-	-	-	1330	3.22
3	C28	N	12.198	12.125	0.097	1.083	419	1.02	18		N	17.481	-	-	-	92	0.22
4	C29	Non	12.743	-	-	-	110	0.27	19	C40	Non	17.890	-	-	-	1262	3.06
		N	12.743	-	-	-	1075	2.61			N	17.890	17.817	0.183	1.250	107	0.26
5	C30	Non	13.269	-	-	-	300	0.73	20	C41	Non	18.247	-	-	-	998	2.42
		N	13.269	13.196	0.105	1.120	2567	6.22			N	18.247	-	-	-	101	0.24
6	C31	Non	13.779	-	-	-	584	1.42	21	C42	Non	18.652	-	-	-	910	2.21
		N	13.779	-	-	-	4009	9.72			N	18.652	18.579	0.163	1.269	54	0.13
7	C32	Non	14.271	-	-	-	842	2.04	22	C43	Non	18.991	-	-	-	712	1.73
		N	14.271	14.198	0.101	1.152	4117	9.98			N	18.991	-	-	-	46	0.11
8	C33	Non	14.731	-	-	-	1037	2.51	23	C44	Non	19.346	-	-	-	619	1.50
		N	14.731	-	-	-	3741	9.07			N	19.346	19.273	0.110	1.284	44	0.11
9	C34	Non	15.212	-	-	-	1737	4.21	24	C45	Non	19.739	-	-	-	453	1.10
		N	15.212	15.139	0.090	1.180	2336	5.66			N	19.739	-	-	-	48	0.12
10	C35	Non	15.661	-	-	-	1782	4.32	25	C46	Non	20.067	-	-	-	382	0.93
		N	15.661	-	-	-	1332	3.23	26	C47	Non	20.459	-	-	-	232	0.61
11	C36	Non	15.938	-	-	-	1972	4.78	27	C48	Non	20.639	-	-	-	136	0.33
12		N	16.096	16.023	0.069	1.204	666	1.61	28	C49	Non	20.874	-	-	-	93	0.23
13	C37	Non	16.351	-	-	-	2546	6.17	29	C50	Non	21.276	-	-	-	42	0.10
14		N	16.516	-	-	-	279	0.68							Total	41249	100.00

**Table B62 Chromatographic data of crystallized wax from fractional crystallization of 500SW at 30 °C in MEK**

Total Non = 33.13% , N = 66.87%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>1</sub>	Solvent	0.075	-	-	-	-	-	12	C40	Non	17.754	-	-	-	1025	2.85
1	C29	N	12.729	-	-	-	95	0.26			N	17.754	17.679	0.045	1.247	1269	3.53
2	C30	N	13.251	13.176	0.085	1.119	362	1.01	13	C41	Non	18.145	-	-	-	1136	3.16
3	C31	Non	13.756	-	-	-	66	0.18			N	18.145	-	-	-	925	2.57
		N	13.756	-	-	-	944	2.62	14	C42	Non	18.524	-	-	-	1155	3.21
4	C32	Non	14.236	-	-	-	175	0.49			N	18.524	18.449	0.033	1.265	740	2.06
		N	14.236	14.181	0.084	1.151	1713	4.76	15	C43	Non	18.897	-	-	-	988	2.75
5	C33	Non	14.734	-	-	-	298	0.83			N	18.897	-	-	-	506	1.41
		N	14.734	-	-	-	2316	6.44	16	C44	Non	19.266	-	-	-	803	2.23
6	C34	Non	15.201	-	-	-	413	1.15			N	19.266	19.191	0.028	1.283	396	1.10
		N	15.201	15.126	0.077	1.179	2767	7.69	17	C45	Non	19.622	-	-	-	648	1.80
7	C35	Non	15.654	-	-	-	556	1.55			N	19.622	-	-	-	297	0.83
		N	15.654	-	-	-	2757	7.66	18	C46	Non	19.970	-	-	-	508	1.41
8	C36	Non	16.096	-	-	-	709	1.97			N	19.970	19.895	0.019	1.298	204	0.57
		N	16.096	16.021	0.067	1.204	2572	7.15	19	C47	Non	20.306	-	-	-	184	1.07
9	C37	Non	16.529	-	-	-	753	2.09			N	20.306	-	-	-	129	0.36
		N	16.529	-	-	-	2368	6.58	20	C48	Non	20.650	-	-	-	271	0.75
10	C38	Non	16.946	-	-	-	897	2.49			N	20.650	20.575	0.012	1.313	72	0.20
		N	16.946	16.871	0.058	1.227	1950	5.42	21	C49	Non	20.958	-	-	-	117	0.33
11	C39	Non	17.353	-	-	-	1015	2.82			N	20.958	-	-	-	56	0.16
		N	17.353	-	-	-	1576	4.38	22	C50	Non	21.257	21.182	-0.034	1.325	40	0.11
															Total	35971	100.00

**Table B63** Chromatographic data of residual oil from fractional crystallization of 600SW at -20 °C in MEK

Total Non = 96.03% . N = 3,97%

P/ No.	P/ No.	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ No.	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1 tm	CS <sub>2</sub>	Solvent	0.081	-	-	-	-	-			N	14.881	14.800	-0.249	1.170	592	0.40
1	C19	N	6.451	-	-	-	340	0.23	17	C35	Non	15.326	-	-	-	14776	9.97
2	C20	N	7.179	7.098	0.066	0.851	375	0.25			N	15.326	-	-	-	522	0.35
3	C21	N	7.871	-	-	-	259	0.17	18	C36	Non	15.769	-	-	-	12872	8.69
4	C22	N	8.569	8.488	0.085	0.928	131	0.09			N	15.769	15.688	-0.266	1.195	487	0.33
5	C23	N	-	-	-	-	0	0.00	19	C37	Non	16.211	-	-	-	11961	8.07
6	C24	N	-	-	-	-	0	0.00			N	16.211	-	-	-	277	0.19
7	C25	N	-	-	-	-	0	0.00	20	C38	Non	16.644	-	-	-	10952	7.39
8	C26	Non	10.811	-	-	-	188	0.13			N	16.644	16.563	-0.25	1.219	350	0.24
		N	10.811	10.730	-0.166	1.030	76	0.05	21	C39	Non	17.059	-	-	-	8985	6.06
9	C27	Non	11.427	-	-	-	707	0.48			N	17.059	-	-	-	239	0.16
		N	11.427	-	-	-	128	0.09	22	C40	Non	17.439	-	-	-	8860	5.98
10	C28	Non	11.983	-	-	-	1485	1.00			N	17.439	17.358	-0.276	1.239	135	0.09
		N	11.983	11.902	-0.126	1.075	194	0.13	23	C41	Non	17.821	-	-	-	7035	4.75
11	C29	Non	12.465	-	-	-	3401	1.62	24	C42	Non	18.190	-	-	-	6667	4.50
		N	12.465	-	-	-	305	0.21	25	C43	Non	18.510	-	-	-	4932	3.33
12	C30	Non	12.919	-	-	-	2855	1.93	26	C44	Non	19.032	-	-	-	4396	2.97
		N	12.919	12.838	-0.253	1.108	274	0.18	27	C45	Non	19.272	-	-	-	2618	1.77
13	C31	Non	13.453	-	-	-	5082	3.43	28	C46	Non	19.786	-	-	-	1822	1.23
		N	13.453	-	-	-	341	0.23	29	C47	Non	20.026	-	-	-	1572	1.06
14	C32	Non	13.917	-	-	-	6868	4.63	30	C48	Non	20.534	-	-	-	1372	0.93
		N	13.917	13.836	-0.261	1.141	332	0.22	31	C49	Non	20.788	-	-	-	560	0.38
15	C33	Non	14.411	-	-	-	10602	7.15	32	C50	Non	21.291	-	-	-	510	0.34
		N	14.411	-	-	-	533	0.36	33	C51	Non	21.520	-	-	-	92	0.06
16	C34	Non	14.881	-	-	-	12145	8.19							Total	148205	100.00

**Table B64** Chromatographic data of crystallized wax from fractional crystallization of 600SW at -20 °C in MEK

Total Non = 86.47% , N = 13.53%

**Table B65 Chromatographic data of crystallized wax from fractional crystallization of 600SW at -10 °C in MEK**

Total Non = 86.00% , N = 14.00%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>1</sub>	Solvent	0.079	-	-	-	-	-	22	C36	Non	16.309	-	-	-	5606	7.05
1	C20	N	7.207	7.128	0.096	0.852	136	0.17		N	16.309	16.130	0.176	1.207	718	0.90	
2	C21	N	7.891	-	-	-	378	0.35	23	C37	Non	16.629	-	-	-	4721	5.94
3	C22	N	8.571	8.492	0.089	0.929	330	0.42		N	16.629	-	-	-	669	0.84	
4	C23	N	9.224	-	-	-	397	0.37	24	C38	Non	17.052	-	-	-	4461	5.61
5	C24	N	9.863	9.784	0.093	0.990	334	0.39		N	17.052	16.973	0.160	1.229	708	0.89	
6	C25	N	10.469	-	-	-	148	0.11	25	C39	Non	17.452	-	-	-	3822	4.81
7	C36	Non	10.854	-	-	-	126	0.16		N	17.452	-	-	-	683	0.86	
8		N	11.052	10.973	0.077	1.040	112	0.14	26	C40	Non	17.849	-	-	-	3600	4.53
9	C27	Non	11.419	-	-	-	290	0.36		N	17.849	17.770	0.136	1.249	644	0.81	
10		N	11.636	-	-	-	86	0.11	27	C41	Non	18.238	-	-	-	3287	4.14
11	C28	Non	11.981	-	-	-	382	0.73		N	18.238	-	-	-	483	0.61	
12		N	12.201	12.122	0.094	1.083	66	0.08	28	C42	Non	18.617	-	-	-	3012	3.79
13	C29	Non	12.525	-	-	-	956	1.20		N	18.617	18.538	0.122	1.268	399	0.50	
14		N	12.761	-	-	-	78	0.10	29	C43	Non	18.841	-	-	-	3115	3.92
15	C30	Non	13.038	-	-	-	1443	1.82	30		N	18.997	-	-	-	172	0.22
16		N	13.292	13.213	0.122	1.121	143	0.18	31	C44	Non	19.357	-	-	-	2444	3.07
17	C31	Non	13.939	-	-	-	3769	4.74		N	19.357	19.278	0.115	1.285	85	0.11	
		N	13.939	-	-	-	455	0.57	32	C45	Non	19.694	-	-	-	2011	2.53
18	C32	Non	14.423	-	-	-	3991	5.02	33	C46	Non	20.151	-	-	-	1636	2.06
		N	14.423	14.344	0.247	1.156	1047	1.32	34	C47	Non	20.403	-	-	-	1183	1.49
19	C33	Non	14.881	-	-	-	4981	6.27	35	C48	Non	20.844	-	-	-	580	0.73
		N	14.881	-	-	-	1293	1.63	36	C49	Non					462	0.58
20	C34	Non	15.332	-	-	-	5391	6.78	37	C50	Non	21.157	-	-	-	235	0.30
		N	15.332	15.253	0.204	1.183	1053	1.32	38	C51	Non	21.595	-	-	-	74	0.09
21	C35	Non	15.774	-	-	-	6580	8.28							Total	79484	100.00

**Table B66 Chromatographic data of crystallized wax from fractional crystallization of 600SW at 0 °C in MEK**

Total Non = 84.87% , N = 15.13%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>1</sub>	Solvent	0.078	-	-	-	-	-	24	C37	Non	16.199	16.121	0.167	1.207	909	1.07
1	C20	N	7.227	7.149	0.117	0.854	58	0.07		N	16.633	-	-	-	4967	5.87	
2	C21	N	7.912	-	-	-	159	0.19		N	16.633	-	-	-	645	0.76	
3	C22	N	8.539	8.481	0.078	0.928	282	0.33	25	C38	Non	17.042	-	-	-	4773	5.64
4	C23	N	9.212	-	-	-	328	0.39		N	17.042	16.964	0.151	1.229	598	0.71	
5	C24	N	9.849	9.771	0.08	0.989	349	0.41	26	C39	Non	17.446	-	-	-	4021	4.75
6	C25	N	10.458	-	-	-	374	0.44		N	17.446	-	-	-	539	0.64	
7	C26	Non	10.837	-	-	-	111	0.13	27	C40	Non	17.843	-	-	-	3744	4.42
8		N	11.051	10.973	0.077	1.040	341	0.40		N	17.843	17.765	0.131	1.249	531	0.63	
9	C27	Non	11.411	-	-	-	268	0.32	28	C41	Non	18.232	-	-	-	3354	3.96
10		N	11.623	-	-	-	241	0.28		N	18.232	-	-	-	462	0.55	
11	C28	Non	11.976	-	-	-	529	0.62	29	C42	Non	18.609	-	-	-	3018	3.56
12		N	12.188	12.110	0.082	1.083	180	0.21		N	18.609	18.531	0.115	1.267	496	0.59	
13	C29	Non	12.526	-	-	-	897	1.06	30	C43	Non	18.979	-	-	-	2880	3.40
14		N	12.738	-	-	-	135	0.16		N	18.979	-	-	-	317	0.37	
15	C30	Non	13.044	-	-	-	1524	1.80	31	C44	Non	19.329	-	-	-	2464	2.91
16		N	13.289	13.211	0.120	1.120	119	0.14		N	19.329	19.251	0.088	1.284	261	0.31	
17	C31	Non	13.566	-	-	-	4997	5.90	32	C45	Non	19.694	-	-	-	2109	2.49
18		N	13.956	-	-	-	609	0.72		N	19.694	-	-	-	158	0.19	
19	C32	Non	14.429	-	-	-	3458	4.08	33	C46	Non	20.041	-	-	-	1832	2.16
		N	14.429	14.351	0.234	1.156	991	1.17		N	20.041	19.963	0.087	1.300	86	0.10	
20	C33	Non	14.892	-	-	-	5494	6.49	34	C47	Non	20.176	-	-	-	1247	1.47
		N	14.892	-	-	-	1396	1.53	35	C48	Non	20.488	-	-	-	968	1.14
21	C34	Non	15.334	-	-	-	5627	6.65	36	C49	Non	21.024	-	-	-	807	0.95
		N	15.334	15.256	0.207	1.183	1266	1.50	37	C50	Non	21.239	-	-	-	415	0.49
22	C35	Non	15.767	-	-	-	5642	6.66	38	C51	Non	21.597	-	-	-	158	0.19
		N	15.767	-	-	-	1080	1.28	39	C52	Non	21.945	-	-	-	63	0.07
23	C36	Non	16.199	-	-	-	6488	7.66							Total	84665	100.00

**Table B67 Chromatographic data of crystallized wax from fractional crystallization of 600SW at 10 °C in MEK**

Total Non = 84.51% , N = 15.49%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t <sub>R</sub>	Δt <sub>R</sub>	Log t <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t <sub>R</sub>	Δt <sub>R</sub>	Log t <sub>R</sub>	A	% wt
1m	CS <sub>1</sub>	Solvent	0.085	-	-	-	-	-	25	C38	Non	16.681	-	-	-	949	0.90
1	C21	N	7.941	-	-	-	70	0.07	25	C38	Non	17.093	-	-	-	5436	5.15
2	C22	N	8.594	8.309	0.106	0.929	163	0.15	26	C39	Non	17.093	17.008	0.195	1.230	722	0.68
3	C23	N	9.341	-	-	-	297	0.28	27	C40	Non	17.494	-	-	-	5412	5.13
4	C24	N	9.871	9.786	0.093	0.990	431	0.41	27	C40	Non	17.889	-	-	-	4491	4.25
5	C25	N	10.477	-	-	-	619	0.59	28	C41	Non	18.264	-	-	-	4217	3.99
6	C26	N	11.078	10.993	0.097	1.041	839	0.79	28	C41	Non	18.264	-	-	-	499	0.47
7	C27	Non	11.449	-	-	-	102	0.10	29	C42	Non	18.647	-	-	-	3717	3.52
8		N	11.651	-	-	-	868	0.82	29	C42	Non	18.647	18.562	0.146	1.268	461	0.44
9	C28	Non	12.023	-	-	-	343	0.32	30	C43	Non	19.016	-	-	-	3227	3.06
10		N	12.208	12.123	0.093	1.083	840	0.80	30	C43	Non	19.016	-	-	-	361	0.34
11	C29	Non	12.568	-	-	-	689	0.65	31	C44	Non	19.370	-	-	-	2766	2.62
12		N	12.749	-	-	-	760	0.72	31	C44	Non	19.370	19.285	0.122	1.285	336	0.32
13	C30	Non	13.096	-	-	-	1489	1.41	32	C45	Non	19.728	-	-	-	2402	2.27
14		N	13.279	13.194	0.103	1.120	678	0.64	32	C45	Non	19.728	-	-	-	288	0.27
15	C31	Non	13.627	-	-	-	3052	2.89	33	C46	Non	20.078	-	-	-	2230	2.11
16		N	13.802	-	-	-	552	0.52	33	C46	Non	20.078	19.993	0.117	1.300	225	0.21
17	C32	Non	14.115	-	-	-	6607	6.26	34	C47	Non	20.404	-	-	-	1683	1.39
18		N	14.304	14.219	0.122	1.152	325	0.31	34	C47	Non	20.404	-	-	-	158	0.15
19	C33	Non	14.516	-	-	-	10407	9.86	35	C48	Non	20.742	-	-	-	765	0.72
20		N	14.955	-	-	-	922	0.87	35	C48	Non	20.742	20.657	0.094	1.315	50	0.05
21	C34	Non	15.398	-	-	-	8191	7.76	36	C49	Non	20.874	-	-	-	642	0.61
		N	15.398	15.313	0.264	1.185	1245	1.18	37	C50	Non	21.203	-	-	-	315	0.30
22	C35	Non	15.830	-	-	-	7115	6.74	38	C51	Non	21.581	-	-	-	203	0.19
		N	15.830	-	-	-	1374	1.30	39	C52	Ndn	21.973	-	-	-	89	0.08
23	C36	Non	16.261	-	-	-	6900	6.54									
		N	16.261	16.176	0.222	1.208	1098	1.04									
24	C37	Non	16.681	-	-	-	6736	6.38									
		N	16.681	-	-	-									Total	105583 100.00	

**Table B68 Chromatographic data of crystallized wax from fractional crystallization of 600SW at 20 °C in MEK**

Total Non = 77.96% , N = 22.04%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t <sub>R</sub>	Δt <sub>R</sub>	Log t <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t <sub>R</sub>	Δt <sub>R</sub>	Log t <sub>R</sub>	A	% wt
1m	CS <sub>1</sub>	Solvent	0.077	-	-	-	-	-	25	C38	Non	16.934	-	-	-	5313	6.00
1	C23	N	9.254	-	-	-	49	0.06	25	C38	Non	16.934	16.857	0.044	1.226	295	0.33
2	C24	N	9.859	9.782	0.091	0.990	163	0.18	26	C39	Non	17.341	-	-	-	4540	5.13
3	C25	N	10.464	-	-	-	332	0.37	26	C39	Non	17.341	-	-	-	167	0.19
4	C26	N	11.061	10.984	0.088	1.040	649	0.73	27	C40	Non	17.801	-	-	-	4095	4.62
5	C27	N	11.631	-	-	-	937	1.06	27	C40	Non	17.801	17.724	0.09	1.248	141	0.16
6	C28	Non	11.989	-	-	-	159	0.18	28	C41	Non	18.186	-	-	-	3585	4.05
7		N	12.181	12.104	0.076	1.082	1213	1.37	28	C41	Non	18.186	-	-	-	91	0.10
8	C29	Non	12.534	-	-	-	324	0.37	29	C42	Non	18.551	-	-	-	2971	3.35
9		N	12.722	-	-	-	1403	1.58	29	C42	Non	18.551	18.474	0.058	1.266	47	0.05
10	C30	Non	13.071	-	-	-	678	0.77	30	C43	Non	18.981	-	-	-	2466	2.78
11		N	13.246	13.169	0.078	1.119	1689	1.91	30	C43	Non	18.981	-	-	-	193	0.22
12	C31	Non	13.589	-	-	-	1480	1.67	31	C44	Non	19.351	-	-	-	1995	2.25
13		N	13.756	-	-	-	2234	2.52	31	C44	Non	19.351	19.274	0.111	1.284	162	0.18
14	C32	Non	14.094	-	-	-	3101	3.30	32	C45	Non	19.683	-	-	-	1622	1.83
15		N	14.248	14.171	0.074	1.151	2855	3.22	32	C45	Non	19.683	-	-	-	131	0.15
16	C33	Non	14.581	-	-	-	5038	5.69	33	C46	Non	20.034	-	-	-	1375	1.55
17		N	14.727	-	-	-	2748	3.10	33	C46	Non	20.034	19.957	0.081	1.300	108	0.12
18	C34	Non	15.036	-	-	-	6886	7.78	34	C47	Non	20.356	-	-	-	966	1.09
19		N	15.199	15.122	0.073	1.179	1773	2.00	34	C47	Non	20.356	-	-	-	58	0.07
20	C35	Non	15.404	-	-	-	8815	9.95	35	C48	Non	20.567	-	-	-	813	0.92
21		N	15.634	-	-	-	1052	1.19	36	C49	Non	20.887	-	-	-	499	0.56
22	C36	Non	15.836	-	-	-	6227	7.09	37	C50	Non	21.197	-	-	-	345	0.39
23		N	16.086	16.009	0.055	1.204	570	0.64	38	C51	Non	21.512	-	-	-	225	0.25
24	C37	Non	16.521	-	-	-	5378	6.07	39	C52	Non	21.985	-	-	-	97	0.11
		N	16.521	-	-	-	455	0.51							Total	88560 100.00	

**Table B69 Chromatographic data of crystallized wax from fractional crystallization of 600SW at 30 °C in MEK**

Total Non = 41.45% , N = 58.55%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	Λ	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	Λ	% wt
1m	CS <sub>1</sub>	Solvent	0.073	-	-	-	-	-	15	C40	Non	17.728	-	-	-	2828	3.74
1	C26	N	11.028	10.955	0.059	1.039	70	0.09		N	17.728	17.655	0.021	1.246	1491	1.97	
2	C27	N	11.602	-	-	-	174	0.23	16	C41	Non	18.12	-	-	-	2398	3.17
3	C28	N	12.156	12.083	0.055	1.082	402	0.53		N	18.12	-	-	-	1075	1.42	
4	C29	Non	12.694	-	-	-	40	0.05	17	C42	Non	18.499	-	-	-	2080	2.75
	N	12.694	-	-	-	-	712	0.94		N	18.499	18.426	0.010	1.265	904	1.20	
5	C30	Non	13.222	-	-	-	113	0.15	18	C43	Non	18.869	-	-	-	1850	2.45
	N	13.222	13.149	0.058	1.118	1.271	1.68		N	18.869	-	-	-	661	0.87		
6	C31	Non	13.733	-	-	-	274	0.36	19	C44	Non	19.233	-	-	-	1451	1.92
	N	13.733	-	-	-	-	2435	3.22		N	19.233	19.16	-0.003	1.282	514	0.68	
7	C32	Non	14.230	-	-	-	538	0.71	20	C45	Non	19.591	-	-	-	1237	1.64
	N	14.230	14.157	0.060	1.150	4404	5.83		N	19.591	-	-	-	415	0.55		
8	C33	Non	14.709	-	-	-	1021	1.35	21	C46	Non	19.933	-	-	-	970	1.28
	N	14.709	-	-	-	-	5899	7.81		N	19.933	19.86	-0.016	1.297	300	0.40	
9	C34	Non	15.182	-	-	-	1593	2.11	22	C47	Non	20.277	-	-	-	682	0.90
	N	15.182	15.109	0.060	1.179	6018	7.97		N	20.277	-	-	-	187	0.25		
10	C35	Non	15.632	-	-	-	1994	2.64	23	C48	Non	20.394	-	-	-	527	0.70
	N	15.632	-	-	-	-	5245	6.94		N	20.394	20.521	-0.042	1.312	143	0.19	
11	C36	Non	16.079	-	-	-	3408	3.19	24	C49	Non	20.924	-	-	-	309	0.41
	N	16.079	16.006	0.052	1.204	4217	5.58		N	20.924	-	-	-	96	0.13		
12	C37	Non	16.508	-	-	-	2706	3.58	25	C50	Non	21.261	-	-	-	224	0.30
	N	16.508	-	-	-	-	3232	4.30		N	21.261	21.188	-0.028	1.326	43	0.06	
13	C38	Non	16.923	-	-	-	2932	3.88	26	C51	Non	20.924	-	-	-	103	0.14
	N	16.923	16.850	0.037	1.226	3470	3.27		N	20.924	-	-	-	55	0.07		
14	C39	Non	17.334	-	-	-	2983	3.95	27	C52	Non	21.261	-	-	-	Total	75545 100.00
	N	17.334	-	-	-	-	1831	2.42									

**Table B70 Chromatographic data of residual oil from fractional crystallization of 500SW at -20 °C in toluene**

Total Non = 93.61% , N = 6.39%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	Λ	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	Λ	% wt
1m	CS <sub>1</sub>	Solvent	0.090	-	-	-	-	-	17	C35	Non	15.511	-	-	-	10594	7.87
1	C19	N	6.581	-	-	-	45	0.03		N	15.511	-	-	-	653	0.49	
2	C20	N	7.326	7.236	0.204	0.859	52	0.04	18	C36	Non	15.974	-	-	-	9460	7.03
3	C21	N	8.001	-	-	-	90	0.07		N	15.974	15.884	-0.070	1.200	538	0.40	
4	C22	N	8.694	8.604	0.201	0.934	92	0.07	19	C37	Non	16.419	-	-	-	8639	6.42
5	C23	Non	9.316	-	-	-	44	0.03		N	16.419	-	-	-	470	0.35	
	N	9.316	-	-	-	-	95	0.07	20	C38	Non	16.861	-	-	-	8203	6.09
6	C24	Non	9.962	-	-	-	125	0.09		N	16.861	16.771	-0.042	1.224	452	0.34	
	N	9.962	9.872	0.181	0.904	100	0.07	21	C39	Non	17.296	-	-	-	7050	5.24	
7	C25	Non	10.561	-	-	-	255	0.19		N	17.296	-	-	-	372	0.28	
	N	10.561	-	-	-	-	74	0.05	22	C40	Non	17.726	-	-	-	6507	4.83
8	C26	Non	11.163	-	-	-	550	0.41		N	17.726	17.636	0.002	1.246	331	0.25	
	N	11.163	11.073	0.177	1.044	67	0.05	23	C41	Non	18.154	-	-	-	6460	4.80	
9	C27	Non	11.731	-	-	-	1161	0.86		N	18.154	-	-	-	303	0.23	
	N	11.731	-	-	-	-	51	0.04	24	C42	Non	18.539	-	-	-	5765	4.28
10	C28	Non	12.084	-	-	-	1201	0.89		N	18.539	18.449	0.033	1.265	221	0.16	
	N	12.084	11.994	-0.034	1.078	171	0.13	25	C43	Non	18.939	-	-	-	4387	3.26	
11	C29	Non	12.642	-	-	-	3079	2.29		N	18.939	-	-	-	171	0.13	
	N	12.642	-	-	-	-	379	0.28	26	C44	Non	19.329	-	-	-	4178	3.10
12	C30	Non	13.193	-	-	-	5130	3.81		N	19.329	19.239	0.076	1.284	143	0.11	
	N	13.193	13.103	0.012	1.117	492	0.37	27	C45	Non	19.683	-	-	-	3079	2.29	
13	C31	Non	13.611	-	-	-	7140	5.30		N	19.683	-	-	-	99	0.07	
	N	13.611	-	-	-	-	806	0.60	28	C46	Non	20.051	-	-	-	1759	1.31
14	C32	Non	14.073	-	-	-	7811	5.80		N	20.051	19.961	0.085	1.300	73	0.05	
	N	14.073	13.983	-0.114	1.145	762	0.57	29	C47	Non	20.247	-	-	-	1549	1.15	
15	C33	Non	14.566	-	-	-	9331	6.93		N	20.247	-	-	-	1376	1.02	
	N	14.566	-	-	-	-	741	0.55	30	C48	Non	20.365	-	-	-	785	0.58
16	C34	Non	15.044	-	-	-	9774	7.26		N	20.365	-	-	-	418	0.31	
	N	15.044	14.954	-0.095	1.174	764	0.57	31	C49	Non	20.909	-	-	-	190	0.14	
							32	C50	Non	21.225	-	-	-	Total	134607 100.00		
							33	C51	Non	21.526	-	-	-				

**Table B71 Chromatographic data of crystallized wax from fractional crystallization of 500SW at 0 °C in toluene**

Total Non = 55.65% , N = 44.35%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>1</sub>	Solvent	0.078	-	-	-	-	-	15	C39	Non	17.396	-	-	-	2762	4.08
1	C25	N	10.533	-	-	-	113	0.17		N	17.296	-	-	-	256	0.38	
2	C26	N	11.139	11.061	0.165	1.043	387	0.57	16	C40	Non	17.721	-	-	-	2631	3.88
3	C27	N	11.701	-	-	-	956	1.41		N	17.721	17.643	0.009	1.246	256	0.38	
4	C28	N	12.369	12.191	0.163	1.086	1941	2.86	17	C41	Non	18.144	-	-	-	2440	3.60
5	C29	N	12.816	-	-	-	3534	5.22		N	18.144	-	-	-	337	0.50	
6	C30	Non	13.356	-	-	-	183	0.27	18	C42	Non	18.541	-	-	-	2032	3.00
	N	13.356	13.278	0.187	1.123	5801	8.56		N	18.541	18.463	0.047	1.266	230	0.34		
7	C31	Non	13.876	-	-	-	773	1.14	19	C43	Non	18.931	-	-	-	1835	2.71
	N	13.876	-	-	-	-	5965	8.80		N	18.931	-	-	-	167	0.25	
8	C32	Non	14.377	-	-	-	1503	2.22	20	C44	Non	19.311	-	-	-	1437	2.12
	N	14.377	14.299	0.202	1.155	4611	6.86		N	19.311	19.233	0.070	1.284	115	0.17		
9	C33	Non	14.869	-	-	-	2457	3.63	21	C45	Non	19.686	-	-	-	1186	1.75
	N	14.869	-	-	-	-	2659	3.92		N	19.686	-	-	-	111	0.16	
10	C34	Non	15.347	-	-	-	3104	4.58	22	C46	Non	20.056	-	-	-	945	1.39
	N	15.347	15.269	0.220	1.183	1405	2.07		N	20.056	19.978	0.102	1.300	84	0.12		
11	C35	Non	15.811	-	-	-	3341	4.93	23	C47	Non	20.378	-	-	-	656	0.97
	N	15.811	-	-	-	-	630	0.93		N	20.378	-	-	-	42	0.06	
12	C36	Non	16.261	-	-	-	3339	4.93	24	C48	Non	20.743	-	-	-	505	0.75
	N	16.261	16.183	0.229	1.209	344	0.51	25	C49	Non	20.928	-	-	-	321	0.47	
13	C37	Non	16.702	-	-	-	3138	4.63	26	C50	Non	21.266	-	-	-	172	0.25
	N	16.702	-	-	-	-	112	0.17	27	C51	Non	21.577	-	-	-	85	0.13
14	C38	Non	16.876	-	-	-	2864	4.23									
	N	16.876	16.798	-0.015	1.225	0	0.00										
															Total	67765 100.00	

**Table B72 Chromatographic data of crystallized wax from fractional crystallization of 500SW at 10 °C in toluene**

Total Non = 39.42% , N = 60.58%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>1</sub>	Solvent	0.073	-	-	-	-	-	13	C39	Non	17.176	-	-	-	4496	3.71
1	C27	N	11.239	-	-	-	81	0.07		N	17.176	-	-	-	1028	0.85	
2	C28	N	11.862	11.787	-0.241	1.071	184	0.15	14	C40	Non	17.609	-	-	-	4224	3.49
3	C29	Non	12.384	-	-	-	94	0.08		N	17.609	17.534	-0.100	1.243	612	0.51	
	N	12.384	-	-	-	-	722	0.60	15	C41	Non	18.034	-	-	-	3903	3.22
4	C30	Non	12.963	-	-	-	208	0.17		N	18.034	-	-	-	478	0.39	
	N	12.963	12.888	-0.203	1.110	2793	2.31	16	C42	Non	18.446	-	-	-	3485	2.88	
5	C31	Non	13.471	-	-	-	530	0.44		N	18.446	18.371	-0.045	1.264	289	0.24	
	N	13.471	-	-	-	-	8529	7.04	17	C43	Non	18.847	-	-	-	3096	2.56
6	C32	Non	14.006	-	-	-	974	0.80		N	18.847	-	-	-	249	0.21	
	N	14.006	13.931	-0.166	1.143	11460	9.47	18	C44	Non	19.234	-	-	-	2558	2.11	
7	C33	Non	14.424	-	-	-	1456	1.20		N	19.234	19.159	-0.004	1.282	151	0.12	
	N	14.424	-	-	-	-	12065	9.97	19	C45	Non	19.616	-	-	-	2190	1.81
8	C34	Non	14.991	-	-	-	1667	1.38		N	19.616	-	-	-	130	0.11	
	N	14.991	14.916	-0.133	1.173	11617	9.60	20	C46	Non	20.073	-	-	-	2030	1.68	
9	C35	Non	15.389	-	-	-	1973	1.63	21	C47	Non	20.426	-	-	-	1158	0.96
	N	15.389	-	-	-	-	10917	9.02	22	C48	Non	20.642	-	-	-	760	0.63
10	C36	Non	15.851	-	-	-	3553	2.93	23	C49	Non	20.931	-	-	-	469	0.39
	N	15.851	15.776	-0.178	1.197	6016	4.97	24	C50	Non	21.266	-	-	-	229	0.19	
11	C37	Non	16.301	-	-	-	4129	3.41	25	C51	Non	21.587	-	-	-	84	0.07
	N	16.301	-	-	-	-	3954	3.27									
12	C38	Non	16.743	-	-	-	4460	3.68							Total	121066 100.00	

**Table B73 Chromatographic data of crystallized wax from fractional crystallization of 500SW at 20 °C in toluene**

Total Non = 56.73% , N = 43.27%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>2</sub>	Solvent	0.078	-	-	-	-	-	14	C39	Non	17.179	-	-	-	2877	4.13
1	C26	N	10.726	10.648	-0.048	1.027	48	0.07		N	17.179	-	-	-	1286	1.85	
2	C27	N	11.241	-	-	-	91	0.13	15	C40	Non	17.611	-	-	-	3379	4.85
3	C28	N	11.916	11.838	-0.090	1.073	167	0.24		N	17.611	17.533	-0.101	1.243	862	1.24	
4	C29	Non	12.379	-	-	-	119	0.17	16	C41	Non	18.038	-	-	-	2750	3.95
	N	12.379	-	-	-	-	271	0.39		N	18.038	-	-	-	572	0.82	
5	C30	Non	12.916	-	-	-	559	0.80	17	C42	Non	18.451	-	-	-	2384	3.42
	N	12.916	12.838	-0.078	1.108	663	0.95		N	18.451	18.373	-0.043	1.264	357	0.51		
6	C31	Non	13.454	-	-	-	1231	1.77	18	C43	Non	18.853	-	-	-	2113	3.03
	N	13.454	-	-	-	-	1627	2.34		N	18.853	-	-	-	301	0.43	
7	C32	Non	13.877	-	-	-	1826	2.62	19	C44	Non	19.231	-	-	-	1830	2.63
	N	13.877	13.899	-0.022	1.142	3041	4.36		N	19.231	19.153	-0.010	1.282	238	0.34		
8	C33	Non	14.386	-	-	-	2226	3.19	20	C45	Non	19.599	-	-	-	1344	1.93
	N	14.386	-	-	-	-	4030	5.78		N	19.599	-	-	-	175	0.25	
9	C34	Non	14.884	-	-	-	2584	3.71	21	C46	Non	19.964	-	-	-	1252	1.80
	N	14.884	14.806	-0.078	1.117	4337	6.22		N	19.964	19.886	0.010	1.298	145	0.21		
10	C35	Non	15.373	-	-	-	2621	3.76	22	C47	Non	20.308	-	-	-	834	1.20
	N	15.373	-	-	-	-	4112	5.90		N	20.308	-	-	-	99	0.14	
11	C36	Non	15.837	-	-	-	2663	3.82	23	C48	Non	20.651	-	-	-	574	0.82
	N	15.837	15.759	-0.078	1.197	3286	4.72		N	20.651	20.573	0.010	1.313	70	0.10		
12	C37	Non	16.292	-	-	-	2842	4.08	24	C49	Non	20.994	-	-	-	373	0.54
	N	16.292	-	-	-	-	2494	3.58	25	C50	Non	21.217	-	-	-	203	0.29
13	C38	Non	16.737	-	-	-	2853	4.09	26	C51	Non	21.524	-	-	-	91	0.13
	N	16.737	16.659	-0.149	1.221	1876	2.69								Total	69676	100.00

**Table B74 Chromatographic data of crystallized wax from fractional crystallization of 500SW at 30 °C in toluene**

Total Non = 70.52% , N = 29.48%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>2</sub>	Solvent	0.075	-	-	-	-	-	14	C39	Non	17.183	-	-	-	2702	4.53
1	C26	N	10.741	10.666	-0.075	1.028	46	0.08		N	17.183	-	-	-	1156	1.94	
2	C27	N	11.232	-	-	-	128	0.21	15	C40	Non	17.609	-	-	-	2637	4.42
3	C28	N	11.914	11.839	-0.078	1.073	183	0.31		N	17.609	17.534	-0.100	1.243	1014	1.70	
4	C29	Non	12.367	-	-	-	205	0.34	16	C41	Non	18.039	-	-	-	2505	4.20
	N	12.367	-	-	-	-	243	0.41		N	18.039	-	-	-	930	1.56	
5	C30	Non	12.914	-	-	-	752	1.26	17	C42	Non	18.456	-	-	-	2204	3.69
	N	12.914	12.839	-0.075	1.108	420	0.70		N	18.456	18.381	-0.035	1.264	689	1.15		
6	C31	Non	13.452	-	-	-	1531	2.57	18	C43	Non	18.851	-	-	-	1992	3.34
	N	13.452	-	-	-	-	802	1.34		N	18.851	-	-	-	625	1.05	
7	C32	Non	13.974	-	-	-	2423	4.06	19	C44	Non	19.234	-	-	-	1662	2.79
	N	13.974	13.899	-0.075	1.142	1151	1.93		N	19.234	19.159	-0.004	1.282	473	0.79		
8	C33	Non	14.382	-	-	-	3109	5.21	20	C45	Non	19.604	-	-	-	1425	2.39
	N	14.382	-	-	-	-	1297	2.17		N	19.604	-	-	-	405	0.68	
9	C34	Non	14.974	-	-	-	3239	5.43	21	C46	Non	19.979	-	-	-	1042	1.75
	N	14.974	14.899	-0.150	1.173	1488	2.49		N	19.979	19.904	0.028	1.298	304	0.51		
10	C35	Non	15.352	-	-	-	3691	6.19	22	C47	Non	20.317	-	-	-	811	1.36
	N	15.352	-	-	-	-	1591	2.67		N	20.317	-	-	-	173	0.29	
11	C36	Non	15.829	-	-	-	3306	5.54	23	C48	Non	20.673	-	-	-	513	0.86
	N	15.829	15.754	-0.200	1.197	1486	2.49		N	20.673	20.598	0.035	1.313	129	0.22		
12	C37	Non	16.282	-	-	-	2901	4.86	24	C49	Non	20.994	-	-	-	304	0.51
	N	16.282	-	-	-	-	1433	2.40		N	20.994	-	-	-	71	0.12	
13	C38	Non	16.739	-	-	-	2854	4.78	25	C50	Non	21.344	-	-	-	180	0.30
	N	16.739	16.664	-0.149	1.221	1351	2.26		N	21.344	21.647	-	-	81	0.14		
															Total	39637	100.00

**Table B75** Chromatographic data of residual oil from fractional crystallization of 600SW at -20 °C in toluene

Total Non = 91.92% , N = 8,08%

**Table B76** Chromatographic data of crystallized wax from fractional crystallization of 600SW at 0 °C in toluene

Total Non = 60.30% , N = 39,70%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	Λ	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	Λ	% wt	
1m	CS <sub>1</sub>	Solvent	0.078	-	-	-	-	-	15	C39	Non	17.274	-	-	-	2828	4.85	
1	C23	N	10.528	-	-	-	160	0.27			N	17.274	-	-	-	397	0.68	
2	C26	N	11.114	11.036	0.14	1.042	518	0.89	16	C40	Non	17.708	-	-	-	2356	4.04	
3	C27	N	11.481	-	-	-	1357	2.33			N	17.708	17.630	-0.004	1.246	496	0.85	
4	C28	N	12.256	12.178	0.15	1.085	1835	3.15	17	C41	Non	18.114	-	-	-	2104	3.61	
5	C29	N	12.802	-	-	-	2359	4.05			N	18.114	-	-	-	410	0.70	
6	C30	Non	13.334	-	-	-	-	-1	0.00	18	C42	Non	18.519	-	-	-	1841	3.16
		N	13.334	13.256	0.165	1.122	2820	4.84			N	18.519	18.441	0.025	1.265	362	0.62	
7	C31	Non	13.852	-	-	-	334	0.57	19	C43	Non	18.909	-	-	-	1673	2.87	
		N	13.852	-	-	-	3139	5.39			N	18.909	-	-	-	244	0.42	
8	C32	Non	14.354	-	-	-	1102	1.89	20	C44	Non	19.288	-	-	-	1447	2.48	
		N	14.354	14.276	0.179	1.154	3203	5.50			N	19.288	19.210	0.047	1.283	181	0.31	
9	C33	Non	14.851	-	-	-	2360	4.05	21	C45	Non	19.642	-	-	-	1090	1.87	
		N	14.851	-	-	-	2334	4.01			N	19.642	-	-	-	140	0.24	
10	C34	Non	15.331	-	-	-	3548	6.09	22	C46	Non	20.017	-	-	-	895	1.54	
		N	15.331	15.253	0.204	1.183	1151	1.98			N	20.017	19.939	0.063	1.299	109	0.19	
11	C35	Non	15.799	-	-	-	3853	6.51	23	C47	Non	20.361	-	-	-	642	1.10	
		N	15.799	-	-	-	394	0.68			N	20.361	-	-	-	69	0.12	
12	C36	Non	16.064	-	-	-	3026	5.19	24	C48	Non	20.688	-	-	-	425	0.73	
		N	16.064	15.986	0.032	1.203	690	1.18			N	20.688	20.610	0.047	1.314	61	0.10	
13	C37	Non	16.461	-	-	-	2371	4.07	25	C49	Non	21.041	-	-	-	262	0.45	
		N	16.461	-	-	-	314	0.54								105	0.18	
14	C38	Non	16.874	-	-	-	2872	4.93	26	C50	Non	21.369	-	-	-			
		N	16.874	16.796	-0.017	1.225	391	0.67							Total	58267	100.00	

**Table B77 Chromatographic data of crystallized wax from fractional crystallization of 600SW at 10 °C in toluene**

Total Non = 40.16% , N = 59.84%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
0m	CS <sub>1</sub>	Solvent	0.078	-	-	-	-	-	14	C40	Non	17.709	-	-	-	2569	4.01
1	C27	N	11.701	-	-	-	104	0.16	15	C41	Non	17.709	17.631	-0.003	1.246	185	0.29
2	C28	N	12.257	12.179	0.151	1.085	430	0.67	16	C42	Non	18.144	-	-	-	2301	3.59
3	C29	N	12.804	-	-	-	1258	1.96	17	C43	Non	18.144	-	-	-	227	0.35
4	C30	N	13.337	13.259	0.168	1.122	2692	4.20	18	C44	Non	18.529	-	-	-	1996	3.12
5	C31	N	13.861	-	-	-	3930	7.70	19	C45	Non	18.938	-	-	-	1619	2.53
6	C32	Non	14.376	-	-	-	146	0.23	20	C46	Non	18.938	-	-	-	190	0.30
		N	14.376	14.298	0.301	1.155	7327	11.44	21	C47	Non	19.302	-	-	-	1277	1.99
7	C33	Non	14.869	-	-	-	441	0.69	22	C48	Non	19.302	19.224	0.061	1.283	175	0.27
		N	14.869	-	-	-	7602	11.87	23	C49	Non	19.663	-	-	-	1045	1.63
8	C34	Non	15.347	-	-	-	586	0.92	24	C50	Non	19.663	-	-	-	158	0.25
		N	15.347	15.269	0.220	1.183	6218	9.71									
9	C35	Non	15.813	-	-	-	1904	2.97									
		N	15.813	-	-	-	3384	5.29									
10	C36	Non	16.263	-	-	-	2589	4.04									
		N	16.263	16.185	0.231	1.209	1746	2.73									
11	C37	Non	16.701	-	-	-	2755	4.30									
		N	16.701	-	-	-	879	1.37									
12	C38	Non	17.139	-	-	-	2717	4.24									
		N	17.139	17.061	0.248	1.232	443	0.69									
13	C39	Non	17.358	-	-	-	1528	2.39									
		N	17.358	-	-	-	0	0.00									
															Total	64029	100.00

**Table B78 Chromatographic data of crystallized wax from fractional crystallization of 600SW at 20 °C in toluene**

Total Non = 46.49% , N = 53.51%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
0m	CS <sub>1</sub>	Solvent	0.074	-	-	-	-	-	15	C39	Non	17.166	-	-	-	4095	3.87
1	C25	N	9.966	-	-	-	49	0.05								2404	3.27
2	C26	N	10.757	10.683	-0.213	1.028	97	0.09	16	C40	Non	17.599	-	-	-	4121	3.89
3	C27	N	11.226	-	-	-	154	0.15	17	C41	Non	17.599	17.525	-0.109	1.243	1410	1.33
4	C28	N	11.872	11.798	-0.230	1.071	222	0.21	18	C42	Non	18.017	-	-	-	3797	3.58
5	C29	N	12.362	-	-	-	434	0.41	19	C43	Non	18.017	-	-	-	991	0.94
6	C30	N	12.909	12.835	-0.256	1.108	776	0.73	20	C44	Non	18.423	-	-	-	3756	3.55
7	C31	Non	13.441	-	-	-	315	0.30	21	C45	Non	18.423	18.349	-0.067	1.263	538	0.51
		N	13.441	-	-	-	1486	1.40	22	C46	Non	18.824	-	-	-	3756	3.55
8	C32	Non	13.963	-	-	-	716	0.68	23	C47	Non	18.824	-	-	-	420	0.40
		N	13.963	13.889	-0.208	1.142	3519	3.32	24	C48	Non	19.212	19.138	-0.025	1.281	322	0.30
9	C33	Non	14.382	-	-	-	1561	1.47	25	C49	Non	19.579	-	-	-	2802	2.64
		N	14.382	-	-	-	6936	6.55	26	C50	Non	19.579	-	-	-	285	0.27
10	C34	Non	14.887	-	-	-	2330	2.20									
		N	14.887	14.813	-0.236	1.170	9434	8.90									
11	C35	Non	15.376	-	-	-	3264	3.08									
		N	15.376	-	-	-	9094	8.58									
12	C36	Non	15.836	-	-	-	3557	3.36									
		N	15.836	15.762	-0.192	1.197	7101	6.70									
13	C37	Non	16.291	-	-	-	3733	3.52									
		N	16.291	-	-	-	5299	5.00									
14	C38	Non	16.737	-	-	-	3922	3.70									
		N	16.737	16.663	-0.150	1.221	3674	3.47									
															Total	103949	100.00

**Table B79 Chromatographic data of crystallized wax from fractional crystallization of 600SW at 30 °C in toluene**

Total Non = 63.77% , N = 36.23%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t <sub>R</sub>	Δt <sub>R</sub>	Log t <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t <sub>R</sub>	Δt <sub>R</sub>	Log t <sub>R</sub>	A	% wt
1m	CS <sub>1</sub>	Solvent	0.076	-	-	-	-	-	15	C40	Non	17.593	-	-	-	2908	4.56
1	C26	N	10.717	10.641	-0.255	1.026	73	0.11	16	C41	Non	17.593	17.517	-0.117	1.243	1483	2.33
2	C27	N	11.232	-	-	-	90	0.14	17	C42	Non	18.016	-	-	-	3032	4.76
3	C28	N	11.894	11.818	-0.210	1.072	141	0.23	18	C43	Non	18.016	-	-	-	1295	2.03
4	C29	Non	12.376	-	-	-	126	0.20	19	C44	Non	19.208	-	-	-	2765	4.34
		N	12.376	-	-	-	152	0.24	20	C45	Non	19.583	-	-	-	997	1.56
5	C30	Non	12.892	-	-	-	318	0.30	21	C46	Non	19.951	-	-	-	2311	3.62
		N	12.892	12.816	-0.275	1.107	165	0.26	22	C47	Non	20.299	-	-	-	914	1.43
6	C31	Non	13.328	-	-	-	565	0.89	23	C48	Non	20.639	-	-	-	2031	3.19
		N	13.328	-	-	-	257	0.40	24	C49	Non	20.979	-	-	-	702	1.10
7	C32	Non	13.946	-	-	-	1318	2.38	25	C50	Non	21.314	-	-	-	1675	2.63
		N	13.946	13.87	-0.227	1.142	527	0.83	26	C51	Non	21.632	-	-	-	576	0.90
8	C33	Non	14.356	-	-	-	2025	3.18	27	C52	Non	21.933	-	-	-	1059	1.66
		N	14.356	-	-	-	1100	1.73							316	0.50	
9	C34	Non	14.863	-	-	-	2710	4.25							419	0.66	
		N	14.863	14.787	-0.262	1.169	2073	3.25							256	0.40	
10	C35	Non	15.342	-	-	-	2732	4.29							578	0.91	
		N	15.342	-	-	-	2431	3.81							158	0.25	
11	C36	Non	15.813	-	-	-	2774	4.35							165	0.26	
		N	15.813	15.737	-0.217	1.196	2622	4.11							51	0.08	
12	C37	Non	16.272	-	-	-	2781	4.36							81	0.13	
		N	16.272	-	-	-	2327	3.65							Total	63752 100.00	
13	C38	Non	16.722	-	-	-	2860	4.49									
		N	16.722	16.646	-0.167	1.221	2090	3.28									
14	C39	Non	17.163	-	-	-	2890	4.53									
		N	17.163	-	-	-	1778	2.79									

**Table B80 Chromatographic data of wax cake from extraction of 1 g 500SW / 100 ml MEK at 20 °C**

Total Non = 43.76% , N = 56.24%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t <sub>R</sub>	Δt <sub>R</sub>	Log t <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t <sub>R</sub>	Δt <sub>R</sub>	Log t <sub>R</sub>	A	% wt
1m	CS <sub>2</sub>	Solvent	0.074	-	-	-	-	-	15	C39	Non	17.531	-	-	-	5422	3.61
1	C25	N	10.517	-	-	-	106	0.07	16	C40	Non	17.531	-	-	-	2667	1.78
2	C26	Non	11.094	-	-	-	343	0.23	17	C41	Non	17.939	-	-	-	5171	3.45
		N	11.094	11.020	0.134	1.042	343	0.23	18	C42	Non	17.939	17.865	0.231	1.252	1875	1.25
3	C27	Non	11.674	-	-	-	714	0.48	19	C43	Non	18.339	-	-	-	4425	2.95
		N	11.674	-	-	-	700	0.47	20	C44	Non	18.339	-	-	-	1748	1.16
4	C28	Non	12.233	-	-	-	1439	0.96	21	C45	Non	18.733	-	-	-	4054	2.70
		N	12.233	12.159	0.131	1.084	1416	0.94	22	C46	Non	19.104	-	-	-	3282	2.19
5	C29	Non	12.776	-	-	-	80	0.05	23	C46	Non	19.104	-	-	-	1174	0.78
		N	12.776	-	-	-	2956	1.97	24	C47	Non	19.471	-	-	-	2792	1.86
6	C30	Non	13.314	-	-	-	592	0.39	25	C47	Non	19.471	19.397	0.234	1.287	940	0.63
		N	13.314	13.240	0.149	1.121	6270	4.18	26	C48	Non	19.834	-	-	-	2492	1.66
7	C31	Non	13.836	-	-	-	1102	0.73	27	C48	Non	19.834	-	-	-	617	0.41
		N	13.836	-	-	-	9307	6.20	28	C49	Non	20.181	-	-	-	1912	1.27
8	C32	Non	14.342	-	-	-	2111	1.41	29	C49	Non	20.181	20.107	0.231	1.303	474	0.32
		N	14.342	14.268	0.171	1.154	10564	7.04	30	C50	Non	20.524	-	-	-	1390	0.93
9	C33	Non	14.831	-	-	-	2830	1.89	31	C50	Non	21.181	-	-	-	325	0.22
		N	14.831	-	-	-	10106	6.73	32	C51	Non	20.841	-	-	-	104	0.07
10	C34	Non	15.306	-	-	-	3525	2.35	33	C51	Non	20.841	20.767	0.204	1.317	867	0.58
		N	15.306	15.232	0.183	1.182	9121	6.08	34	C52	Non	21.181	-	-	-	197	0.13
11	C35	Non	15.771	-	-	-	4617	3.08	35	C52	Non	21.181	-	-	-	603	0.40
		N	15.771	-	-	-	7026	4.68	36	C53	Non	21.489	-	-	-	104	0.07
12	C36	Non	16.228	-	-	-	5018	3.34	37	C53	Non	21.489	-	-	-	353	0.24
		N	16.228	16.154	0.200	1.208	5616	3.74	38	C54	Non	21.489	21.415	0.199	1.330	56	0.04
13	C37	Non	16.673	-	-	-	5462	3.64	39	C54	Non	21.811	-	-	-	177	0.12
		N	16.673	-	-	-	4253	2.83	40	C55	Non	21.811	-	-	-	46	0.03
14	C38	Non	17.104	-	-	-	6303	4.20							Total	150085 100.00	

**Table B81** Chromatographic data of wax cake from extraction of 5 g 500SW / 100 ml MEK at 20 °C

Total Non = 58.00% , N = 42.00%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>1</sub>	Solvent	0.074	-	-	-	-	-	15	C38	Non	17.128	-	-	-	3564	4.82
1	C24	N	9.903	9.829	0.138	0.992	80	0.11	16	C39	Non	17.128	17.054	0.241	1.231	1195	1.62
2	C23	N	10.518	-	-	-	155	0.21			N	17.557	-	-	-	3331	4.50
3	C26	N	11.101	11.027	0.131	1.042	381	0.38			N	17.557	-	-	-	931	1.26
4	C27	N	11.681	-	-	-	434	0.59	17	C40	Non	17.971	-	-	-	2963	4.01
5	C28	N	12.241	12.167	0.139	1.085	755	1.02			N	17.971	17.897	0.263	1.252	812	1.10
6	C29	Non	12.788	-	-	-	253	0.34	18	C41	Non	18.371	-	-	-	2522	3.41
		N	12.788	-	-	-	1396	1.89			N	18.371	-	-	-	619	0.84
7	C30	Non	13.321	-	-	-	881	1.19	19	C42	Non	18.777	-	-	-	2127	2.88
		N	13.321	13.247	0.156	1.132	2708	3.66			N	18.777	18.703	0.287	1.271	534	0.72
8	C31	Non	13.841	-	-	-	1529	2.07	20	C43	Non	19.153	-	-	-	1788	2.42
		N	13.841	-	-	-	3775	5.10			N	19.153	-	-	-	423	0.57
9	C32	Non	14.347	-	-	-	2243	3.03	21	C44	Non	19.529	-	-	-	1421	1.92
		N	14.347	14.273	0.176	1.154	4067	5.50			N	19.529	19.455	0.392	1.289	337	0.46
10	C33	Non	14.842	-	-	-	2774	3.75	22	C45	Non	19.893	-	-	-	1103	1.49
		N	14.842	-	-	-	3577	4.84			N	19.893	-	-	-	216	0.29
11	C34	Non	15.324	-	-	-	3320	4.49	23	C46	Non	20.241	-	-	-	845	1.14
		N	15.324	15.250	0.201	1.183	2976	4.02			N	20.241	20.167	0.291	1.304	131	0.18
12	C35	Non	15.791	-	-	-	3601	4.87	24	C47	Non	20.581	-	-	-	526	0.71
		N	15.791	-	-	-	2305	3.12			N	20.581	-	-	-	117	0.16
13	C36	Non	16.249	-	-	-	4178	5.65	25	C48	Non	20.891	-	-	-	270	0.37
		N	16.249	16.175	0.221	1.208	1737	2.35			N	20.891	20.817	0.254	1.318	64	0.09
14	C37	Non	16.691	-	-	-	3616	4.89	26	C49	Non	21.222	-	-	-	75	0.10
		N	16.691	-	-	-	1399	1.89							Total	73954 100.00	

**Table B82** Chromatographic data of wax cake from extraction of 10 g 500SW / 100 ml MEK at 20 °C

Total Non = 63.61% , N = 36.39%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	Λ	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	Λ	% wt
im	CS <sub>1</sub>	Solvent	0.075	-	-	-	-	-	18	C38	Non	17.081	-	-	-	5318	4.50
1	C21	N	7.972	-	-	-	63	0.05		N	17.081	17.006	0.193	1.230	1654	1.40	
2	C22	N	8.629	8.554	0.151	0.932	85	0.07	19	C39	Non	17.506	-	-	-	4630	3.92
3	C23	N	9.396	-	-	-	127	0.11		N	17.506	-	-	-	1362	1.15	
4	C24	N	9.917	9.842	0.151	0.993	194	0.16	20	C40	Non	17.926	-	-	-	4105	3.47
5	C25	N	10.512	-	-	-	293	0.25		N	17.926	(17.851	0.217	1.251	1200	1.02	
6	C26	N	11.099	11.024	0.128	1.042	464	0.39	21	C41	Non	18.321	-	-	-	4082	3.45
7	C27	Non	11.676	-	-	-	60	0.05		N	18.321	-	-	-	935	0.79	
		N	11.676	-	-	-	724	0.61	22	C42	Non	18.711	-	-	-	3376	2.86
8	C28	Non	12.229	-	-	-	352	0.30		N	18.711	18.636	0.220	1.270	762	0.64	
		N	12.229	12.154	0.126	1.084	1121	0.95	23	C43	Non	19.087	-	-	-	3079	2.61
9	C29	Non	12.771	-	-	-	853	0.72		N	19.087	-	-	-	661	0.56	
		N	12.771	-	-	-	1995	1.69	24	C44	Non	19.466	-	-	-	2456	2.08
10	C30	Non	13.304	-	-	-	1982	1.68		N	19.466	19.391	0.228	1.287	498	0.42	
		N	13.304	13.229	0.138	1.121	3795	3.21	25	C45	Non	19.816	-	-	-	2132	1.80
11	C31	Non	13.821	-	-	-	3398	2.79		N	19.816	-	-	-	339	0.29	
		N	13.821	-	-	-	5120	4.33	26	C46	Non	20.173	-	-	-	1524	1.29
12	C32	Non	14.324	-	-	-	4410	3.73		N	20.173	20.098	0.222	1.303	265	0.22	
		N	14.324	14.249	0.152	1.153	5372	4.55	27	C47	Non	20.511	-	-	-	1160	0.98
13	C33	Non	14.811	-	-	-	5593	4.73		N	20.511	-	-	-	194	0.16	
		N	14.811	-	-	-	4490	3.80	28	C48	Non	20.837	-	-	-	777	0.66
14	C34	Non	15.286	-	-	-	6208	5.25		N	20.837	20.762	0.199	1.317	95	0.08	
		N	15.286	15.211	0.162	1.182	3809	3.22	29	C49	Non	21.174	-	-	-	462	0.39
15	C35	Non	15.749	-	-	-	6917	5.85		N	21.174	-	-	-	48	0.04	
		N	15.749	-	-	-	2889	2.44	30	C50	Non	21.452	-	-	-	239	0.20
16	C36	Non	16.204	-	-	-	6390	5.41		N	21.452	21.377	0.161	1.329	40	0.03	
		N	16.204	16.129	0.175	1.307	2356	1.99	31	C51	Non	21.809	-	-	-	175	0.15
17	C37	Non	16.653	-	-	-	5642	4.77							Total	118195	100.00

**Table B83 Chromatographic data of wax cake from extraction of 15 g 500SW / 100 ml MEK at 20 °C**

Total Non = 66.88% , N = 33.12%

P/No.	P/Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/No.	P/Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>1</sub>	Solvent	0.074	-	-	-	104	0.06	18	C38	Non	16.669	-	-	-	2916	1.62
1	C21	N	7.934	-	-	-	149	0.08			N	17.109	-	-	-	7941	4.40
2	C22	N	8.669	8.595	0.192	0.934	149	0.08			N	17.109	17.035	0.222	1.231	2390	1.33
3	C23	N	9.284	-	-	-	182	0.10	19	C39	Non	17.526	-	-	-	7308	4.05
4	C24	N	9.924	9.850	0.139	0.993	245	0.14			N	17.526	-	-	-	2027	1.12
5	C25	N	10.514	-	-	-	346	0.19	20	C40	Non	17.941	-	-	-	6890	3.82
6	C26	N	11.102	11.028	0.132	1.042	633	0.35			N	17.941	17.867	0.233	1.252	1787	0.99
7	C27	Non	11.681	-	-	-	133	0.07	21	C41	Non	18.343	-	-	-	5811	3.22
		N	11.681	-	-	-	938	0.52			N	18.343	-	-	-	1417	0.79
8	C28	Non	12.244	-	-	-	735	0.41	22	C42	Non	18.726	-	-	-	5176	2.87
		N	12.244	12.170	0.142	1.085	1450	0.80			N	18.726	18.652	0.236	1.270	1169	0.63
9	C29	Non	12.789	-	-	-	1810	1.00	23	C43	Non	19.111	-	-	-	4500	2.50
		N	12.789	-	-	-	2606	1.44			N	19.111	-	-	-	961	0.53
10	C30	Non	13.318	-	-	-	3727	2.07	24	C44	Non	19.472	-	-	-	3654	2.03
		N	13.318	13.244	0.153	1.122	5083	2.82			N	19.472	19.398	0.235	1.287	758	0.42
11	C31	Non	13.836	-	-	-	3991	3.32	25	C45	Non	19.833	-	-	-	3121	1.73
		N	13.836	-	-	-	6926	3.84			N	19.833	-	-	-	536	0.30
12	C32	Non	14.346	-	-	-	7885	4.37	26	C46	Non	20.171	-	-	-	2239	1.24
		N	14.346	14.272	0.173	1.154	7148	3.96			N	20.171	20.097	0.221	1.303	399	0.22
13	C33	Non	14.837	-	-	-	9553	5.30	27	C47	Non	20.511	-	-	-	1698	0.94
		N	14.837	-	-	-	6229	3.45			N	20.511	-	-	-	283	0.16
14	C34	Non	15.311	-	-	-	10114	5.61	28	C48	Non	20.833	-	-	-	1149	0.64
		N	15.311	15.237	0.188	1.182	5300	2.94			N	20.833	20.759	0.196	1.317	122	0.07
15	C35	Non	15.771	-	-	-	10490	6.05	29	C49	Non	21.173	-	-	-	679	0.38
		N	15.771	-	-	-	4109	2.38			N	21.173	-	-	-	80	0.04
16	C36	Non	16.231	-	-	-	9856	5.46	30	C50	Non	21.461	-	-	-	372	0.21
		N	16.231	16.157	0.203	1.208	3389	1.88			N	21.461	21.387	0.171	1.330	49	0.03
17	C37	Non	16.669	-	-	-	9363	5.19			Total	180348	100.00				

**Table B84 Chromatographic data of wax cake from extraction of 1 g 600SW / 100 ml MEK at 20 °C**

Total Non = 48.61% , N = 51.39%

P/No.	P/Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/No.	P/Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>1</sub>	Solvent	0.075	-	-	-	-	-	16	C39	Non	17.529	-	-	-	6629	3.96
1	C24	N	10.148	10.073	0.382	1.003	145	0.09			N	17.529	-	-	-	3390	2.03
2	C25	N	10.516	-	-	-	163	0.10	17	C40	Non	17.946	-	-	-	6357	3.80
3	C26	N	11.102	11.027	0.131	1.042	354	0.21			N	17.946	17.871	0.237	1.252	2985	1.78
4	C27	N	11.666	-	-	-	715	0.43	18	C41	Non	18.339	-	-	-	5478	3.27
5	C28	N	12.226	12.151	0.123	1.084	1251	0.75			N	18.339	-	-	-	2334	1.39
6	C29	Non	12.769	-	-	-	166	0.10	19	C42	Non	18.733	-	-	-	4973	2.97
		N	12.769	-	-	-	1899	1.13			N	18.733	18.658	0.242	1.270	2020	1.21
7	C30	Non	13.301	-	-	-	370	0.22	20	C43	Non	19.104	-	-	-	4363	2.61
		N	13.301	13.226	0.135	1.121	2988	1.79			N	19.104	-	-	-	1682	1.01
8	C31	Non	13.818	-	-	-	815	0.49	21	C44	Non	19.474	-	-	-	3663	2.19
		N	13.818	-	-	-	5150	1.08			N	19.474	19.399	0.236	1.287	1385	0.83
9	C32	Non	14.329	-	-	-	1739	1.03	22	C45	Non	19.833	-	-	-	3333	1.99
		N	14.329	14.254	0.157	1.153	8626	5.16			N	19.833	-	-	-	1003	0.60
10	C33	Non	14.831	-	-	-	3206	1.92	23	C46	Non	20.183	-	-	-	2533	1.51
		N	14.831	-	-	-	11119	6.65			N	20.183	20.108	0.232	1.303	818	0.49
11	C34	Non	15.307	-	-	-	4579	2.74	24	C47	Non	20.516	-	-	-	2073	1.24
		N	15.307	15.232	0.183	1.182	10874	6.50			N	20.516	-	-	-	634	0.38
12	C35	Non	15.773	-	-	-	5804	3.47	25	C48	Non	20.846	-	-	-	1523	0.91
		N	15.773	-	-	-	8799	5.26			N	20.846	20.771	0.208	1.317	383	0.23
13	C36	Non	16.231	-	-	-	7577	4.53	26	C49	Non	21.184	-	-	-	984	0.59
		N	16.231	16.156	0.202	1.208	7039	4.21			N	21.184	-	-	-	252	0.15
14	C37	Non	16.676	-	-	-	7543	4.51	27	C50	Non	21.491	-	-	-	583	0.35
		N	16.676	-	-	-	5427	3.24			N	21.491	21.416	0.200	1.330	167	0.10
15	C38	Non	17.108	-	-	-	6737	4.03	28	CS1	Non	21.811	-	-	-	364	0.22
		N	17.108	17.033	0.220	1.231	4343	2.60			Total	167327	100.00				

**Table B85** Chromatographic data of wax cake from extraction of 5 g 600SW / 100 ml MEK at 20 °C

Total Non = 55.57% , N = 44.43%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>2</sub>	Solvent	0.073	-	-	-	-	-	19	C39	Non	17.321	-	-	-	5550	4.74
1	C21	N	8.124	-	-	-	41	0.04			N	17.321	-	-	-	2043	1.75
2	C22	N	8.726	8.653	0.250	0.937	51	0.04	20	C40	Non	17.763	-	-	-	4751	4.06
3	C23	N	9.376	-	-	-	62	0.05			N	17.763	17.690	0.056	1.247	1881	1.61
4	C24	N	9.999	9.926	0.235	0.996	147	0.13	21	C41	Non	18.191	-	-	-	4101	3.50
5	C25	N	10.608	-	-	-	371	0.23			N	18.191	-	-	-	1471	1.26
6	C26	N	11.208	11.135	0.239	1.046	450	0.38	22	C42	Non	18.604	-	-	-	3875	3.31
7	C27	N	11.781	-	-	-	653	0.56			N	18.604	18.531	0.115	1.267	1232	1.05
8	C28	N	12.346	12.273	0.245	1.088	975	0.83	23	C43	Non	19.006	-	-	-	3001	2.56
9	C29	N	12.809	-	-	-	1487	1.27			N	19.006	-	-	-	1024	0.87
10	C30	N	13.431	13.358	0.267	1.125	2051	1.75	24	C44	Non	19.389	-	-	-	2721	2.32
11	C31	Non	13.951	-	-	-	381	0.33			N	19.389	19.316	0.153	1.285	819	0.70
		N	13.951	-	-	-	3275	2.80	25	C45	Non	19.761	-	-	-	2208	1.89
12	C32	Non	14.467	-	-	-	1521	1.30			N	19.761	-	-	-	668	0.57
		N	14.467	14.394	0.297	1.158	5330	4.55	26	C46	Non	20.128	-	-	-	1747	1.49
13	C33	Non	14.974	-	-	-	3270	2.79			N	20.128	20.055	0.179	1.302	547	0.47
		N	14.974	-	-	-	6458	5.52	27	C47	Non	20.479	-	-	-	1386	1.18
14	C34	Non	15.461	-	-	-	3899	4.19			N	20.479	-	-	-	416	0.36
		N	15.461	15.245	0.169	1.183	5826	4.98	28	C48	Non	20.811	-	-	-	886	0.76
15	C35	Non	15.938	-	-	-	5528	4.72			N	20.811	20.738	0.175	1.316	244	0.21
		N	15.938	-	-	-	4775	4.08	29	C49	Non	21.153	-	-	-	562	0.48
16	C36	Non	16.299	-	-	-	5730	4.90			N	21.153	-	-	-	162	0.14
		N	16.299	16.226	0.272	1.210	3822	3.27	30	C50	Non	21.472	-	-	-	303	0.26
17	C37	Non	16.407	-	-	-	6558	5.60			N	21.472	21.399	0.183	1.330	99	0.08
		N	16.407	-	-	-	3200	2.71	31	C51	Non	21.789	-	-	-	79	0.07
18	C38	Non	16.868	-	-	-	5939	5.07			N	21.789	-	-	-	41	0.04
		N	16.868	16.795	-0.018	1.225	2482	2.12	32	C52	Non	22.097	-	-	-	48	0.04
															Total	117047	100.00

**Table B86** Chromatographic data of wax cake from extraction of 10 g 600SW / 100 ml MEK at 20 °C

Total Non = 64.35% , N = 35.65%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>2</sub>	Solvent	0.073	-	-	-	-	-	18	C38	Non	17.099	-	-	-	7392	4.72
1	C21	N	7.989	-	-	-	46	0.03			N	17.099	17.026	0.213	1.231	2734	1.75
2	C22	N	8.639	8.566	0.163	0.932	91	0.06	19	C39	Non	17.514	-	-	-	6889	4.40
3	C23	N	9.284	-	-	-	139	0.09			N	17.514	-	-	-	2247	1.44
4	C24	N	9.898	9.825	0.134	0.992	220	0.14	20	C40	Non	17.929	-	-	-	6519	4.17
5	C25	N	10.524	-	-	-	316	0.20			N	17.929	17.856	0.222	1.251	1982	1.27
6	C26	N	11.099	11.026	0.130	1.042	508	0.32	21	C41	Non	18.331	-	-	-	5569	3.56
7	C27	N	12.110	-	-	-	766	0.49			N	18.331	-	-	-	1520	0.97
8	C28	Non	12.226	-	-	-	140	0.09	22	C42	Non	18.714	-	-	-	4983	3.18
		N	12.226	12.153	0.125	1.084	1099	0.70			N	18.714	18.641	0.225	1.270	1289	0.82
9	C29	Non	12.773	-	-	-	399	0.25	23	C43	Non	19.091	-	-	-	4338	2.77
		N	12.773	-	-	-	1515	0.97			N	19.091	-	-	-	1121	0.72
10	C30	Non	13.294	-	-	-	945	0.60	24	C44	Non	19.468	-	-	-	3635	2.32
		N	13.294	13.221	0.130	1.121	2307	1.41			N	19.468	19.395	0.232	1.287	899	0.57
11	C31	Non	13.818	-	-	-	2202	1.41	25	C45	Non	19.826	-	-	-	3290	2.10
		N	13.818	-	-	-	3475	2.22			N	19.826	-	-	-	607	0.39
12	C32	Non	14.321	-	-	-	4187	2.68	26	C46	Non	20.176	-	-	-	2470	1.58
		N	14.321	14.248	0.151	1.153	5521	3.53			N	20.176	20.103	0.227	1.303	538	0.34
13	C33	Non	14.819	-	-	-	6614	4.23	27	C47	Non	20.514	-	-	-	2009	1.28
		N	14.819	-	-	-	6790	4.34			N	20.514	-	-	-	420	0.27
14	C34	Non	15.297	-	-	-	8114	5.18	28	C48	Non	20.836	-	-	-	1478	0.94
		N	15.297	15.224	0.175	1.182	6331	4.05			N	20.836	20.763	0.200	1.317	216	0.14
15	C35	Non	15.762	-	-	-	8756	5.59	29	C49	Non	21.163	-	-	-	936	0.60
		N	15.762	-	-	-	5805	3.71			N	21.163	-	-	-	159	0.10
16	C36	Non	16.218	-	-	-	10087	6.45	30	C50	Non	21.472	-	-	-	654	0.42
		N	16.218	16.145	0.191	1.208	3771	2.41			N	21.472	21.399	0.183	1.330	103	0.07
17	C37	Non	16.661	-	-	-	8695	5.56	31	C51	Non	21.769	-	-	-	402	0.26
		N	16.661	-	-	-	3303	2.11			N	21.769	-	-	-	59	0.04
															Total	156500	100.00

**Table B87** Chromatographic data of wax cake from extraction of 15 g 600SW / 100 ml MEK at 20 °C

Total Non = 64.43% , N = 35.57%

P/ No.	P/ Na	Group	t <sub>g</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>g</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	
tm	CS <sub>2</sub>	Solvent	0.075	-	-	-	-	-	16	C35	Non	15.744	-	-	-	-	10921	8.47
1	C19	N	6.009	-	-	-	141	0.11	17	C36	Non	16.204	-	-	-	-	381	0.30
2	C20	N	6.853	6.776	-0.256	0.830	370	0.29	18	C37	Non	16.646	-	-	-	-	10528	8.16
3	C21	N	7.461	-	-	-	302	0.23	19	C38	Non	17.077	-	-	-	-	9325	7.23
4	C22	N	8.183	8.106	-0.297	0.908	92	0.07	20	C39	Non	17.503	-	-	-	-	8548	6.63
5	C24	Non	9.891	-	-	-	66	0.05	21	C40	Non	17.914	-	-	-	-	7957	6.17
6	C25	Non	10.511	-	-	-	153	0.12	22	C41	Non	18.317	-	-	-	-	7445	5.77
7	C26	Non	11.078	-	-	-	330	0.26	23	C42	Non	18.711	-	-	-	-	6580	5.10
8	C27	Non	12.110	-	-	-	577	0.45	24	C43	Non	19.086	-	-	-	-	5866	4.55
9	C28	Non	12.208	-	-	-	894	0.69	25	C44	Non	19.454	-	-	-	-	5088	3.94
10	C29	Non	12.757	-	-	-	1562	1.21	26	C45	Non	19.813	-	-	-	-	4493	3.48
11	C30	Non	13.286	-	-	-	2795	2.14	27	C46	Non	20.157	-	-	-	-	3544	2.75
12	C31	Non	13.801	-	-	-	4668	3.62	28	C47	Non	20.506	-	-	-	-	3039	2.36
13	C32	Non	14.311	-	-	-	6945	5.38	29	C48	Non	20.836	-	-	-	-	2207	1.71
		N	14.311	14.060	-0.037	1.147	163	0.13	30	C49	Non	21.156	-	-	-	-	1880	1.46
14	C33	Non	14.801	-	-	-	9120	7.07	31	C50	Non	21.481	-	-	-	-	1058	0.82
		N	14.801	-	-	-	306	0.24	32	C51	Non	21.799	-	-	-	-	667	0.52
15	C34	Non	15.118	-	-	-	10141	7.86	33	C52	Non	21.799	-	-	-	-	347	0.27
		N	15.118	15.041	-0.008	1.177	436	0.34									101	0.08
																	Total	128996 100.00

**Table B88** Chromatographic data of wax cake from fractionation extraction of 500SW at 60 °C by using MEK

Total Non = 26.36% N = 73.44%

P/No.	P/Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/No.	P/Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1 C28	CS <sub>1</sub> Solvent	0.074	-	-	-	-	-	-	13 C40	Non N	17.962	-	-	-	1420	2.23	
	N	12.233	-	-	-	52	0.08	-		N	17.962	17.888	0.254	1.252	3306	5.19	
2 C29	Non N	12.757	-	-	-	84	0.13	-	14 C41	Non N	18.366	-	-	-	1671	2.62	
	N	12.757	-	-	-	69	0.11	-		N	18.366	-	-	-	2603	4.08	
3 C30	Non N	13.294	-	-	-	293	0.46	-	15 C42	Non N	18.757	-	-	-	1638	2.57	
	N	13.294	13.23	0.129	1.121	247	0.39	-		N	18.757	18.683	0.267	1.271	2179	3.42	
4 C31	Non N	13.814	-	-	-	877	1.38	-	16 C43	Non N	19.136	-	-	-	1578	2.48	
	N	13.814	-	-	-	798	1.25	-		N	19.136	-	-	-	1611	2.53	
5 C32	Non N	14.320	-	-	-	123	0.19	-	17 C44	Non N	19.506	-	-	-	1537	2.41	
	N	14.320	14.246	0.149	1.153	1886	2.96	-		N	19.506	19.432	0.269	1.288	1206	1.89	
6 C33	Non N	14.818	-	-	-	211	0.33	-	18 C45	Non N	19.871	-	-	-	1302	2.04	
	N	14.818	-	-	-	3100	4.86	-		N	19.871	-	-	-	871	1.37	
7 C34	Non N	15.302	-	-	-	297	0.47	-	19 C46	Non N	20.218	-	-	-	963	1.51	
	N	15.302	15.228	0.179	1.182	4233	6.64	-		N	20.218	20.144	0.268	1.304	637	1.00	
8 C35	Non N	15.773	-	-	-	446	0.70	-	20 C47	Non N	20.563	-	-	-	759	1.19	
	N	15.773	-	-	-	4709	7.39	-		N	20.563	-	-	-	451	0.71	
9 C36	Non N	16.236	-	-	-	610	0.96	-	21 C48	Non N	20.891	-	-	-	512	0.80	
	N	16.236	16.162	0.208	1.208	4774	7.49	-		N	20.891	20.817	0.254	1.318	266	0.42	
10 C37	Non N	16.684	-	-	-	788	1.24	-	22 C49	Non N	21.221	-	-	-	293	0.46	
	N	16.684	-	-	-	4684	7.35	-		N	21.221	-	-	-	136	0.21	
11 C38	Non N	17.119	-	-	-	1021	1.60	-	23 C50	Non N	21.536	-	-	-	147	0.23	
	N	17.119	17.043	0.232	1.231	4225	6.63	-		N	21.536	21.462	0.246	1.331	84	0.13	
12 C39	Non N	17.544	-	-	-	1225	1.92	-	24 C51	Non N	21.856	-	-	-	45	0.07	
	N	17.544	-	-	-	3737	5.86	-		N	21.856	-	-	-	50	0.08	

**Table B89 Chromatographic data of extracted wax from fractionation extraction of 500SW at 60 °C by using MEK**

Total Non = 35.41% , N = 64.59%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t <sub>R</sub>	Δt <sub>R</sub>	Log t <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t <sub>R</sub>	Δt <sub>R</sub>	Log t <sub>R</sub>	A	% wt
1m	CS <sub>1</sub>	Solvent	0.074	-	-	-	-	-	13	C38	Non	17.112	-	-	-	2795	3.86
1	C26	N	11.108	11.034	0.138	1.042	72	0.10		N	17.112	17.038	0.225	1.231	1007	1.39	
2	C27	N	11.684	-	-	-	223	0.31	14	C39	Non	17.532	-	-	-	2600	3.59
3	C28	N	12.234	12.160	0.132	1.084	635	0.88		N	17.532	-	-	-	681	0.94	
4	C29	N	12.781	-	-	-	1788	2.47	15	C40	Non	17.949	-	-	-	2441	3.37
5	C30	Non	13.318	-	-	-	68	0.09		N	17.949	17.875	0.241	1.252	524	0.72	
		N	13.318	13.244	0.153	1.122	4335	5.99	16	C41	Non	18.359	-	-	-	2205	3.05
6	C31	Non	13.837	-	-	-	235	0.32		N	18.359	-	-	-	302	0.42	
		N	13.837	-	-	-	6682	9.24	17	C42	Non	18.744	-	-	-	2064	2.85
7	C32	Non	14.345	-	-	-	440	0.61		N	18.744	18.670	0.254	1.271	279	0.39	
		N	14.345	14.271	0.174	1.154	7083	9.79	18	C43	Non	19.126	-	-	-	1701	2.35
8	C33	Non	14.836	-	-	-	618	0.85		N	19.126	-	-	-	196	0.27	
		N	14.836	-	-	-	6974	9.64	19	C44	Non	19.501	-	-	-	1520	2.10
9	C34	Non	15.318	-	-	-	898	1.24		N	19.501	19.427	0.264	1.288	127	0.18	
		N	15.318	15.244	0.195	1.183	6006	8.30	20	C45	Non	19.859	-	-	-	1134	1.57
10	C35	Non	15.781	-	-	-	1397	1.93		N	19.859	-	-	-	91	0.13	
		N	15.781	-	-	-	4378	6.05	21	C46	Non	20.211	-	-	-	882	1.22
11	C36	Non	16.234	-	-	-	1836	2.54		N	20.211	20.137	0.261	1.303	73	0.10	
		N	16.234	16.160	0.206	1.208	3108	4.30	22	C47	Non	20.554	-	-	-	623	0.86
12	C37	Non	16.679	-	-	-	2195	3.03		N	20.554	-	-	-	56	0.08	
		N	16.679	-	-	-	2067	2.86							Total	72339	100.00

**Table B90 Chromatographic data of extracted wax from fractionation extraction of 500SW at 50 °C by using MEK**

Total Non = 65.37% , N = 34.63%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t <sub>R</sub>	Δt <sub>R</sub>	Log t <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t <sub>R</sub>	Δt <sub>R</sub>	Log t <sub>R</sub>	A	% wt
1m	CS <sub>1</sub>	Solvent	0.078	-	-	-	-	-	15	C38	Non	16.827	-	-	-	2865	4.51
1	C24	N	9.908	9.83	0.139	0.992	45	0.07		N	16.827	16.749	-0.064	1.223	358	0.56	
2	C25	N	10.514	-	-	-	170	0.27	16	C39	Non	17.241	-	-	-	2784	4.38
3	C26	N	11.104	11.026	0.13	1.042	563	0.89		N	17.241	-	-	-	339	0.53	
4	C27	N	11.681	-	-	-	1188	1.87	17	C40	Non	17.651	-	-	-	2657	4.18
5	C28	N	12.239	12.161	0.133	1.084	1942	3.06		N	17.651	17.573	-0.061	1.244	276	0.43	
6	C29	Non	12.786	-	-	-	70	0.11	18	C41	Non	18.084	-	-	-	2458	3.87
		N	12.786	-	-	-	2887	4.54		N	18.084	-	-	-	238	0.37	
7	C30	Non	13.319	-	-	-	501	0.79	19	C42	Non	18.487	-	-	-	2075	3.27
		N	13.319	13.241	0.15	1.121	4011	6.31		N	18.487	18.409	-0.007	1.265	208	0.33	
8	C31	Non	13.833	-	-	-	1351	2.13	20	C43	Non	18.871	-	-	-	1955	3.08
		N	13.833	-	-	-	3674	5.78		N	18.871	-	-	-	197	0.31	
9	C32	Non	14.331	-	-	-	2446	3.85	21	C44	Non	19.234	-	-	-	1573	2.48
		N	14.331	14.253	0.156	1.153	2575	4.05		N	19.234	19.156	-0.007	1.282	179	0.28	
10	C33	Non	14.824	-	-	-	3399	5.35	22	C45	Non	19.599	-	-	-	1314	2.07
		N	14.824	-	-	-	1339	2.11		N	19.599	-	-	-	154	0.24	
11	C34	Non	15.313	-	-	-	3873	6.10	23	C46	Non	19.951	-	-	-	1077	1.70
		N	15.313	15.235	0.186	1.182	615	0.97		N	19.951	19.873	-0.003	1.298	143	0.23	
12	C35	Non	15.556	-	-	-	3443	5.42	24	C47	Non	20.306	-	-	-	777	1.22
		N	15.556	-	-	-	0	0.00		N	20.306	-	-	-	87	0.14	
13	C36	Non	15.979	-	-	-	3091	4.87	25	C48	Non	20.642	-	-	-	539	0.85
		N	15.979	15.901	-0.053	1.201	328	0.52		N	20.642	20.564	0.001	1.313	73	0.11	
14	C37	Non	16.392	-	-	-	2902	4.57	26	C49	Non	20.951	-	-	-	382	0.60
		N	16.392	-	-	-	369	0.58		N	20.951	-	-	-	41	0.06	
															Total	63531	100.00

**Table B91 Chromatographic data of extracted wax from fractionation extraction of 500SW at 40 °C by using MEK.**

Total Non = 73.83% , N = 26.17%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1	CS <sub>1</sub>	Solvent	0.078	-	-	-	-	-	16	C38	Non	16.394	-	-	-	320	0.54
1	C23	N	9.318	-	-	-	59	0.10	16	C38	Non	16.827	-	-	-	2922	4.94
2	C24	N	9.899	9.821	0.130	0.992	132	0.22	16	C38	Non	16.827	16.749	-0.064	1.223	473	0.80
3	C25	N	10.512	-	-	-	368	0.62	17	C39	Non	17.603	-	-	-	2712	4.59
4	C26	N	11.113	11.035	0.139	1.042	827	1.40	17	C39	Non	17.603	-	-	-	381	0.64
5	C27	Non	11.693	-	-	-	56	0.09	18	C40	Non	17.667	-	-	-	2677	4.53
		N	11.693	-	-	-	1156	1.95	18	C40	Non	17.667	17.589	-0.045	1.245	326	0.55
6	C28	Non	12.252	-	-	-	182	0.31	19	C41	Non	18.091	-	-	-	2402	4.06
		N	12.352	12.174	0.146	1.085	1391	2.35	19	C41	Non	18.091	-	-	-	280	0.47
7	C29	Non	12.796	-	-	-	376	0.64	20	C42	Non	18.499	-	-	-	2058	3.48
		N	12.796	-	-	-	1788	3.02	20	C42	Non	18.499	18.421	0.003	1.265	189	0.32
8	C30	Non	13.326	-	-	-	1044	1.77	21	C43	Non	18.878	-	-	-	1716	2.90
		N	13.326	13.248	0.157	1.122	2354	3.98	21	C43	Non	18.878	-	-	-	215	0.36
9	C31	Non	13.841	-	-	-	2205	3.73	22	C44	Non	19.256	-	-	-	1406	2.38
		N	13.841	-	-	-	2087	3.53	22	C44	Non	19.256	19.178	0.015	1.282	187	0.32
10	C32	Non	14.346	-	-	-	3396	5.74	23	C45	Non	19.631	-	-	-	1126	2.01
		N	14.346	14.268	0.171	1.154	1403	2.37	23	C45	Non	19.631	-	-	-	127	0.21
11	C33	Non	14.839	-	-	-	3073	5.20	24	C46	Non	19.976	-	-	-	986	1.67
		N	14.839	-	-	-	679	1.15	24	C46	Non	19.976	19.898	0.022	1.298	109	0.18
12	C34	Non	15.101	-	-	-	3030	5.12	25	C47	Non	20.319	-	-	-	647	1.09
		N	15.101	-	-	-	0	0.00	25	C47	Non	20.319	-	-	-	64	0.11
13	C35	Non	15.523	-	-	-	3715	6.28	26	C48	Non	20.679	-	-	-	489	0.83
		N	15.523	-	-	-	174	0.29	26	C48	Non	20.679	20.601	0.038	1.313	52	0.09
14	C36	Non	15.961	-	-	-	3691	6.24	27	C49	Non	20.891	-	-	-	329	0.56
		N	15.961	15.883	-0.071	1.200	307	0.52	27	C49	Non	20.891	-	-	-	147	0.23
15	C37	Non	16.394	-	-	-	3256	3.50	28	C50	Non	21.319	-	-	-	Total	59149 100.00

**Table B92 Chromatographic data of extracted wax from fractionation extraction of 500SW at 30 °C by using MEK**

Total Non = 87.38% , N = 12.26%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1	CS <sub>1</sub>	Solvent	0.078	-	-	-	-	-	17	C37	Non	16.304	-	-	-	3647	6.03
1	C21	N	7.984	-	-	-	89	0.15	17	C37	Non	16.304	-	-	-	420	0.69
2	C22	N	8.646	8.568	0.165	0.932	117	0.19	18	C38	Non	16.826	-	-	-	3618	5.98
3	C23	N	9.311	-	-	-	188	0.31	18	C38	Non	16.826	16.748	-0.065	1.223	375	0.62
4	C24	N	9.924	9.846	0.155	0.993	316	0.52	19	C39	Non	17.253	-	-	-	3362	5.56
5	C25	N	10.542	-	-	-	385	0.64	19	C39	Non	17.253	-	-	-	276	0.46
6	C26	N	11.124	11.046	0.15	1.043	476	0.79	20	C40	Non	17.663	-	-	-	3097	5.12
7	C27	Non	11.701	-	-	-	45	0.07	20	C40	Non	17.663	17.585	-0.049	1.245	223	0.37
		N	11.701	-	-	-	480	0.79	21	C41	Non	18.077	-	-	-	2772	4.58
8	C28	Non	12.256	-	-	-	429	0.71	21	C41	Non	18.077	-	-	-	200	0.33
		N	12.256	12.178	0.15	1.085	414	0.68	22	C42	Non	18.496	-	-	-	2106	3.48
9	C29	Non	12.811	-	-	-	1003	1.66	22	C42	Non	18.496	18.418	0.002	1.265	160	0.26
		N	12.811	-	-	-	402	0.66	23	C43	Non	18.871	-	-	-	1835	3.03
10	C30	Non	13.342	-	-	-	2260	3.74	23	C43	Non	18.871	-	-	-	135	0.22
		N	13.342	13.264	0.173	1.122	396	0.65	24	C44	Non	19.263	-	-	-	1599	2.64
11	C31	Non	13.869	-	-	-	3632	6.01	24	C44	Non	19.263	19.185	0.022	1.282	113	0.19
		N	13.869	-	-	-	288	0.48	25	C45	Non	19.625	-	-	-	1326	2.19
12	C32	Non	14.134	-	-	-	3667	6.06	25	C45	Non	19.625	-	-	-	87	0.14
		N	14.134	14.056	-0.041	1.147	0	0.00	26	C46	Non	19.974	-	-	-	1096	1.81
13	C33	Non	14.566	-	-	-	3680	6.09	26	C46	Non	19.974	19.896	0.020	1.298	70	0.12
		N	14.566	-	-	-	189	0.64	27	C47	Non	20.324	-	-	-	722	1.19
14	C34	Non	15.026	-	-	-	3885	6.43	27	C47	Non	20.324	-	-	-	603	1.00
		N	15.026	14.948	-0.101	1.174	527	0.87	28	C48	Non	20.528	-	-	-	362	0.60
15	C35	Non	15.491	-	-	-	3997	6.61	29	C49	Non	20.881	-	-	-	166	0.27
		N	15.491	-	-	-	381	0.96	30	C50	Non	21.231	-	-	-	82	0.14
16	C36	Non	15.929	-	-	-	3845	6.36	31	C51	Non	21.539	-	-	-	Total	60466 100.00

**Table B93 Chromatographic data of extracted wax from fractionation extraction of 500SW at 20 °C by using MEK**

Total Non = 58.00% , N = 42.00%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	
1	CS <sub>1</sub>	Solvent	0.074	-	-	-	-	-	15	C38	Non	17.128	-	-	-	3564	4.82	
1	C24	N	9.903	9.829	0.138	0.992	80	0.11	15		N	17.128	17.054	0.341	1.231	1195	1.62	
2	C25	N	10.528	-	-	-	155	0.21	16	C39	Non	17.557	-	-	-	3331	4.50	
3	C26	N	11.101	11.027	0.131	1.042	281	0.38	16		N	17.557	-	-	-	931	1.26	
4	C27	N	11.681	-	-	-	434	0.59	17	C40	Non	17.971	-	-	-	2963	4.01	
5	C28	N	12.341	12.167	0.139	1.085	755	1.02	17		N	17.971	17.897	0.263	1.252	812	1.10	
6	C29	Non	12.788	-	-	-	253	0.34	18	C41	Non	18.371	-	-	-	2522	3.41	
		N	12.788	-	-	-	1396	1.89	18		N	18.371	-	-	-	619	0.84	
7	C30	Non	13.321	-	-	-	881	1.19	19	C42	Non	18.777	-	-	-	2127	2.88	
		N	13.321	13.247	0.156	1.122	2708	1.66	19		N	18.777	18.703	0.287	1.271	534	0.72	
8	C31	Non	13.841	-	-	-	1529	2.07	20	C43	Non	19.153	-	-	-	1788	2.42	
		N	13.841	-	-	-	3775	5.10	20		N	19.153	-	-	-	423	0.57	
9	C32	Non	14.347	-	-	-	2243	3.03	21	C44	Non	19.529	-	-	-	1421	1.92	
		N	14.347	14.273	0.176	1.154	4067	5.50	21		N	19.529	19.455	0.292	1.289	337	0.46	
10	C33	Non	14.842	-	-	-	2774	3.75	22	C45	Non	19.893	-	-	-	1103	1.49	
		N	14.842	-	-	-	3577	4.84	22		N	19.893	-	-	-	216	0.29	
11	C34	Non	15.324	-	-	-	3320	4.49	23	C46	Non	20.241	-	-	-	845	1.14	
		N	15.324	15.250	0.201	1.183	2976	4.02	23		N	20.241	20.167	0.291	1.304	131	0.18	
12	C35	Non	15.791	-	-	-	3601	4.87	24	C47	Non	20.581	-	-	-	526	0.71	
		N	15.791	-	-	-	2305	3.12	24		N	20.581	-	-	-	117	0.16	
13	C36	Non	16.249	-	-	-	4178	5.65	25	C48	Non	20.891	-	-	-	270	0.37	
		N	16.249	16.175	0.221	1.208	1737	2.35	25		N	20.891	20.817	0.254	1.318	64	0.09	
14	C37	Non	16.691	-	-	-	3616	4.89	26	C49	Non	21.222	-	-	-	75	0.10	
		N	16.691	-	-	-	1399	1.89	26		N	21.222	-	-	-	Total	73934	100.00

**Table B94 Chromatographic data of crystallized wax from fractionation crystallization of 500SW at 10 °C in MEK**

Total Non = 82.87% , N = 17.13%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	
1	CS <sub>1</sub>	Solvent	0.077	-	-	-	-	-	18	C37	Non	16.333	-	-	-	3755	5.90	
1	C20	N	7.293	7.216	0.184	0.858	52	0.08	18		N	16.333	-	-	-	567	0.89	
2	C21	N	7.961	-	-	-	123	0.19	19	C38	Non	16.786	-	-	-	3180	4.99	
3	C22	N	8.637	8.56	0.157	0.932	219	0.34	19		N	16.786	16.709	-0.104	1.222	551	0.87	
4	C23	N	9.271	-	-	-	270	0.42	20	C39	Non	17.221	-	-	-	3090	4.85	
5	C24	N	9.913	9.836	0.145	0.992	324	0.51	20		N	17.221	-	-	-	513	0.81	
6	C25	N	10.512	-	-	-	311	0.49	21	C40	Non	17.639	-	-	-	2870	4.51	
7	C26	Non	11.109	-	-	-	48	0.08	21		N	17.639	17.562	-0.072	1.244	575	0.90	
8	C27	Non	11.679	-	-	-	125	0.20	22	C41	Non	18.042	-	-	-	2466	3.92	
		N	11.679	-	-	-	243	0.38	22		N	18.042	-	-	-	629	0.99	
9	C28	Non	12.241	-	-	-	378	0.59	23	C42	Non	18.451	-	-	-	2395	3.76	
		N	12.241	12.164	0.136	1.085	218	0.34	23		N	18.451	18.374	-0.042	1.264	549	0.86	
10	C29	Non	12.813	-	-	-	1004	1.58	24	C43	Non	18.836	-	-	-	2215	3.48	
		N	12.813	-	-	-	180	0.28	24		N	18.836	-	-	-	616	0.97	
11	C30	Non	13.351	-	-	-	2312	3.63	25	C44	Non	19.219	-	-	-	2346	3.68	
		N	13.351	13.274	0.183	1.123	155	0.24	25		N	19.219	19.142	-0.021	1.281	454	0.71	
12	C31	Non	13.601	-	-	-	2828	4.44	26	C45	Non	19.589	-	-	-	1767	2.77	
		N	13.601	-	-	-	0	0.00	26		N	19.589	-	-	-	215	0.34	
13	C32	Non	14.044	-	-	-	2903	4.36	27	C46	Non	19.931	-	-	-	1418	2.23	
		N	14.044	13.967	-0.130	1.145	719	1.13	27		N	19.931	19.854	-0.022	1.297	111	0.17	
14	C33	Non	14.517	-	-	-	3507	5.51	28	C47	Non	20.294	-	-	-	1044	1.64	
		N	14.517	-	-	-	740	1.16	28		N	20.294	-	-	-	48	0.08	
15	C34	Non	14.979	-	-	-	3904	6.13	29	C48	Non	20.479	-	-	-	419	0.66	
		N	14.979	14.902	-0.147	1.173	800	1.26	29		N	20.479	-	-	-	409	0.64	
16	C35	Non	15.444	-	-	-	3994	6.27	30	C49	Non	20.619	-	-	-	269	0.42	
		N	15.444	-	-	-	775	1.22	30		N	20.619	-	-	-	271	0.43	
17	C36	Non	15.905	-	-	-	3832	6.02	31	C50	Non	20.789	-	-	-	Total	63689	100.00

**Table B95 Chromatographic data of crystallized wax from fractionation crystallization of 500SW at 0 °C in MEK**

Total Non = 85.24% , N = 14.76%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	
1	CS <sub>1</sub>	Solvent	0.078	-	-	-	-	-	18	C36	Non	15.943	-	-	-	6295	6.39	
1	C19	N	6.774	-	-	-	48	0.05	19	C37	Non	15.943	15.863	-0.089	1.200	991	1.01	
2	C20	N	7.311	7.233	0.201	0.859	196	0.20	20	C38	Non	16.384	-	-	-	6014	6.10	
3	C21	N	7.984	-	-	-	372	0.38			N	16.384	-	-	-	1040	1.06	
4	C22	N	8.644	8.566	0.163	0.932	400	0.41	21	C39	Non	16.821	-	-	-	5049	5.13	
5	C23	N	9.318	-	-	-	326	0.33			N	16.821	16.743	-0.070	1.223	1277	1.30	
6	C24	N	9.926	9.848	0.157	0.993	258	0.26	22	C40	Non	17.253	-	-	-	4800	4.87	
7	C25	Non	10.533	-	-	-	40	0.04			N	17.253	-	-	-	1311	1.33	
		N	10.533	-	-	-	171	0.17	23	C41	Non	17.676	-	-	-	4523	4.59	
8	C26	Non	11.132	-	-	-	140	0.14			N	17.676	17.598	-0.036	1.245	878	0.89	
		N	11.132	11.054	0.158	1.043	142	0.14	24	C42	Non	18.093	-	-	-	4450	4.52	
9	C27	Non	11.727	-	-	-	332	0.34			N	18.093	-	-	-	534	0.54	
		N	11.727	-	-	-	109	0.11	25	C43	Non	18.494	-	-	-	4098	4.16	
10	C28	Non	12.296	-	-	-	735	0.75			N	18.494	18.416	0.000	1.265	268	0.27	
		N	12.296	12.218	0.190	1.087	68	0.07	26	C44	Non	19.103	-	-	-	3890	3.95	
11	C29	Non	12.859	-	-	-	1539	1.56			N	19.103	-	-	-	136	0.14	
		N	12.859	-	-	-	118	0.12	27	C45	Non	19.288	-	-	-	3488	3.54	
12	C30	Non	13.131	-	-	-	3020	3.07			N	19.288	19.210	0.047	1.283	131	0.13	
		N	13.131	13.053	-0.038	1.115	0	0.00	28	C46	Non	19.651	-	-	-	2717	2.76	
13	C31	Non	13.568	-	-	-	3518	3.57			N	19.651	-	-	-	127	0.13	
		N	13.568	-	-	-	1298	1.32	29	C47	Non	20.006	-	-	-	2351	2.39	
14	C32	Non	14.052	-	-	-	4005	4.07			N	20.006	19.928	0.052	1.299	96	0.10	
		N	14.052	13.974	-0.123	1.145	1335	1.36	30	C48	Non	20.164	-	-	-	1826	1.85	
15	C33	Non	14.533	-	-	-	5038	5.11			N	20.164	-	-	-	1323	1.34	
		N	14.533	-	-	-	1344	1.36	31	C49	Non	20.301	-	-	-	832	0.84	
16	C34	Non	15.007	-	-	-	5953	6.04			N	20.301	-	-	-	501	0.51	
		N	15.007	14.929	-0.120	1.174	1352	1.37	32	C50	Non	20.608	-	-	-	250	0.25	
17	C35	Non	15.483	-	-	-	6245	6.34			N	20.608	-	-	-	120	0.12	
		N	15.483	-	-	-	1097	1.11	33	C51	Non	21.475	-	-	-	Total	98515	100.00

**Table B96 Chromatographic data of waxy-oil from fractionation crystallization of 500SW at -10 °C in MEK**

Total Non = 100.00% , N = 0.00%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1	CS <sub>1</sub>	Solvent	0.075	-	-	-	-	-	15	C39	Non	17.321	-	-	-	12583	5.25
1	C25	Non	10.413	-	-	-	83	0.03	16	C40	Non	17.696	-	-	-	11785	4.91
2	C26	Non	10.887	-	-	-	367	0.15	17	C41	Non	18.118	-	-	-	10365	4.32
3	C27	Non	11.432	-	-	-	997	0.42	18	C42	Non	18.525	-	-	-	8873	3.70
4	C28	Non	11.940	-	-	-	2082	0.87	19	C43	Non	18.916	-	-	-	7333	3.06
5	C29	Non	12.398	-	-	-	3260	1.36	20	C44	Non	19.288	-	-	-	6405	2.67
6	C30	Non	12.894	-	-	-	6522	2.72	21	C45	Non	19.662	-	-	-	5088	2.12
7	C31	Non	13.481	-	-	-	12497	5.21	22	C46	Non	20.010	-	-	-	4840	2.02
8	C32	Non	13.906	-	-	-	16525	6.89	23	C47	Non	20.354	-	-	-	3784	1.58
9	C33	Non	14.663	-	-	-	20701	8.63	24	C48	Non	20.698	-	-	-	2852	1.19
10	C34	Non	15.186	-	-	-	33116	13.81	25	C49	Non	21.040	-	-	-	1987	0.83
11	C35	Non	15.639	-	-	-	18660	7.78	26	C50	Non	21.364	-	-	-	1208	0.50
12	C36	Non	15.983	-	-	-	17238	7.19	27	C51	Non	21.667	-	-	-	680	0.28
13	C37	Non	16.481	-	-	-	13746	6.56	28	C52	Non	22.005	-	-	-	436	0.18
14	C38	Non	16.881	-	-	-	13854	5.78							Total	239867	100.00

**Table B97 Chromatographic data of waxy-oil from fractionation crystallization of 500SW at -20 °C in MEK**

Total Non = 99.01% , N = 0.99%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>1</sub>	Solvent	0.078	-	-	-	-	-	14	C36	Non	16.064	-	-	-	13615	8.28
1	C19	N	6.709	-	-	-	96	0.06	15	C37	Non	16.514	-	-	-	12640	7.68
2	C20	N	7.276	7.198	0.166	0.857	113	0.07	16	C38	Non	17.042	-	-	-	11881	7.22
3	C21	N	8.068	-	-	-	44	0.03	17	C39	Non	17.281	-	-	-	10603	6.45
4	C26	Non	10.889	-	-	-	102	0.06	18	C40	Non	17.702	-	-	-	9531	5.79
5	C27	Non	11.431	-	-	-	330	0.20	19	C41	Non	18.132	-	-	-	8691	5.28
6	C28	Non	11.932	-	-	-	782	0.48	20	C42	Non	18.325	-	-	-	7823	4.76
7	C29	Non	12.394	-	-	-	1288	0.78	21	C43	Non	18.915	-	-	-	6860	4.17
8	C30	Non	12.896	-	-	-	1755	1.67	22	C44	Non	19.296	-	-	-	6336	3.85
9	C31	Non	13.489	-	-	-	5882	3.58	23	C45	Non	19.581	-	-	-	5105	3.10
10	C32	Non	14.153	-	-	-	8118	4.93	24	C46	Non	20.010	-	-	-	4246	2.58
		N	14.153	14.073	-0.022	1.148	335	0.20	25	C47	Non	20.354	-	-	-	3385	2.06
11	C33	Non	14.639	-	-	-	11422	6.94	26	C48	Non	20.698	-	-	-	2308	1.52
		N	14.639	-	-	-	482	0.29	27	C49	Non	21.040	-	-	-	1595	0.97
12	C34	Non	15.141	-	-	-	12562	7.64	28	C50	Non	21.364	-	-	-	941	0.57
		N	15.141	15.063	0.014	1.177	347	0.21	29	C51	Non	21.664	-	-	-	604	0.37
13	C35	Non	15.608	-	-	-	13006	7.91	30	C52	Non	22.005	-	-	-	227	0.14
		N	15.608	-	-	-	260	0.16							Total	164515 100.00	

**Table B98 Chromatographic data of residual oil from fractionation crystallization of 500SW at -20 °C in MEK**

Total Non = 100.007% , N = 0.00%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>1</sub>	Solvent	0.078	-	-	-	-	-	15	C39	Non	17.279	-	-	-	15078	5.70
1	C25	Non	10.436	-	-	-	156	0.06	16	C40	Non	17.701	-	-	-	13878	5.24
2	C26	Non	10.899	-	-	-	687	0.26	17	C41	Non	18.132	-	-	-	12002	4.53
3	C27	Non	11.429	-	-	-	1809	0.68	18	C42	Non	18.325	-	-	-	10042	3.79
4	C28	Non	11.940	-	-	-	3438	1.30	19	C43	Non	18.915	-	-	-	8202	3.10
5	C29	Non	12.403	-	-	-	5113	1.93	20	C44	Non	19.284	-	-	-	7128	2.69
6	C30	Non	12.901	-	-	-	9290	3.51	21	C45	Non	19.664	-	-	-	5374	2.03
7	C31	Non	13.489	-	-	-	16960	6.41	22	C46	Non	20.010	-	-	-	4233	1.60
8	C32	Non	14.179	-	-	-	18843	7.12	23	C47	Non	20.354	-	-	-	3210	1.21
9	C33	Non	14.663	-	-	-	22352	8.45	24	C48	Non	20.698	-	-	-	2253	0.85
10	C34	Non	15.142	-	-	-	23330	8.89	25	C49	Non	21.040	-	-	-	1400	0.53
11	C35	Non	15.623	-	-	-	21978	8.30	26	C50	Non	21.364	-	-	-	807	0.30
12	C36	Non	15.971	-	-	-	20695	7.82	27	C51	Non	21.676	-	-	-	538	0.20
13	C37	Non	16.419	-	-	-	18824	7.11	28	C52	Non	22.005	-	-	-	207	0.08
14	C38	Non	16.876	-	-	-	16636	6.29							Total	264663 100.00	

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**Table B99 Chromatographic data of wax cake from fractionation extraction of 600SW at 60 °C by using MEK**

Total Non = 34.497% , N = 65.51%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	
1m	CS <sub>1</sub>	Solvent	0.075	-	-	-	-	-	14	C42	Non	18.354	-	-	-	2178	4.76	
1	C29	N	12.767	-	-	-	49	0.11	14	C42	N	18.746	-	-	-	1353	2.96	
2	C30	N	13.301	13.226	0.135	1.121	141	0.31	14	C42	N	18.746	18.671	0.255	1.271	2004	4.38	
3	C31	Non	13.813	-	-	-	73	0.16	15	C43	Non	19.128	-	-	-	1316	2.88	
		N	13.813	-	-	-	358	0.78	15	C43	N	19.128	-	-	-	1657	3.62	
4	C32	Non	14.313	-	-	-	124	0.27	16	C44	Non	19.501	-	-	-	1296	2.83	
		N	14.313	14.238	0.141	1.153	797	1.74	16	C44	N	19.501	19.426	0.263	1.288	1374	3.00	
5	C33	Non	14.802	-	-	-	208	0.45	17	C45	Non	19.862	-	-	-	1162	2.54	
		N	14.802	-	-	-	1334	2.92	17	C45	N	19.862	-	-	-	1131	2.47	
6	C34	Non	15.283	-	-	-	302	0.66	18	C46	Non	20.212	-	-	-	1058	2.31	
		N	15.283	15.208	0.159	1.182	1778	3.89	18	C46	N	20.212	20.137	0.261	1.303	902	1.97	
7	C35	Non	15.751	-	-	-	444	0.97	19	C47	Non	20.556	-	-	-	839	1.88	
		N	15.751	-	-	-	2083	4.55	19	C47	N	20.556	-	-	-	714	1.56	
8	C36	Non	16.216	-	-	-	580	1.27	20	C48	Non	20.892	-	-	-	650	1.42	
		N	16.216	16.141	0.187	1.207	2340	5.12	20	C48	N	20.892	20.817	0.254	1.318	488	1.07	
9	C37	Non	16.666	-	-	-	752	1.64	21	C49	Non	21.221	-	-	-	493	1.08	
		N	16.666	-	-	-	2517	5.50	21	C49	N	21.221	-	-	-	279	0.61	
10	C38	Non	17.101	-	-	-	933	2.04	22	C50	Non	21.534	-	-	-	319	0.70	
		N	17.101	17.026	0.213	1.231	2545	5.56	22	C50	N	21.534	21.459	0.243	1.331	188	0.41	
11	C39	Non	17.532	-	-	-	1055	2.31	23	C51	Non	21.862	-	-	-	206	0.45	
		N	17.532	-	-	-	2491	5.45	23	C51	N	21.862	-	-	-	108	0.24	
12	C40	Non	17.949	-	-	-	1182	2.58	24	C52	Non	22.170	-	-	-	112	0.24	
		N	17.949	17.874	0.240	1.252	2478	5.42	24	C52	N	22.170	22.095	0.249	1.344	53	0.12	
13	C41	Non	18.354	-	-	-	1281	2.80								Total	45745	100.00

**Table B100 Chromatographic data of extracted wax from fractionation extraction of 600SW at 60 °C by using MEK**

Total Non = 30.19% , N = 69.81%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	
1m	CS <sub>1</sub>	Solvent	0.074	-	-	-	-	-	14	C41	Non	18.336	-	-	-	3078	3.73	
1	C28	N	12.234	12.160	0.132	1.084	115	0.14	14	C41	N	18.336	-	-	-	1420	1.72	
2	C29	N	12.764	-	-	-	318	0.39	15	C42	Non	18.725	-	-	-	2420	2.93	
3	C30	N	13.296	13.222	0.131	1.121	930	1.13	15	C42	N	18.725	18.651	0.235	1.270	1111	1.35	
4	C31	N	13.804	-	-	-	2348	2.85	16	C43	Non	19.104	-	-	-	2014	2.44	
5	C32	Non	14.318	-	-	-	35	0.04	16	C43	N	19.104	-	-	-	836	1.01	
		N	14.318	14.244	0.147	1.153	4954	6.01	17	C44	Non	19.474	-	-	-	1640	1.99	
6	C33	Non	14.818	-	-	-	232	0.28	17	C44	N	19.474	19.400	0.237	1.287	641	0.78	
		N	14.818	-	-	-	7329	8.89	18	C45	Non	19.833	-	-	-	1393	1.69	
7	C34	Non	15.299	-	-	-	475	0.58	18	C45	N	19.833	-	-	-	490	0.59	
		N	15.299	15.225	0.176	1.182	8015	9.72	19	C46	Non	20.186	-	-	-	1120	1.36	
8	C35	Non	15.767	-	-	-	707	0.86	19	C46	N	20.186	20.112	0.236	1.303	330	0.40	
		N	15.767	-	-	-	7478	9.07	20	C47	Non	20.527	-	-	-	845	1.02	
9	C36	Non	16.222	-	-	-	1102	1.34	20	C47	N	20.527	-	-	-	242	0.29	
		N	16.222	16.148	0.194	1.208	6405	7.77	21	C48	Non	20.864	-	-	-	565	0.69	
10	C37	Non	16.666	-	-	-	1643	1.99	21	C48	N	20.864	20.790	0.227	1.317	153	0.19	
		N	16.666	-	-	-	5199	6.31	22	C49	Non	21.192	-	-	-	366	0.44	
11	C38	Non	17.097	-	-	-	2096	2.54	22	C49	N	21.192	-	-	-	84	0.10	
		N	17.097	17.023	0.210	1.231	3971	4.82	23	C50	Non	21.515	-	-	-	155	0.19	
12	C39	Non	17.522	-	-	-	2448	2.97	23	C50	N	21.515	21.441	0.225	1.331	58	0.07	
		N	17.522	-	-	-	2906	3.52	24	C51	Non	21.824	-	-	-	43	0.05	
13	C40	Non	17.935	-	-	-	2516	3.05	24	C51	N	21.824	-	-	-	41	0.05	
		N	17.935	17.861	0.227	1.251	2190	2.66								Total	82457	100.00

**Table B101 Chromatographic data of extracted wax from fractionation extraction of 600SW at 50 °C by using MEK**

Total Non = 60.71% , N = 39.29%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>2</sub>	Solvent	0.075	-	-	-	-	-	15	C39	Non	17.234	-	-	-	4453	4.66
1	C23	N	10.516	-	-	-	58	0.06		N	17.234	-	-	-	442	0.46	
2	C36	N	11.119	11.044	0.148	1.043	254	0.27	16	C40	Non	17.666	-	-	-	4080	4.27
3	C27	N	11.676	-	-	-	844	0.88		N	17.666	17.591	-0.043	1.245	419	0.44	
4	C28	N	12.333	12.158	0.130	1.084	1879	1.97	17	C41	Non	18.056	-	-	-	3664	3.84
5	C29	N	12.778	-	-	-	2772	2.90		N	18.056	-	-	-	404	0.42	
6	C30	Non	13.311	-	-	-	143	0.15	18	C42	Non	18.461	-	-	-	3380	3.54
	N	13.311	13.236	0.145	1.121	3731	3.91		N	18.461	18.386	-0.030	1.264	395	0.41		
7	C31	Non	13.824	-	-	-	332	0.35	19	C43	Non	18.844	-	-	-	2892	3.03
	N	13.824	-	-	-	5136	5.38		N	18.844	-	-	-	382	0.40		
8	C32	Non	14.331	-	-	-	1305	1.37	20	C44	Non	19.211	-	-	-	2395	2.51
	N	14.331	14.256	0.159	1.153	6242	6.54		N	19.211	19.136	-0.027	1.281	376	0.39		
9	C33	Non	14.819	-	-	-	2929	3.07	21	C45	Non	19.589	-	-	-	2042	2.14
	N	14.819	-	-	-	5674	5.94		N	19.589	-	-	-	361	0.38		
10	C34	Non	15.296	-	-	-	4786	5.01	22	C46	Non	19.938	-	-	-	1653	1.73
	N	15.296	15.221	0.172	1.182	3713	3.89		N	19.938	19.863	-0.013	1.298	353	0.37		
11	C35	Non	15.761	-	-	-	3732	6.00	23	C47	Non	20.271	-	-	-	1320	1.38
	N	15.761	-	-	-	2018	2.11		N	20.271	-	-	-	269	0.28		
12	C36	Non	16.306	-	-	-	3547	5.81	24	C48	Non	20.601	-	-	-	1083	1.13
	N	16.206	16.131	0.177	1.207	1037	1.09		N	20.601	20.526	-0.037	1.312	165	0.17		
13	C37	Non	16.657	-	-	-	3034	5.29	25	C49	Non	20.931	-	-	-	677	0.71
	N	16.657	-	-	-	546	0.57		N	20.931	-	-	-	116	0.12		
14	C38	Non	16.826	-	-	-	4004	4.19	26	C50	Non	21.249	-	-	-	376	0.39
	N	16.826	-	-	-	0	0.00		N	21.249	21.174	-0.042	1.325	73	0.08		
															Total	95506	100.00

**Table B102 Chromatographic data of extracted wax from fractionation extraction of 600SW at 40 °C by using MEK**

Total Non = 77.73% , N = 22.27%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>2</sub>	Solvent	0.075	-	-	-	-	-	16	C38	Non	16.811	-	-	-	5161	5.69
1	C23	N	9.256	-	-	-	41	0.05		N	16.811	16.736	-0.077	1.223	1060	1.17	
2	C24	N	9.892	9.817	0.126	0.991	165	0.18	17	C39	Non	17.231	-	-	-	5027	5.54
3	C25	N	10.496	-	-	-	450	0.50		N	17.231	-	-	-	902	0.99	
4	C26	N	11.094	11.019	0.123	1.042	1014	1.12	18	C40	Non	17.651	-	-	-	4267	4.70
5	C27	N	11.672	-	-	-	1431	1.58		N	17.651	17.576	-0.058	1.244	678	0.75	
6	C28	Non	12.226	-	-	-	142	0.16	19	C41	Non	18.051	-	-	-	3483	3.84
	N	12.226	12.151	0.123	1.084	1614	1.78		N	18.051	-	-	-	624	0.69		
7	C29	Non	12.771	-	-	-	237	0.26	20	C42	Non	18.458	-	-	-	3412	3.76
	N	12.771	-	-	-	1655	1.82		N	18.458	18.383	-0.033	1.264	563	0.62		
8	C30	Non	13.296	-	-	-	635	0.70	21	C43	Non	18.841	-	-	-	3105	3.42
	N	13.296	13.221	0.130	1.121	1666	1.84		N	18.841	-	-	-	543	0.60		
9	C31	Non	13.814	-	-	-	1509	1.66	22	C44	Non	19.212	-	-	-	2760	3.04
	N	13.814	-	-	-	1736	1.91		N	19.212	19.137	-0.026	1.281	418	0.46		
10	C32	Non	14.321	-	-	-	3477	3.83	23	C45	Non	19.577	-	-	-	2362	2.60
	N	14.321	14.246	0.149	1.153	1751	1.93		N	19.577	-	-	-	375	0.41		
11	C33	Non	14.813	-	-	-	5079	5.60	24	C46	Non	19.938	-	-	-	2007	2.21
	N	14.813	-	-	-	1013	1.18		N	19.938	19.863	-0.013	1.298	306	0.34		
12	C34	Non	15.301	-	-	-	5992	6.60	25	C47	Non	20.272	-	-	-	1339	1.48
	N	15.301	-	-	-	0	0.00		N	20.272	-	-	-	195	0.21		
13	C35	Non	15.512	-	-	-	6231	6.87	26	C48	Non	20.622	-	-	-	1225	1.35
	N	15.512	-	-	-	322	0.35		N	20.622	20.547	-0.016	1.312	138	0.15		
14	C36	Non	15.941	-	-	-	5888	6.49	27	C49	Non	20.948	-	-	-	865	0.95
	N	15.941	15.866	-0.088	1.200	612	0.67		N	20.948	-	-	-	97	0.11		
15	C37	Non	16.371	-	-	-	5720	6.30	28	C50	Non	21.274	-	-	-	601	0.66
	N	16.371	-	-	-	721	0.79		N	21.274	21.199	-0.017	1.326	55	0.06		
															Total	90729	100.00

**Table B103 Chromatographic data of extracted wax from fractionation extraction of 600SW at 30 °C by using MEK**

Total Non = 85.43% , N = 14.57%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t <sub>R</sub>	Δt <sub>R</sub>	Log t <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t <sub>R</sub>	Δt <sub>R</sub>	Log t <sub>R</sub>	A	% wt
1m	CS <sub>1</sub>	Solvent	0.078	-	-	-	-	-	18	C38	N	16.358	-	-	-	675	1.01
1	C21	N	7.946	-	-	-	63	0.09	19	C39	N	16.795	-	-	-	4115	6.15
2	C22	N	8.649	8.517	0.167	0.933	114	0.17	N	16.795	16.717	-0.096	1.223	593	0.89		
3	C23	N	9.288	-	-	-	174	0.26	20	C40	Non	17.649	-	-	-	3812	5.69
4	C24	N	9.904	9.826	0.135	0.992	263	0.40	N	17.222	-	-	-	516	0.77		
5	C25	N	10.502	-	-	-	354	0.53	21	C41	Non	18.063	-	-	-	3389	5.06
6	C26	N	11.113	11.035	0.139	1.042	493	0.74	N	18.063	-	-	-	428	0.64		
7	C27	Non	11.676	-	-	-	93	0.14	22	C42	Non	18.449	-	-	-	3004	4.49
		N	11.676	-	-	-	451	0.67	N	18.449	18.371	-0.045	1.264	400	0.60		
8	C28	Non	12.233	-	-	-	257	0.38	23	C43	Non	18.826	-	-	-	2821	4.21
		N	12.233	12.155	0.127	1.084	397	0.59	N	18.826	-	-	-	363	0.54		
9	C29	Non	12.774	-	-	-	488	0.73	24	C44	Non	19.216	-	-	-	2383	3.56
		N	12.774	-	-	-	333	0.50	N	19.216	19.138	-0.025	1.281	313	0.47		
10	C30	Non	13.323	-	-	-	940	1.40	25	C45	Non	19.567	-	-	-	1890	2.82
		N	13.323	13.243	0.154	1.122	273	0.41	N	19.567	-	-	-	192	0.29		
11	C31	Non	13.837	-	-	-	1864	2.78	26	C46	Non	19.942	-	-	-	1418	2.12
		N	13.837	-	-	-	200	0.30	N	19.942	19.864	-0.012	1.298	169	0.25		
12	C32	Non	14.359	-	-	-	3190	4.76	27	C47	Non	20.261	-	-	-	1232	1.84
		N	14.359	14.281	0.184	1.154	236	0.35	N	20.261	-	-	-	118	0.18		
13	C33	Non	14.561	-	-	-	4185	6.25	28	C48	Non	20.604	-	-	-	973	1.45
		N	14.561	-	-	-	0	0.00	N	20.604	20.526	-0.037	1.312	75	0.11		
14	C34	Non	14.998	-	-	-	4267	6.37	29	C49	Non	20.764	-	-	-	730	1.09
		N	14.998	14.920	-0.129	1.173	700	1.05	N	20.764	-	-	-	53	0.08		
15	C35	Non	15.453	-	-	-	4514	6.74	30	C50	Non	21.122	-	-	-	394	0.59
		N	15.453	-	-	-	775	1.16	31	C51	Non	21.431	-	-	-	252	0.38
16	C36	Non	15.911	-	-	-	4484	6.70									
		N	15.911	15.833	-0.121	1.199	758	1.13									
17	C37	Non	16.358	-	-	-	4362	6.52									
															Total	66951 100.00	

**Table B104 Chromatographic data of extracted wax from fractionation extraction of 600SW at 20 °C by using MEK**

Total Non = 55.57% , N = 44.43%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t <sub>R</sub>	Δt <sub>R</sub>	Log t <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t <sub>R</sub>	Δt <sub>R</sub>	Log t <sub>R</sub>	A	% wt
1m	CS <sub>1</sub>	Solvent	0.073	-	-	-	-	-	19	C39	Non	17.321	-	-	-	5550	4.74
1	C21	N	8.124	-	-	-	41	0.04	N	17.321	-	-	-	2043	1.75		
2	C22	N	8.726	8.633	0.250	0.937	51	0.04	20	C40	Non	17.763	-	-	-	4751	4.06
3	C23	N	9.376	-	-	-	62	0.05	N	17.763	17.690	0.056	1.247	1881	1.61		
4	C24	N	9.999	9.926	0.235	0.996	147	0.13	21	C41	Non	18.191	-	-	-	4101	3.30
5	C25	N	10.608	-	-	-	271	0.23	N	18.191	-	-	-	1471	1.26		
6	C26	N	11.208	11.135	0.239	1.046	450	0.38	22	C42	Non	18.604	-	-	-	3875	3.31
7	C27	N	11.781	-	-	-	653	0.56	N	18.604	18.531	0.115	1.267	1232	1.05		
8	C28	N	12.346	12.273	0.245	1.088	975	0.83	23	C43	Non	19.006	-	-	-	3001	2.56
9	C29	N	12.809	-	-	-	1487	1.27	N	19.006	-	-	-	1024	0.87		
10	C30	N	13.431	13.358	0.267	1.125	2051	1.75	24	C44	Non	19.389	-	-	-	2721	2.32
11	C31	Non	13.951	-	-	-	381	0.33	N	19.389	19.316	0.153	1.285	819	0.70		
		N	13.951	-	-	-	3275	2.80	25	C45	Non	19.761	-	-	-	2208	1.89
12	C32	Non	14.467	-	-	-	1521	1.30	N	19.761	-	-	-	668	0.57		
		N	14.467	14.394	0.297	1.158	5330	4.55	26	C46	Non	20.128	-	-	-	1747	1.49
13	C33	Non	14.974	-	-	-	3270	2.79	N	20.128	20.055	0.179	1.302	547	0.47		
		N	14.974	-	-	-	6458	5.52	27	C47	Non	20.479	-	-	-	1386	1.18
14	C34	Non	15.461	-	-	-	4899	4.19	N	20.479	-	-	-	416	0.36		
		N	15.461	15.245	0.169	1.183	5826	4.98	28	C48	Non	20.811	-	-	-	886	0.76
15	C35	Non	15.938	-	-	-	5528	4.72	N	20.811	20.738	0.175	1.316	244	0.21		
		N	15.938	-	-	-	4775	4.08	29	C49	Non	21.153	-	-	-	562	0.48
16	C36	Non	16.299	-	-	-	5730	4.90	N	21.153	-	-	-	162	0.14		
		N	16.299	16.226	0.272	1.210	3822	3.27	30	C50	Non	21.472	21.399	0.183	1.330	303	0.26
17	C37	Non	16.407	-	-	-	6358	5.60	N	21.472	-	-	-	79	0.08		
		N	16.407	-	-	-	3200	2.73	31	C51	Non	21.789	-	-	-	41	0.04
18	C38	Non	16.868	-	-	-	5939	5.07	N	21.789	-	-	-	48	0.04		
		N	16.868	16.795	-0.018	1.225	2482	2.12	32	C52	Non	22.097	-	-	-	Total	117047 100.00

**Table B105 Chromatographic data of crystallized wax from fractionation crystallization of 600SW at 10 °C in MEK**

Total Non = 82.53% , N = 17.47%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>2</sub>	Solvent	0.074	-	-	-	-	-	18	C38	Non	16.808	-	-	-	8468	7.33
1	C21	N	7.448	-	-	-	50	0.04	19	C39	Non	16.808	16.734	-0.079	1.223	1330	1.15
2	C22	N	8.224	8.150	-0.253	0.911	214	0.19	20	C40	Non	17.254	-	-	-	6931	6.00
3	C23	N	8.778	-	-	-	448	0.39	21	C41	Non	17.254	-	-	-	1094	0.95
4	C24	N	9.539	9.465	-0.226	0.976	619	0.54	22	C42	Non	17.676	-	-	-	6474	5.60
5	C25	N	10.079	-	-	-	697	0.60	23	C43	Non	17.602	-0.032	1.245	-	1028	0.89
6	C26	N	10.803	10.729	-0.167	1.030	639	0.55	24	C44	Non	18.089	-	-	-	5923	5.13
7	C27	Non	11.309	-	-	-	42	0.04	25	C45	Non	18.089	-	-	-	893	0.77
		N	11.309	-	-	-	628	0.54	26	C46	Non	18.503	-	-	-	4845	4.19
8	C28	Non	11.904	-	-	-	157	0.14	27	C47	Non	18.891	-	-	-	870	0.75
		N	11.904	11.830	-0.198	1.072	525	0.45	28	C48	Non	18.891	-	-	-	4696	4.06
9	C29	Non	12.481	-	-	-	376	0.33	29	C49	Non	19.272	-	-	-	819	0.71
		N	12.481	-	-	-	474	0.41	30	C50	Non	19.272	19.198	0.035	1.283	3699	3.20
10	C30	Non	13.052	-	-	-	849	0.73	31	C51	Non	19.646	-	-	-	821	0.71
		N	13.052	12.978	-0.113	1.113	342	0.30	32	C52	Non	19.646	-	-	-	3685	3.19
11	C31	Non	13.637	-	-	-	1830	1.58				19.935	0.061	1.299	-	593	0.51
		N	13.637	-	-	-	220	0.19				20.364	-	-	-	3279	2.84
12	C32	Non	14.219	-	-	-	3265	2.83				20.716	-	-	-	463	0.40
		N	14.219	14.145	0.048	1.150	204	0.18				20.716	20.642	0.079	1.314	2785	2.41
13	C33	Non	14.424	-	-	-	3989	3.45				21.382	-	-	-	317	0.27
		N	14.424	-	-	-	0	0.00				21.382	21.308	0.092	1.328	2191	1.90
14	C34	Non	14.903	-	-	-	5246	4.54				21.529	-	-	-	191	0.17
		N	14.903	14.829	-0.220	1.171	1313	1.14				21.671	-	-	-	1778	1.54
15	C35	Non	15.404	-	-	-	7457	6.45				21.882	-	-	-	89	0.08
		N	15.404	-	-	-	1747	1.51				21.882	21.382	0.092	1.328	1108	0.96
16	C36	Non	15.880	-	-	-	7844	6.79				21.882	21.308	0.092	1.328	50	0.04
		N	15.880	15.806	-0.148	1.198	1893	1.64				21.529	-	-	-	239	0.21
17	C37	Non	16.349	-	-	-	8062	6.98				21.671	-	-	-	179	0.15
		N	16.349	-	-	-	1590	1.38				Total	115558	100.00			

**Table B106 Chromatographic data of crystallized wax from fractionation crystallization of 600SW at 0 °C in MEK**

Total Non = 85.14% , N = 14.86%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>2</sub>	Solvent	0.082	-	-	-	-	-	20	C38	Non	16.743	-	-	-	8204	6.55
1	C19	N	6.689	-	-	-	127	0.10	21	C39	Non	16.743	16.661	-0.152	1.221	1736	1.39
2	C20	N	7.369	7.287	-0.255	0.862	458	0.37	22	C40	Non	17.209	-	-	-	7440	5.94
3	C21	N	8.084	-	-	-	685	0.55	23	C41	Non	17.209	-	-	-	1934	1.54
4	C22	N	8.762	8.680	-0.277	0.938	561	0.45	24	C42	Non	17.644	-	-	-	6653	5.31
5	C23	N	9.419	-	-	-	352	0.28	25	C43	Non	17.644	17.562	-0.072	1.244	1720	1.37
6	C24	N	10.049	9.967	-0.276	0.998	203	0.16	26	C44	Non	18.067	-	-	-	6140	4.90
7	C25	Non	10.464	-	-	-	63	0.05	27	C45	Non	18.067	-	-	-	1442	1.15
8	C26	Non	11.073	-	-	-	121	0.10	28	C46	Non	18.483	-	-	-	5936	4.74
9	C27	Non	11.227	-	-	-	287	0.23	29	C47	Non	18.483	18.401	-0.015	1.264	998	0.80
10	C28	Non	11.817	-	-	-	437	0.35	30	C48	Non	18.882	-	-	-	5745	4.59
11	C29	Non	12.476	-	-	-	670	0.53	31	C49	Non	18.882	-	-	-	581	0.46
12	C30	Non	13.049	-	-	-	1138	0.91	32	C50	Non	19.271	-	-	-	5116	4.08
13	C31	Non	13.301	-	-	-	1280	1.02	33	C51	Non	19.271	19.189	0.026	1.283	436	0.35
14	C32	Non	13.774	-	-	-	2264	1.81	34	C52	Non	19.487	-	-	-	4957	3.96
15	C33	Non	14.298	-	-	-	4484	3.58				19.487	-	-	-	199	0.16
		N	14.298	-	-	-	862	0.69				20.026	-	-	-	3919	3.13
16	C34	Non	14.924	-	-	-	5867	4.68				20.026	19.944	0.068	1.299	172	0.14
		N	14.924	14.842	-0.207	1.171	1288	1.03				20.161	-	-	-	3140	2.51
17	C35	Non	15.308	-	-	-	7850	6.27				20.372	-	-	-	2131	1.70
		N	15.308	-	-	-	1584	1.26				20.686	-	-	-	1639	1.31
18	C36	Non	15.797	-	-	-	8632	6.89				21.013	-	-	-	1440	1.15
		N	15.797	15.715	-0.239	1.196	1604	1.28				21.358	-	-	-	1101	0.88
19	C37	Non	16.280	-	-	-	9176	7.32				21.699	-	-	-	827	0.66
		N	16.280	-	-	-	1676	1.34				Total	125275	100.00			

**Table B107 Chromatographic data of waxy oil from fractionation crystallization of 600SW at -10 °C in MEK**

Total Non = 100.00% , N = 0.00%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>1</sub>	Solvent	0.077	-	-	-	-	-	14	C39	Non	17.302	-	-	-	11073	6.73
1	C26	Non	10.851	-	-	-	125	0.08	15	C40	Non	17.716	-	-	-	9893	6.01
2	C27	Non	11.396	-	-	-	362	0.22	16	C41	Non	18.154	-	-	-	8854	5.38
3	C28	Non	11.940	-	-	-	773	0.47	17	C42	Non	18.516	-	-	-	7699	4.68
4	C29	Non	12.392	-	-	-	1207	0.73	18	C43	Non	18.907	-	-	-	6655	4.04
5	C30	Non	12.894	-	-	-	2223	1.35	19	C44	Non	19.284	-	-	-	5714	3.47
6	C31	Non	13.474	-	-	-	3994	2.43	20	C45	Non	19.653	-	-	-	4841	2.94
7	C32	Non	14.010	-	-	-	6169	3.75	21	C46	Non	20.019	-	-	-	3811	2.31
8	C33	Non	14.512	-	-	-	9753	5.92	22	C47	Non	20.363	-	-	-	3060	1.86
9	C34	Non	15.001	-	-	-	12626	7.67	23	C48	Non	20.707	-	-	-	2260	1.37
10	C35	Non	15.381	-	-	-	15612	9.48	24	C49	Non	21.040	-	-	-	1554	0.94
11	C36	Non	15.930	-	-	-	16135	9.80	25	C50	Non	21.364	-	-	-	955	0.58
12	C37	Non	16.403	-	-	-	15223	9.25	26	C51	Non	21.663	-	-	-	640	0.39
13	C38	Non	17.051	-	-	-	13177	8.00	27	C52	Non	21.996	-	-	-	265	0.16
															Total	164653	100.00

**Table B108 Chromatographic data of waxy oil from fractionation crystallization of 600SW at -20 °C in MEK**

Total Non = 93.30% , N = 1.70%

P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>1</sub>	Solvent	0.077	-	-	-	-	-	17	C35	Non	15.599	-	-	-	10921	8.29
1	C19	N	6.009	-	-	-	141	0.11	18	C36	Non	16.064	-	-	-	381	0.29
2	C20	N	6.853	6.776	-0.256	0.83	370	0.28	19	C37	Non	16.554	-	-	-	10528	7.99
3	C21	N	7.461	-	-	-	302	0.23	20	C38	Non	17.041	-	-	-	9323	7.08
4	C22	N	8.183	8.106	-0.297	0.908	92	0.07	21	C39	Non	17.501	-	-	-	8548	6.49
5	C23	Non	0.000	-	-	-	0	0.00	22	C40	Non	17.698	-	-	-	7957	6.04
		N	0.000	-	-	-	0	0.00	23	C41	Non	18.136	-	-	-	7445	5.65
6	C24	Non	9.847	9.926	0.235	0.996	66	0.05	24	C42	Non	18.517	-	-	-	6580	4.99
7	C25	Non	10.627	-	-	-	153	0.12	25	C43	Non	18.907	-	-	-	5866	4.45
8	C26	Non	11.413	11.135	0.239	1.046	330	0.25	26	C44	Non	19.284	-	-	-	5088	3.86
9	C27	Non	11.914	-	-	-	577	0.44	27	C45	Non	19.662	-	-	-	4493	3.41
10	C28	Non	12.382	12.273	0.245	1.088	894	0.68	28	C46	Non	20.01	-	-	-	3544	2.69
11	C29	Non	12.886	-	-	-	1562	1.19	29	C47	Non	20.371	-	-	-	3039	2.31
12	C30	Non	13.403	13.358	0.267	1.125	2755	2.09	30	C48	Non	20.698	-	-	-	2207	1.68
13	C31	Non	13.984	-	-	-	4668	3.54	31	C49	Non	21.074	-	-	-	1880	1.43
14	C32	Non	14.494	-	-	-	6945	5.27	32	C50	Non	21.389	-	-	-	1058	0.80
		N	14.137	14.06	-0.037	1.147	163	0.12	33	C51	Non	21.714	-	-	-	667	0.51
15	C33	Non	14.631	-	-	-	9120	6.92	34	C52	Non	22.032	-	-	-	347	0.36
		N	14.631	-	-	-	3056	2.32							101	0.08	
16	C34	Non	15.118	-	-	-	10141	7.70							Total	131746	100.00

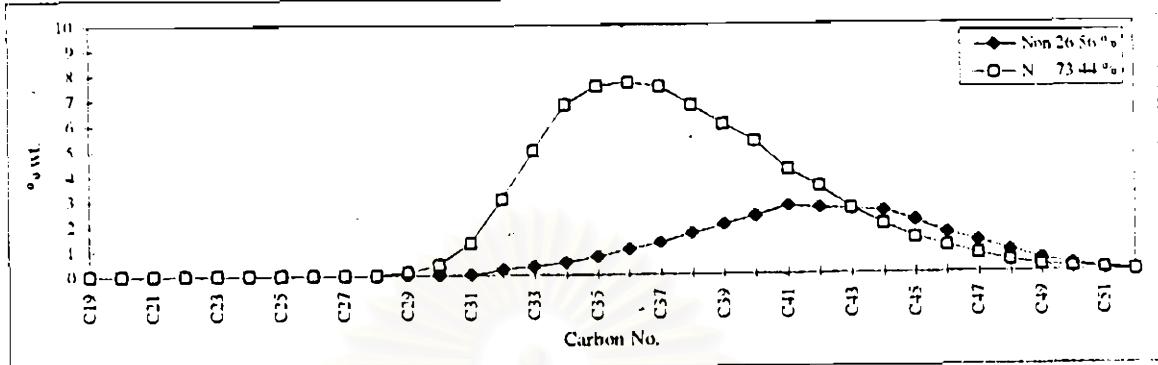
**Table B109 Chromatographic data of residual oil from fractionation crystallization of 600SW at -20 °C in MEK**

Total Non = 100.00% , N = 0.00%

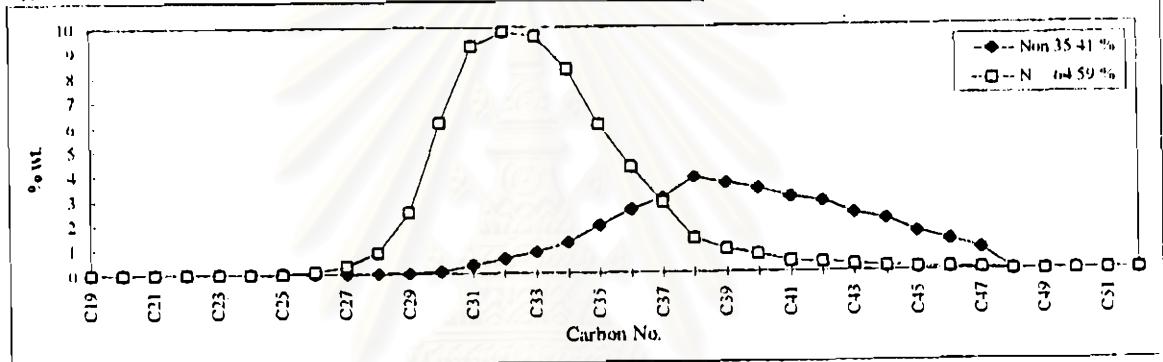
P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt	P/ No.	P/ Na	Group	t <sub>R</sub> , min	t' <sub>R</sub>	Δt' <sub>R</sub>	Log t' <sub>R</sub>	A	% wt
1m	CS <sub>1</sub>	Solvent	0.077	-	-	-	-	-	14	C39	Non	17.289	-	-	-	7757	6.29
1	C26	Non	10.877	-	-	-	137	0.11	15	C40	Non	17.686	-	-	-	7057	5.72
2	C27	Non	11.413	-	-	-	392	0.32	16	C41	Non	18.149	-	-	-	6231	5.05
3	C28	Non	11.939	-	-	-	845	0.68	17	C42	Non	18.517	-	-	-	5171	4.19
4	C29	Non	12.399	-	-	-	1310	1.06	18	C43	Non	18.906	-	-	-	4323	3.50
5	C30	Non	12.899	-	-	-	3212	2.60	19	C44	Non	19.286	-	-	-	3579	2.90
6	C31	Non	13.448	-	-	-	4982	4.04	20	C45	Non	19.654	-	-	-	2933	2.38
7	C32	Non	14.01	-	-	-	6881	5.58	21	C46	Non	20.019	-	-	-	2199	1.78
8	C33	Non	14.511	-	-	-	8491	6.88	22	C47	Non	20.363	-	-	-	1711	1.39
9	C34	Non	15.007	-	-	-	10122	8.20	23	C48	Non	20.707	-	-	-	1209	0.98
10	C35	Non	15.379	-	-	-	12062	9.78	24	C49	Non	21.041	-	-	-	792	0.64
11	C36	Non	15.930	-	-	-	11903	9.65	25	C50	Non	21.364	-	-	-	479	0.39
12	C37	Non	16.393	-	-	-	10294	8.34	26	C51	Non	21.663	-	-	-	329	0.27
13	C38	Non	16.876	-	-	-	8843	7.17	27	C52	Non	21.996	-	-	-	143	0.12

## APPENDIX C

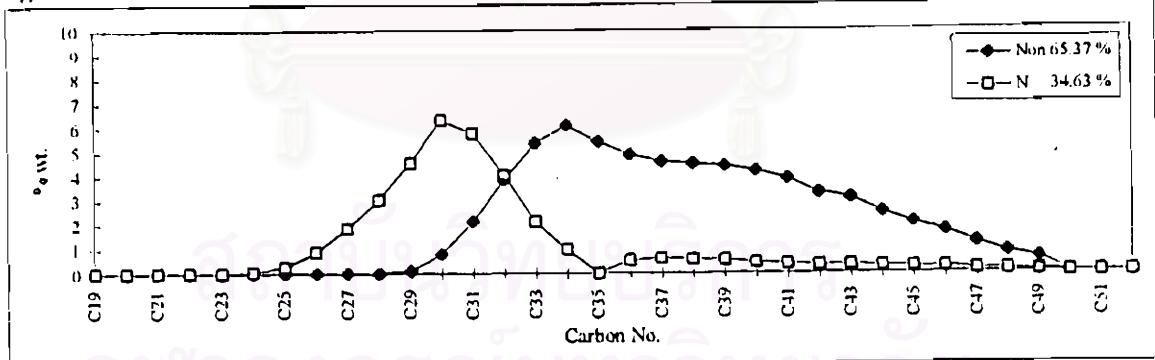
**Figure C1** Carbon distribution curves of wax cake from fractionation of 500SW slack wax

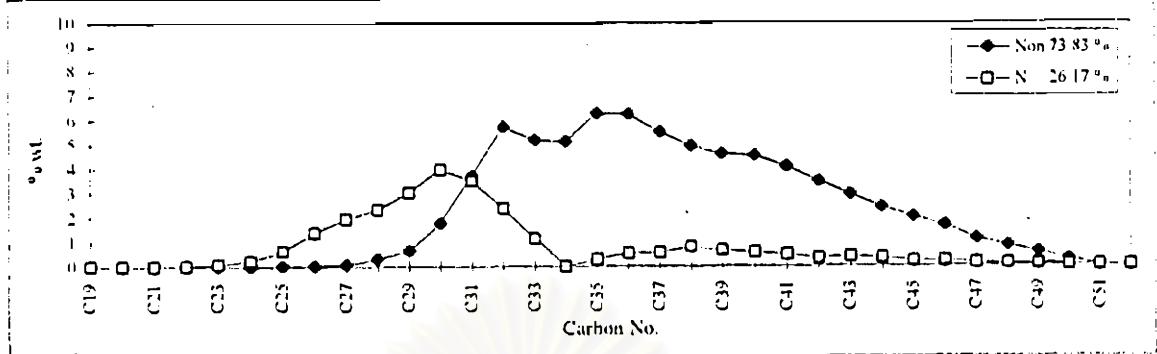
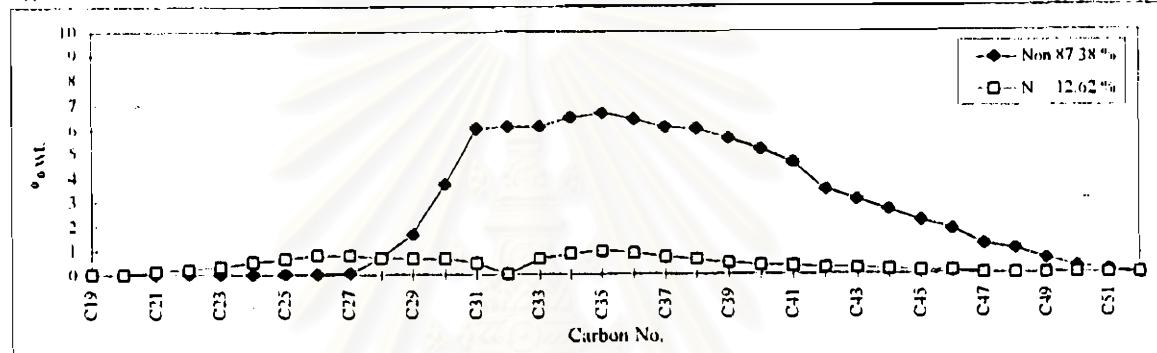
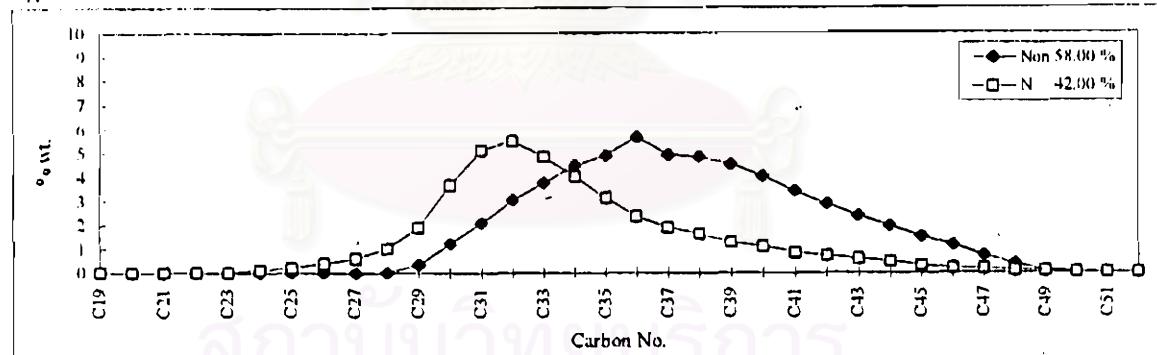
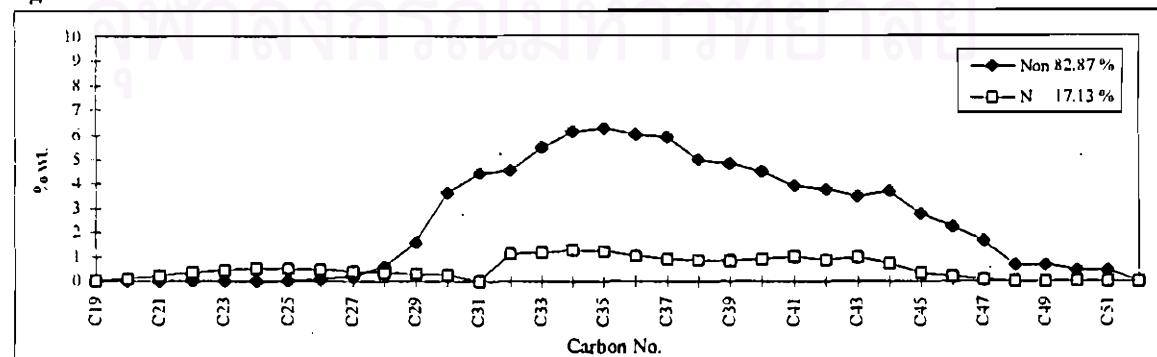


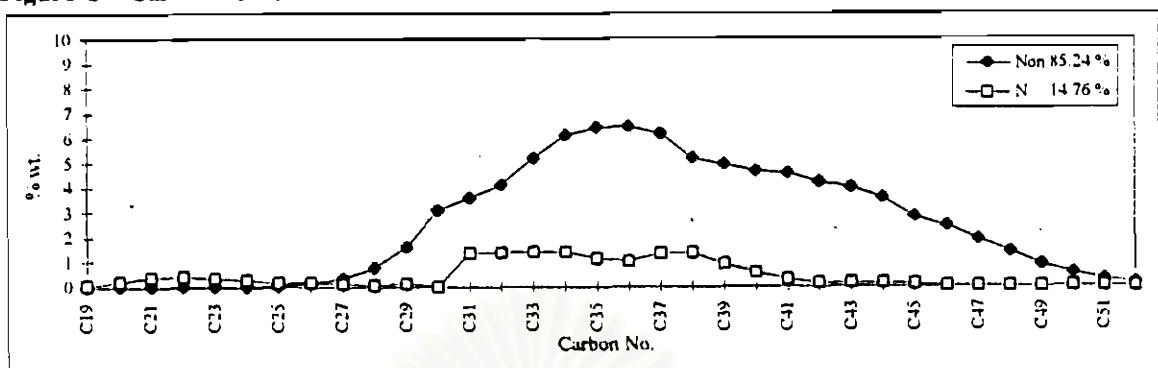
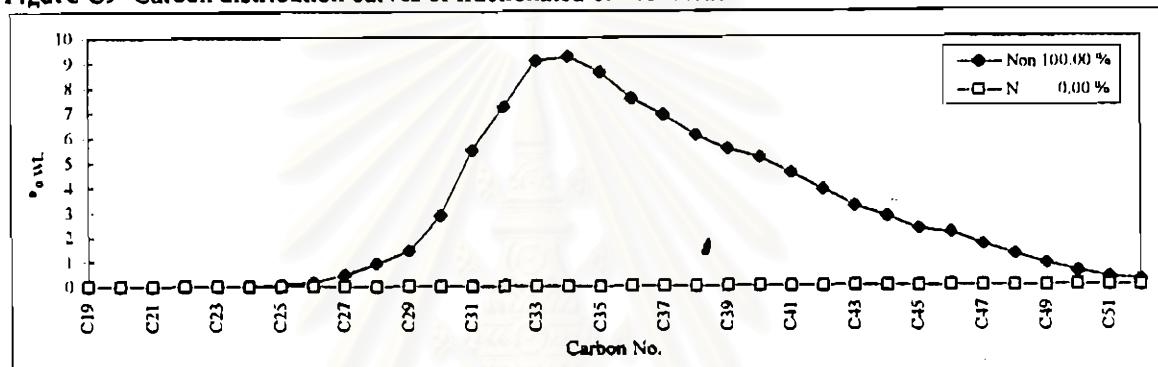
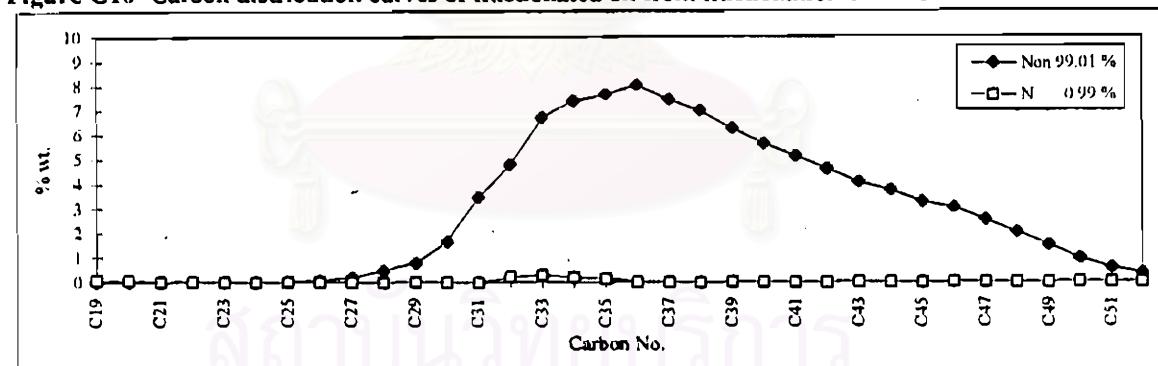
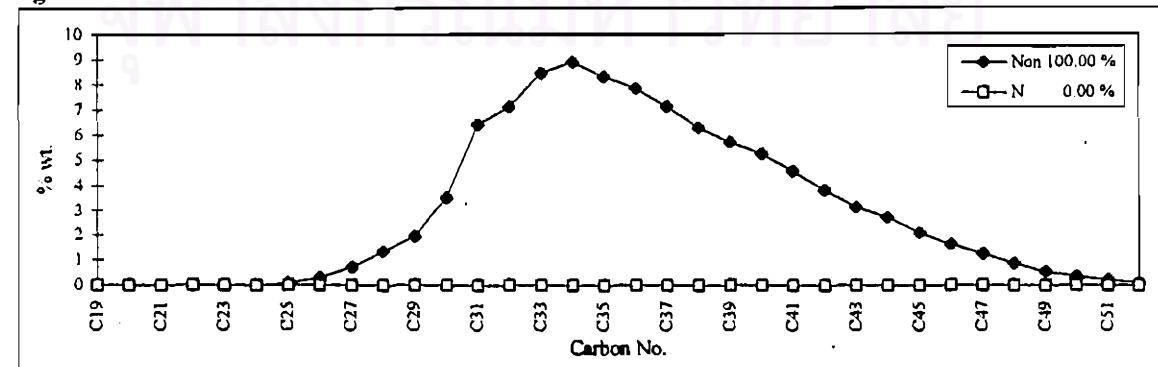
**Figure C2** Carbon distribution curves of fractionated wax from fractionation of 500SW slack wax at 60 °C



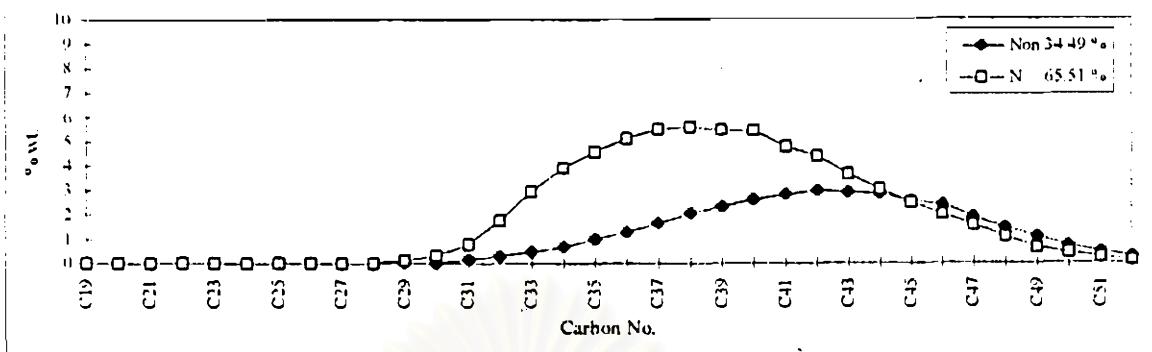
**Figure C3** Carbon distribution curves of fractionated wax from fractionation of 500SW slack wax at 50 °C



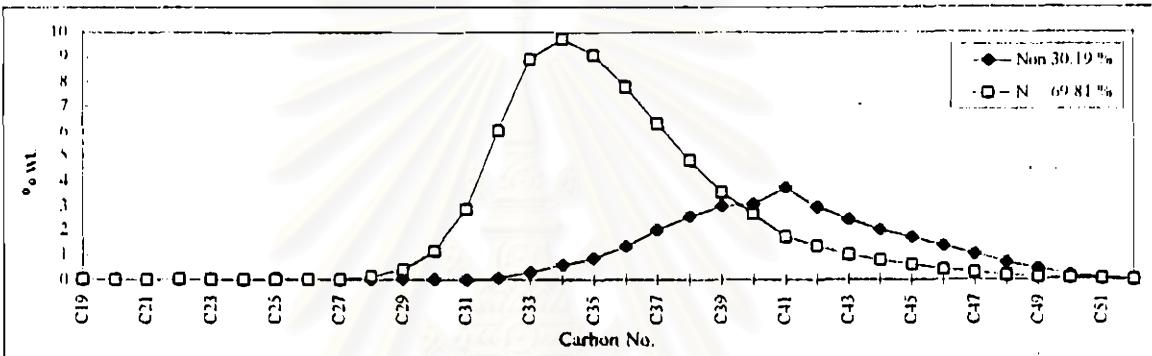
**Figure C4** Carbon distribution curves of fractionated wax from fractionation of 500SW slack wax at 40 °C**Figure C5** Carbon distribution curves of fractionated wax from fractionation of 500SW slack wax at 30 °C**Figure C6** Carbon distribution curves of fractionated wax from fractionation of 500SW slack wax at 20 °C**Figure C7** Carbon distribution curves of fractionated wax from fractionation of 500SW slack wax at 10 °C

**Figure C8** Carbon distribution curves of fractionated wax from fractionation of 500SW slack wax at 0 °C**Figure C9** Carbon distribution curves of fractionated oil from fractionation of 500SW slack wax at -10 °C**Figure C10** Carbon distribution curves of fractionated oil from fractionation of 500SW slack wax at -20 °C**Figure C11** Carbon distribution curves of residual oil from fractionation of 500SW slack wax

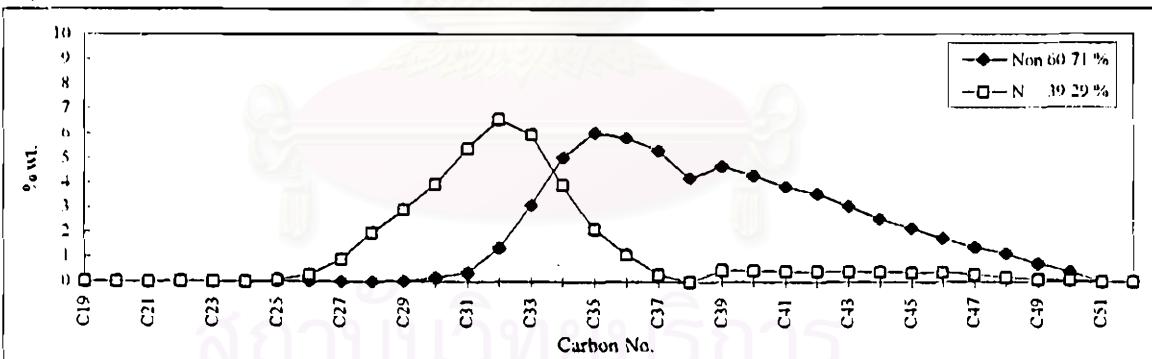
**Figure C12 Carbon distribution curves of wax cake from fractionation of 600SW slack wax**



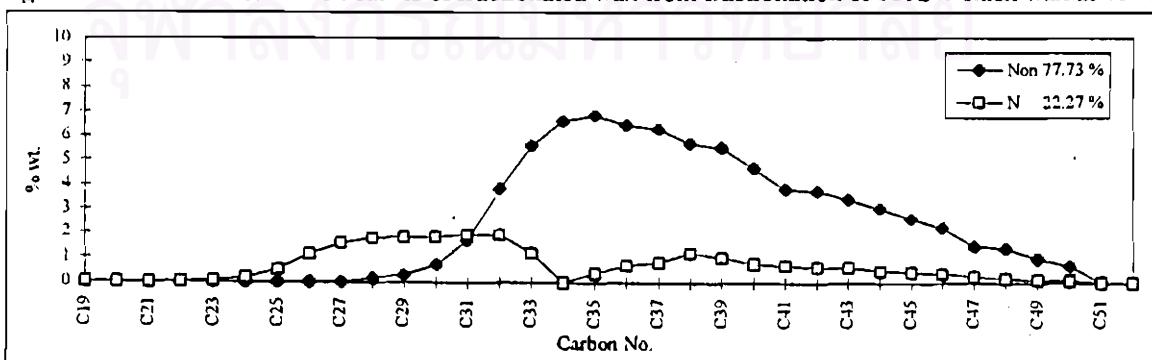
**Figure C13 Carbon distribution curves of fractionated wax from fractionation of 600SW slack wax at 60 °C**



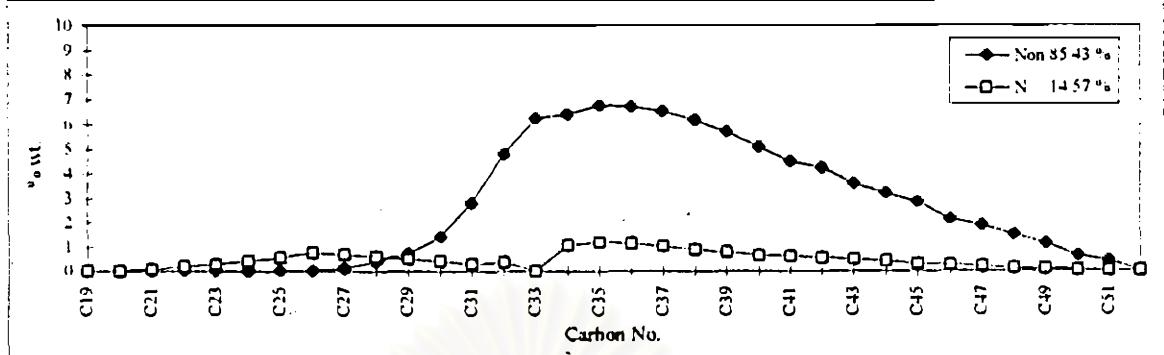
**Figure C14 Carbon distribution curves of fractionated wax from fractionation of 600SW slack wax at 50 °C**



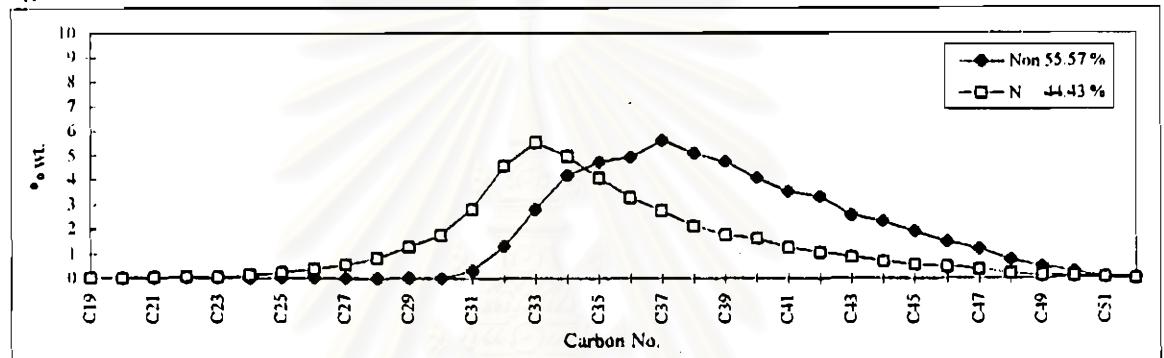
**Figure C15 Carbon distribution curves of fractionated wax from fractionation of 600SW slack wax at 40 °C**



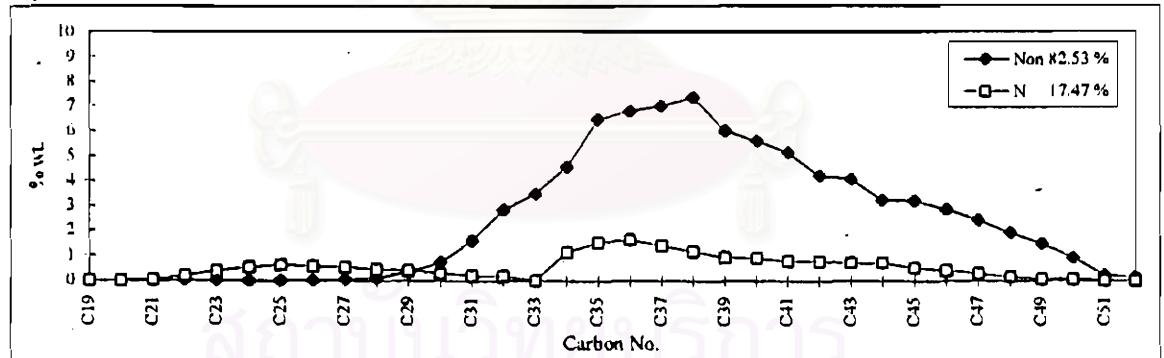
**Figure C16 Carbon distribution curves of fractionated wax from fractionation of 600SW slack wax at 30 °C**



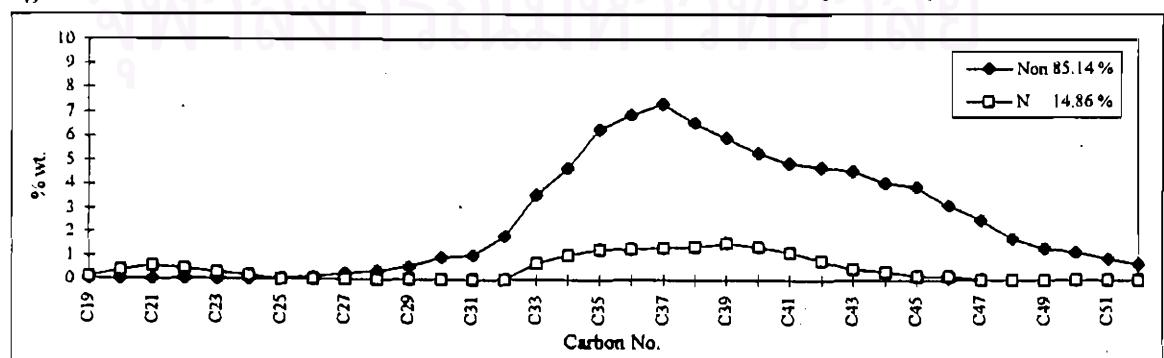
**Figure C17 Carbon distribution curves of fractionated wax from fractionation of 600SW slack wax at 20 °C**



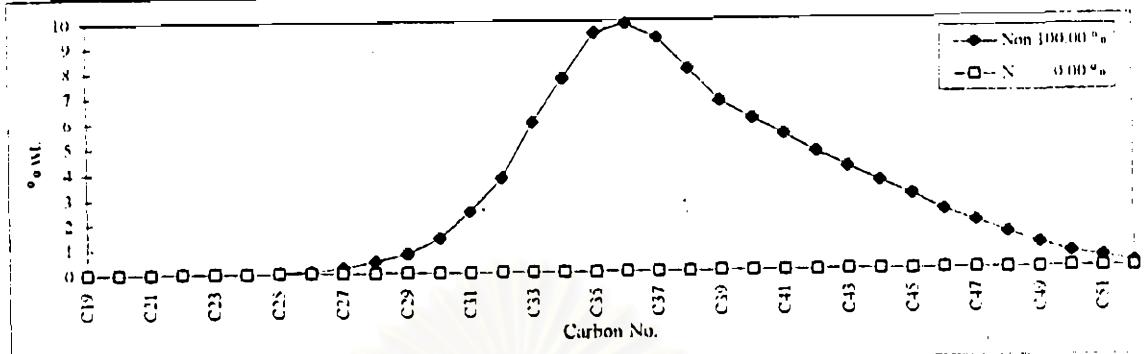
**Figure C18 Carbon distribution curves of fractionated wax from fractionation of 600SW slack wax at 10 °C**



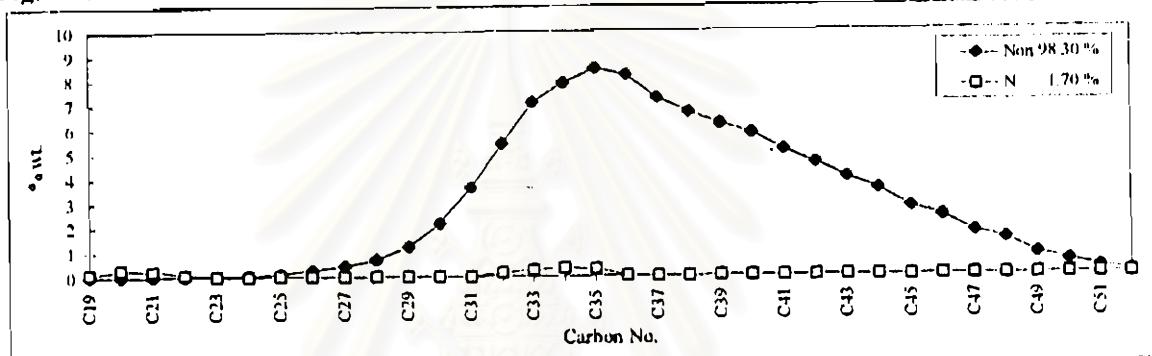
**Figure C19 Carbon distribution curves of fractionated wax from fractionation of 600SW slack wax at 0 °C**



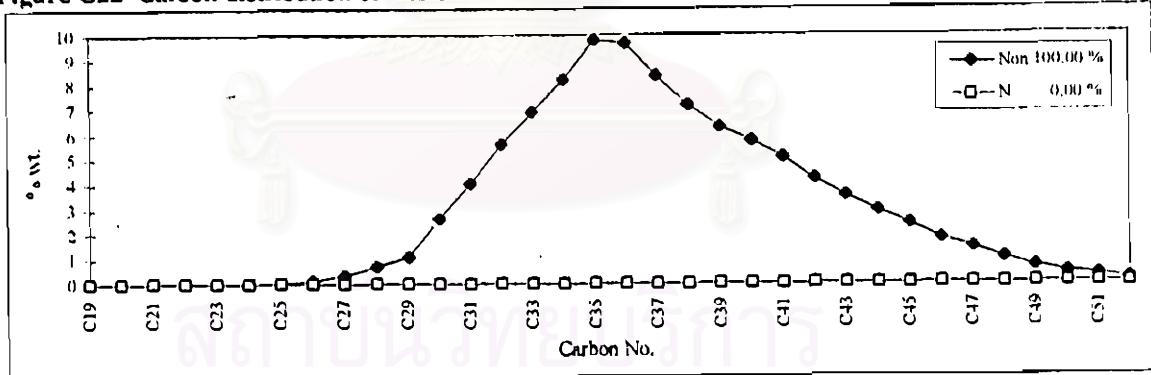
**Figure C20 Carbon distribution curves of fractionated oil from fractionation of 600SW slack wax at -10 °C**



**Figure C21 Carbon distribution curves of fractionated oil from fractionation of 600SW slack wax at -20 °C**



**Figure C22 Carbon distribution curves of residual oil from fractionation of 600SW slack wax**



## VITA



Mr. Chakrapong Saengarun was born on July 30, 1965 in Bangkok. He received his Bachelor of Science Degree in Chemistry from the Department of Chemistry, Faculty of Science, Ramkhamhaeng University in 1988. He began his master's degree study in the Program of Petrochemistry and Polymer science, Faculty of Science, Chulalongkorn University, in 1997 and completed the program in 2000.

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