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APPENDIX I
ANALYSIS OF VARIANCE TABLES

FIGURE	TIME	SOURCE	DF	MEAN SQUARE	PROBABILITY LESS THAN (not significant: ns)
4.1	24h	GM*	1	0.0027	ns
		T**	4	0.0027	
		E***	10	0.0027	
4.1	30	GM	1	0.0108	ns
		T	4	0.0040	
		E	10	0.0054	
4.1	36	GM	1	0.0795	ns
		T	4	0.0072	
		E	10	0.0135	
4.1	42	GM	1	2.0917	ns
		T	4	0.0436	
		E	10	0.0192	
4.1	48	GM	1	6.1480	0.05
		T	4	0.1155	
		E	10	0.0211	
4.1	54	GM	1	14.0293	0.001
		T	4	0.2713	
		E	10	0.0187	
4.1	60	GM	1	16.6992	0.001
		T	4	0.1889	
		E	10	0.0096	
4.1	66	GM	1	20.6423	0.01
		T	4	0.1697	
		E	10	0.0199	
4.1	72	GM	1	22.1198	0.05
		T	4	0.1388	
		E	10	0.0259	
4.1	78	GM	1	23.2912	0.05
		T	4	0.1339	
		E	10	0.0323	
4.1	90	GM	1	24.7764	ns
		T	4	0.0918	
		E	10	0.0267	
4.1	102	GM	1	25.9587	0.01
		T	4	0.0906	
		E	10	0.0148	
4.1	114	GM	1	25.9587	0.01
		T	4	0.0906	
		E	10	0.0148	

* Grand Mean

** Between Treatments

*** Error

APPENDIX I continued

FIGURE	TIME	SOURCE	DF	MEAN SQUARE	PROBABILITY LESS THAN
4.2	48h	GM	1	51.9684	
		T	4	1.3684	0.05
		E	10	0.3418	
4.2	72	GM	1	929.5257	
		T	4	51.3436	0.001
		E	10	4.3282	
4.2	96	GM	1	3636.6850	
		T	4	221.4339	0.001
		E	10	11.0774	
4.2	120	GM	1	12100.6720	
		T	4	858.8280	0.001
		E	10	65.4926	
4.3	31	GM	1	1.7320	
		T	2	0.0428	ns
		E	9	0.0233	
4.3	36	GM	1	4.4105	
		T	2	0.0349	ns
		E	9	0.0139	
4.3	48	GM	1	12.1439	
		T	2	0.0560	0.05
		E	9	0.0082	
4.3	54	GM	1	13.3956	
		T	2	0.0294	0.05
		E	9	0.0052	
4.3	60	GM	1	14.7001	
		T	2	0.0061	ns
		E	9	0.0055	
4.3	70	GM	1	17.2166	
		T	2	0.0103	ns
		E	9	0.0166	
4.3	78	GM	1	17.5689	
		T	2	0.0156	ns
		E	9	0.0118	
4.3	94 119	GM	1	18.1861	
		T	2	0.0027	ns
		E	9	0.0146	
4.4	120	GM	1	43525.8130	
		T	2	56.7981	ns
		E	9	17.1200	

APPENDIX I continued

FIGURE	TIME	SOURCE	DF	MEAN SQUARE	PROBABILITY LESS THAN
4.5	24h	GM	1	0.0304	
		T	2	0.0304	0.01
		E	9	0.0033	
4.5	30	GM	1	0.6961	
		T	2	0.1720	0.01
		E	9	0.0123	
4.5	36	GM	1	4.0036	
		T	2	0.0653	ns
		E	9	0.0159	
4.5	46	GM	1	11.7410	
		T	2	0.0106	ns
		E	9	0.0238	
4.5	54	GM	1	13.9330	
		T	2	0.0015	ns
		E	9	0.0138	
4.5	70	GM	1	15.5081	
		T	2	0.0008	ns
		E	9	0.0061	
4.5	95	GM	1	15.6182	
		T	2	0.0003	ns
		E	9	0.0056	
4.5	120	GM	1	16.4563	
		T	2	0.0093	ns
		E	9	0.0133	
4.6	120	GM	1	56124.9380	
		T	2	130.2600	ns
		E	9	81.6406	
4.7	24	GM	1	0.0228	
		T	3	0.0092	ns
		E	12	0.0059	
4.7	31	GM	1	2.1763	
		T	3	0.0405	ns
		E	12	0.0231	
4.7	36	GM	1	5.8289	
		T	3	0.0279	ns
		E	12	0.0134	
4.7	48	GM	1	15.9392	
		T	3	0.0627	0.05
		E	12	0.0119	
4.7	54	GM	1	17.6946	
		T	3	0.0570	0.01
		E	12	0.0093	

APPENDIX I continued

FIGURE	TIME	SOURCE	DF	MEAN SQUARE	PROBABILITY LESS THAN
4.7	60h	GM	1	19.9027	
		T	3	0.0191	ns
		E	12	0.0099	
4.7	70	GM	1	21.7183	
		T	3	0.0160	ns
		E	12	0.0092	
4.7	78	GM	1	22.1604	
		T	3	0.0137	ns
		E	12	0.0112	
4.7	94	GM	1	23.5081	
		T	3	0.0219	ns
		E	12	0.0188	
4.7	120	GM	1	23.8340	
		T	3	0.0215	ns
		E	12	0.0197	
4.8a	20	GM	1	0.0745	
		T	3	0.0051	ns
		E	12	0.0128	
4.8a	48	GM	1	34.3292	
	72	T	3	0.0313	0.05
	96	E	12	0.0076	
	120				
4.8b	48	GM	1	0.8234	
		T	3	0.0535	0.05
		E	12	0.0151	
4.8b	72	GM	1	5.1164	
		T	3	0.0099	ns
		E	12	0.0145	
4.8b	96	GM	1	5.8364	
		T	3	0.0161	ns
		E	12	0.0296	
4.8b	120	GM	1	7.1819	
		T	3	0.0253	ns
		E	12	0.0170	
4.8c	20	GM	1	1.9256	
		T	3	0.0209	ns
		E	12	0.0310	
4.8c	48	GM	1	12.6934	
		T	3	0.1105	0.01
		E	12	0.0150	

APPENDIX I continued

FIGURE	TIME	SOURCE	DF	MEAN SQUARE	PROBABILITY LESS THAN
4.8c	72 h	GM	1	20.4644	0.05
		T	3	0.0581	
		E	12	0.0164	
4.8c	96	GM	1	21.0148	ns
		T	3	0.0469	
		E	12	0.0162	
4.8c	120	GM	1	21.4003	ns
		T	3	0.0502	
		E	12	0.0158	
4.8d	48	GM	1	20.0429	ns
		T	3	0.0243	
		E	12	0.0219	
4.8d	72	GM	1	23.1610	ns
		T	3	0.0165	
		E	12	0.0111	
4.8d	96	GM	1	25.4994	ns
		T	3	0.0314	
		E	12	0.0250	
4.8e	48	GM	1	0.6818	ns
		T	3	0.0204	
		E	12	0.0212	
4.8e	72	GM	1	8.6971	ns
		T	3	0.0210	
		E	12	0.0119	
4.8e	96	GM	1	18.1700	ns
		T	3	0.0003	
		E	12	0.0212	
4.8e	120	GM	1	20.1667	ns
		T	3	0.0040	
		E	12	0.0197	
4.8f	24	GM	1	12.4132	ns
		T	3	0.0203	
		E	12	0.0120	
4.8f	30	GM	1	15.9348	ns
		T	3	0.0130	
		E	12	0.0159	
4.8f	48	GM	1	20.1175	ns
		T	3	0.0251	
		E	12	0.0187	
4.8f	72	GM	1	21.7247	ns
		T	3	0.0164	
		E	12	0.0159	

APPENDIX I continued

FIGURE	TIME	SOURCE	DF	MEAN SQUARE	PROBABILITY LESS THAN
4.8f	96h	GM	1	22.1167	ns
		T	3	0.0229	
		E	12	0.0142	
4.8f	120	GM	1	22.8757	0.05
		T	3	0.0452	
		E	12	0.0109	
4.8g	24	GM	1	11.3035	0.05
		T	3	0.0582	
		E	12	0.0129	
4.8g	30	GM	1	17.9122	ns
		T	3	0.0218	
		E	12	0.0063	
4.8g	48	GM	1	20.6695	ns
		T	3	0.0137	
		E	12	0.0089	
4.8g	72	GM	1	20.8221	ns
		T	3	0.0157	
		E	12	0.0096	
4.8g	96	GM	1	21.0947	ns
		T	3	0.0175	
		E	12	0.0103	
4.9	120	GM	1	54890.6330	0.05
		T	3	64.9257	
		E	12	13.9130	
4.10a	120	GM	1	134448.7200	ns
		T	3	50.2630	
		E	12	33.7566	
4.10b	120	GM	1	4804.2228	ns
		T	3	86.4153	
		E	12	32.6353	
4.10c	120	GM	1	21232.1330	0.01
		T	3	47.9523	
		E	12	7.0379	
4.10d	120	GM	1	14228.9110	ns
		T	3	14.9654	
		E	11	5.2017	
4.10e	120	GM	1	49518.4900	0.001
		T	3	80.8015	
		E	12	3.5330	
4.10f	120	GM	1	32925.9170	0.01
		T	3	219.4562	
		E	12	29.4776	

APPENDIX I continued

FIGURE	TIME	SOURCE	DF	MEAN SQUARE	PROBABILITY LESS THAN
4.11	48h	GM	1	33.3387	ns
		T	6	0.0118	
		E	21	0.0097	
4.11	60	GM	1	40.2263	ns
		T	6	0.0021	
		E	21	0.0134	
4.11	72	GM	1	43.6610	ns
		T	6	0.0084	
		E	21	0.0137	
4.11	84	GM	1	45.8569	ns
		T	6	0.0060	
		E	21	0.0145	
4.11	96	GM	1	48.0441	ns
		T	6	0.0143	
		E	21	0.0141	
4.11	120	GM	1	49.4443	ns
		T	6	0.0206	
		E	21	0.0127	
4.12	120	GM	1	89416.9040	0.01
		T	6	248.6558	
		E	21	51.3738	
4.13	2d	GM	1	20124.3000	ns
		T	1	0.8333	
		A*	2	2193.7000	
		TA**	2	22.6333	
		E	23	29.0956	
4.13	4d	GM	1	26522.1333	ns
		T	1	2.1333	
		A	2	3294.5333	
		TA	2	32.5333	
		E	23	29.8956	
4.13	6d	GM	1	34222.5185	ns
		T	1	0.0520	
		A	2	4184.2937	
		TA	2	32.8270	
		E	23	30.8152	
4.13	8d	GM	1	47104.2187	ns
		T	1	5.8520	
		A	2	5351.8187	
		TA	2	13.2520	
		E	23	41.5804	

* Between Ages

** Treatments x Ages

APPENDIX I continued

FIGURE	TIME	SOURCE	DF	MEAN SQUARE	PROBABILITY LESS THAN
4.14	2d	GM	1	896.5333	
		T	1	1.2000	ns
		A	2	360.5333	0.001
		TA	2	1.2000	ns
		E	24	1.4500	
4.14	4d	GM	1	2900.8333	
		T	1	0.8333	ns
		A	2	1030.8333	0.001
		TA	2	0.4333	ns
		E	23	2.9913	
4.14	6d	GM	1	4985.8521	
		T	1	1.5187	ns
		A	2	1471.4770	0.001
		TA	2	0.7937	ns
		E	23	2.9195	
4.14	8d	GM	1	8308.3520	
		T	1	12.3520	ns
		A	2	2370.7770	0.001
		TA	2	4.8270	ns
		E	23	5.4413	
4.15	8d	GM	1	0.5631	
		T	1	0.0004	ns
		A	2	0.1387	0.001
		TA	2	0.0007	ns
		E	23	0.0019	
4.16	8d	GM	1	0.2458	
		T	2	0.0110	0.05
		A	1	0.0547	0.001
		TA	2	0.0170	0.01
		E	23	0.0024	
4.17	8d	GM	1	133048.8281	
		T	1	31.8781	ns
		A	1	24168.6281	0.001
		TA	1	2.2781	ns
		E	15	66.7966	
4.18	30h	GM	1	0.0793	
		T	1	0.0238	ns
		E	8	0.0125	
4.18	45	GM	1	9.6323	
		T	1	0.0491	0.01
		E	8	0.0035	
4.18	73	GM	1	14.9021	
		T	1	0.0287	ns
		E	8	0.0072	
4.18	93	GM	1	16.6929	
		T	1	0.0492	ns
		E	8	0.0114	

APPENDIX I continued

FIGURE	TIME	SOURCE	DF	MEAN SQUARE	PROBABILITY LESS THAN
4.18	120h	GM	1	16.8664	
		T	1	0.0402	ns
		E	8	0.0118	
4.19	30	GM	1	1.8998	
		T	2	0.0389	ns
		E	12	0.0118	
4.19	48	GM	1	19.2222	
		T	2	0.0021	ns
		E	12	0.0235	
4.19	73	GM	1	23.1033	
		T	2	0.0118	ns
		E	12	0.0214	
4.19	98	GM	1	23.9891	
		T	2	0.0041	ns
		E	12	0.0190	
4.19	120	GM	1	24.5766	
		T	2	0.0063	ns
		E	12	0.0152	
4.20	120	GM	1	33572.7540	
		T	1	38.8085	ns
		E	8	26.4961	
4.21	120	GM	1	34920.3790	
		T	2	52.7281	ns
		E	12	40.4812	
4.22	48	GM	1	39.3054	
		T	5	0.0110	ns
		E	24	0.0129	
4.22	66	GM	1	46.5409	
		T	5	0.0179	ns
		E	24	0.0200	
4.22	88	GM	1	50.8105	
		T	5	0.0220	ns
		E	24	0.0203	
4.22	117	GM	1	51.7656	
		T	5	0.0157	ns
		E	24	0.0223	
4.23	120	GM	1	145912.8200	
		T	5	33.5245	ns
		E	24	69.3306	

APPENDIX I continued

FIGURE	TIME	SOURCE	DF	MEAN SQUARE	PROBABILITY LESS THAN
4.24	48h	GM	1	13.4752	
		T	2	0.0183	ns
		E	9	0.0064	
4.24	72	GM	1	18.6221	
		T	2	0.0023	ns
		E	9	0.0017	
4.24	120	GM	1	19.1262	
		T	2	0.0002	ns
		E	9	0.0020	
4.25	120	GM	1	95130.3359	
		T	2	92.8580	ns
		E	9	54.4473	
4.26	36	GM	1	3.2106	
		T	4	0.0942	0.01
		E	15	0.0147	
4.26	46	GM	1	17.4560	
		T	4	0.0176	ns
		E	15	0.0142	
4.26	52	GM	1	25.6313	
		T	4	0.0219	ns
		E	15	0.0285	
4.26	75	GM	1	30.5365	
		T	4	0.0158	ns
		E	15	0.0230	
4.26	120	GM	1	31.4915	
		T	4	0.0113	ns
		E	15	0.0198	
4.27	22	GM	1	2.7141	
		T	4	0.0437	0.01
		E	15	0.0076	
4.27	28	GM	1	18.9702	
		T	4	0.0266	ns
		E	15	0.0135	
4.27	36	GM	1	27.9154	
		T	4	0.0099	ns
		E	15	0.0119	
4.27	46	GM	1	32.1315	
		T	4	0.0116	ns
		E	15	0.0235	
4.27	52	GM	1	33.5146	
		T	4	0.0097	ns
		E	15	0.0277	

APPENDIX I continued

FIGURE	TIME	SOURCE	DF	MEAN SQUARE	PROBABILITY LESS THAN
4.27	75h	GM	1	37.8789	
		T	4	0.0049	ns
		E	15	0.0288	
4.27	120	GM	1	38.3829	
		T	4	0.0039	ns
		E	15	0.0250	
4.28	74	GM	1	13.3207	
		T	3	0.5511	0.001
		E	12	0.0098	
4.28	120	GM	1	131651.2800	
		T	4	233.6136	0.001
		E	15	23.5911	
4.29	120	GM	1	206601.6000	
		T	4	141.8718	ns
		E	15	58.7781	
4.30a	120	GM	1	16.9339	
		T	4	0.3979	0.001
		E	15	0.0089	
4.30b	120	GM	1	29.5043	
		T	4	0.1557	0.01
		E	15	0.0192	
4.31a	120	GM	1	15978.7700	
		T	4	1919.1466	0.001
		E	15	180.6163	
4.31b	120	GM	1	41822.8290	
		T	4	1669.3205	0.001
		E	15	57.8400	
4.32	120	GM	1	16665.4970	
		T	4	324.8879	0.001
		E	15	10.0581	
4.33	48	GM	1	17.1780	
		T	10	1.0255	0.001
		E	33	0.0295	
4.33	72	GM	1	38.0088	
		T	10	0.3912	0.001
		E	33	0.0212	
4.33	96	GM	1	47.6461	
		T	10	0.2101	0.001
		E	33	0.0184	

APPENDIX I continued

FIGURE	TIME	SOURCE	DF	MEAN SQUARE	PROBABILITY LESS THAN
4.33	120h	GM	1	51.7287	
		T	10	0.1910	0.001
		E	33	0.0186	
4.34	120	GM	1	41101.3670	
		T	10	2361.7974	0.001
		E	33	41.2909	
4.35	120	GM	1	19781.2970	
		T	10	969.1274	0.001
		E	33	7.7785	
5.1	24	GM	1	0.3242	
		T	3	0.1417	0.001
		E	12	0.0039	
5.1	48	GM	1	10.6481	
		T	3	0.6794	0.001
		E	12	0.0096	
5.1	120	GM	1	16.7837	
		T	3	0.3313	0.001
		E	12	0.0151	
5.2	120	GM	1	30542.8049	
		T	3	2295.0798	0.001
		E	12	46.3176	
5.3	120	GM	1	27157.3925	
		T	3	318.5833	0.001
		E	12	8.3927	

APPENDIX II
MASS SPECTROMETER TOTAL ION CURRENT (RIC) RECORDINGS

Suncross 53 sunflower leaf wash solution (July sampling),
Scans 1 to 700.

191.

SCAN
23:20 TTMF

20:00
600

1E:40
500

1E:20
400

10:00
300

6:40
200

3:20
100

619
584

490
516

363
310

195
258

115
195

51
115

444

363

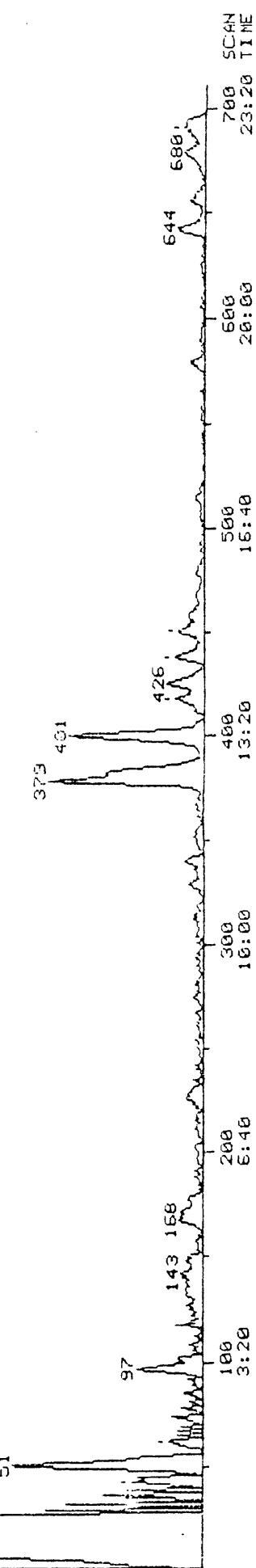
RIC

427

100.0

Australian biotype sunflower leaf wash solution (July
sampling), Scans 1 to 700.

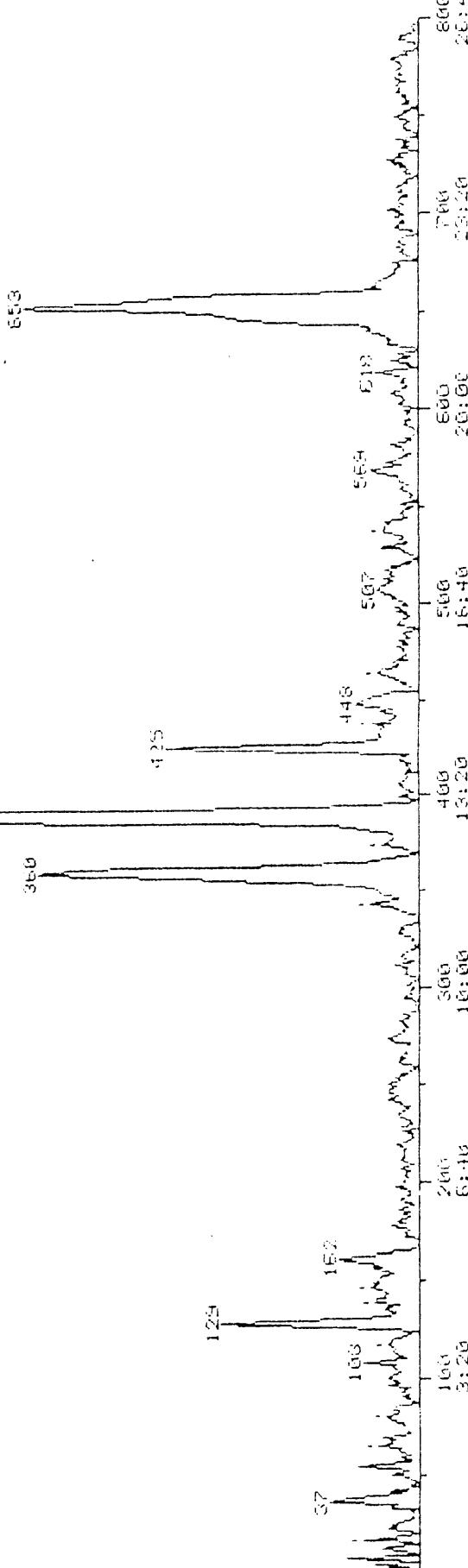
192.



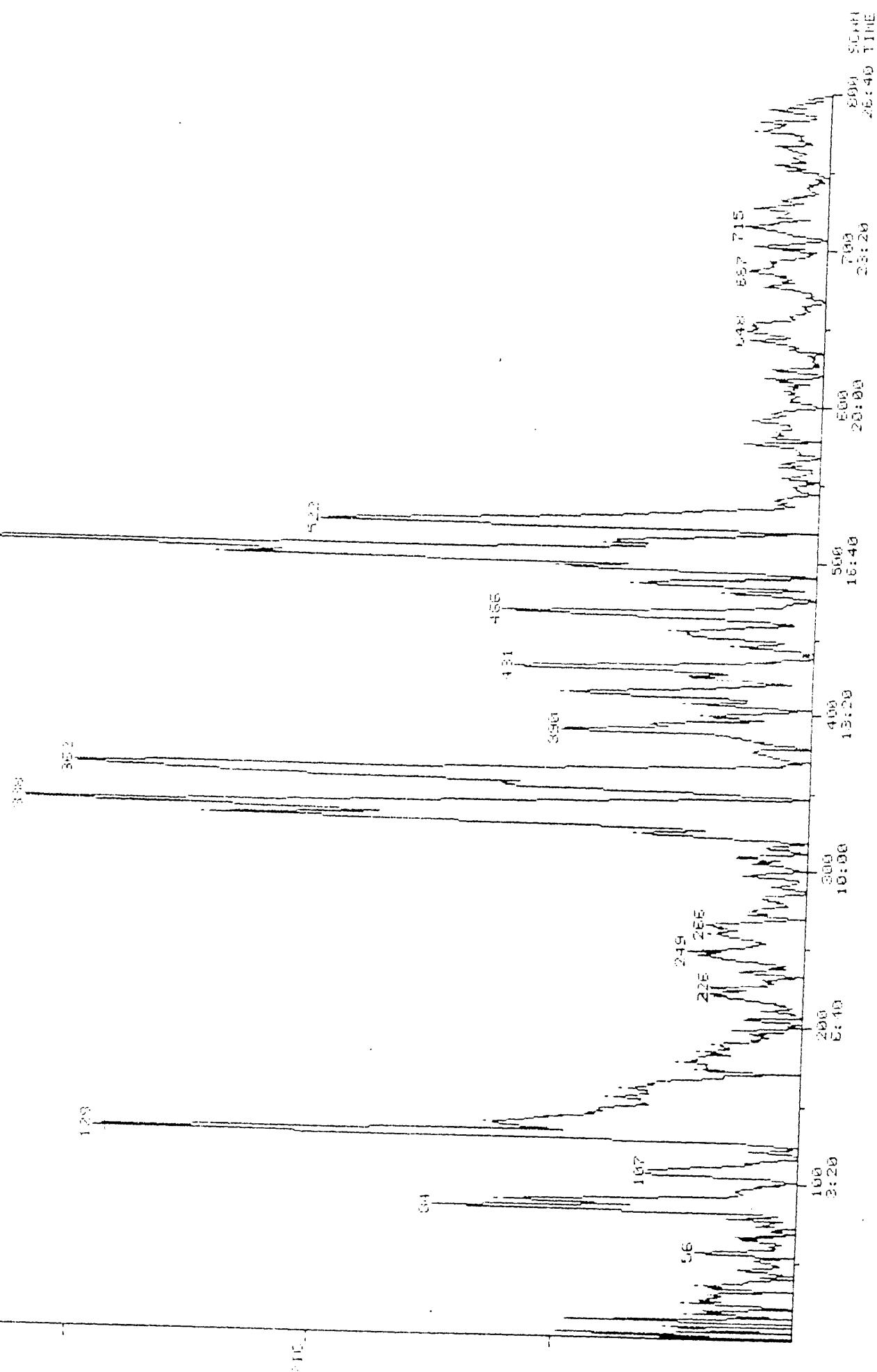
RIC

100.0

Suncross 53 sunflower leaf wash solution (April sampling),
Scans 1 to 800.



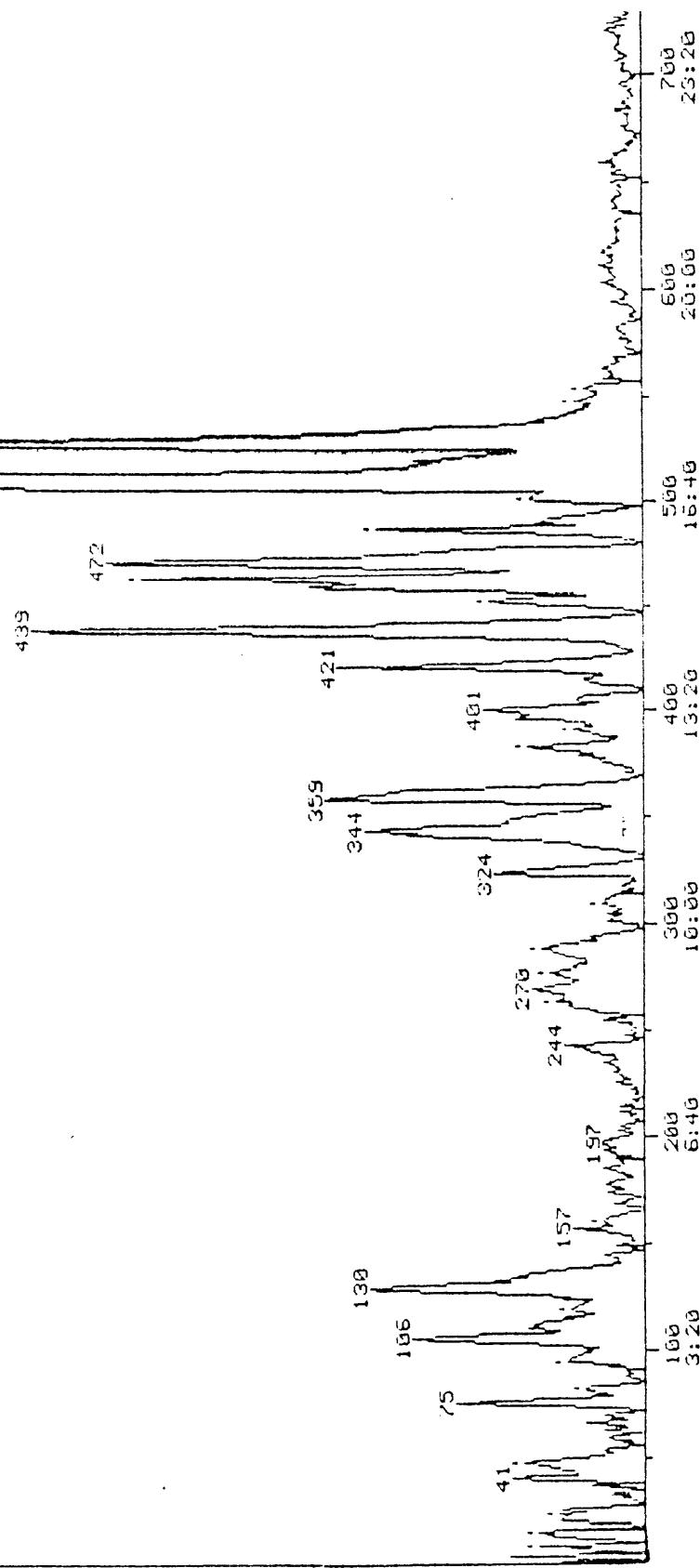
OR1, Suncross 53 sunflower male parent line leaf wash solution
(April sampling), Scans 1 to 800.



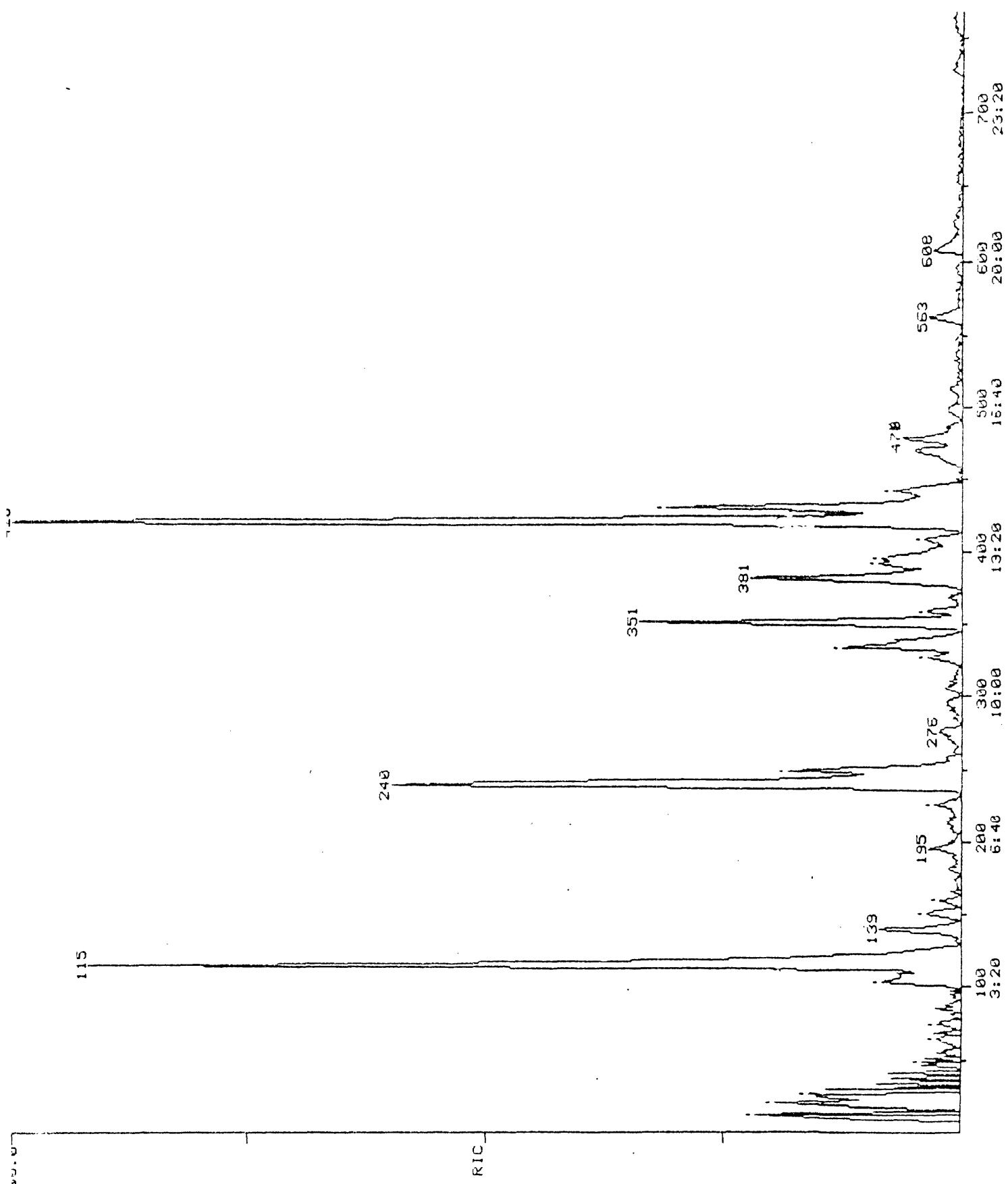
Australian biotype sunflower leaf wash solution (April sampling), Scans 1 to 800.

505

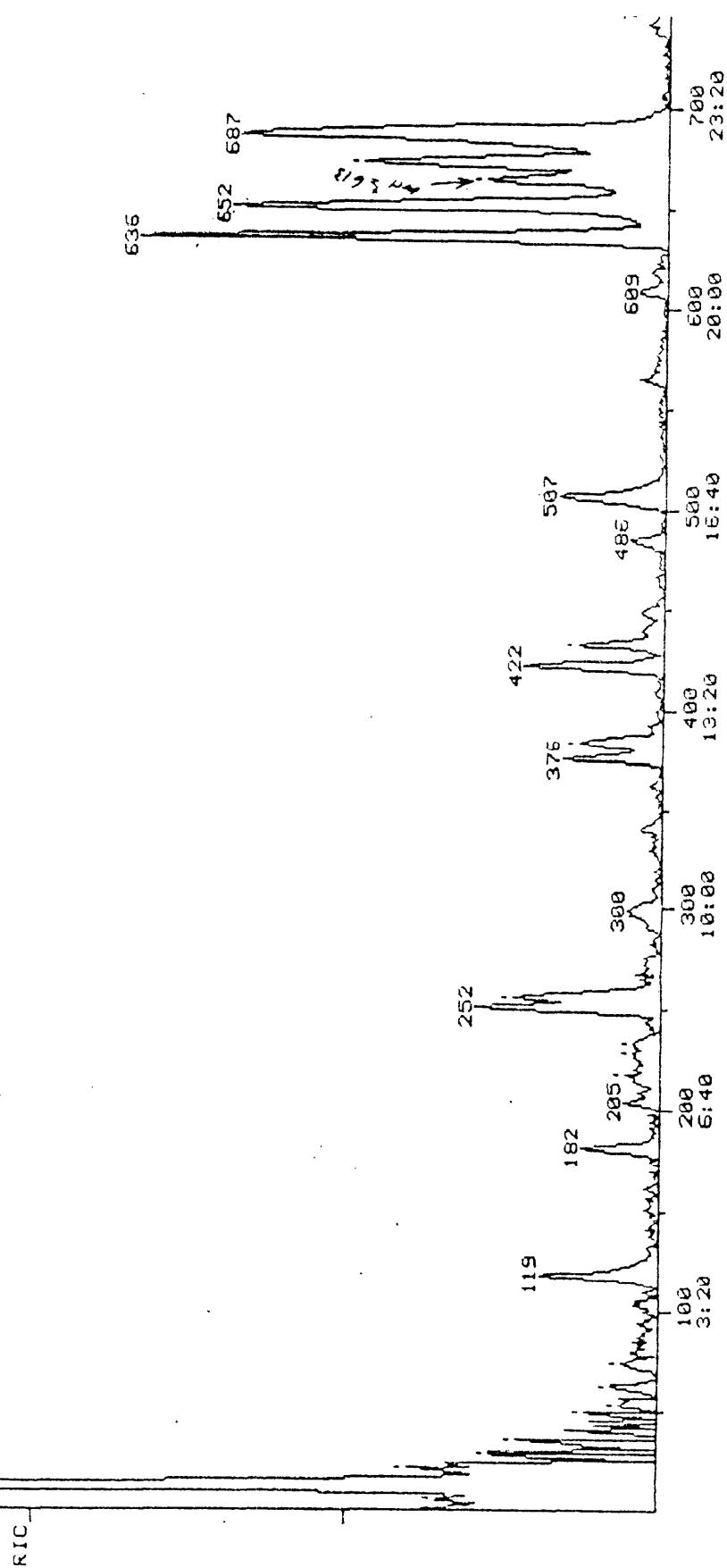
RIC



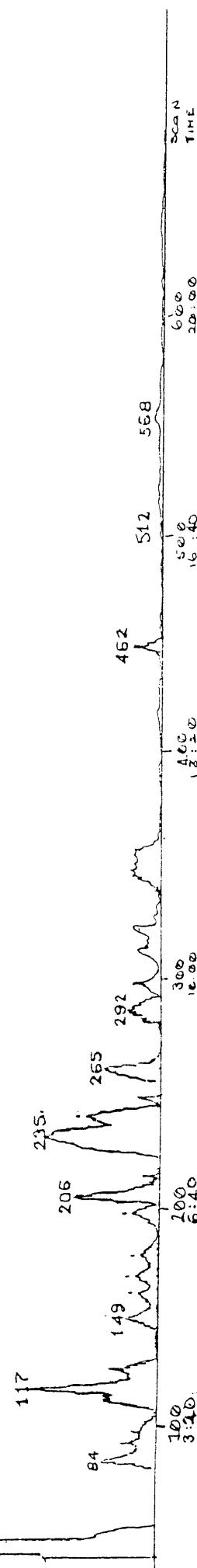
Suncross 53 sunflower macerated leaf solution (July sampling),
Scans 1 to 700.



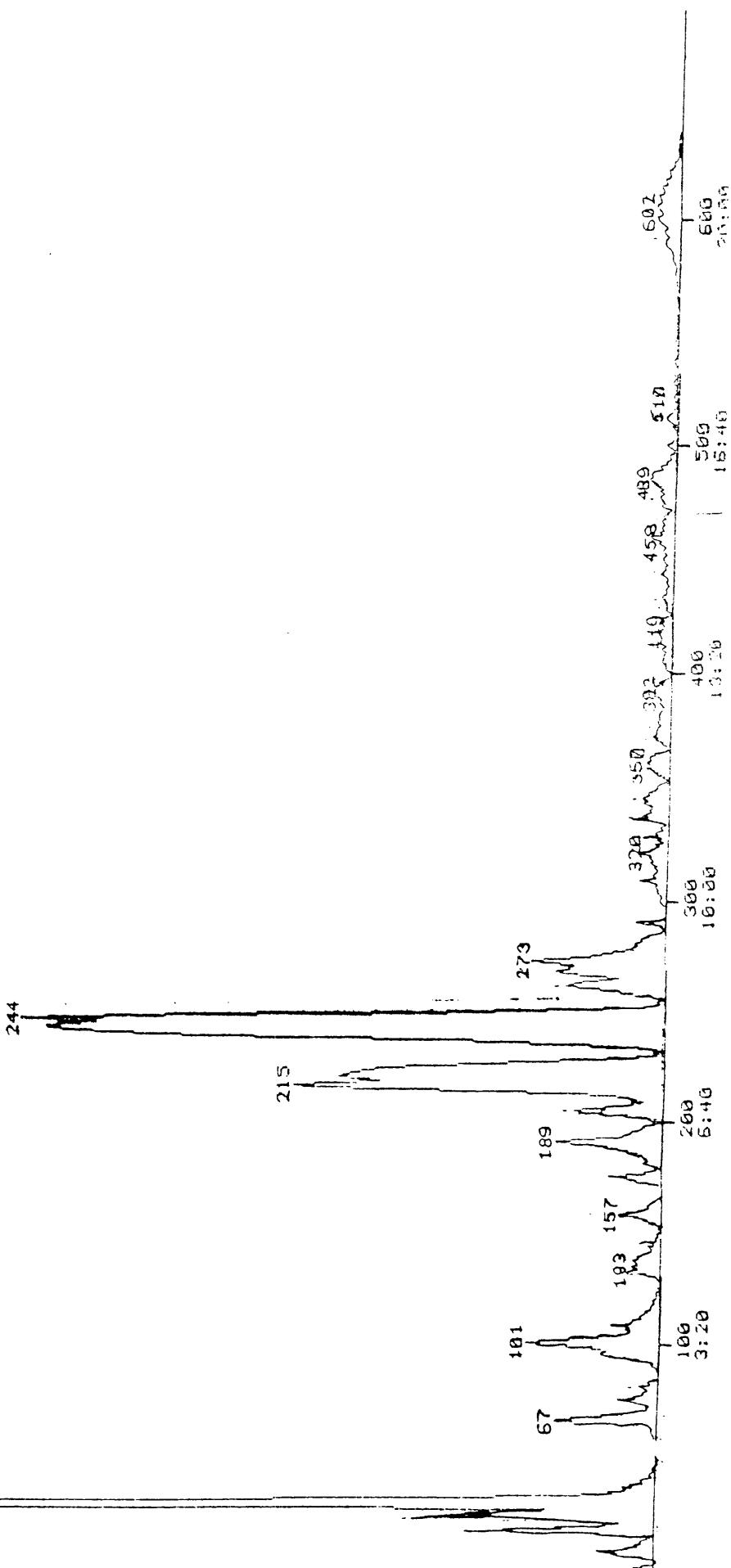
Australian biotype sunflower macerated leaf solution (July sampling), Scans 1 to 700.



Suncross 53 sunflower (three weeks old) leaf wash solution
(June sampling), Scans 1 to 650.



Suncross 53 sunflower (six weeks old) leaf wash solution
(June sampling), Scans 1 to 650.



Suncross 53 sunflower (eight weeks old) leaf wash solution
(June sampling), Scans 1 to 650.

200.

SECTION

5

FIGURE: G 1, P12 L12; 14-24, A 1000 kDa G, 1000 kDa

100.0

RIC

1E3

75

1E3

2E4

1E3

SCAN
TIME

20:00
16:40

500
13:20

400
10:00

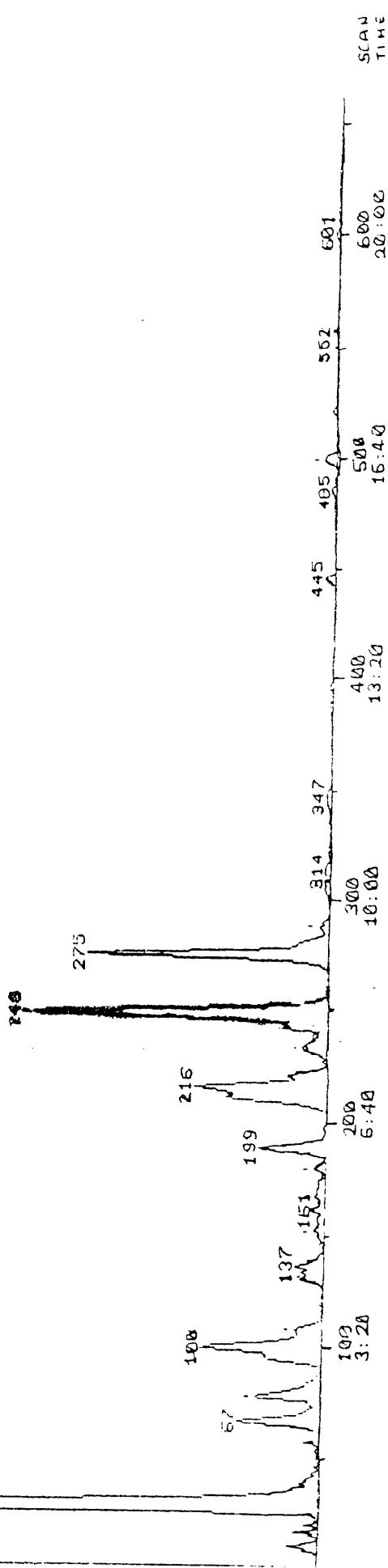
300
05:00

200
00:00

100
3:20

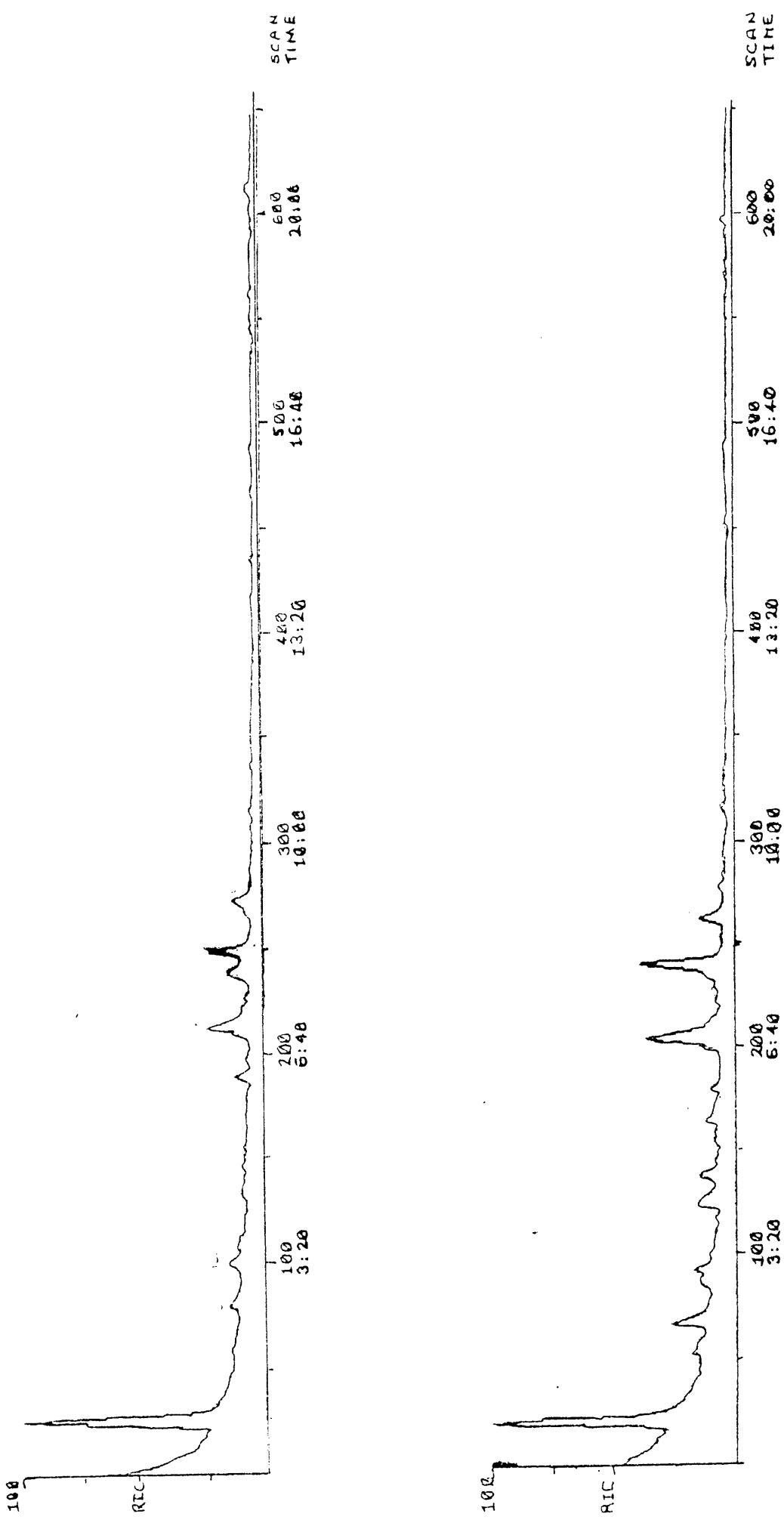
OR1, Suncross 53 sunflower male parent line (three weeks old)
leaf wash solution (June sampling), Scans 1 to 650.

201.



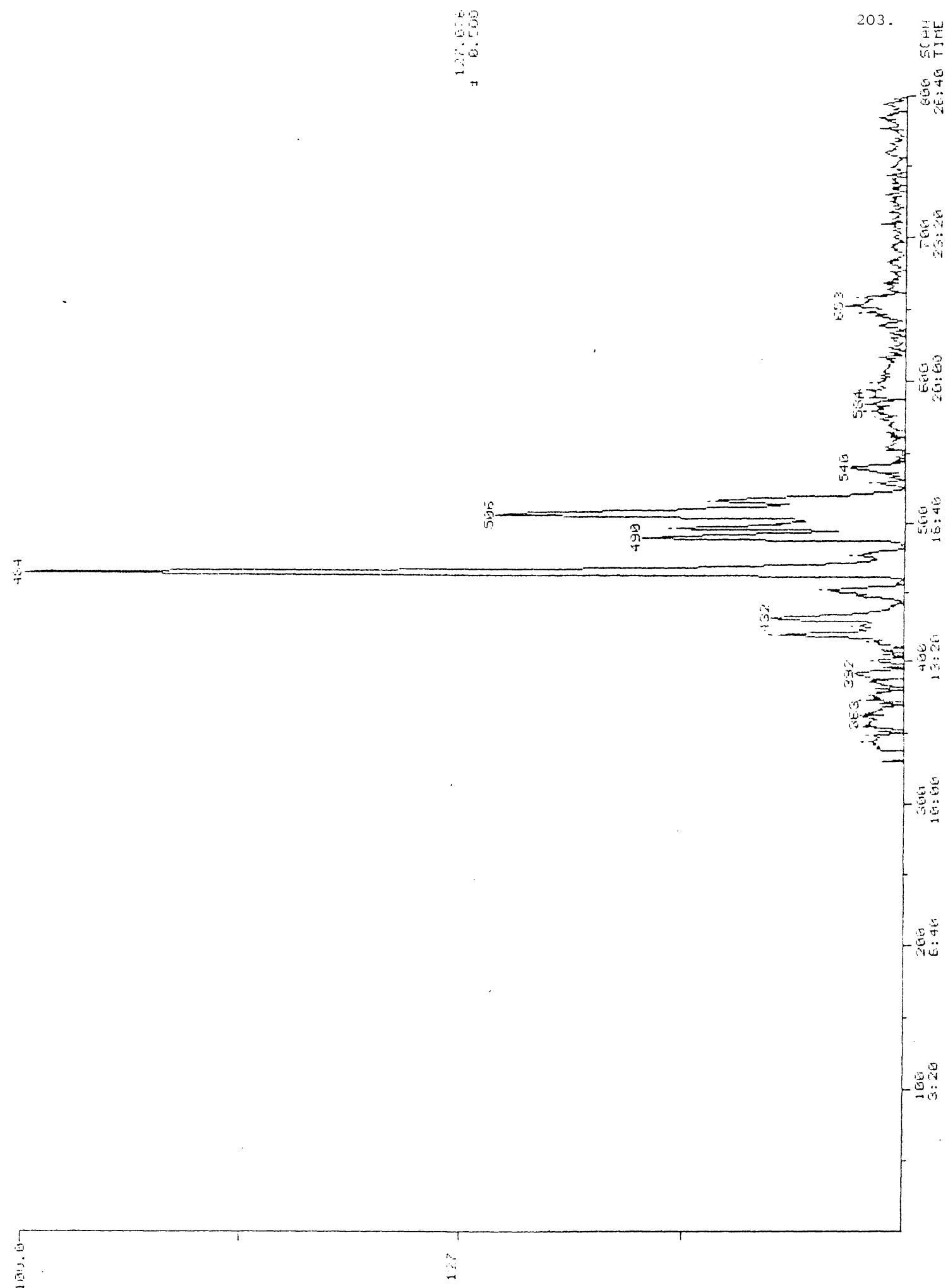
OR1, Suncross 53 sunflower male parent line (six weeks old)
leaf wash solution (June sampling), Scans 1 to 650.

OR1, Suncross 53 sunflower male parent line (eight weeks old)
leaf wash solution (June sampling), Scans 1 to 650.



APPENDIX III
MASS SPECTROMETER MASS CHROMATOGRAM FOR ION MASS 127

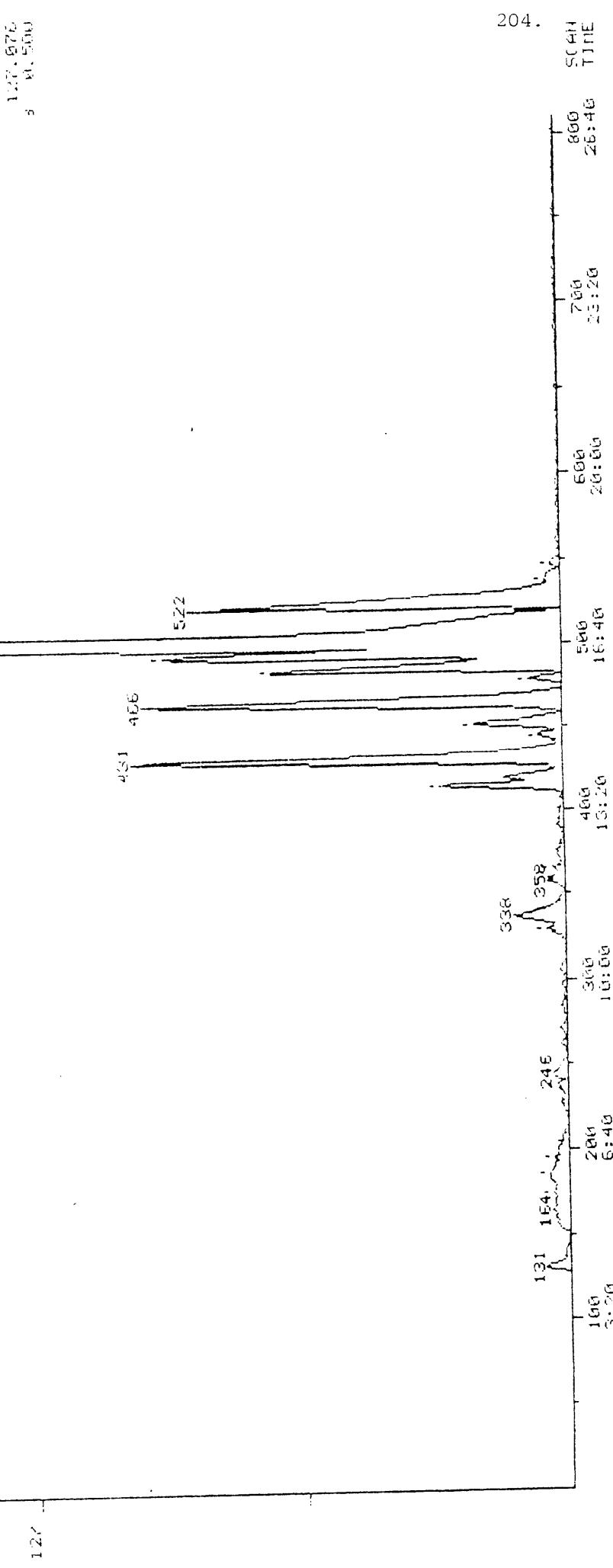
Suncross 53 sunflower leaf wash solution (April sampling),
Scans 1 to 800.



OR1, Suncross 53 sunflower male parent line leaf wash solution
(April sampling), Scans 1 to 310.

150.0 100.0 50.0

5.0



Australian biotype sunflower leaf wash solution (April sampling), Scans 1 to 800.

