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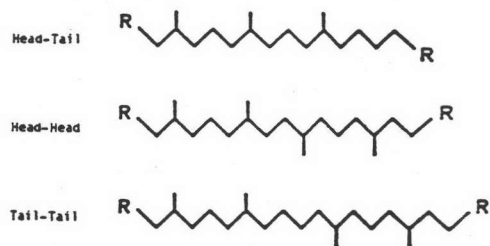
APPENDIX I

MOLECULAR STRUCTURES

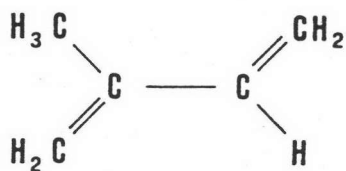
<u>SYMBOL</u>	<u>MOLECULAR STRUCTURE</u>
I	N-ALKANE
II	ISOPRENOID
III	ISOPRENE UNIT
IV	PRISTANE
V	PHYTANE
VI	CHLOROPHYLL
VII	SQUALANE
VIII	PERHYDRO- β -CAROTANE
IX	LYCOPANE
X	BOTRYOCOCCANE
XI	BYCYCLIC SESQUITERPANE
XII	DRIMANE
XIII	EUDESMANE
XIV	8,14-SECOHOPANE
XV	β -AMYRIN
XVI	ABIETANE
XVII	PRIMARANE
XVIII	LABDANE
XIX	PHYLLOCLADANE
XX	KAURANE
XXI	NORABIETANE
XXII	NORPIMARANE
XXIII	EXTENDED TRICYCLIC TERPANE
XXIV	C ₂₃ -TRICYCLIC TERPANE
XXV	TETRACYCLIC TERPANE
XXVI	PENTACYCLIC TERPANE
XXVII	HOPANE-TYPE TRITERPANE
XXVIII	DILOPTENE
XXIX	C ₃₅ -TETRAHYDROXYHOPANE
XXX	Tm, 17 ∞ (H)-22,29,30 TRISNORHOPANE
XXXI	Ts, 18 ∞ (H)-22,29,30 TRISNORHOPANE
XXXII	C ₂₈ -BISNORHOPANE
XXXIII	LUPANE
XXXIV	OLEANANE
XXXV	FERNANE
XXXVI	URSANE
XXXVII	GAMMACERANE
XXXVIII	STERANE
XXXIX	DIASTERANE
XL	METHYLSTERANE
XLI	NAPHTHALENE or ALKYLNAPHTHALENE
XLII	PHENANTHRENE or ALKYLPHENANTHRENE
XLIII	AROMATIC STERANE
XLIV	AROMATIC TRITERPANE



I



II



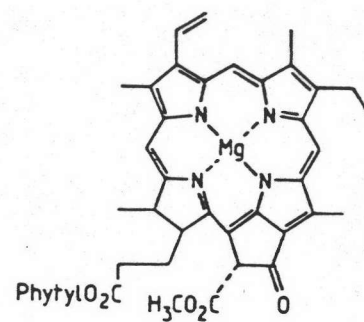
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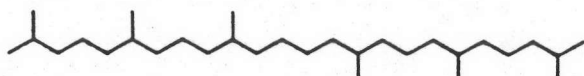
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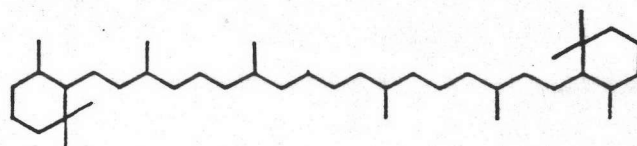
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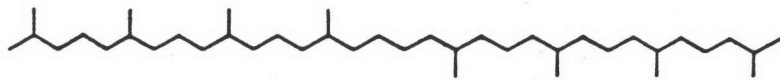
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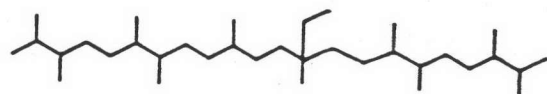
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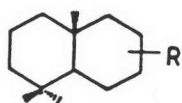
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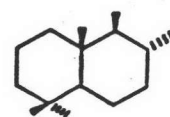
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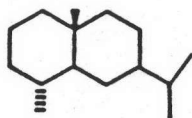
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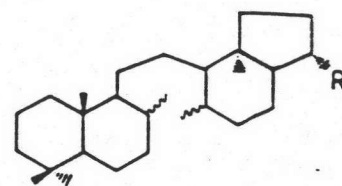
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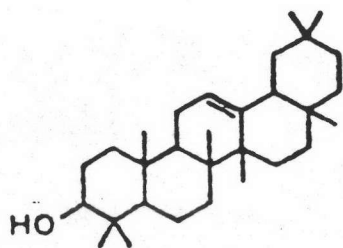
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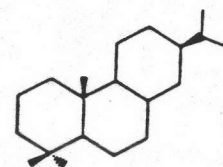
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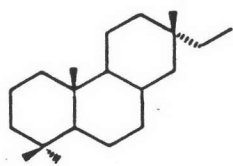
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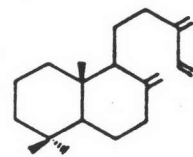
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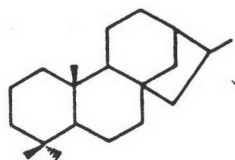
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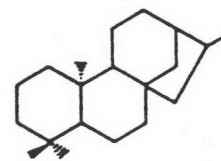
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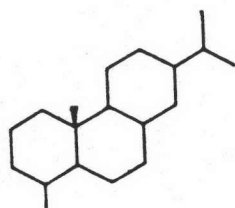
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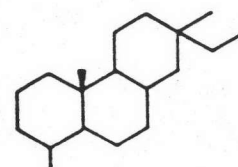
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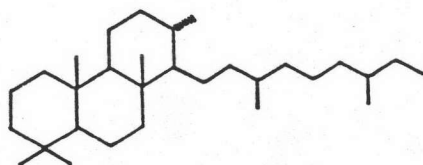
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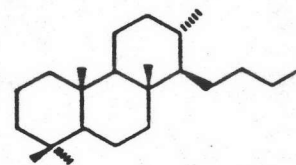
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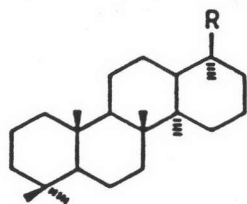
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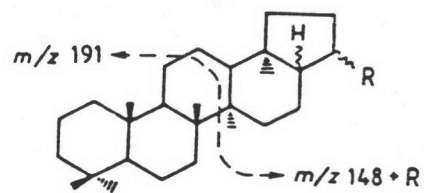
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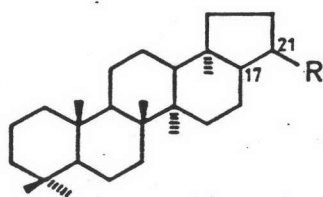
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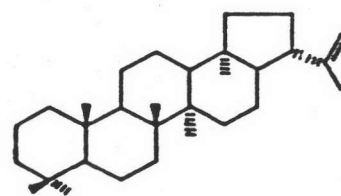
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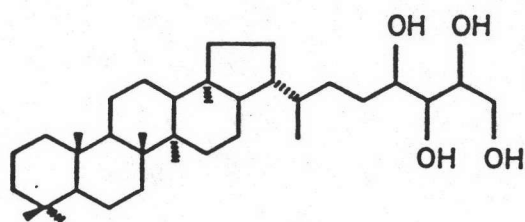
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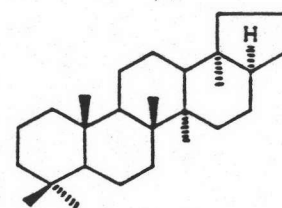
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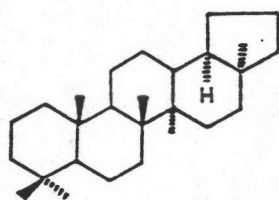
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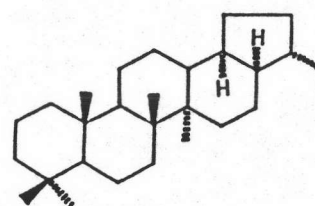
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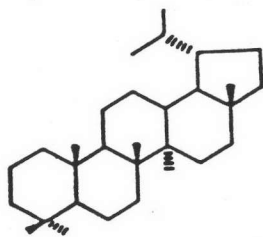
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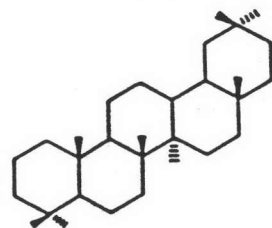
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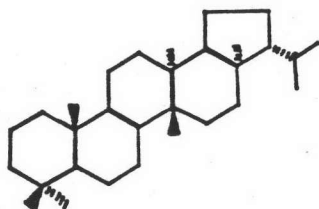
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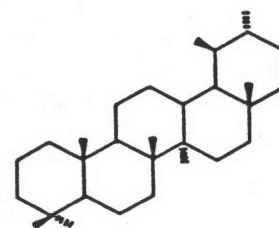
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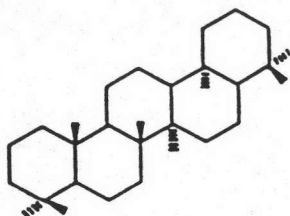
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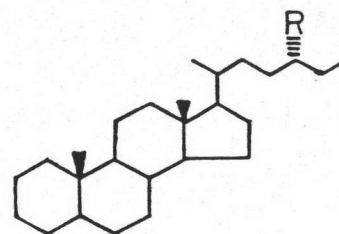
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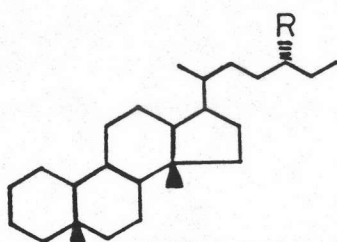
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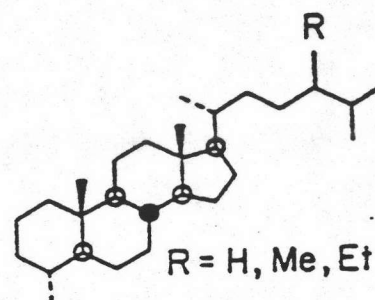
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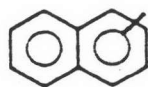


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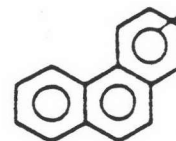


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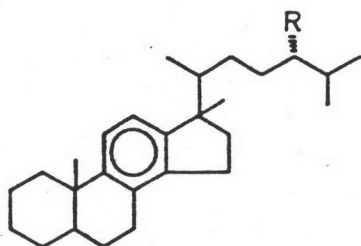
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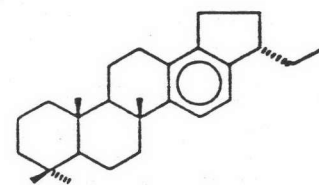
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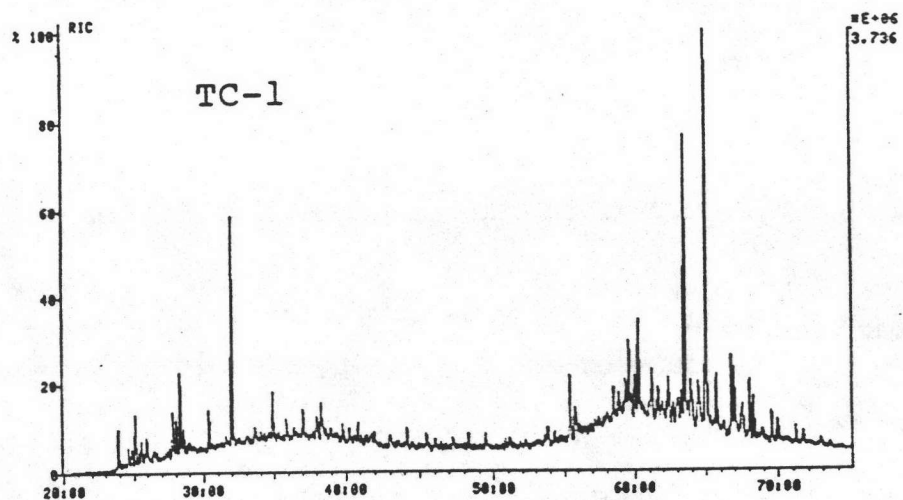
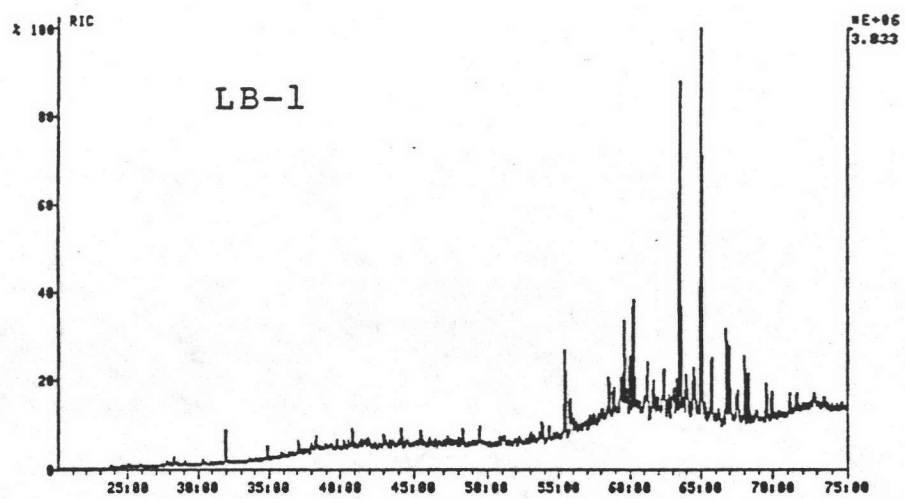
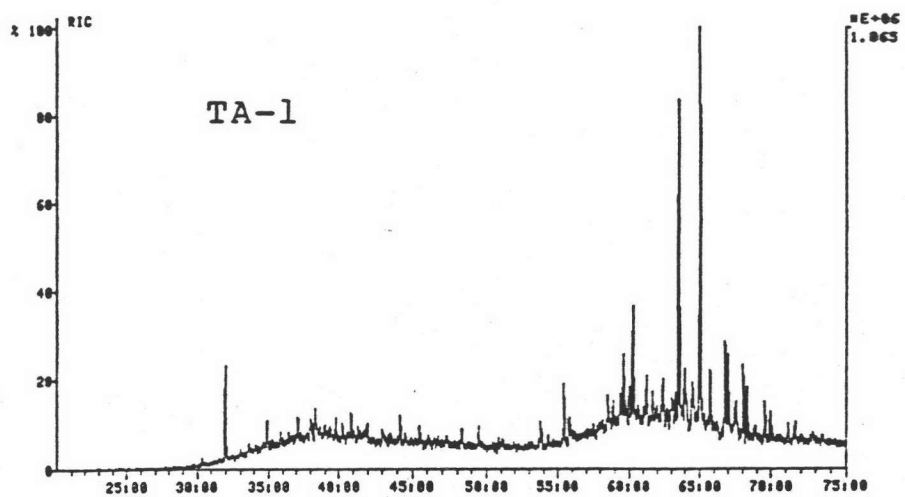
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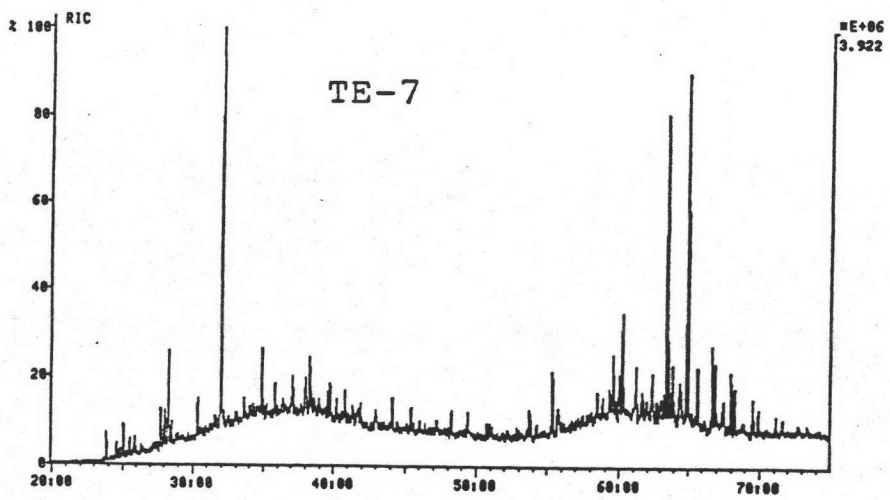
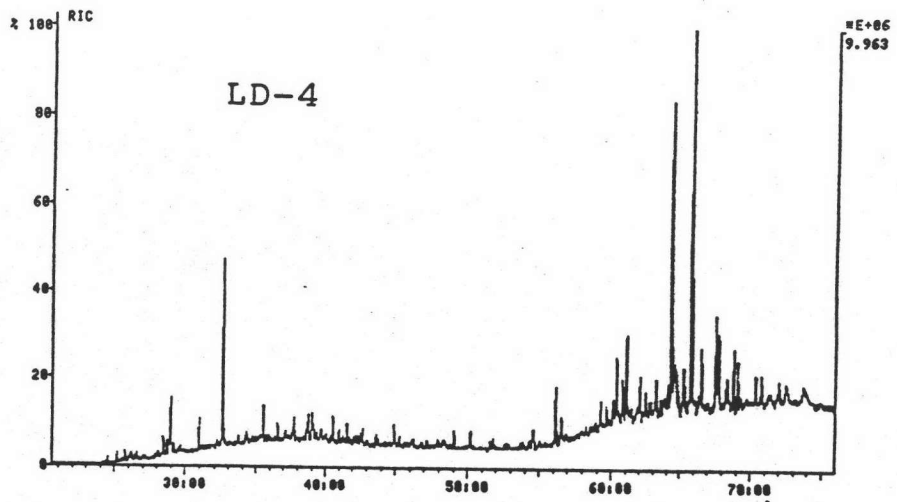
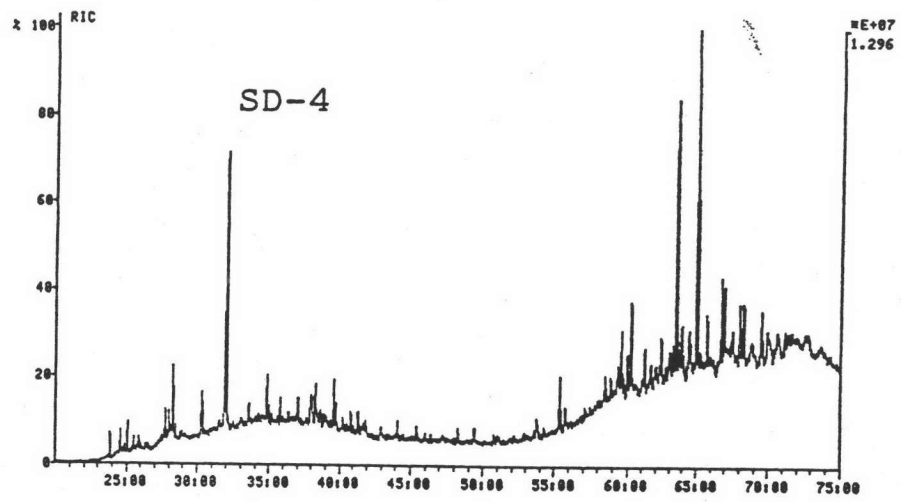


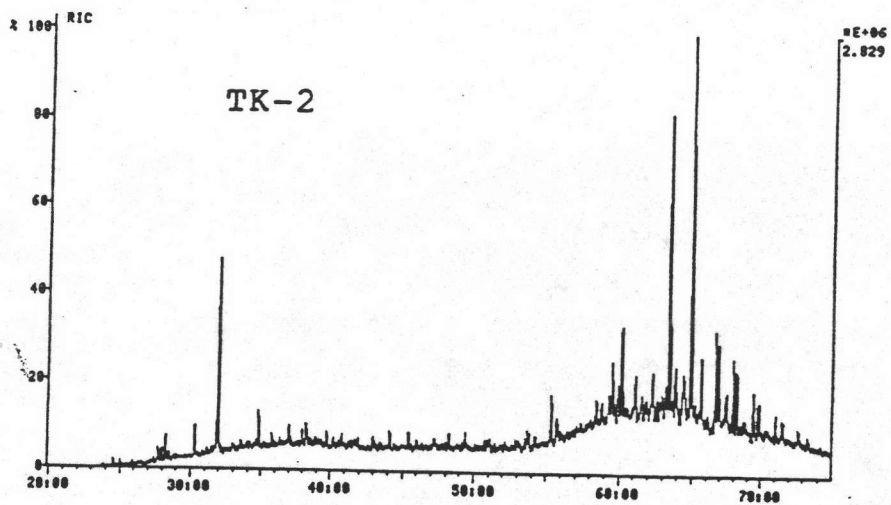
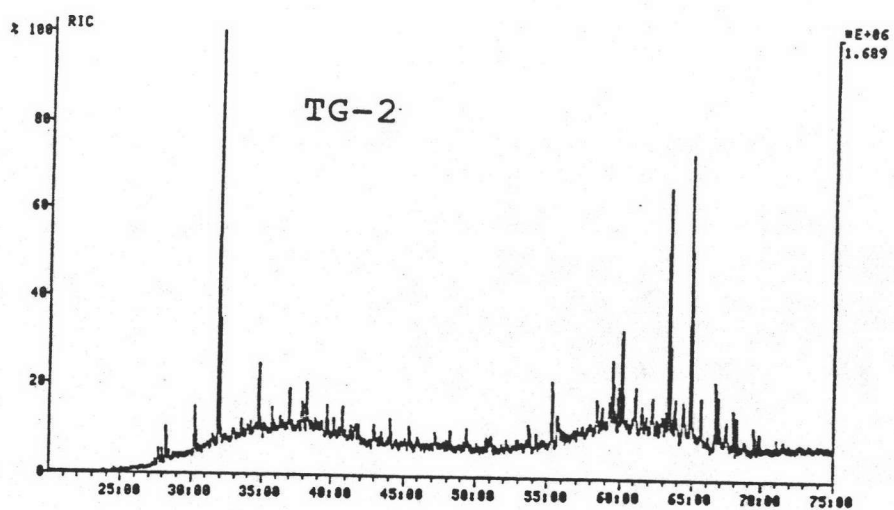
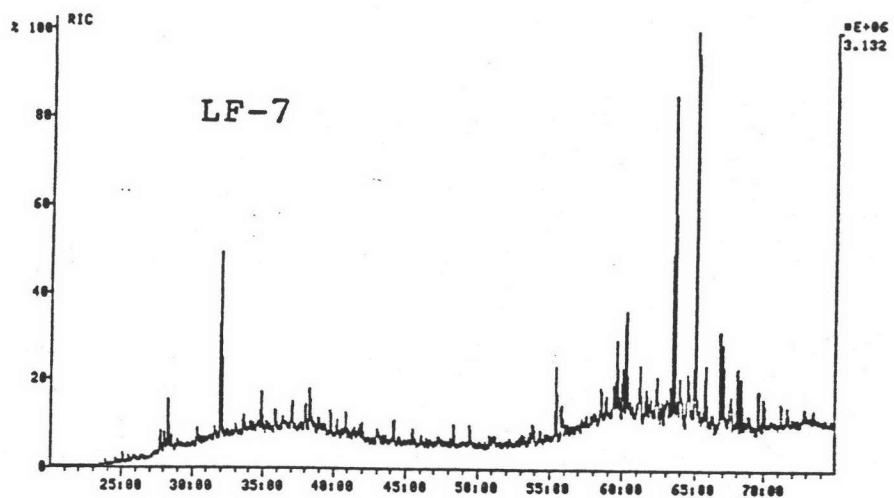
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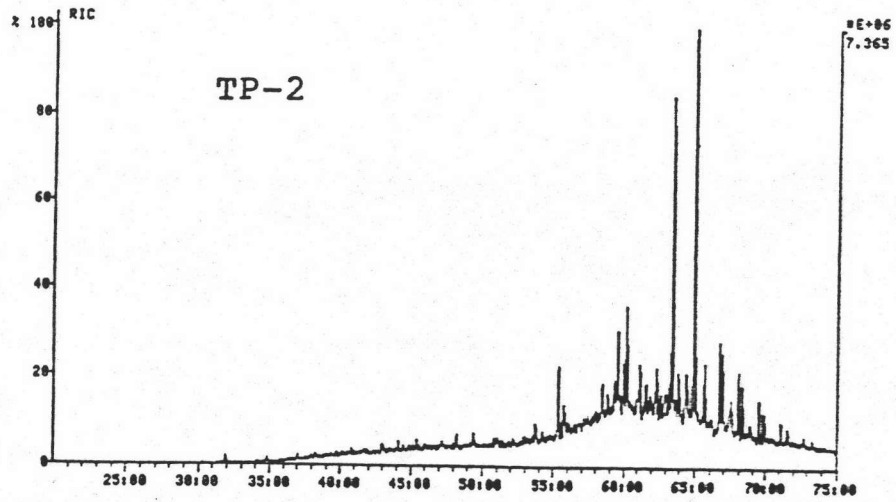
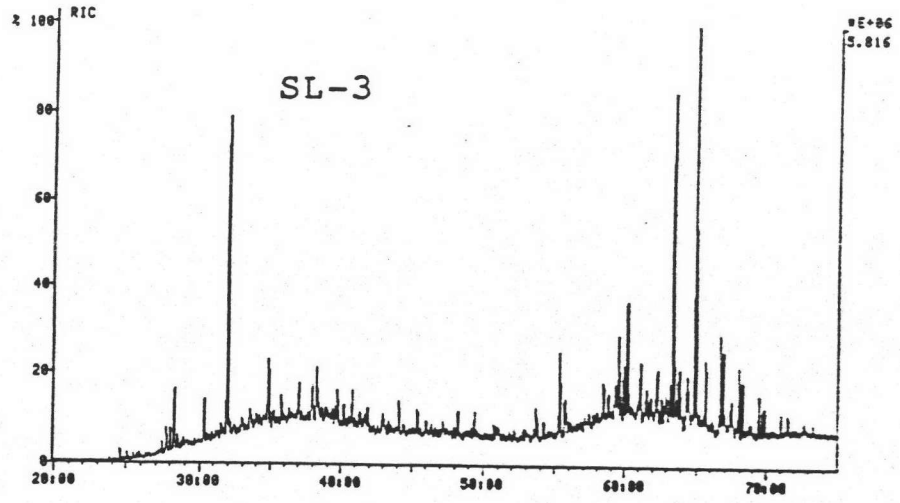
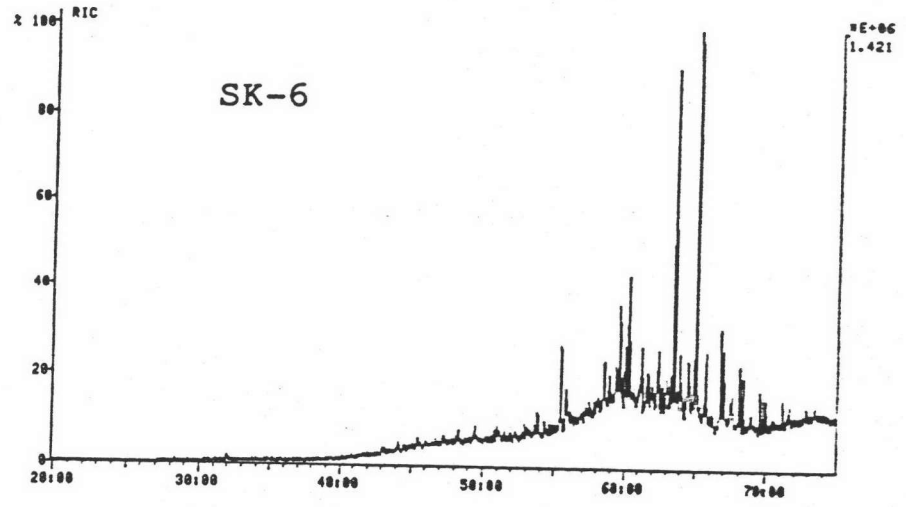
APPENDIX II

COMPILATION OF RIC MASS FRAGMENTOGRAMS OF
B/C FRACTIONS



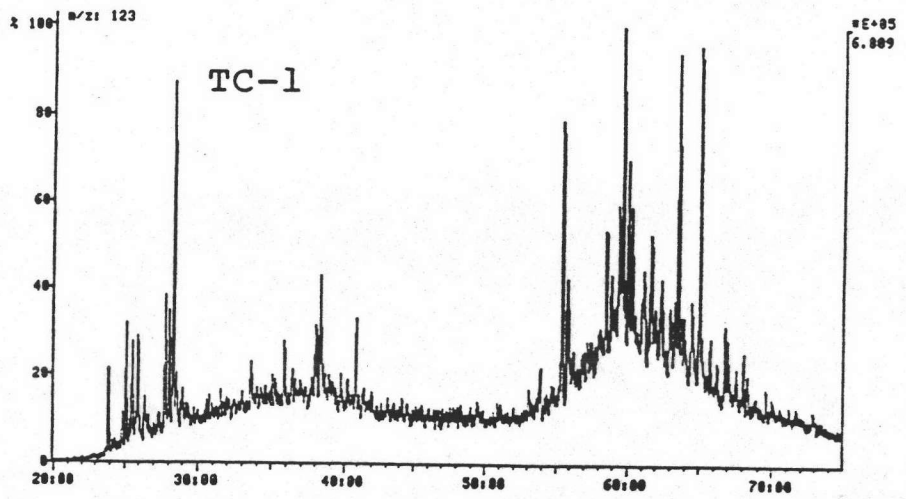
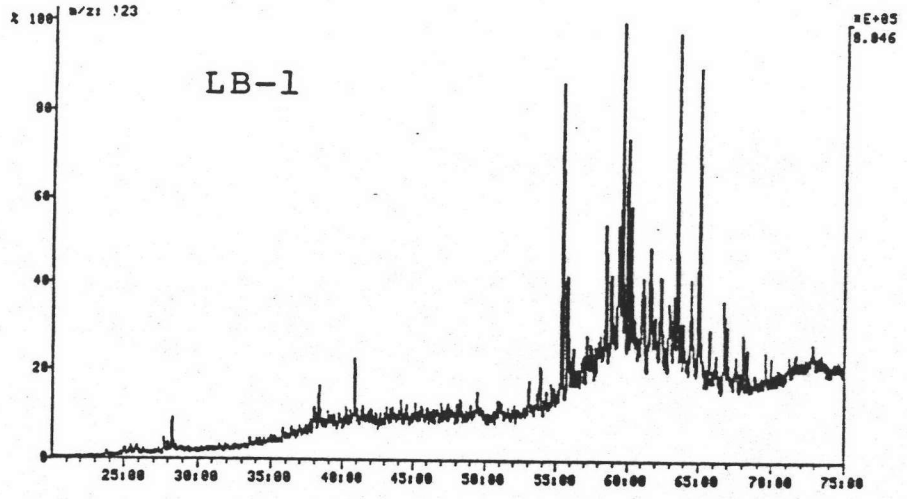
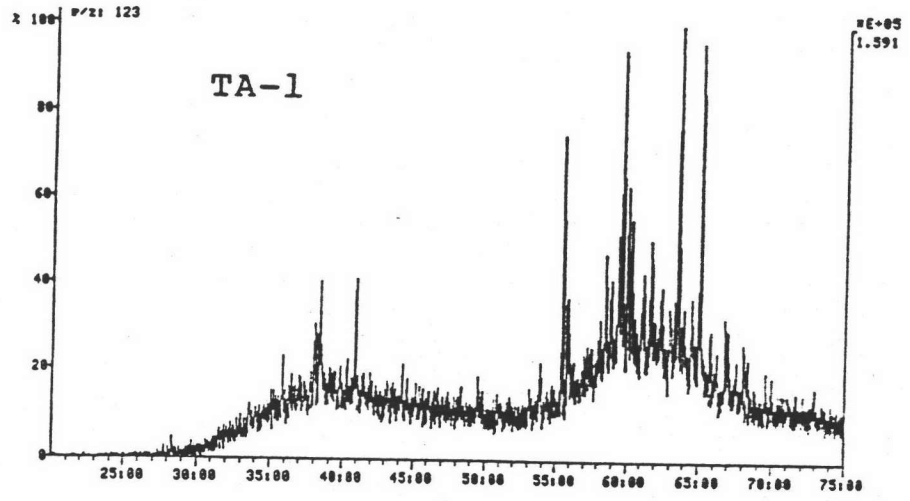


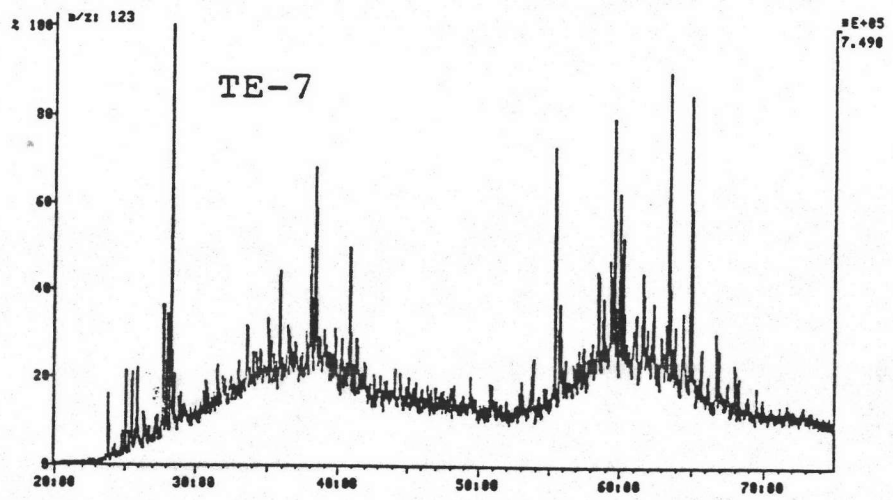
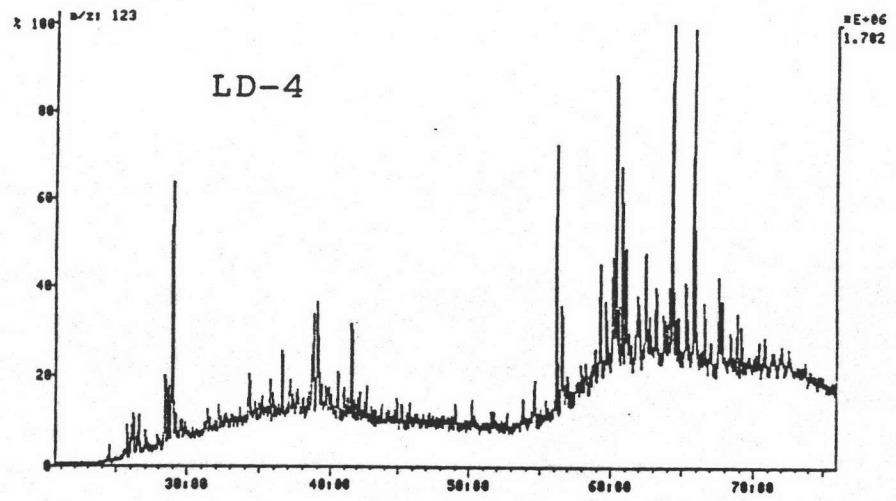
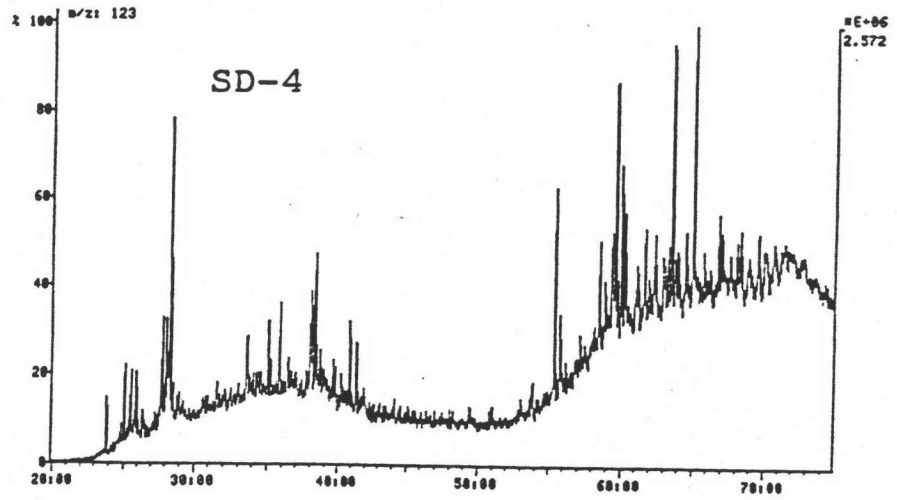


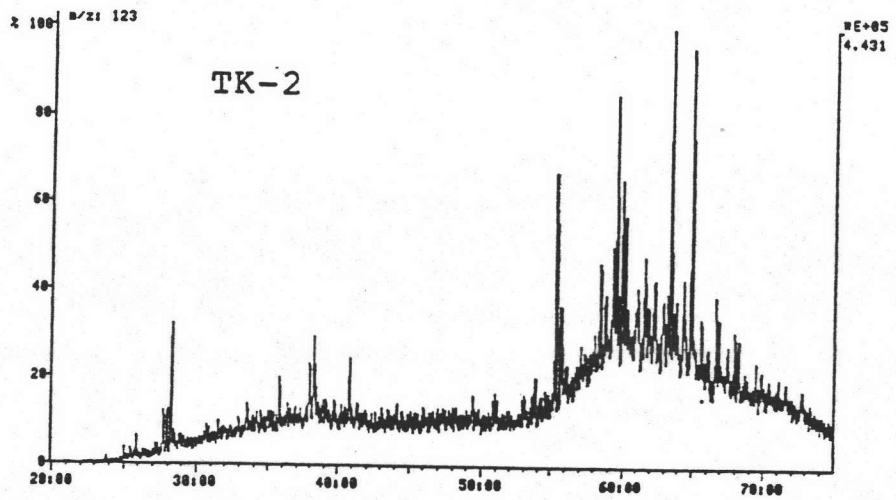
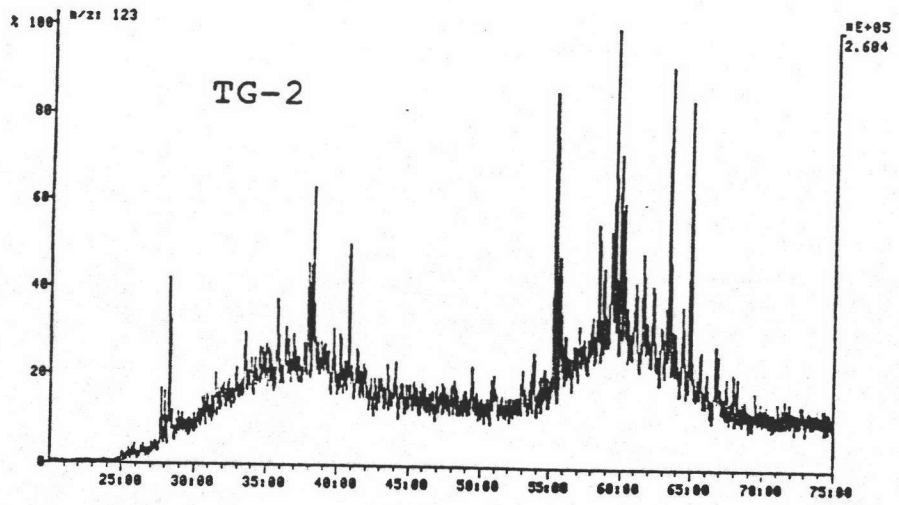
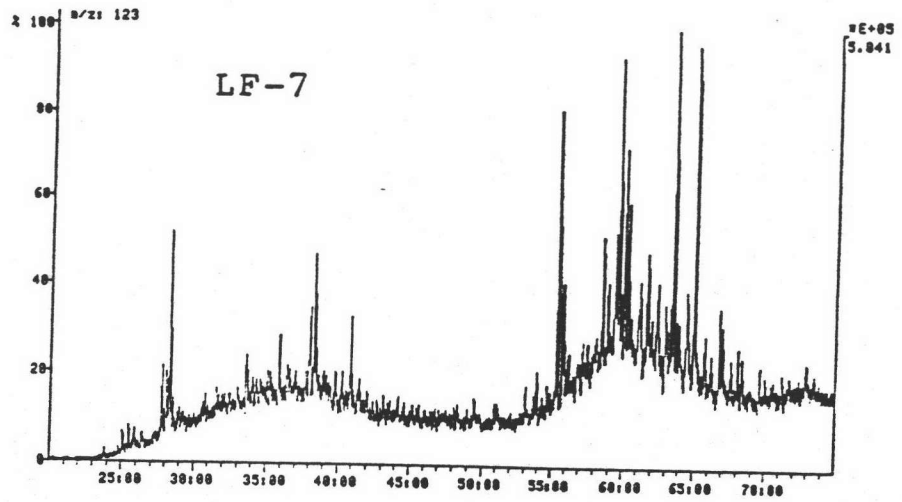


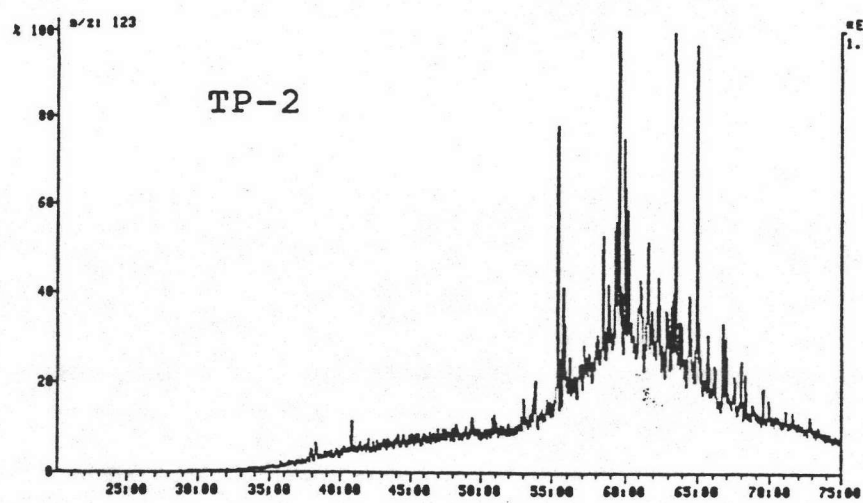
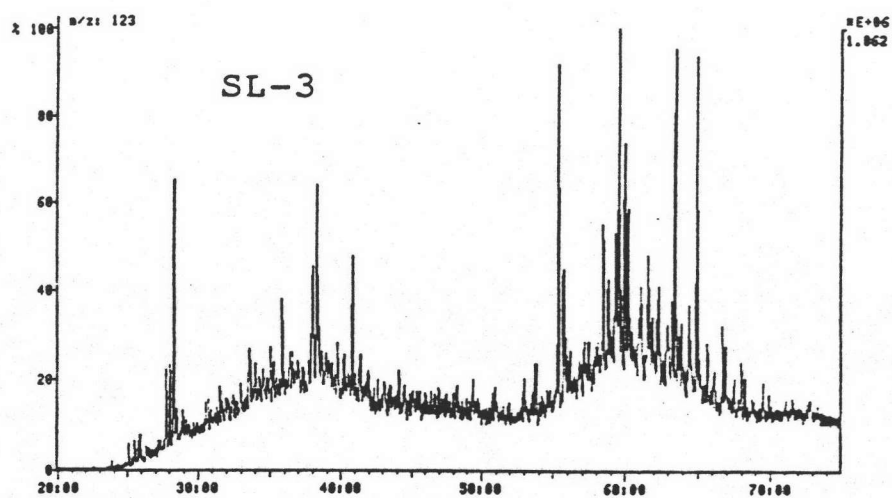
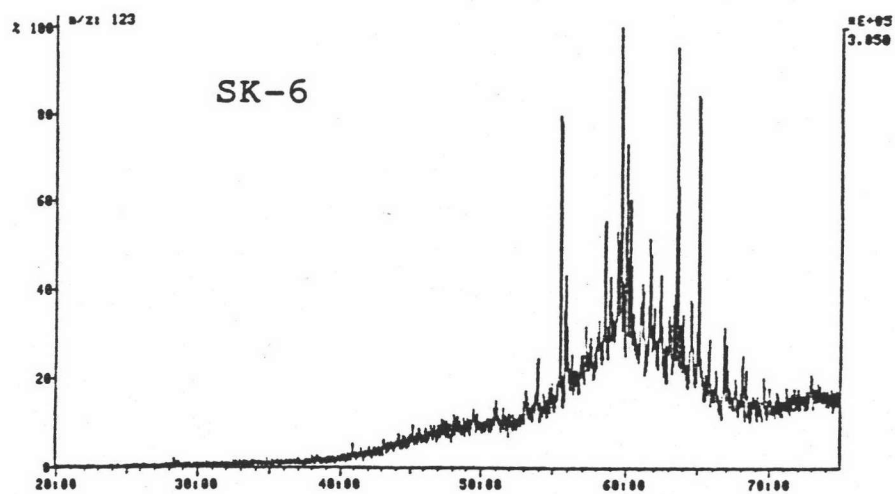
APPENDIX III

COMPILATION OF M/Z 123 MASS FRAGMENTOGRAM OF
B/C FRACTIONS



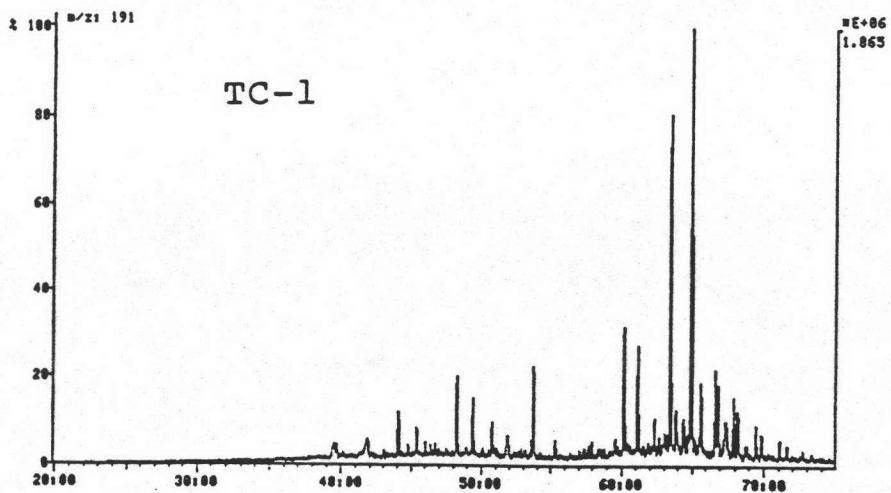
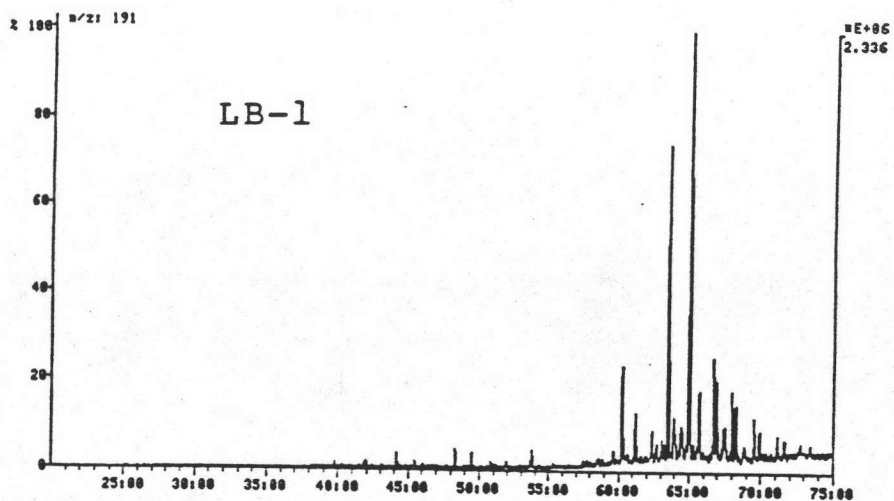
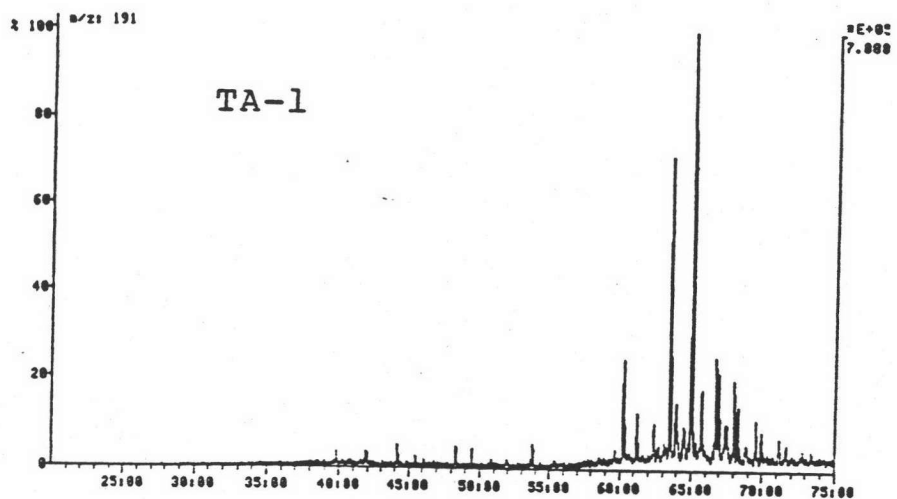


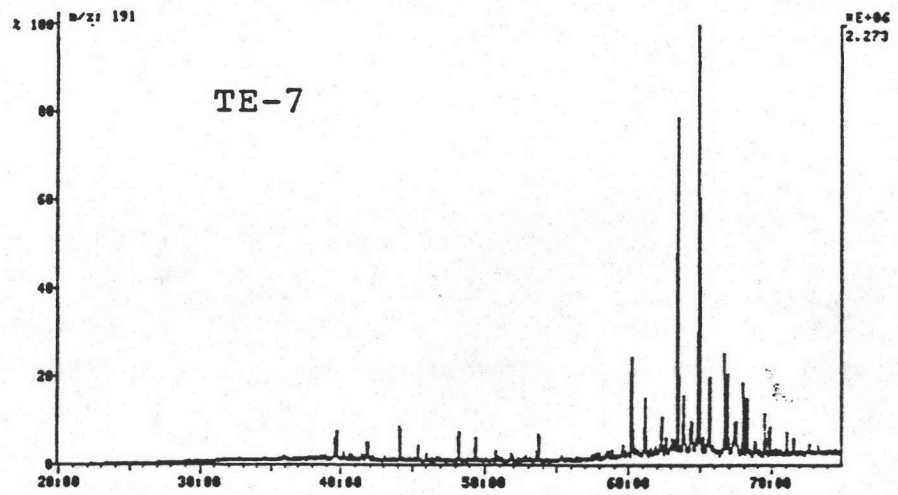
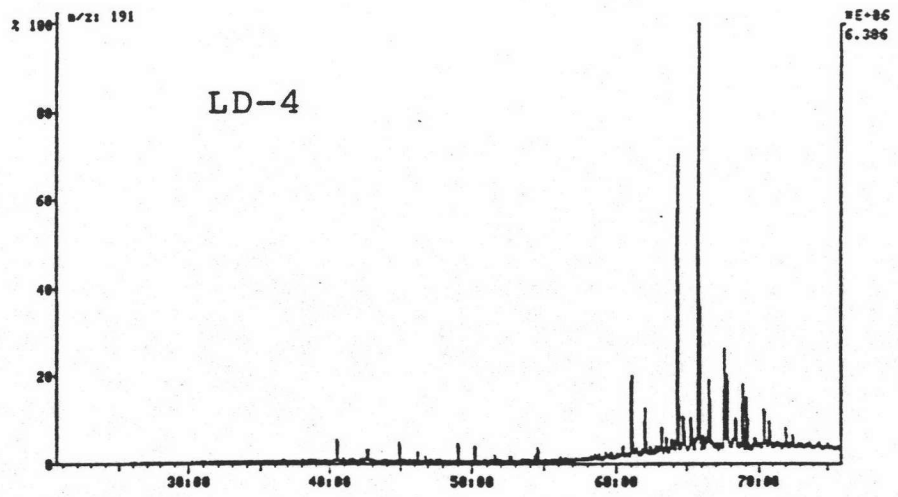
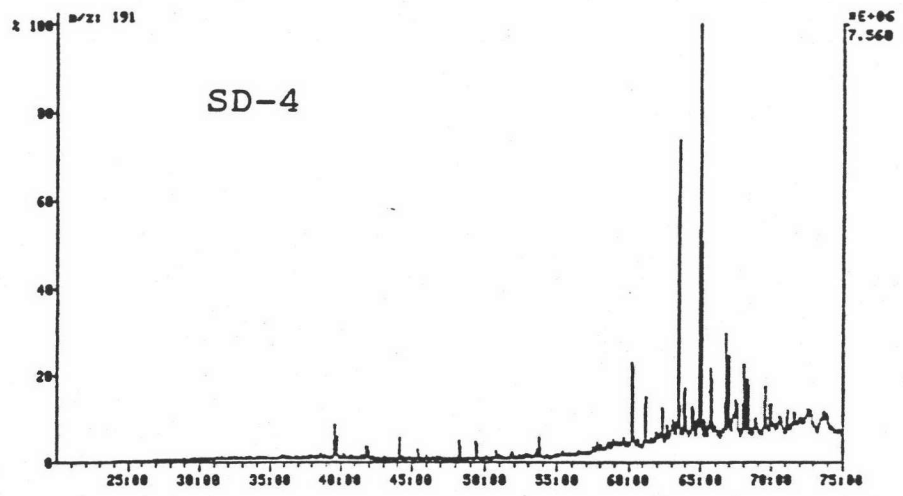


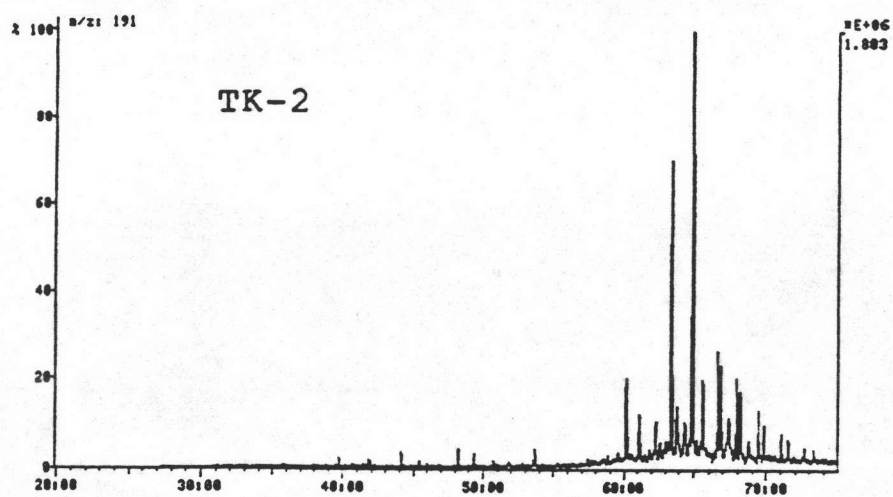
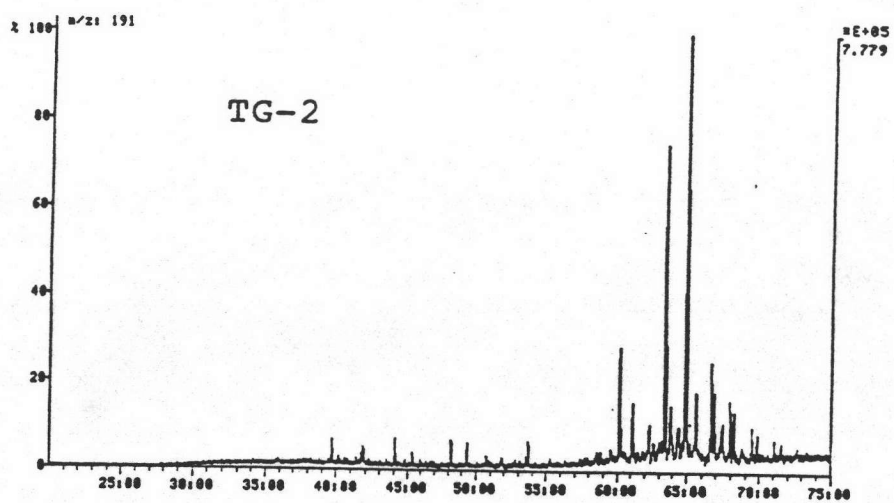
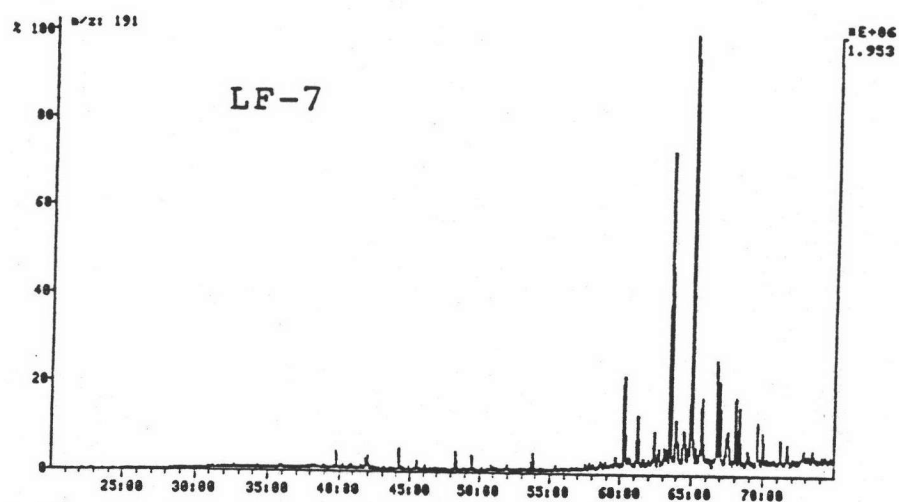


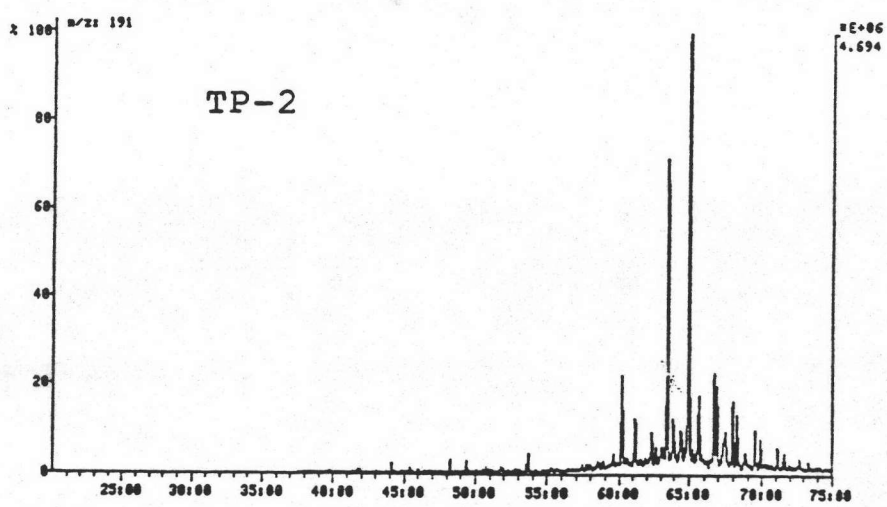
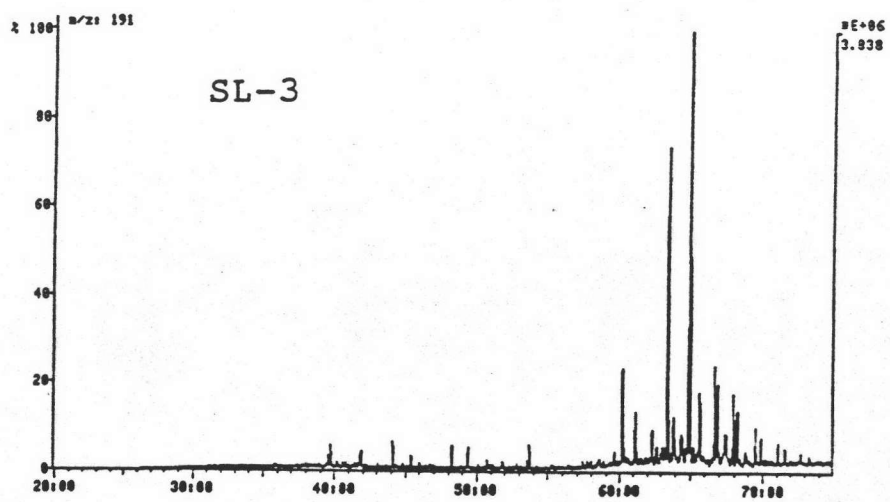
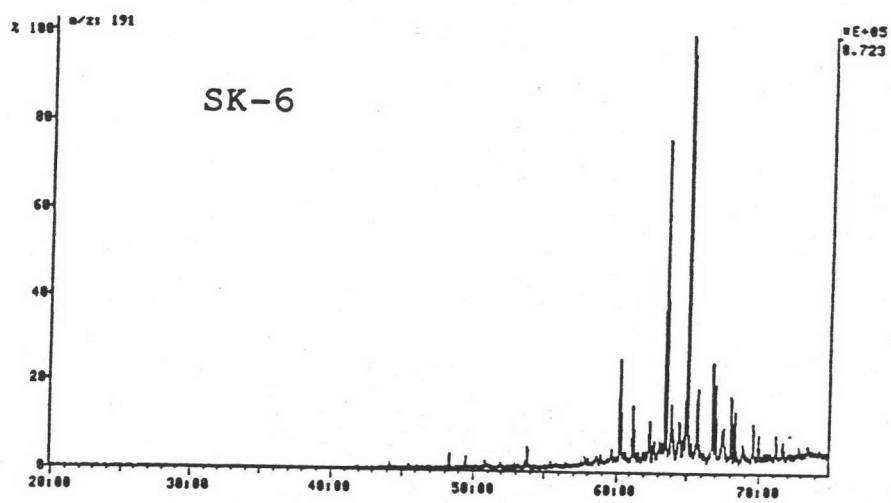
APPENDIX IV

COMPILATION OF M/Z 191 MASS FRAGMENTOGRAM OF
B/C FRACTIONS



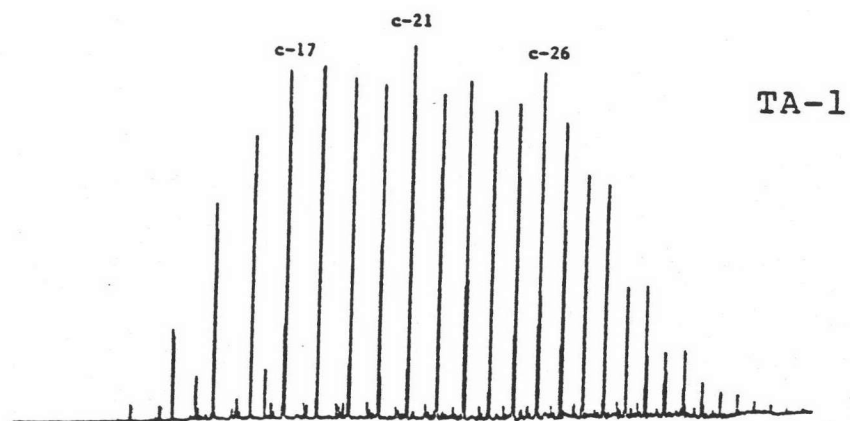




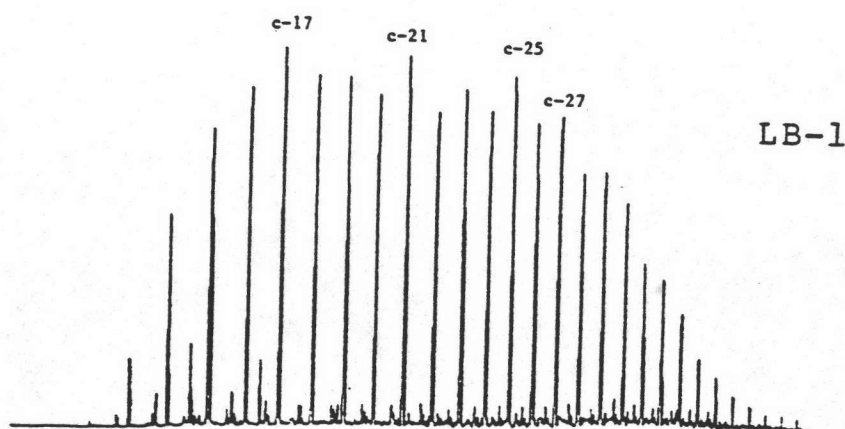


APPENDIX V

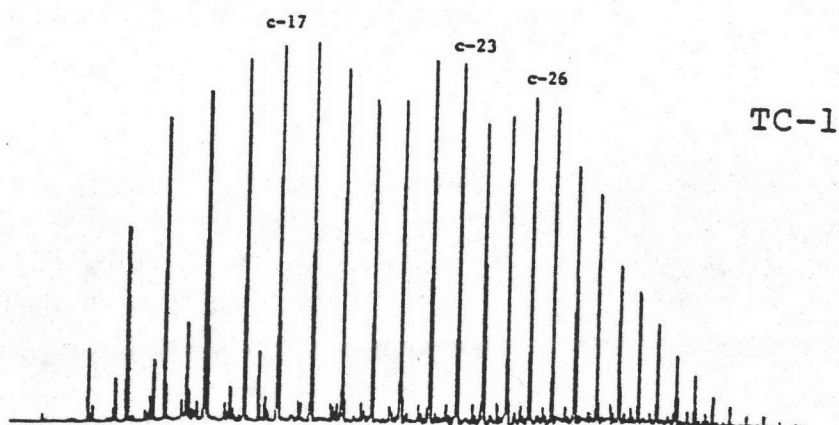
COMPILATION OF GAS CHROMATOGRAM OF SATURATE
FRACTIONS OF OIL SAMPLES



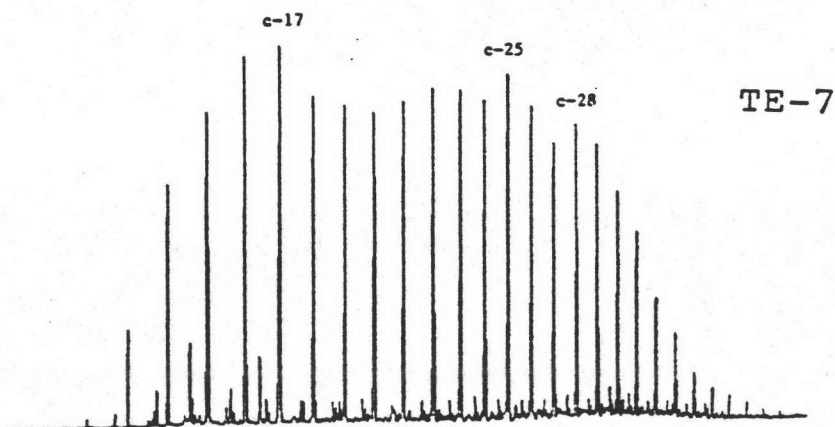
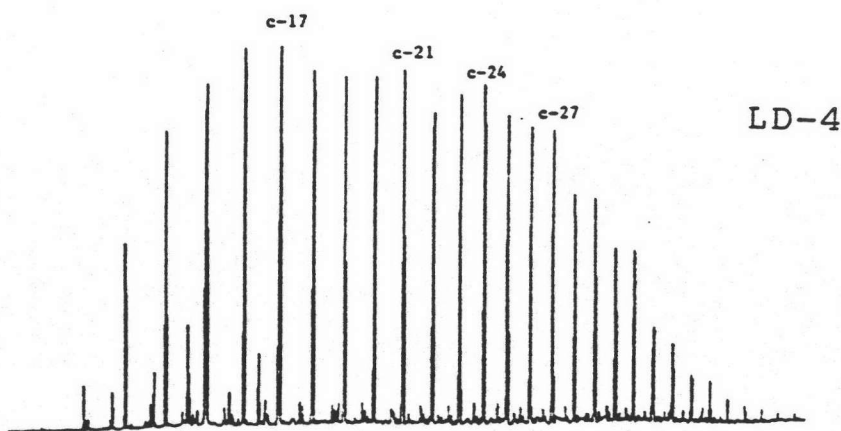
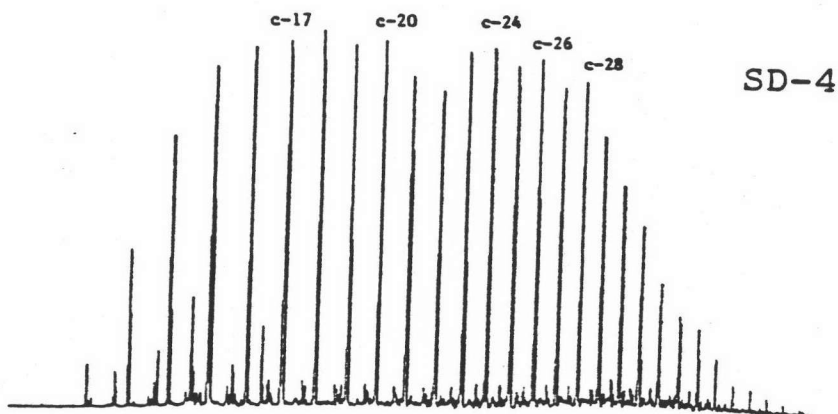
TA-1

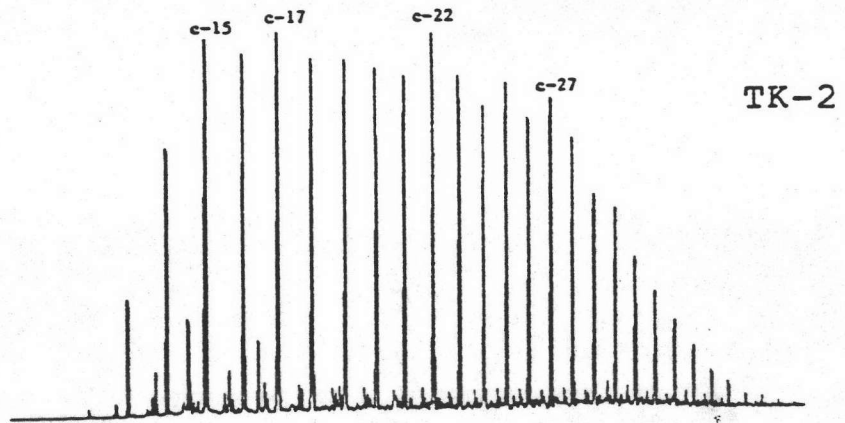
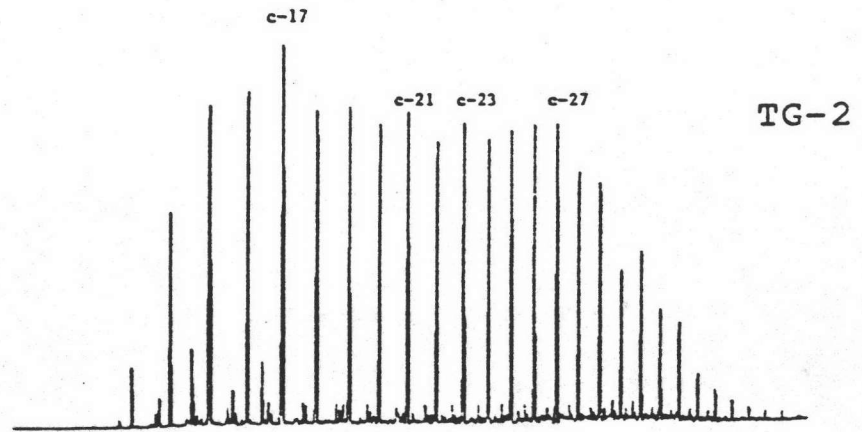
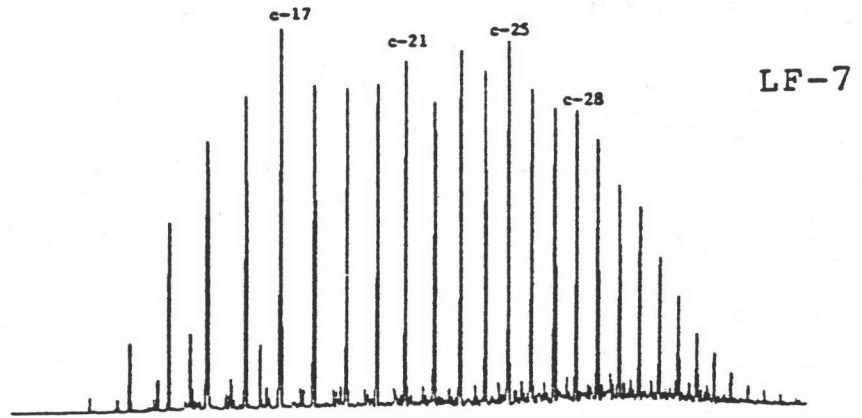


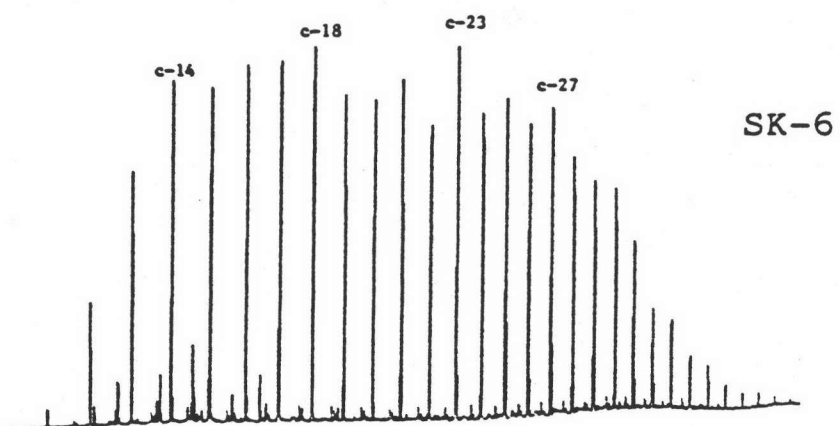
LB-1



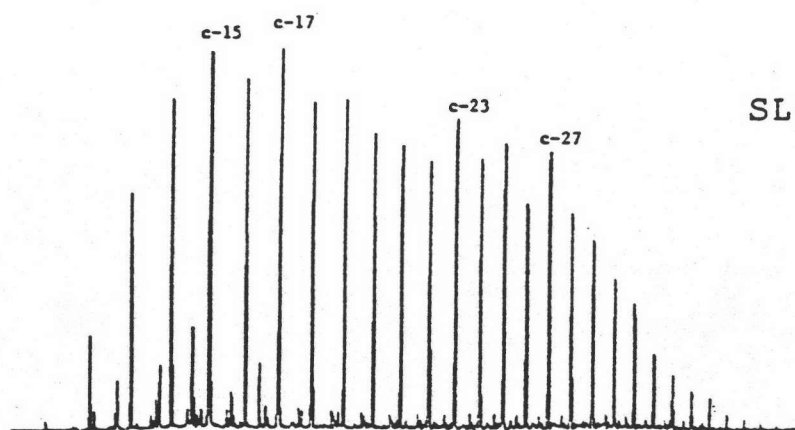
TC-1



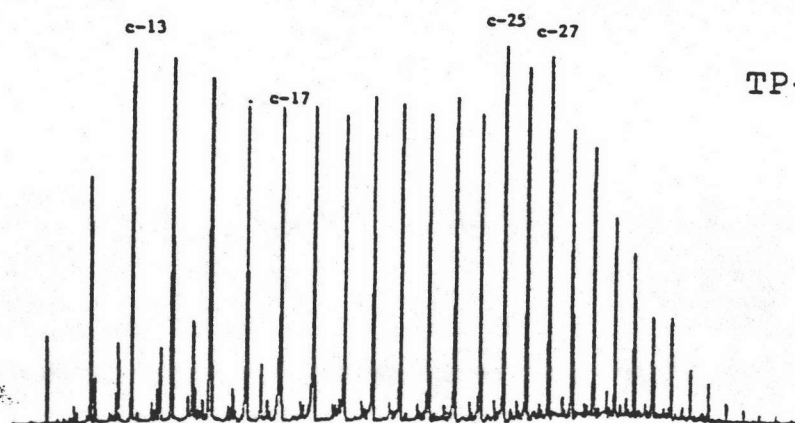




SK-6



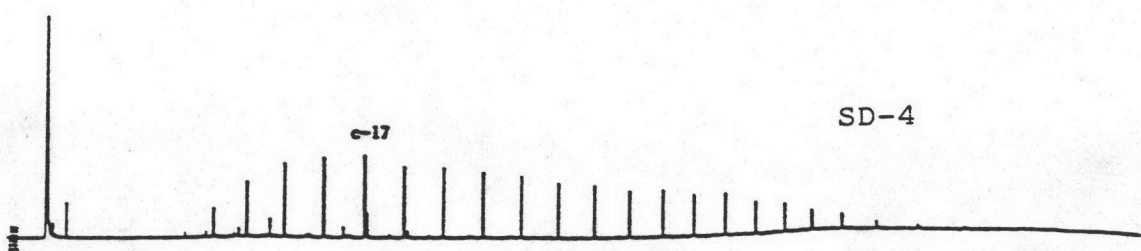
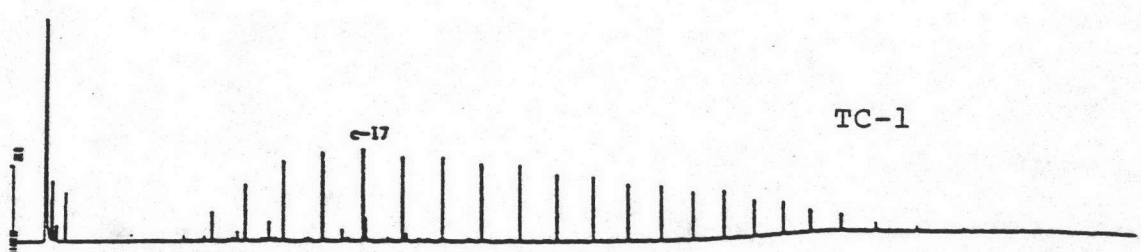
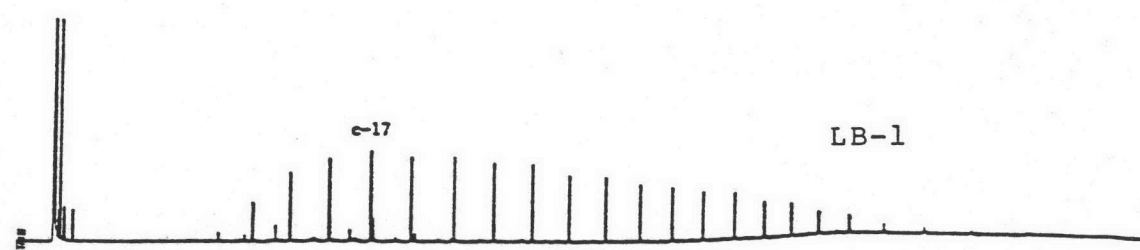
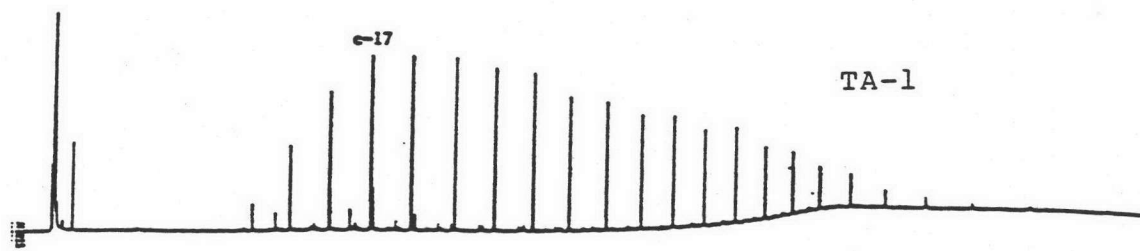
SL-3

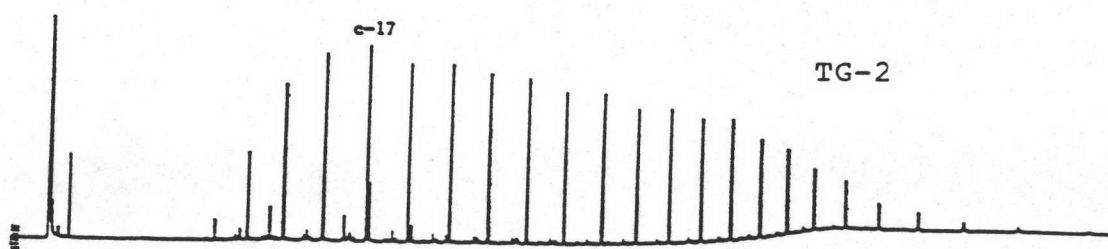
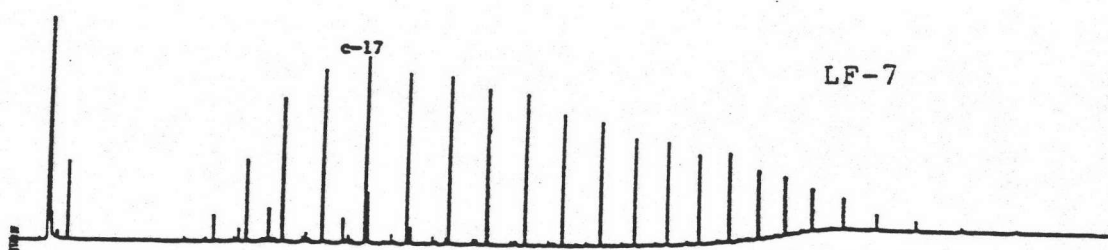
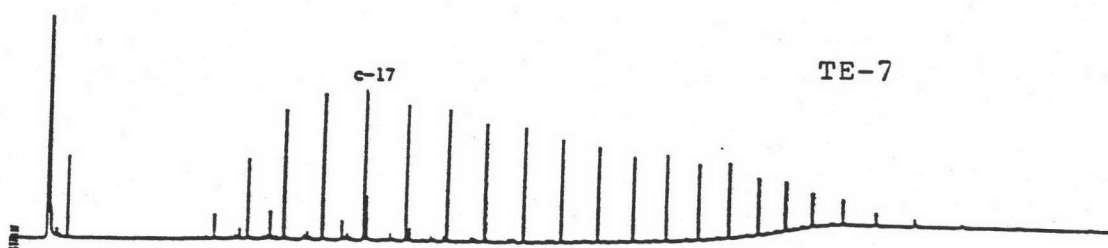
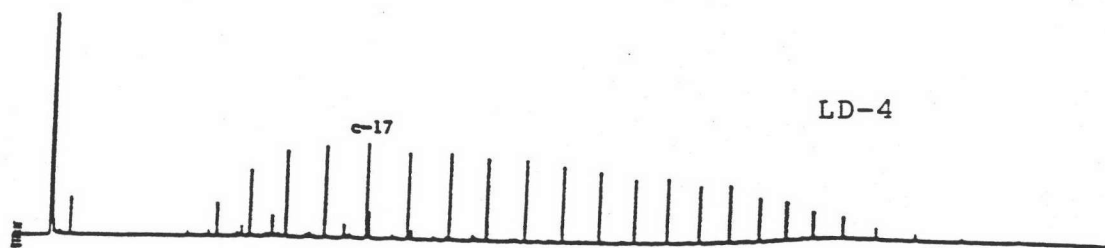


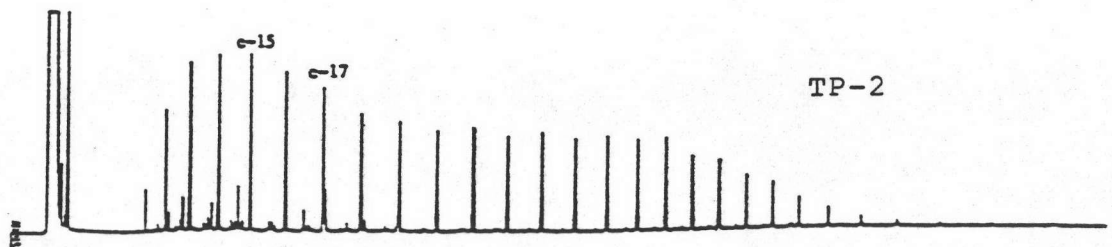
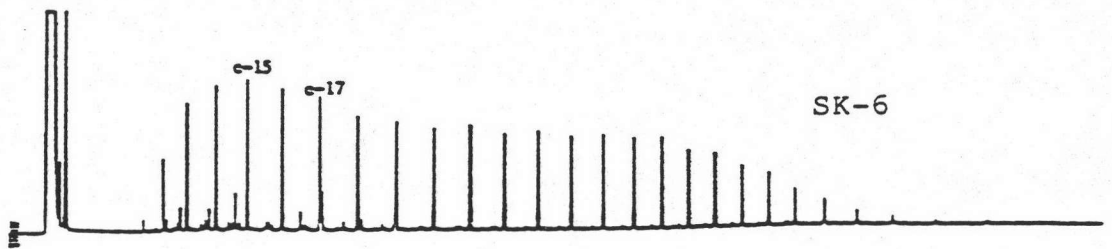
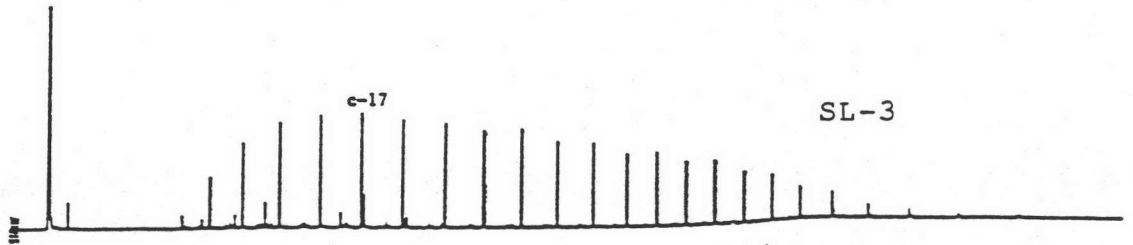
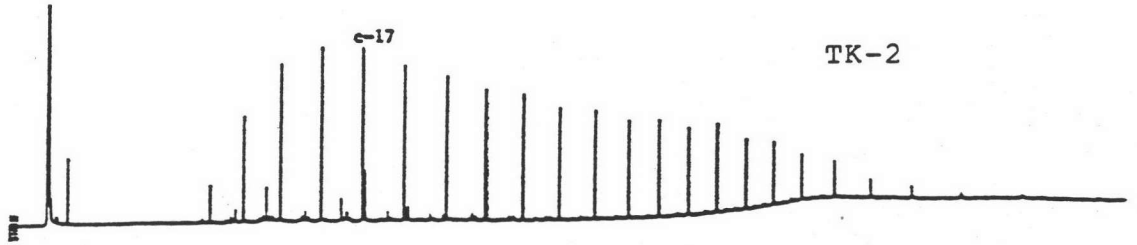
TP-2

APPENDIX VI

COMPILATION OF GAS CHROMATOGRAM OF PRISTANE AND
PHYTANE OF OIL SAMPLES

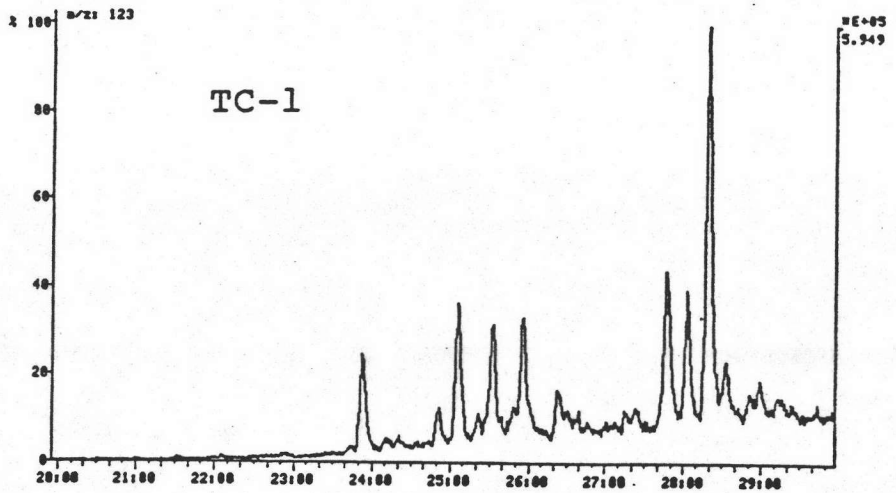
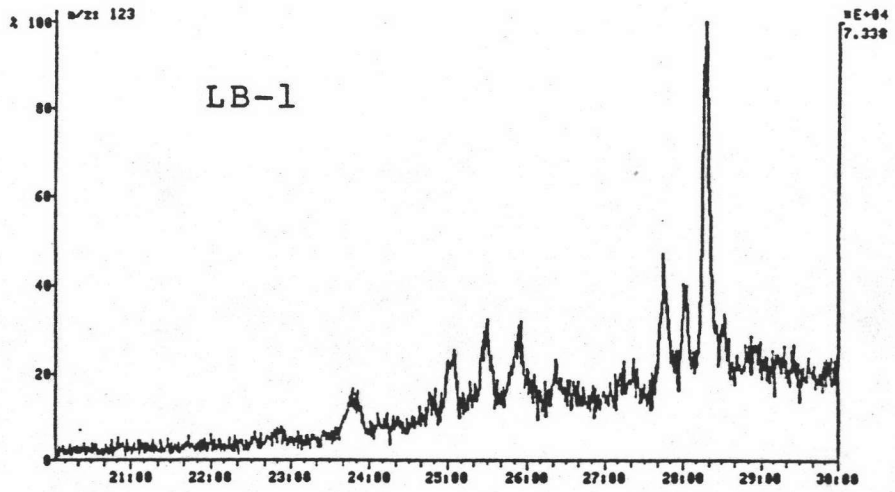
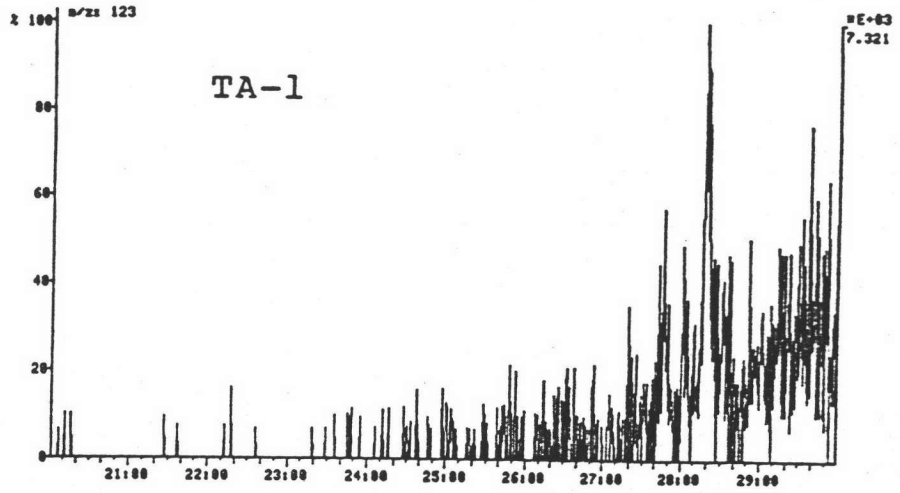


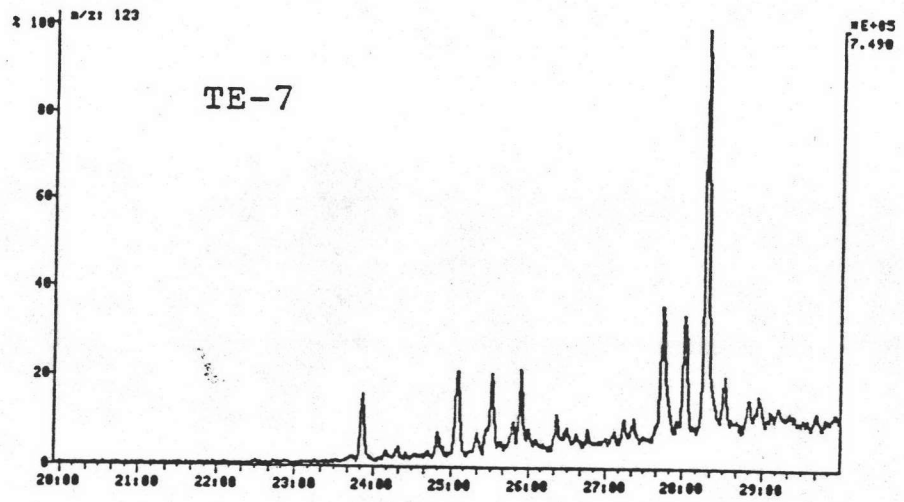
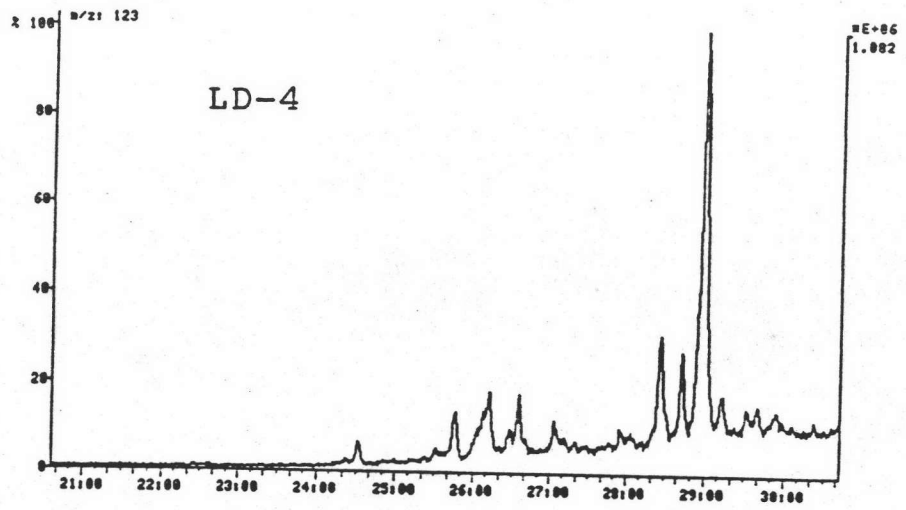
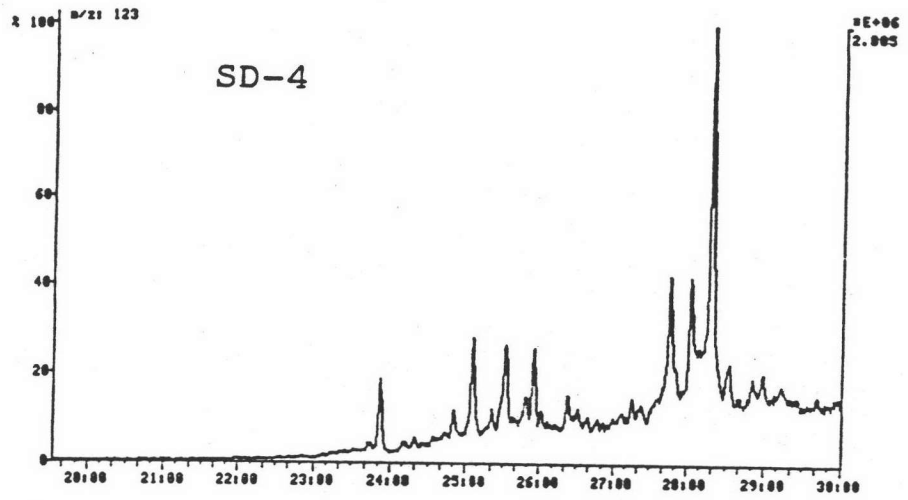


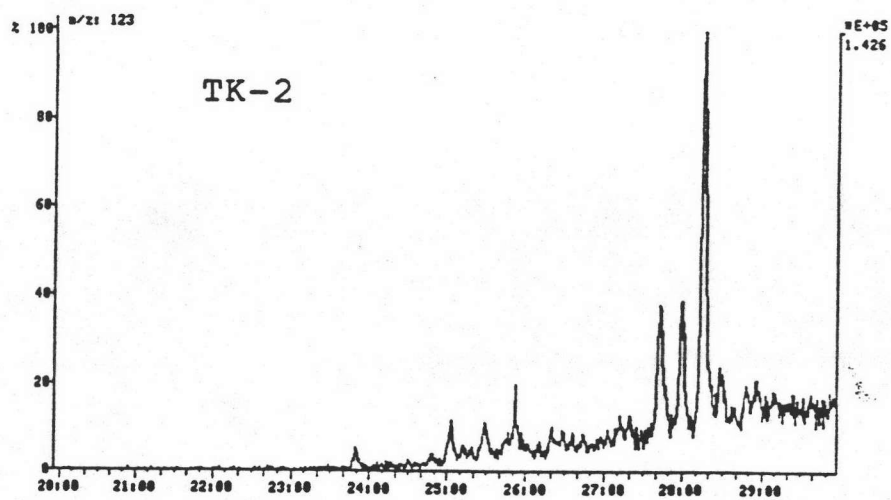
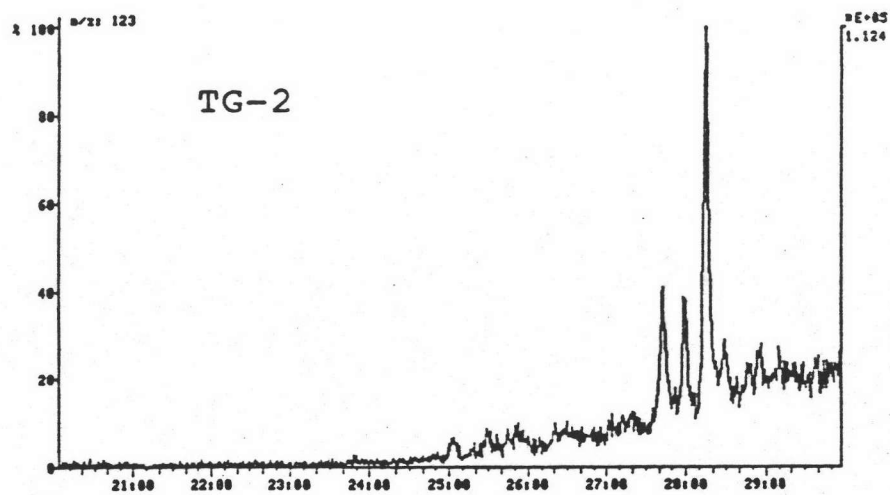
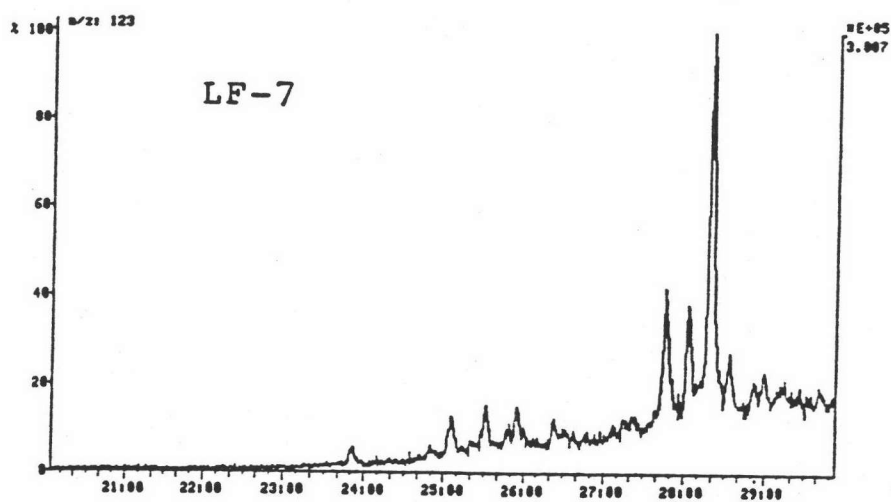


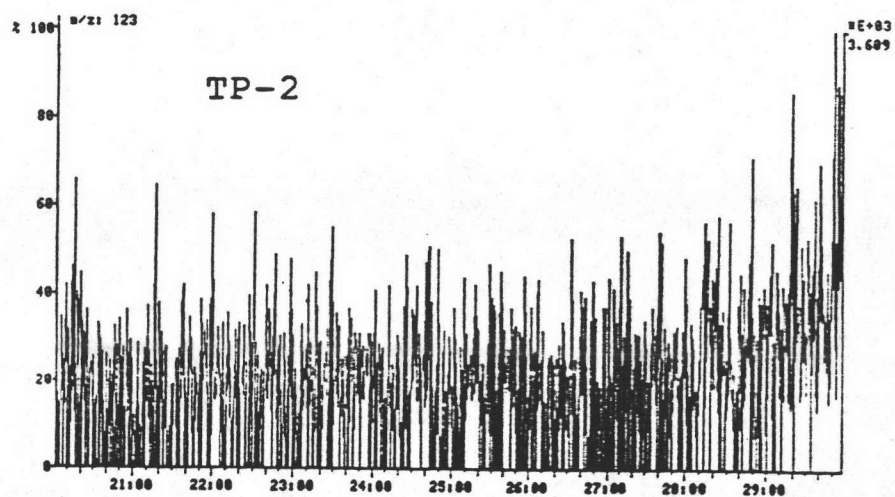
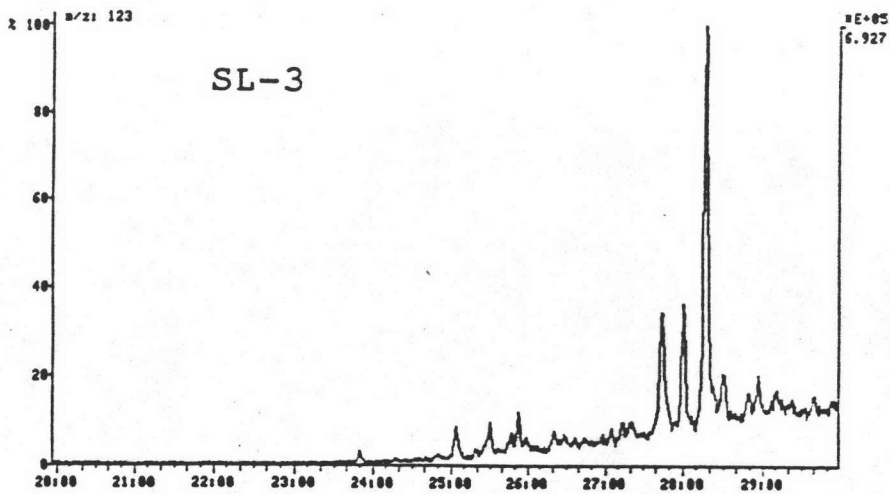
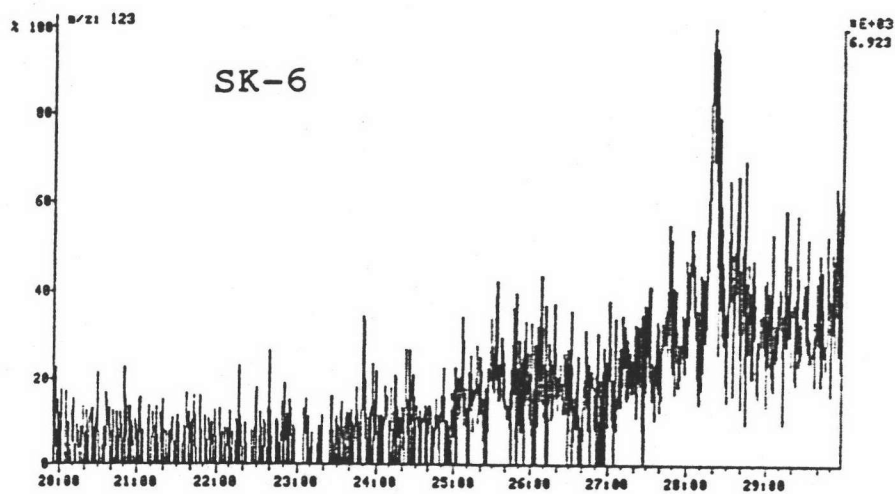
APPENDIX VII

COMPILATION OF M/Z 123 MASS FRAGMENTOGRAM OF
BICYCLIC SESQUITERPANES OF OIL SAMPLES



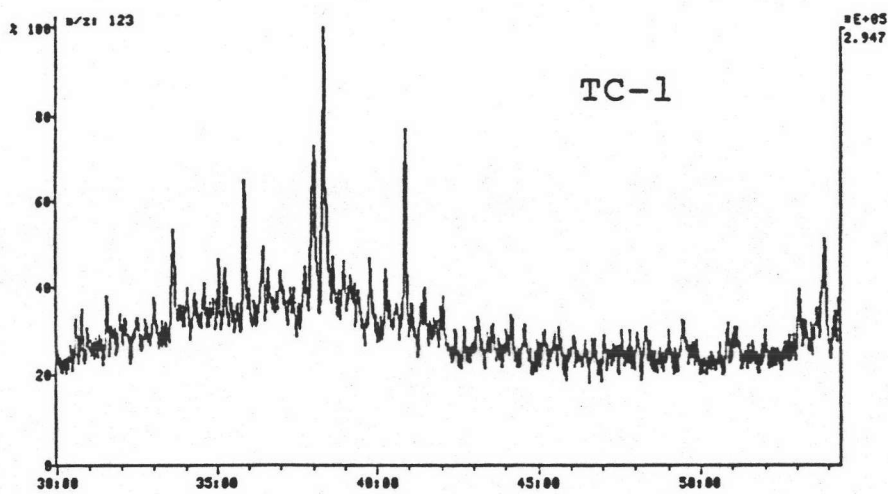
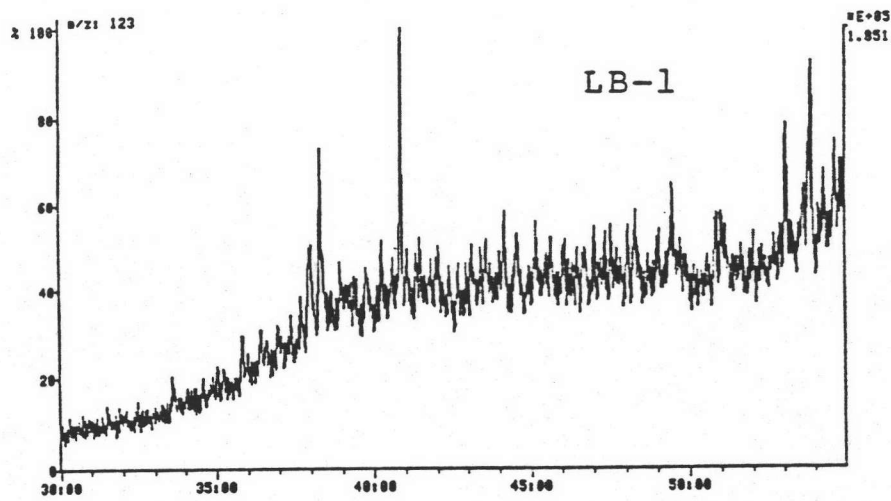
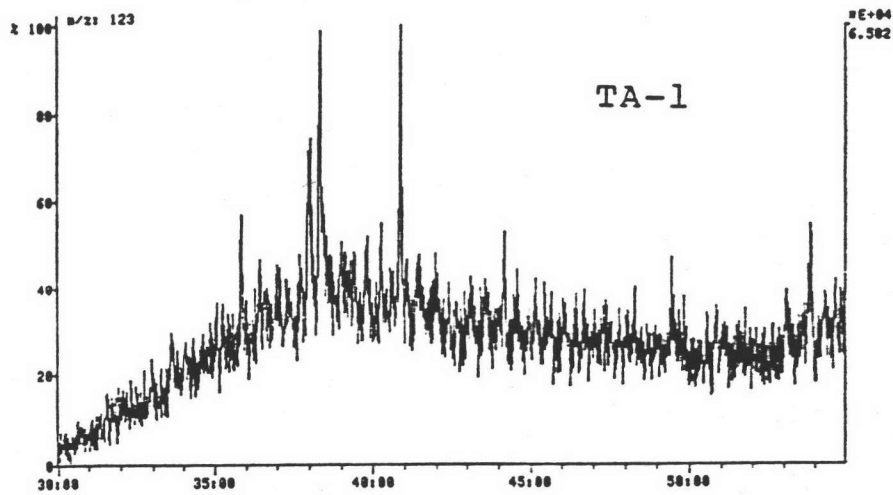


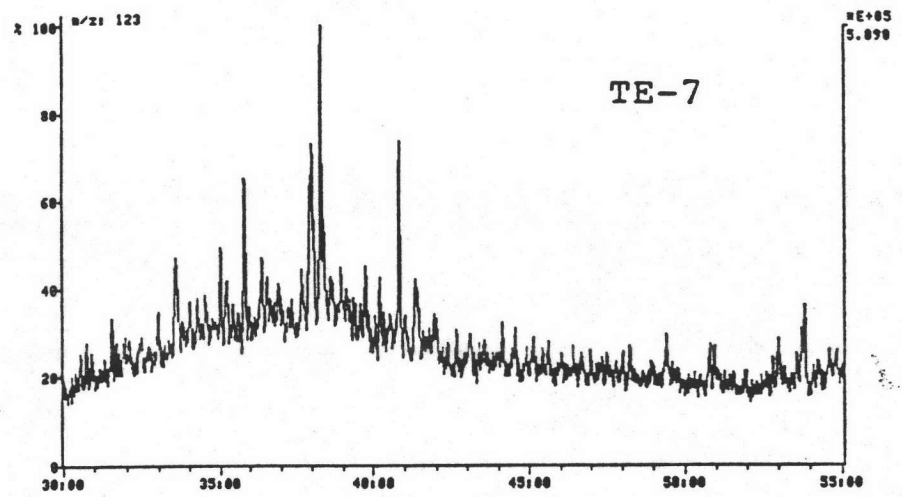
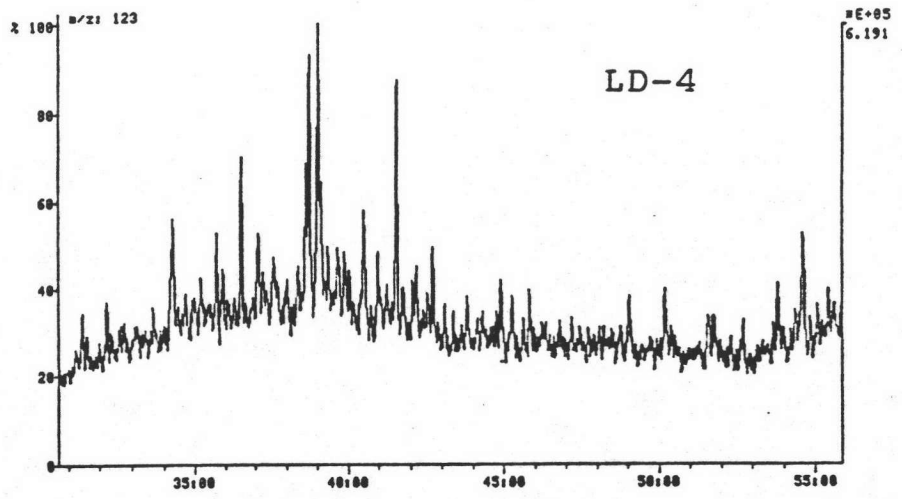
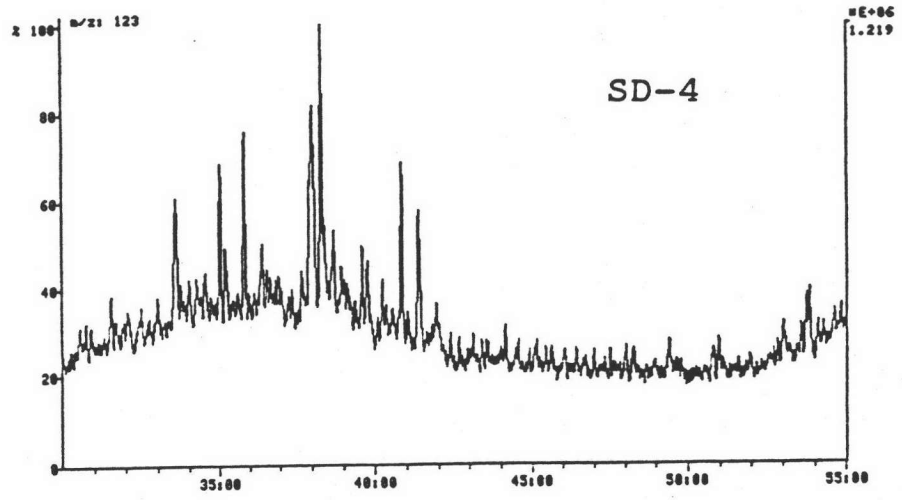


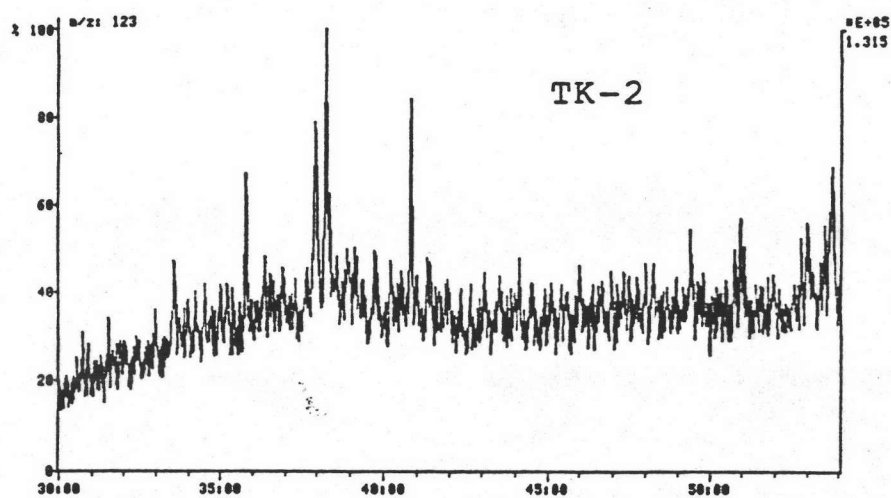
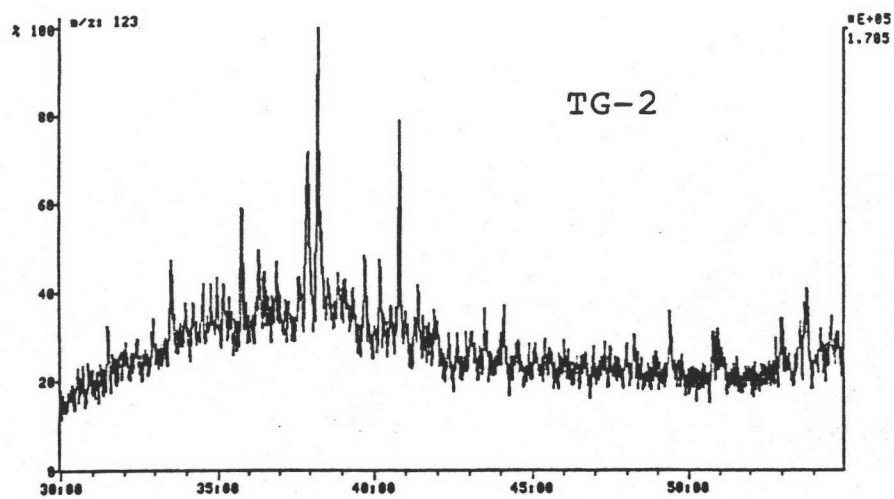
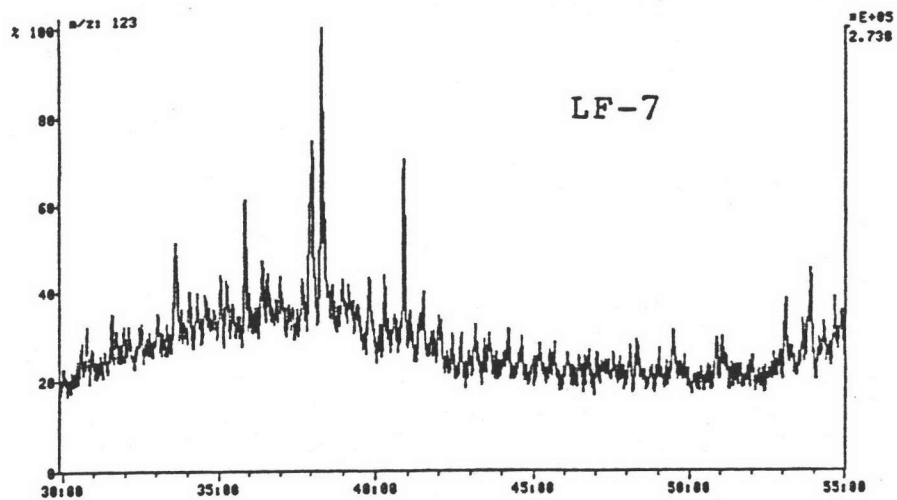


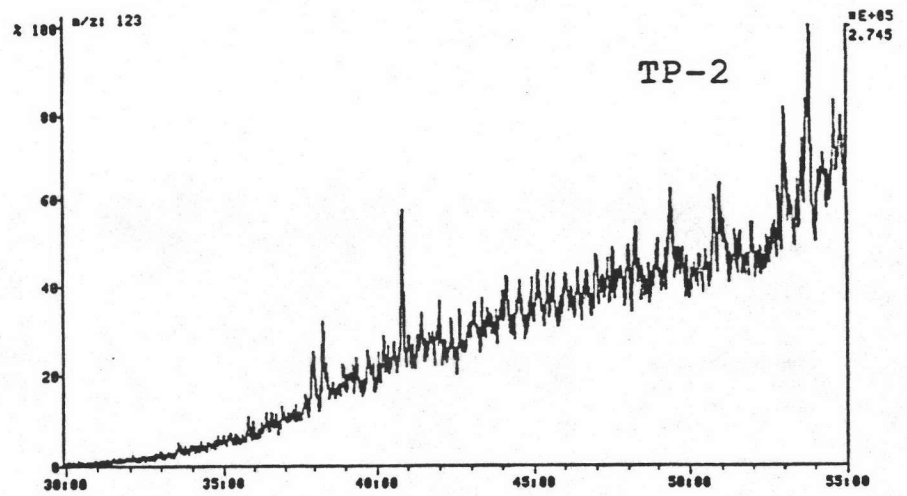
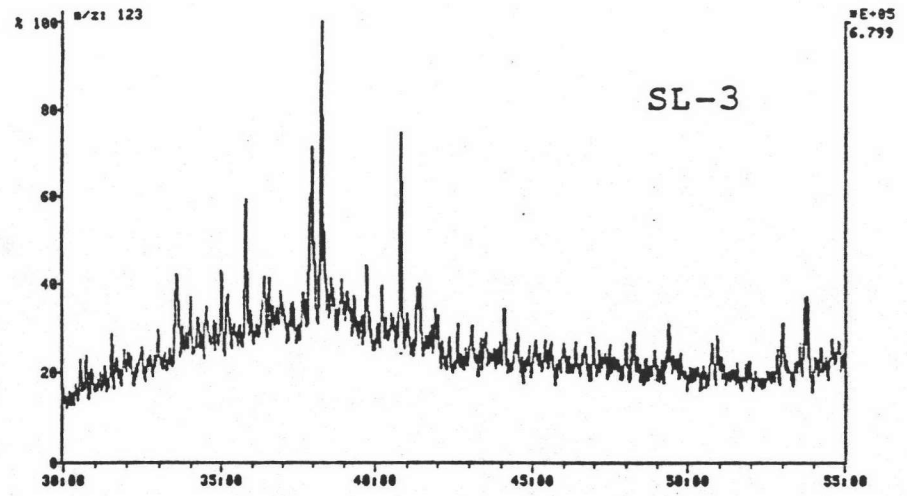
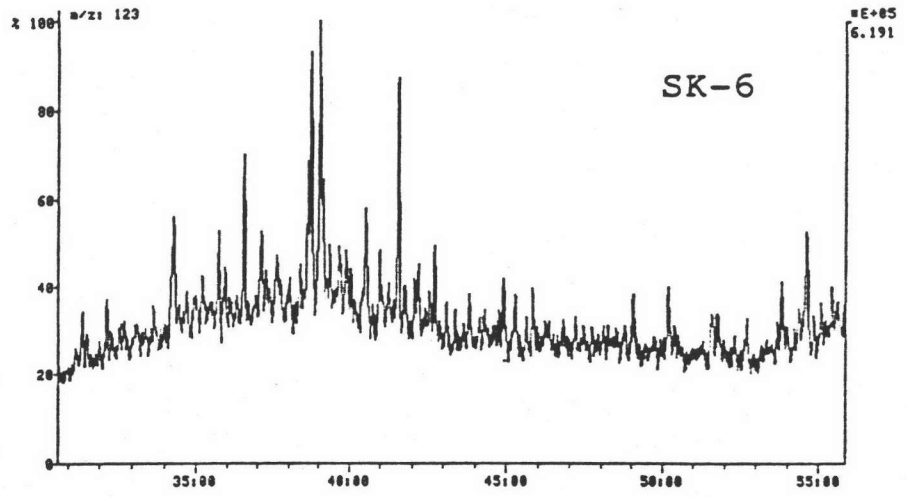
APPENDIX VIII

COMPILATION OF M/Z 123 MASS FRAGMENTOGRAM OF
DITERPANES OF OIL SAMPLES



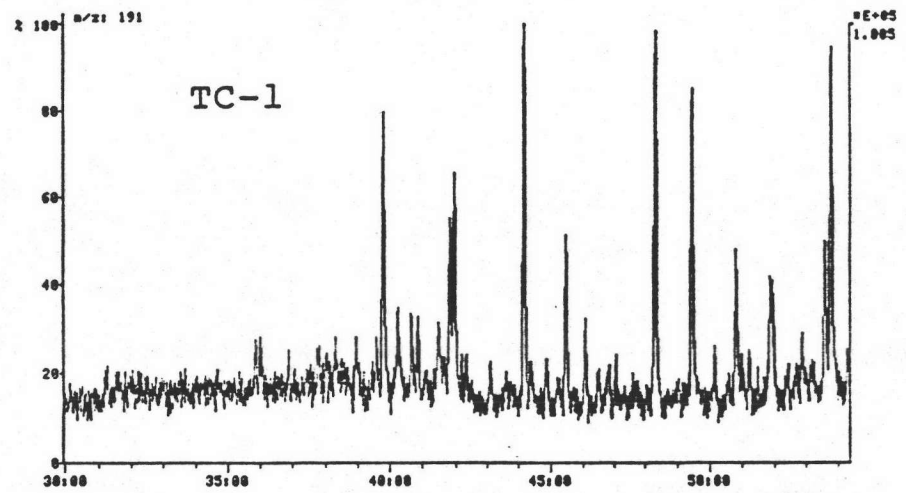
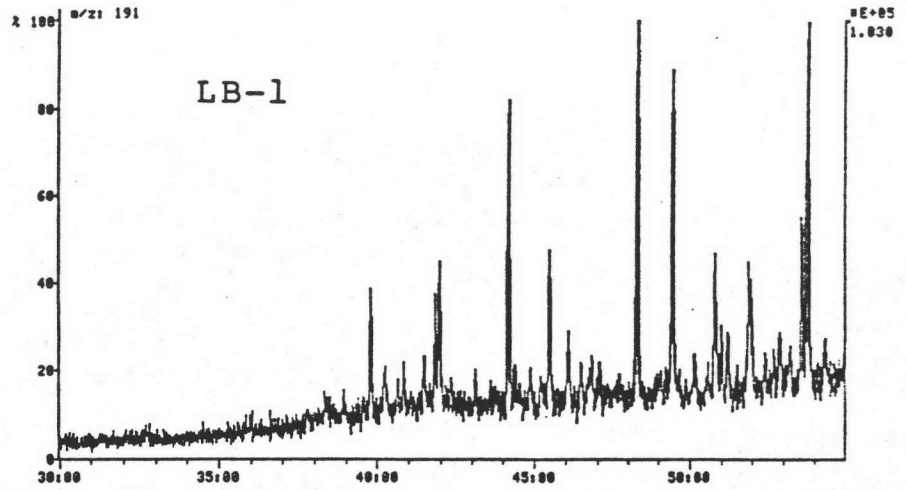
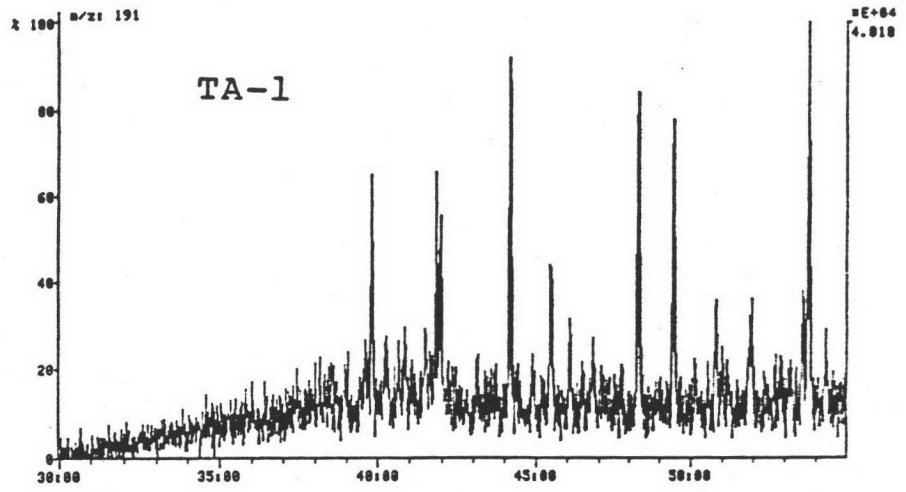


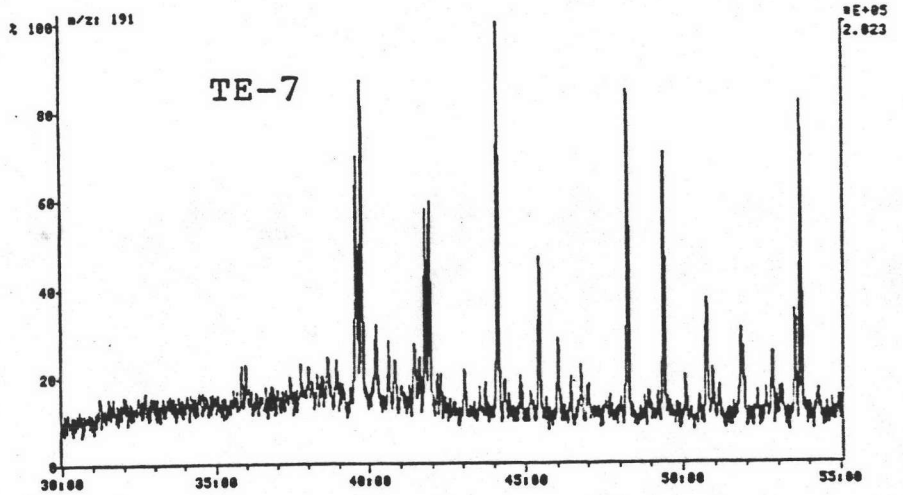
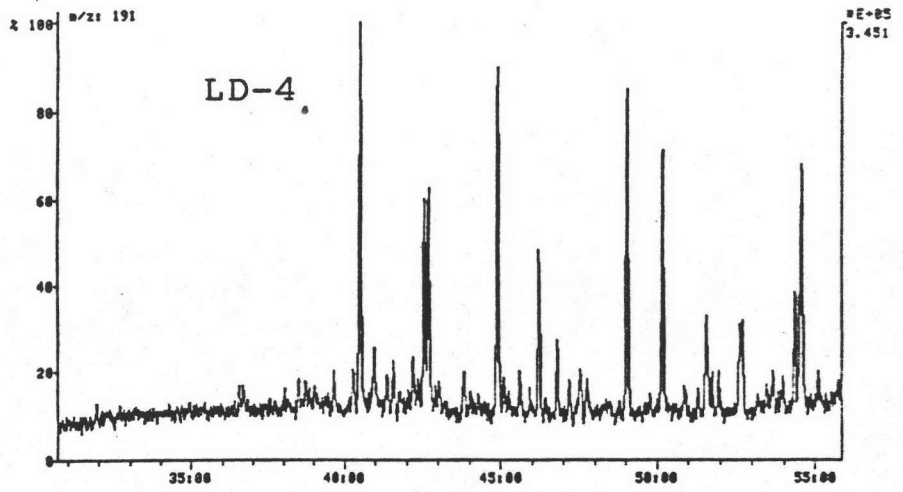
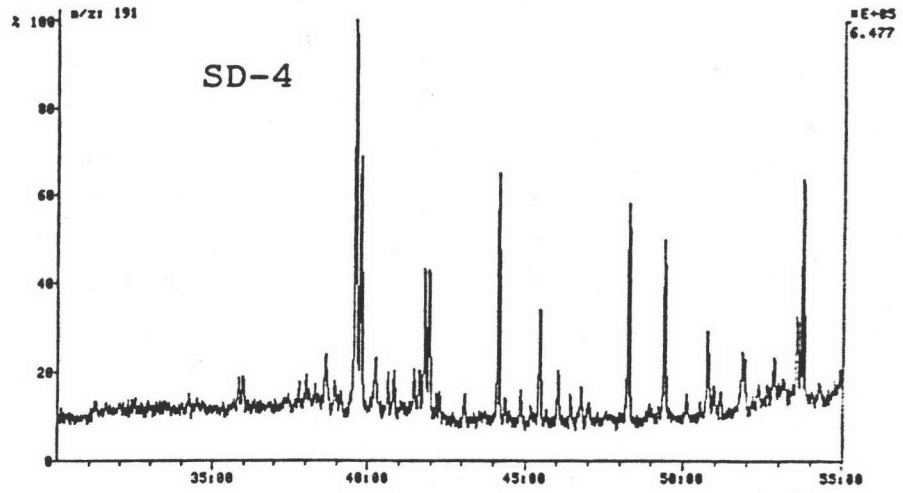


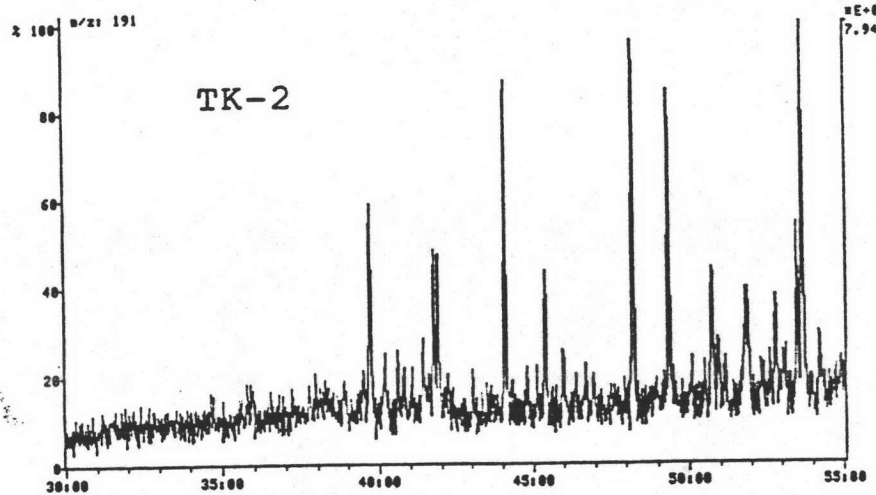
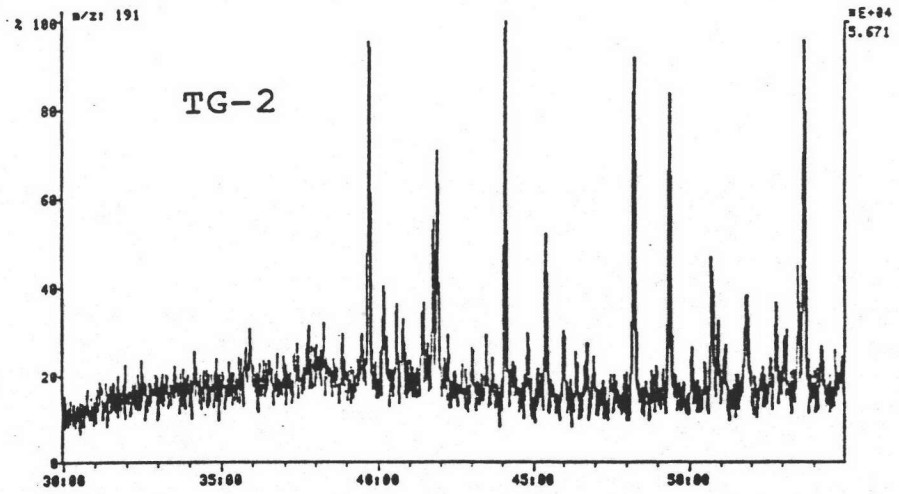
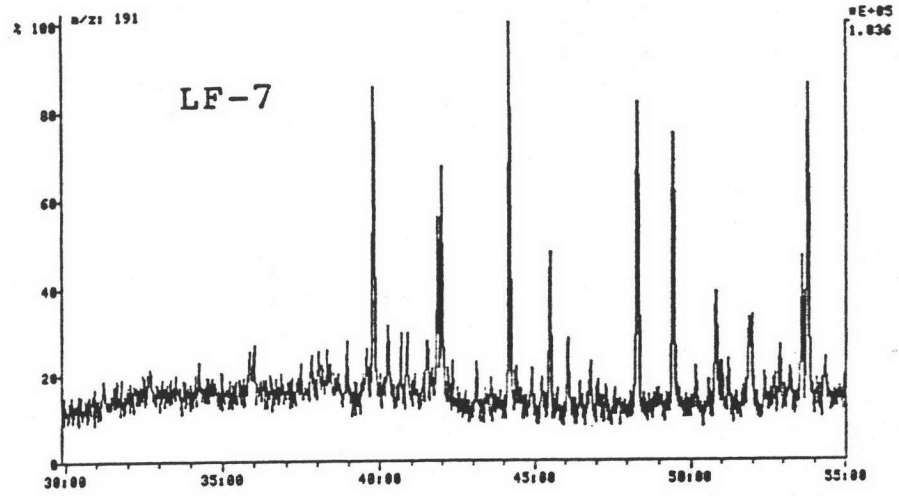


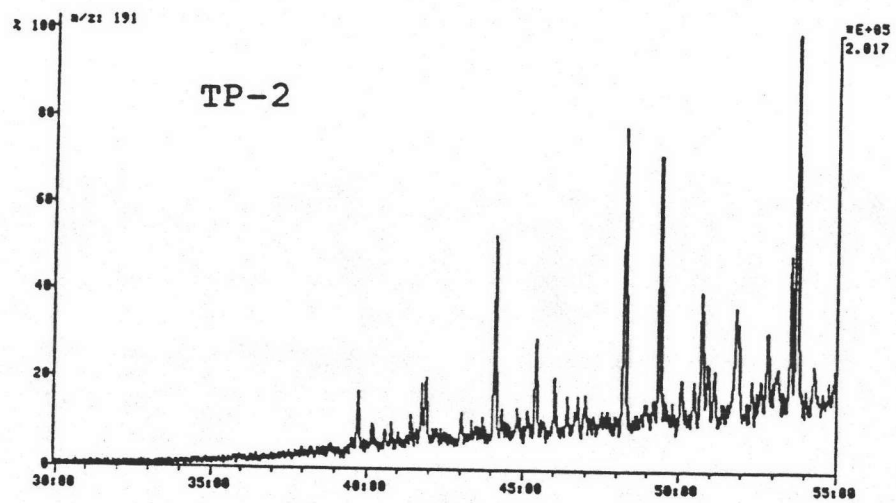
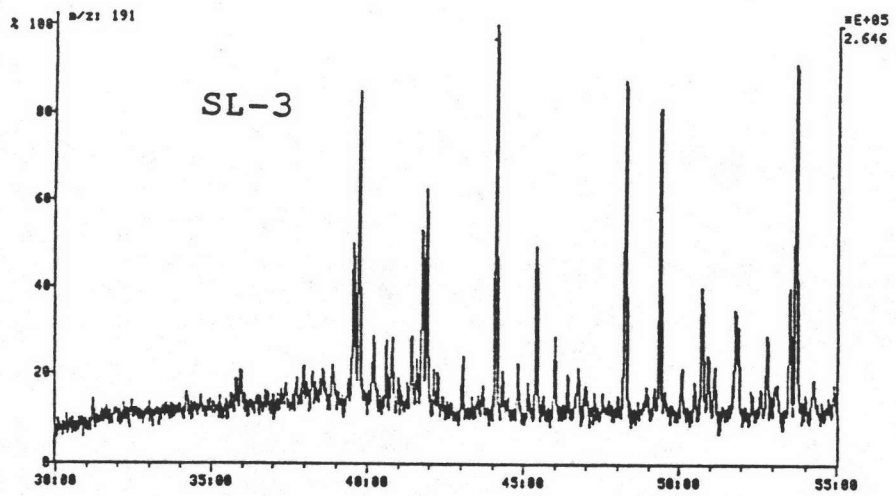
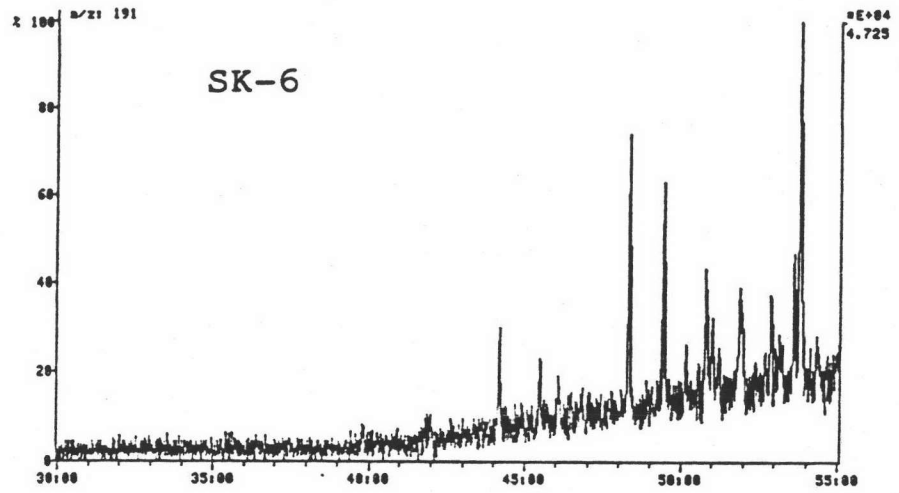
APPENDIX IX

COMPILATION OF M/Z 191 MASS FRAGMENTOGRAM OF
TRICYCLIC AND TETRACYCLIC TERPANES
OF OIL SAMPLES



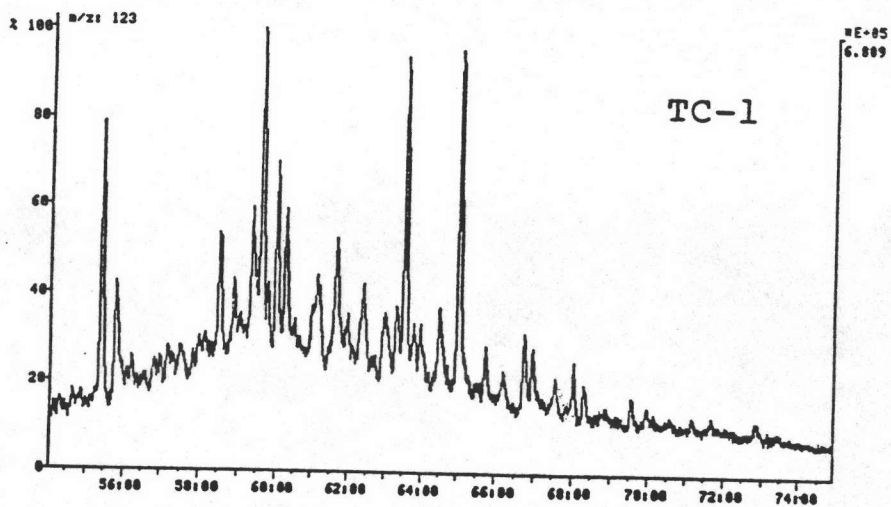
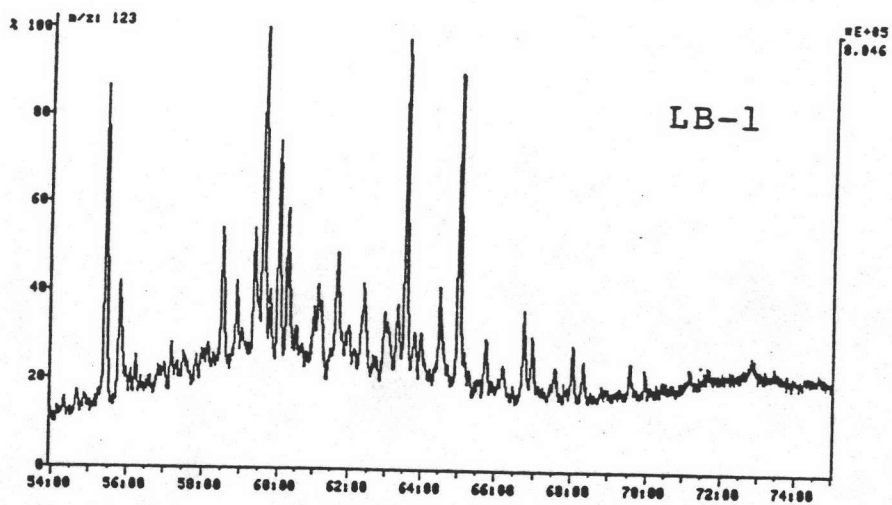
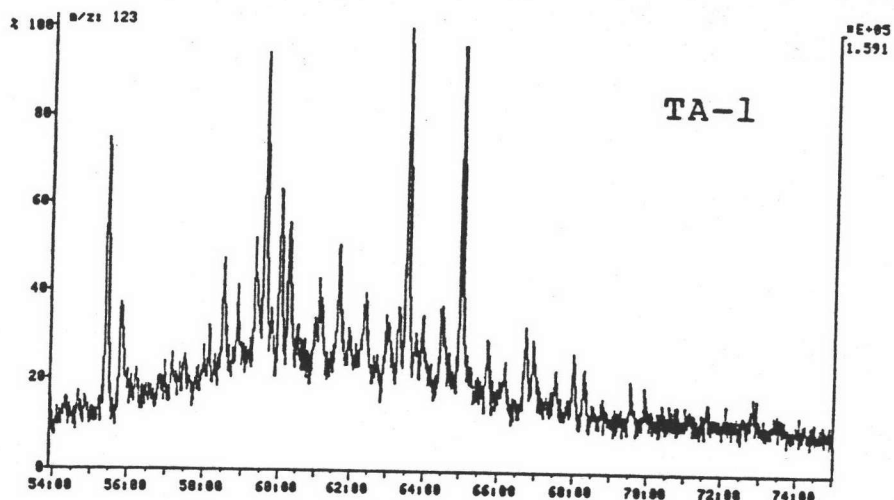


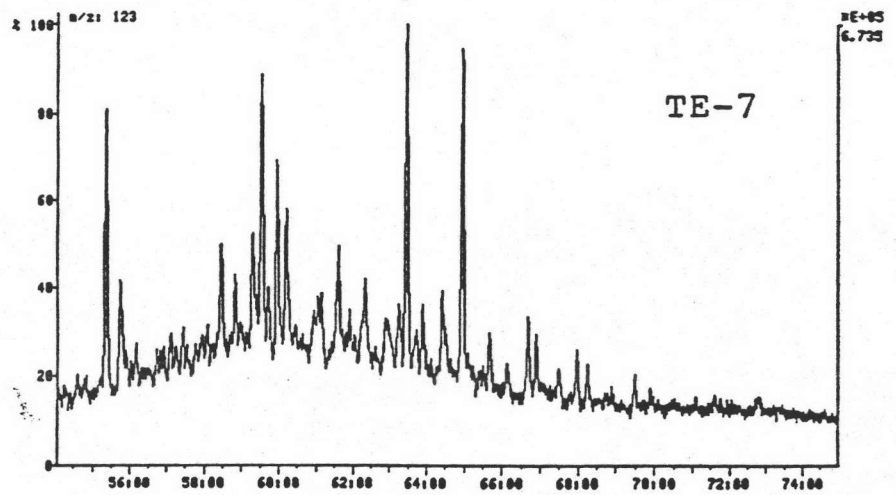
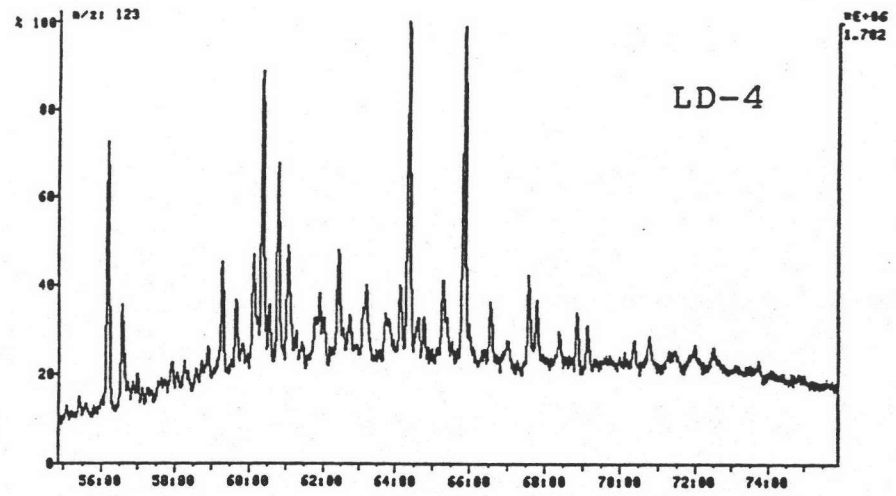
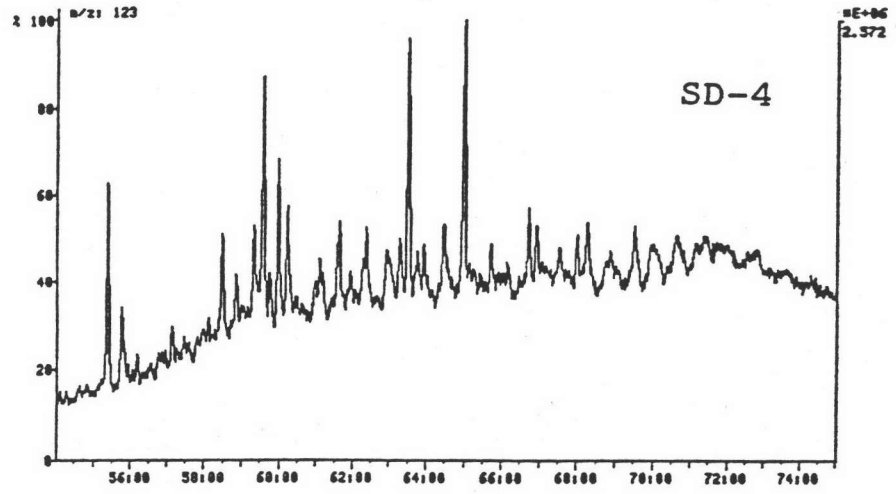


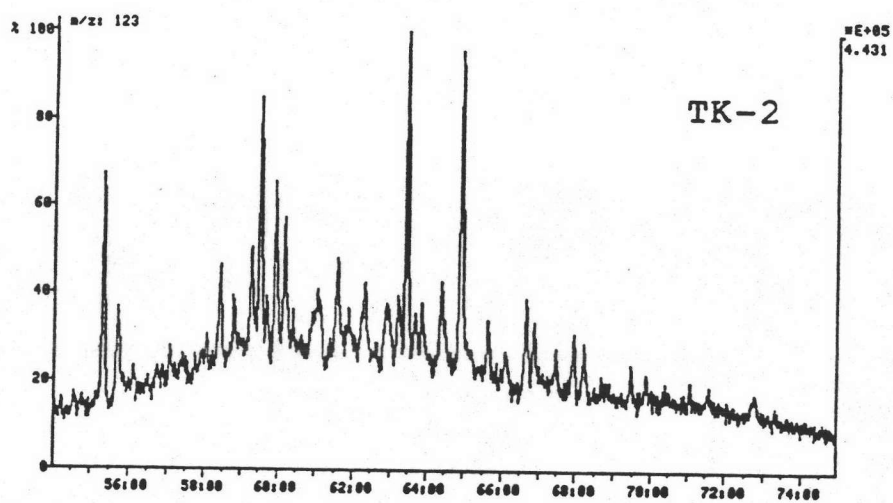
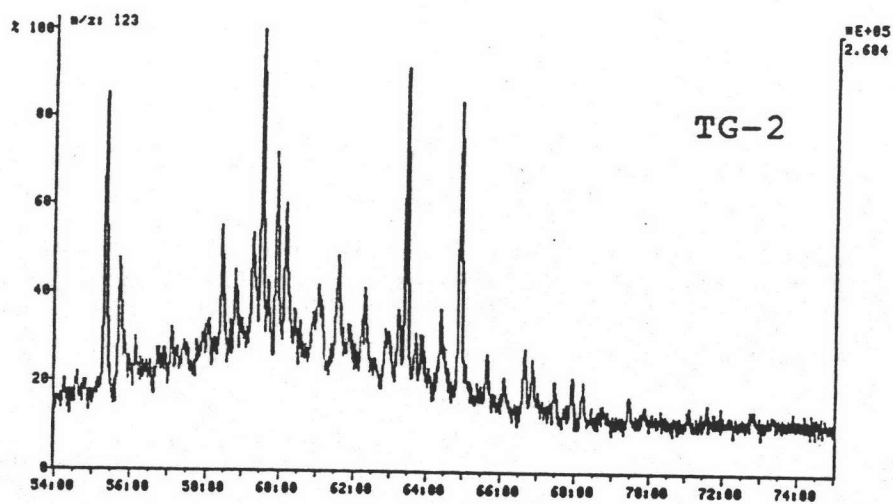
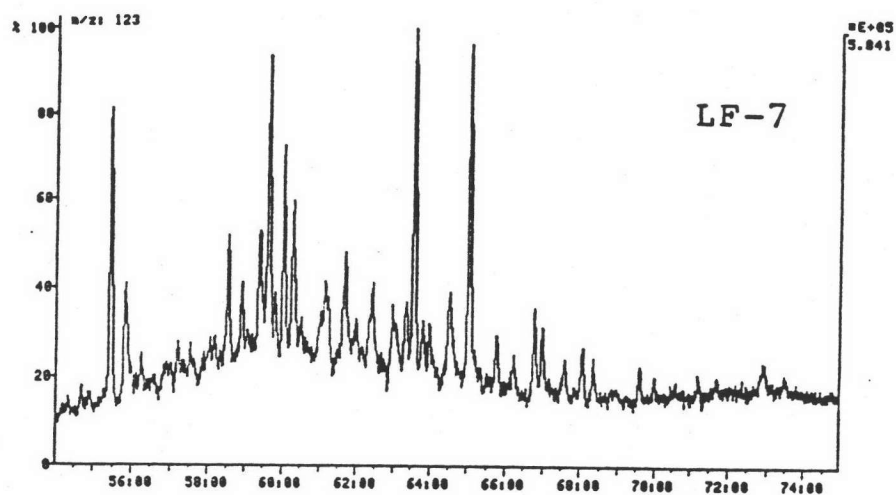


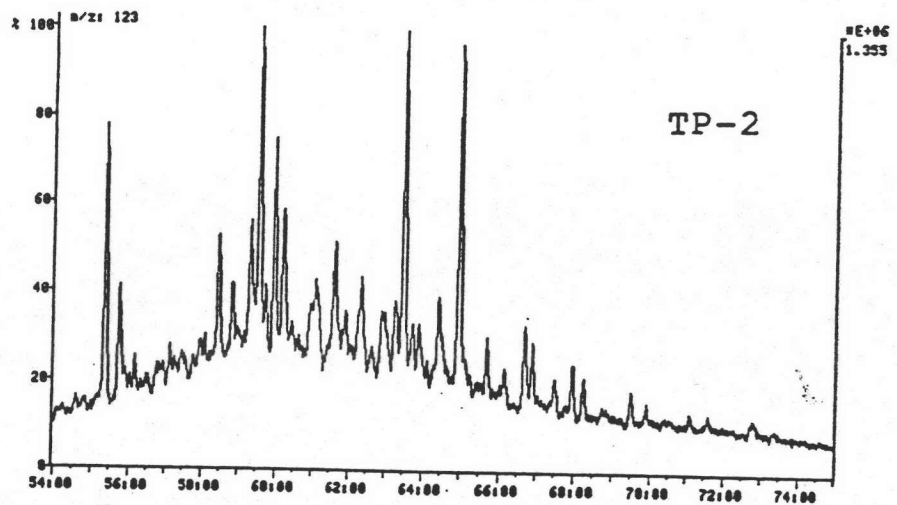
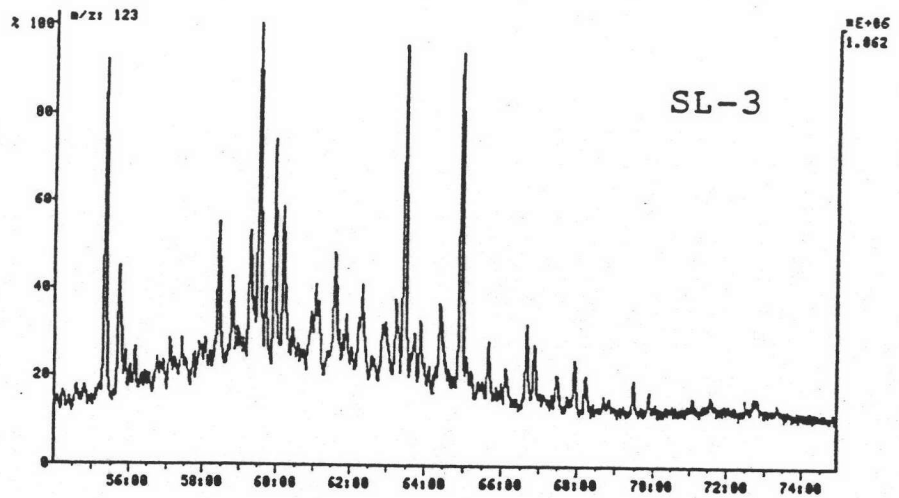
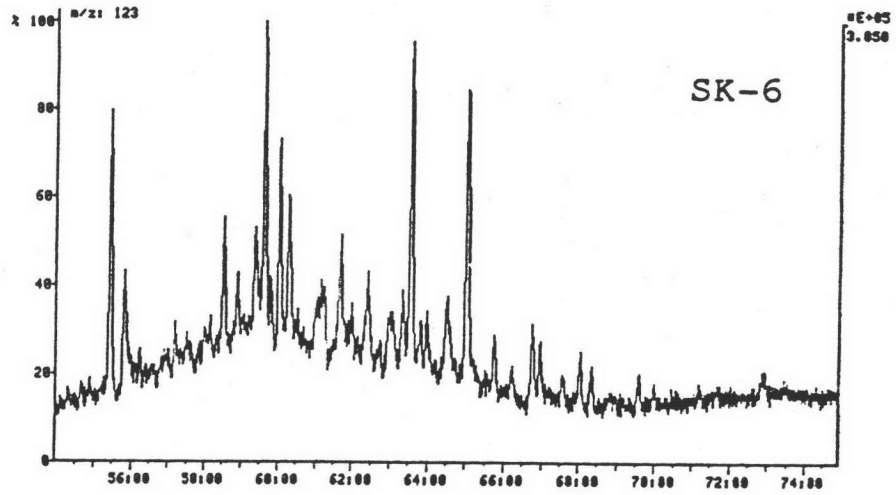
APPENDIX X

COMPILATION OF M/Z 123 MASS FRAGMENTOGRAM OF
8,14-SECOHOPANES OF OIL SAMPLES



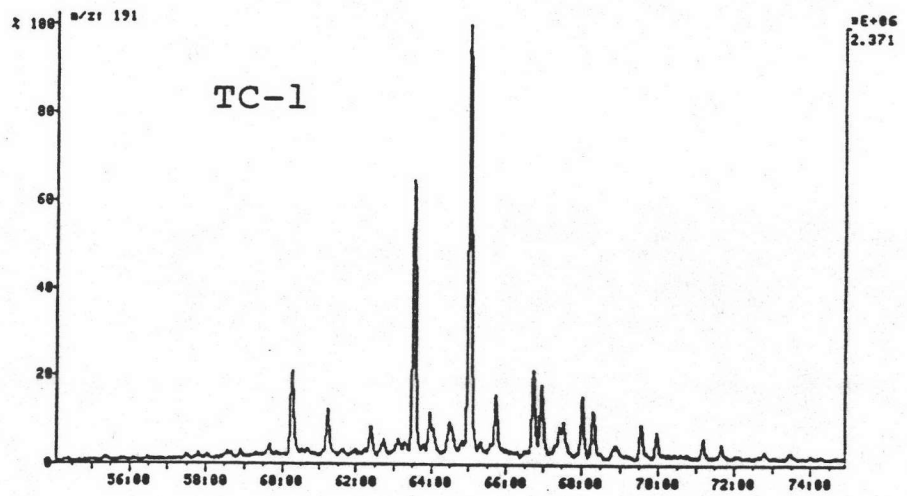
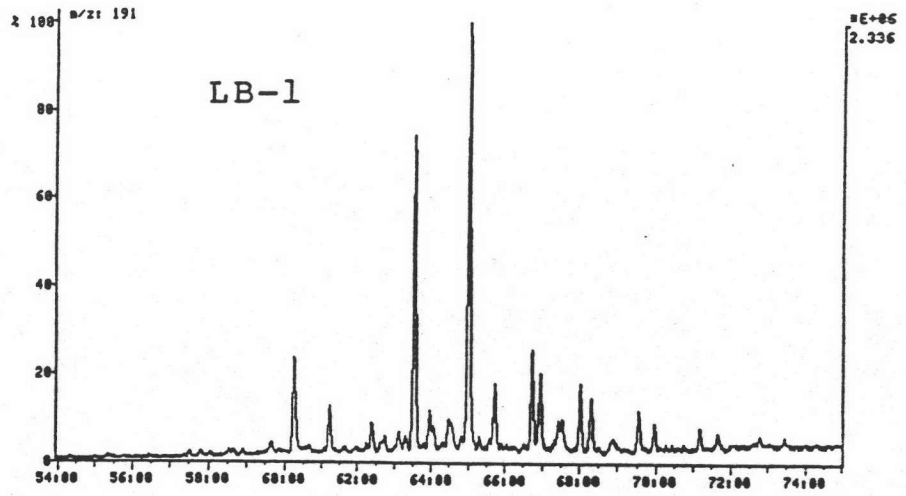
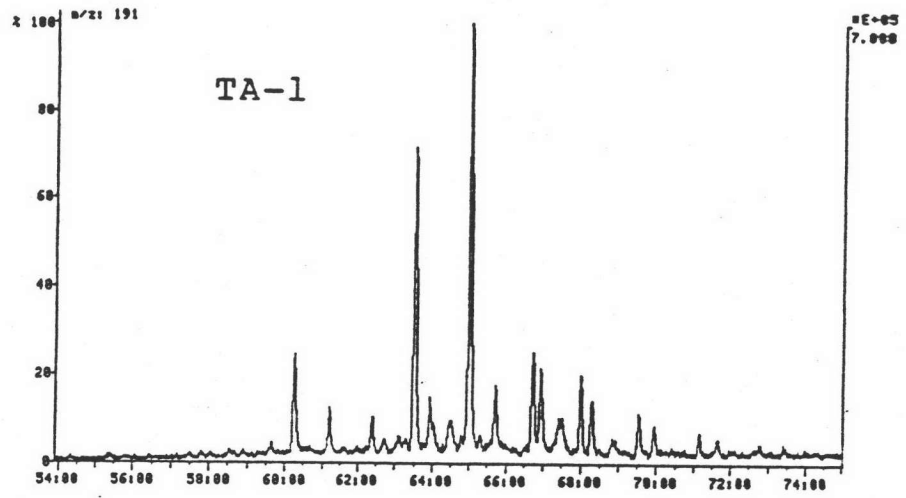


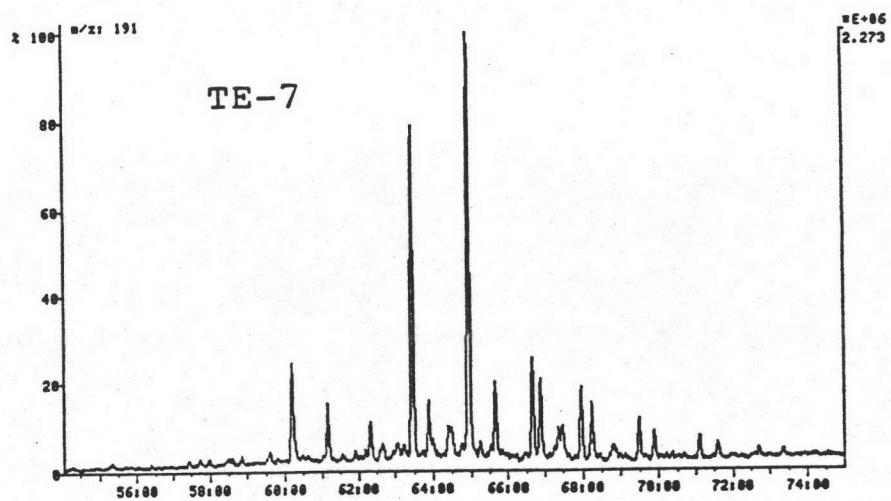
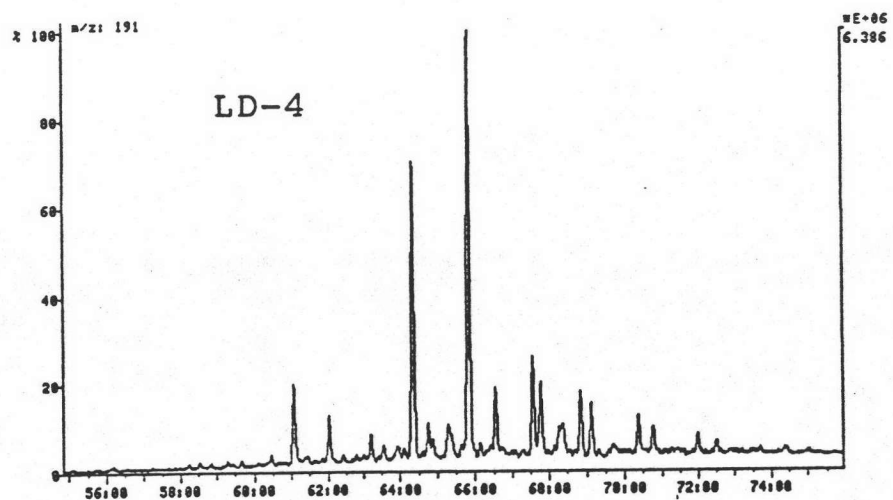
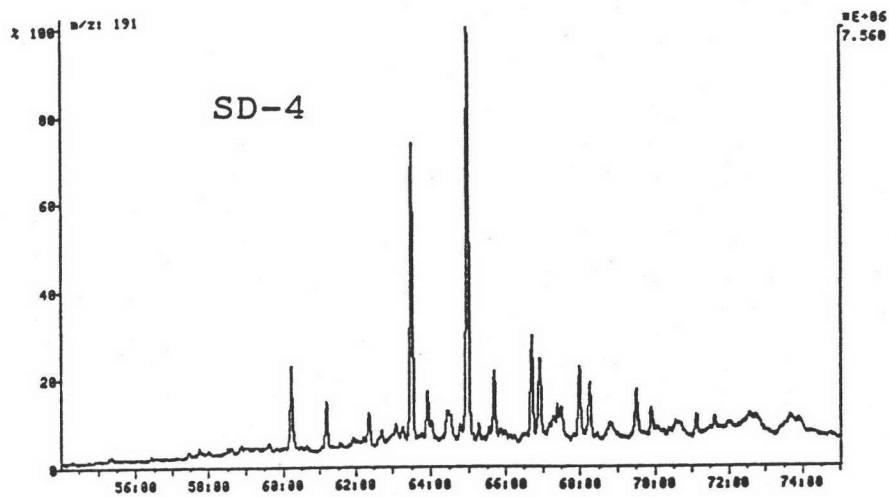


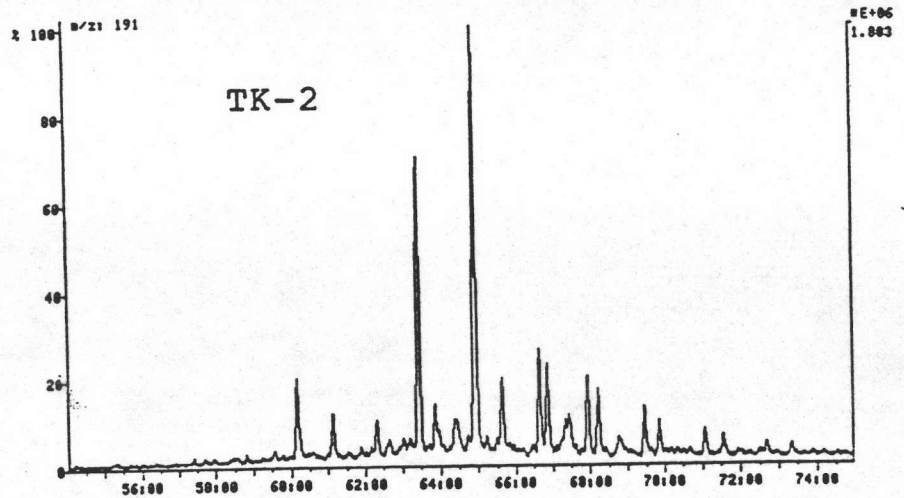
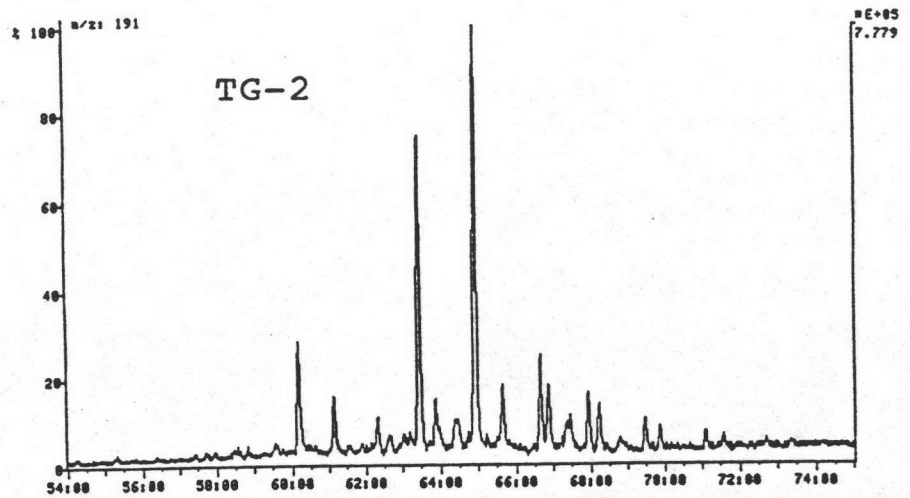
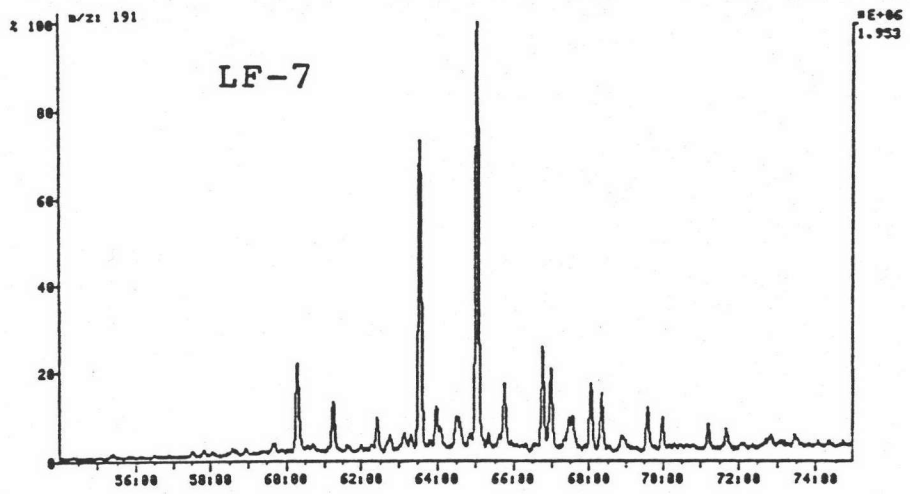


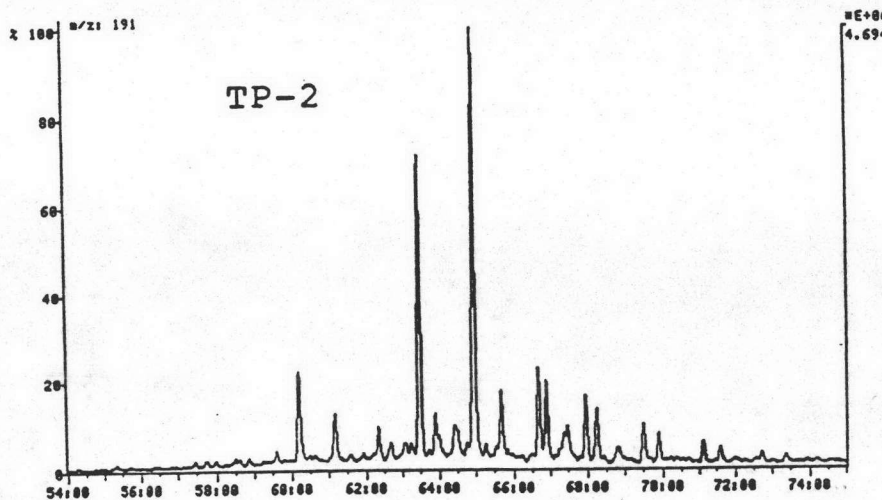
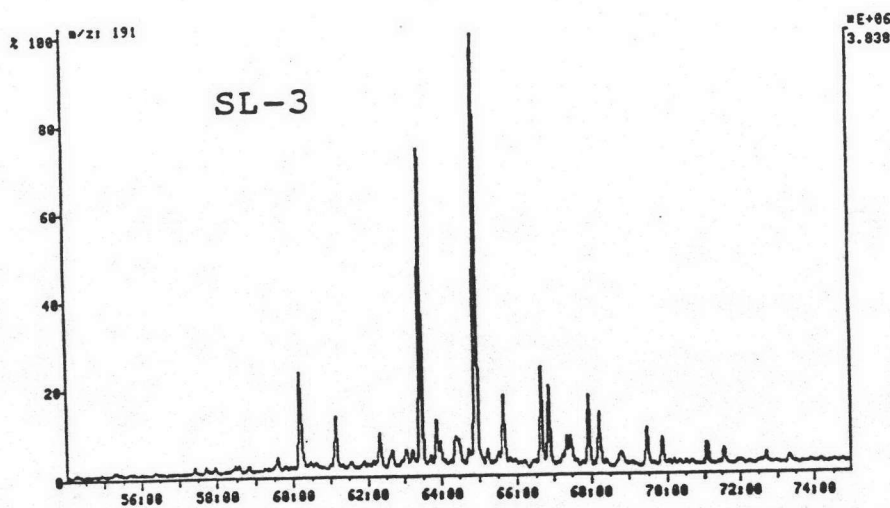
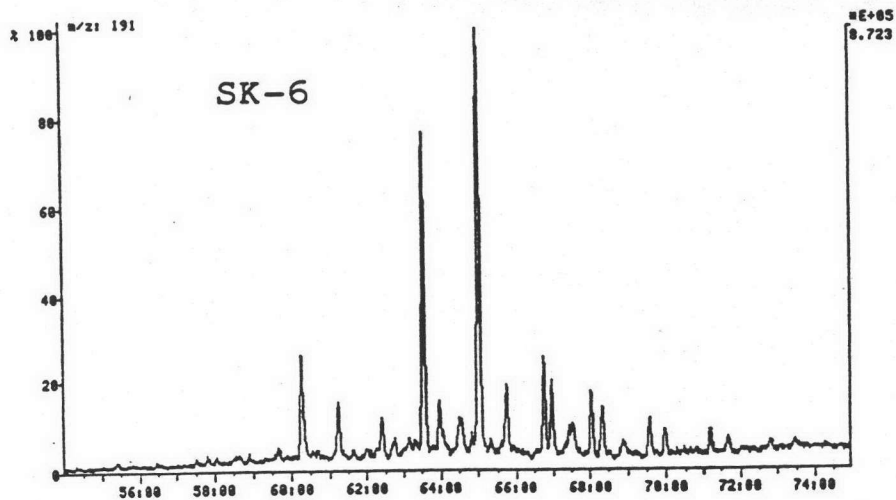
APPENDIX XI

COMPILATION OF M/Z 191 MASS FRAGMENTOGRAM OF
PENTACYCLIC HOPANES OF OIL SAMPLES



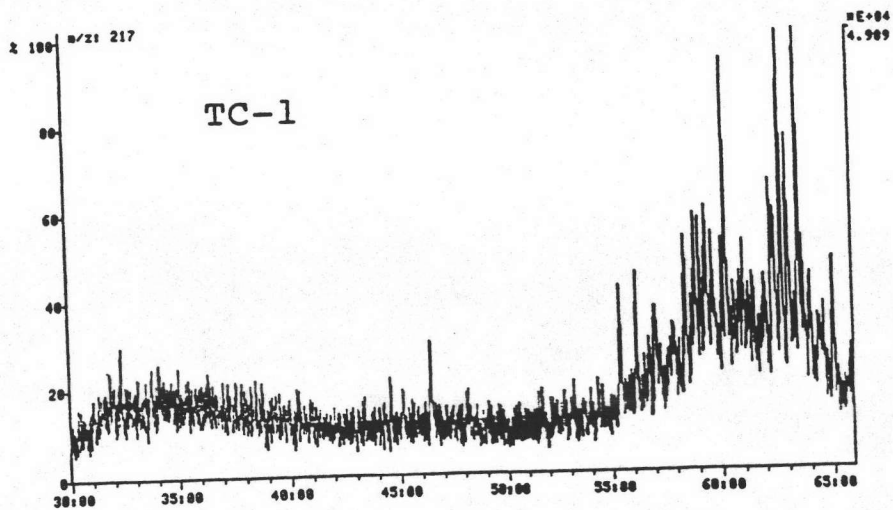
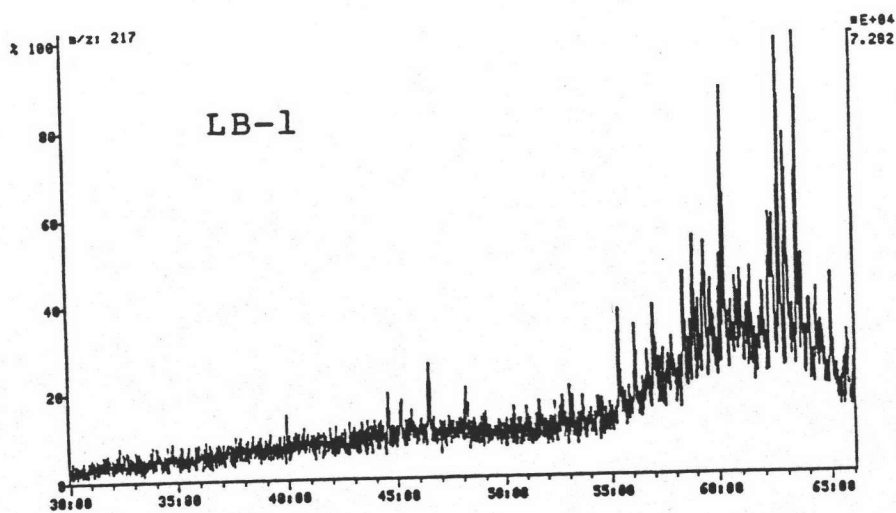
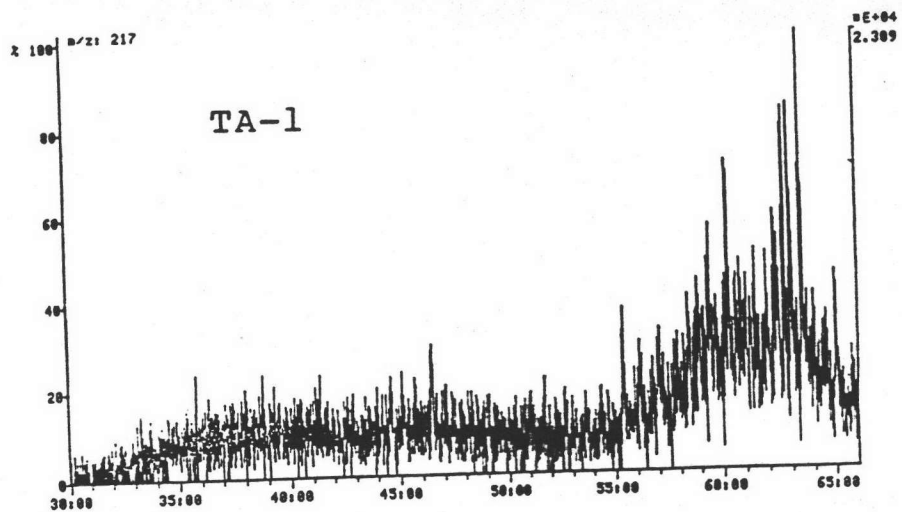


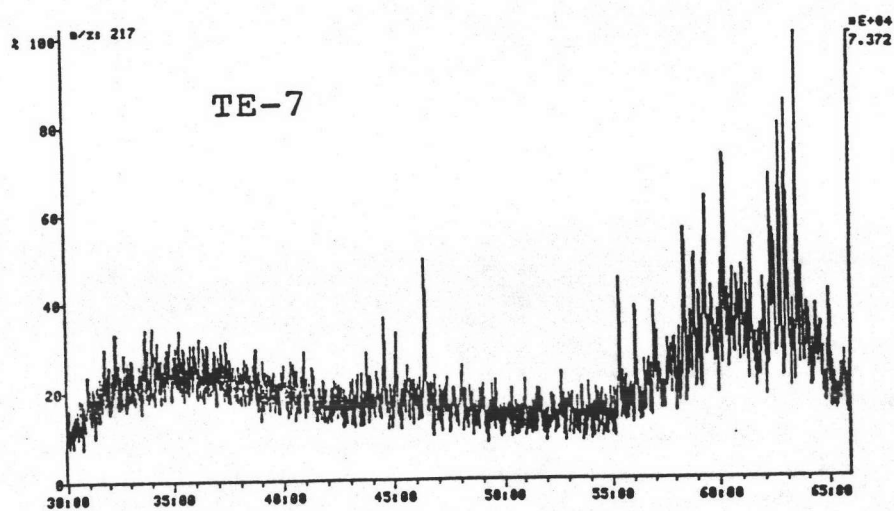
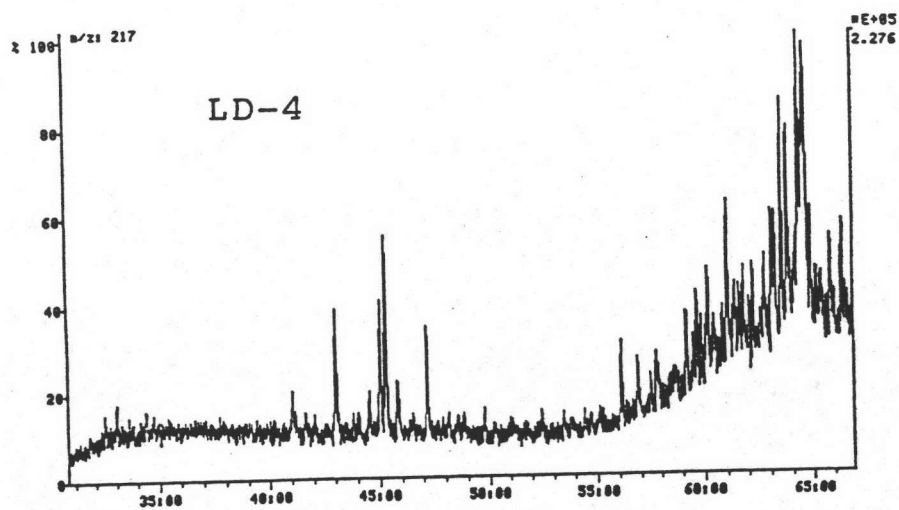
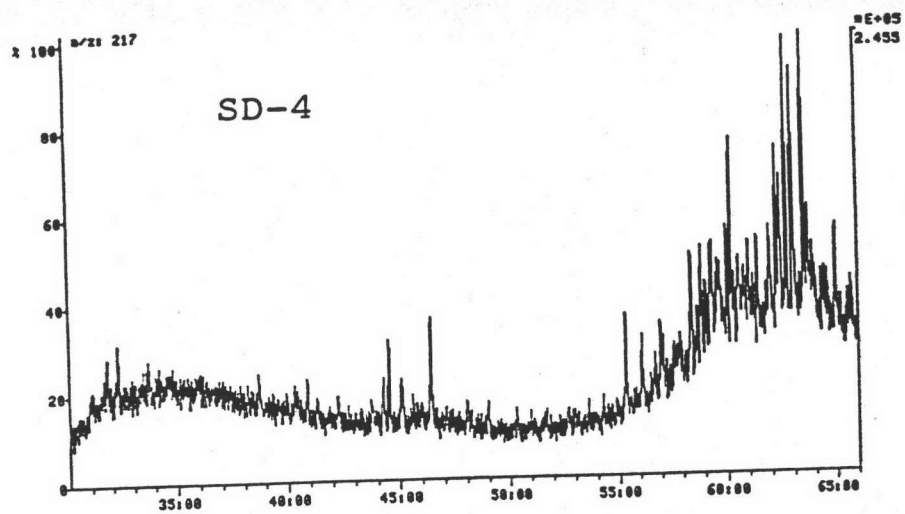


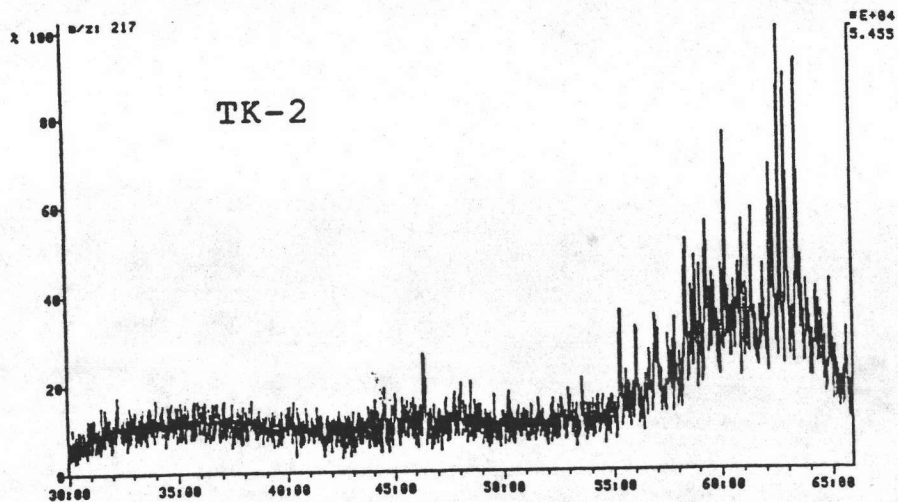
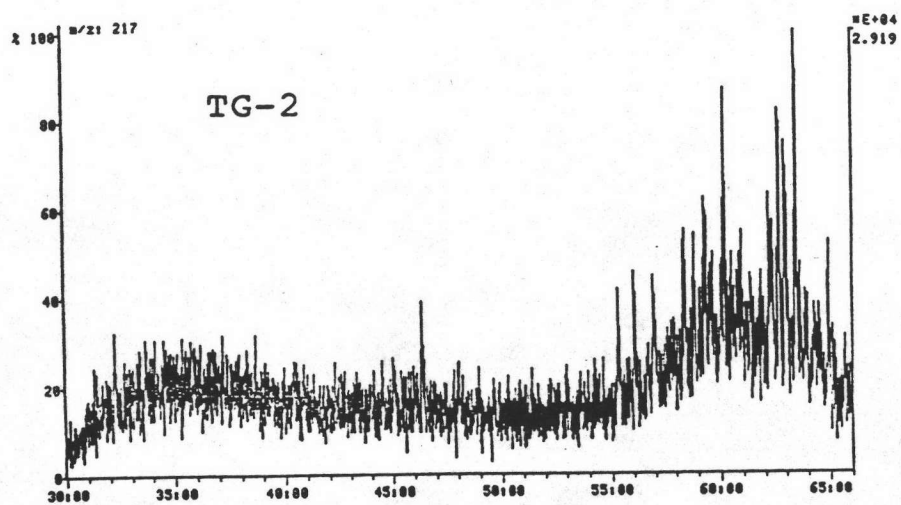
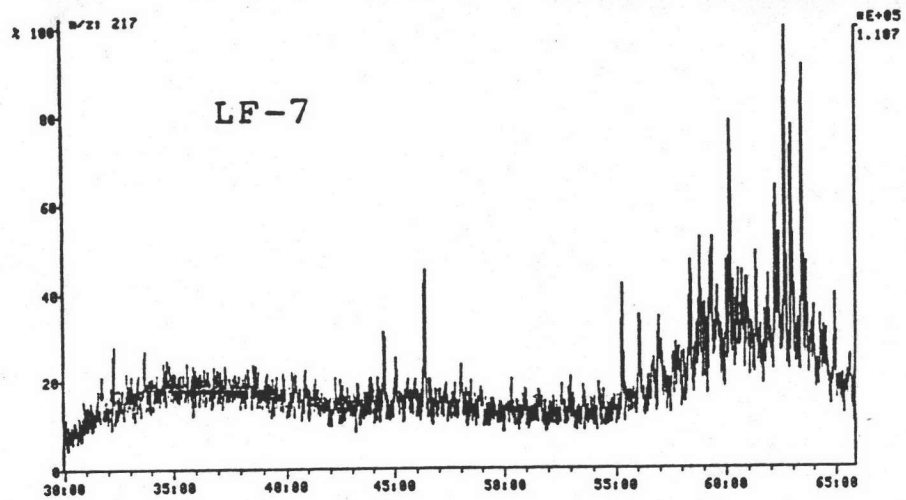


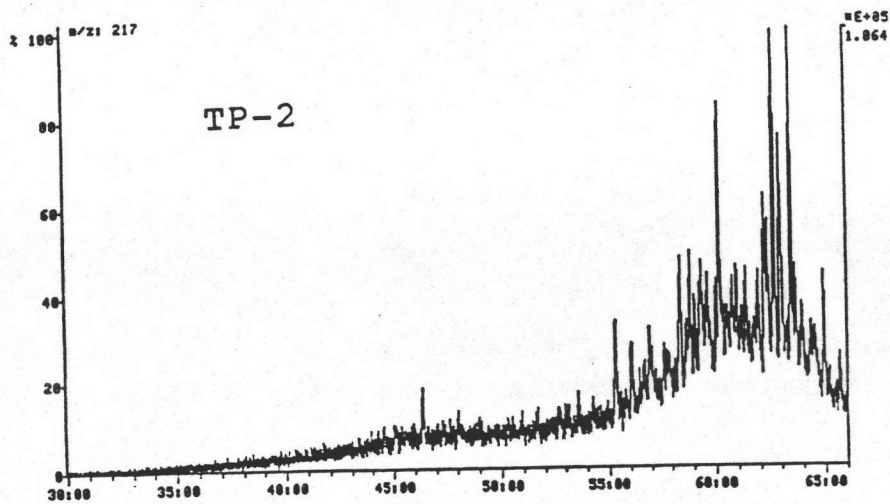
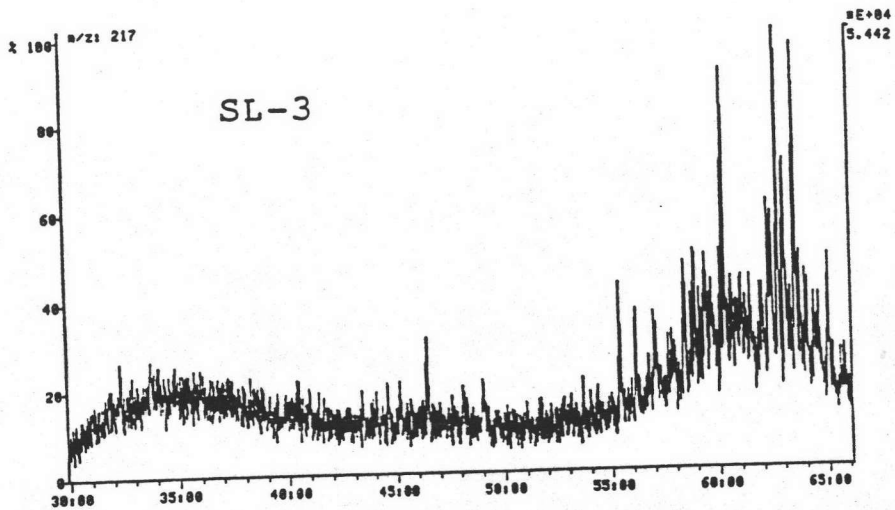
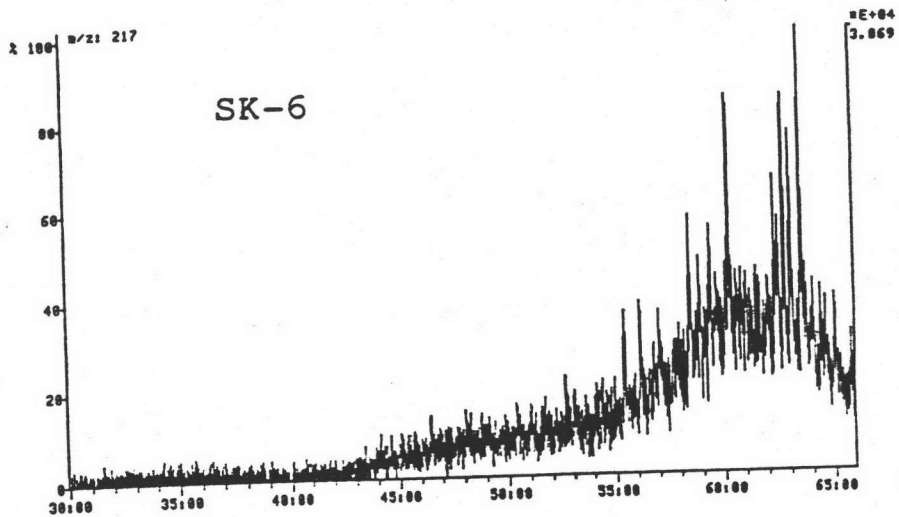
APPENDIX XII

COMPILATION OF M/Z 217 MASS FRAGMENTOGRAM OF
SHORT CHAIN STERANES OF OIL SAMPLES



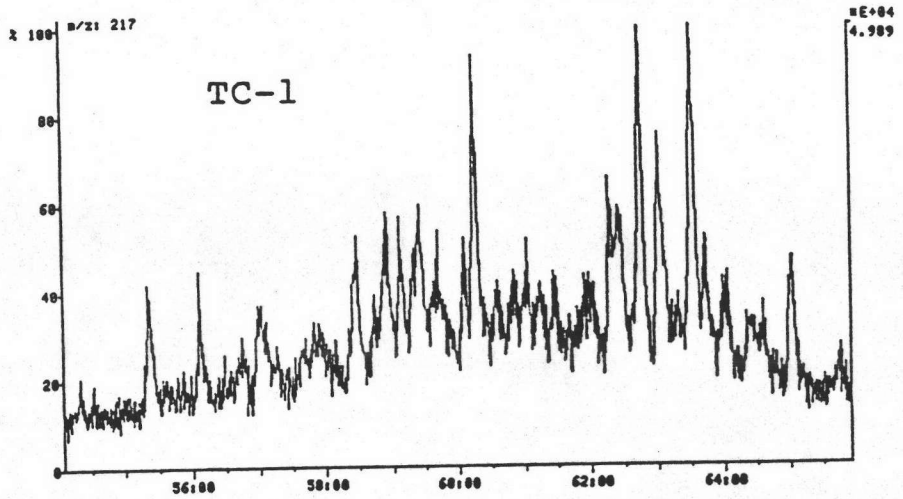
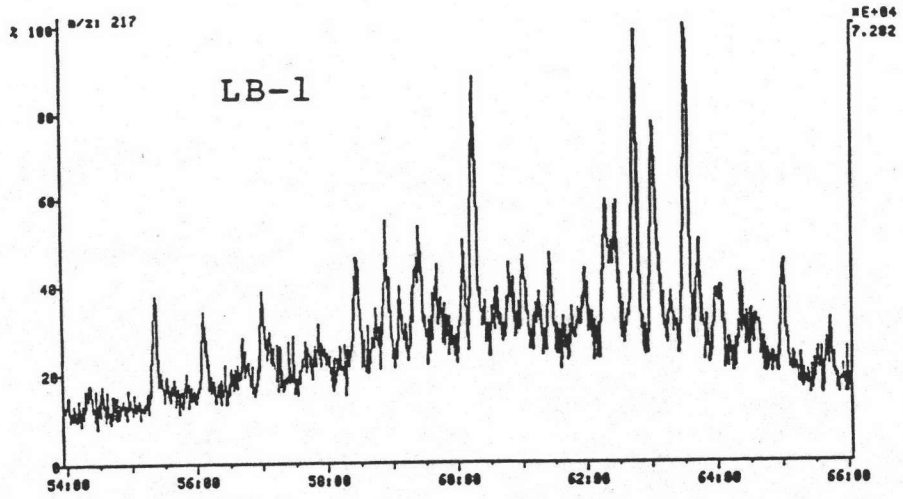
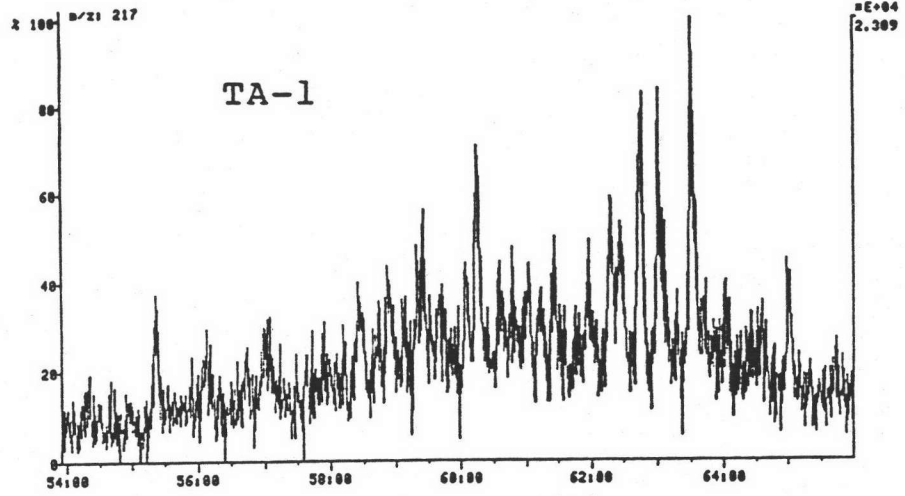


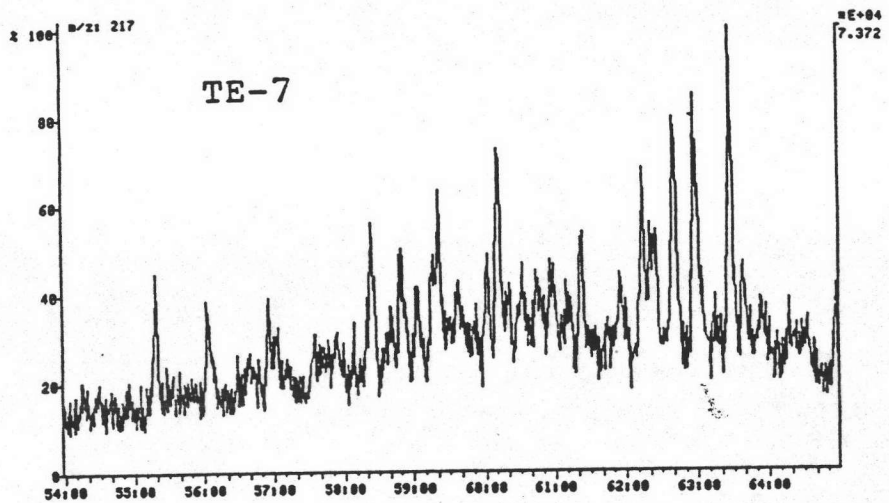
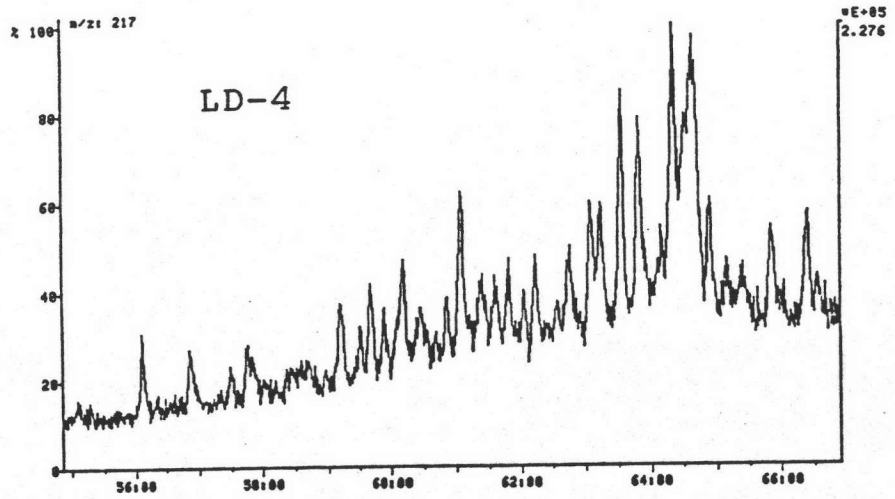
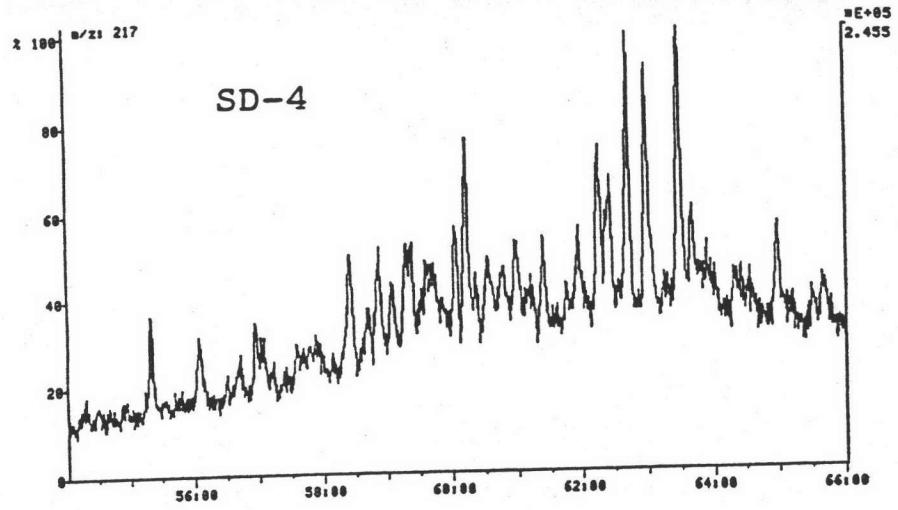


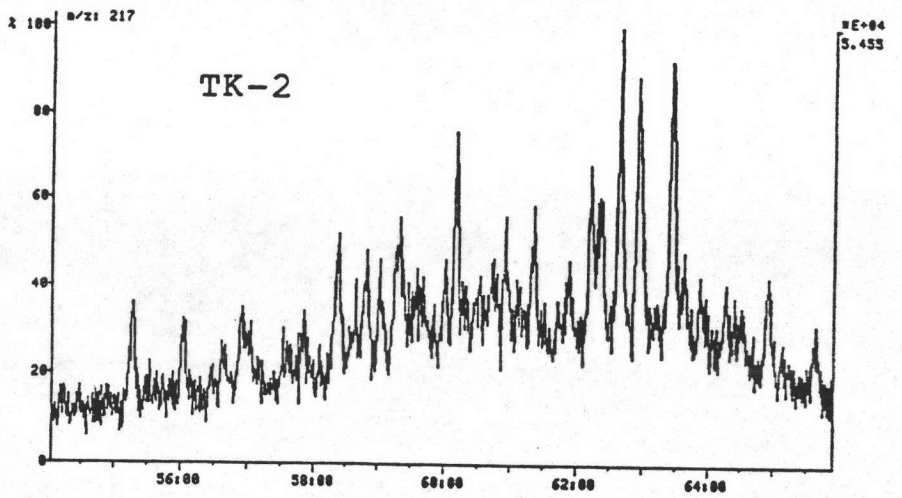
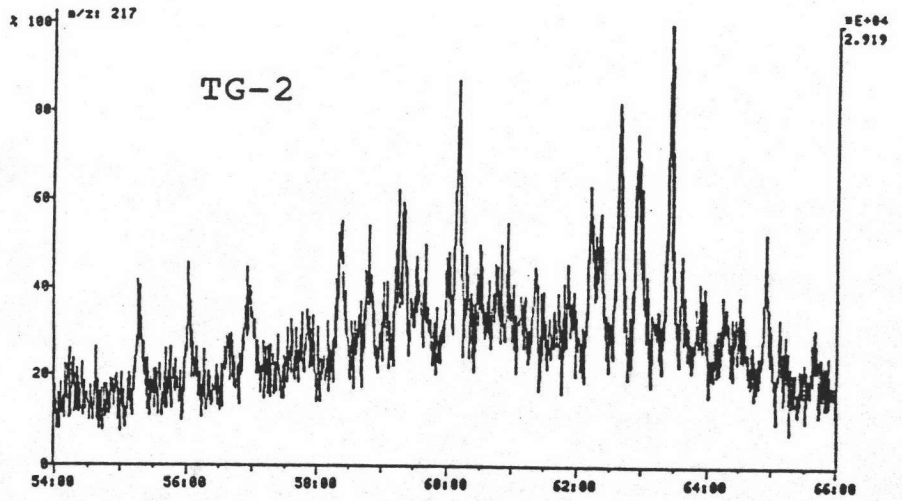
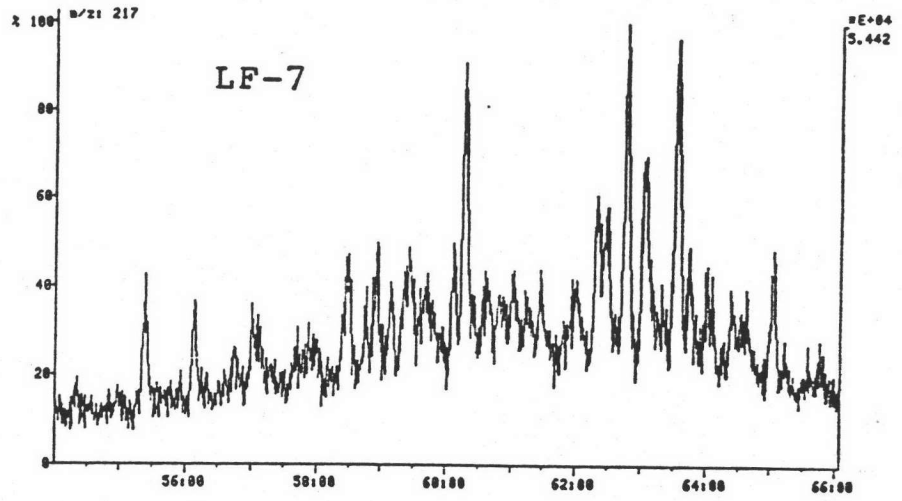


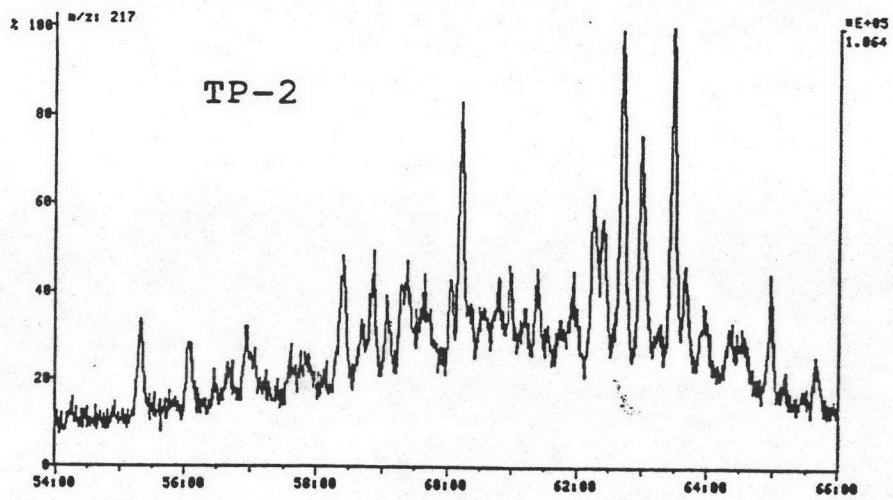
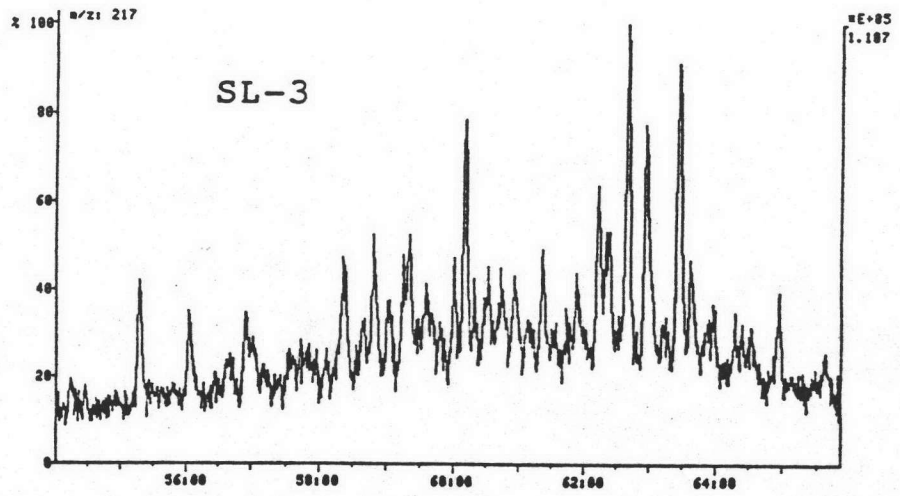
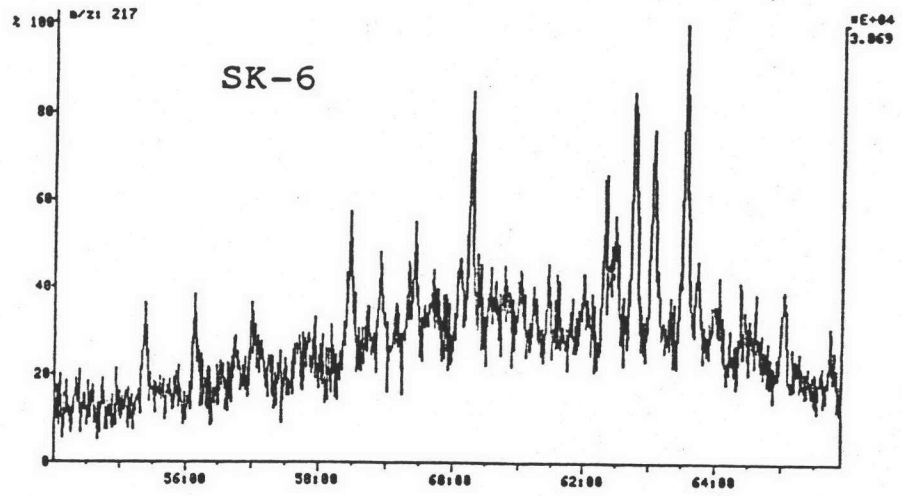
APPENDIX XIII

COMPILATION OF M/Z 217 MASS FRAGMENTOGRAM OF
STERANES (C₂₇-C₂₉) OF OIL SAMPLES



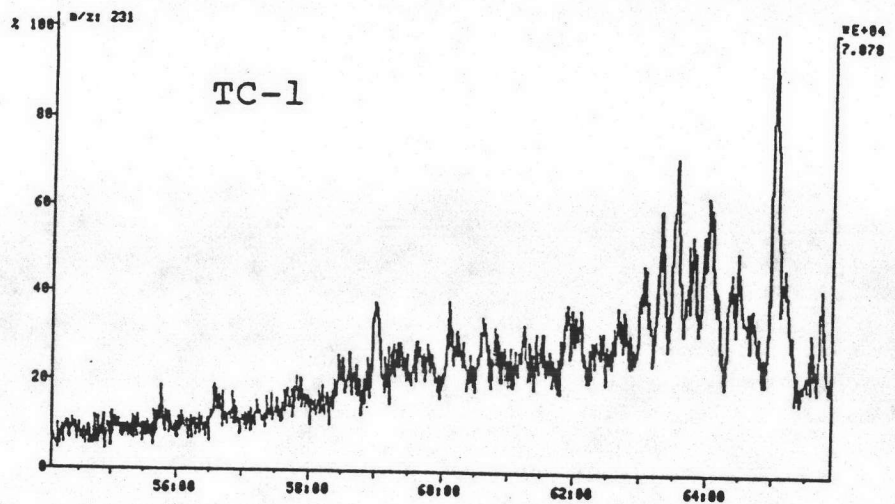
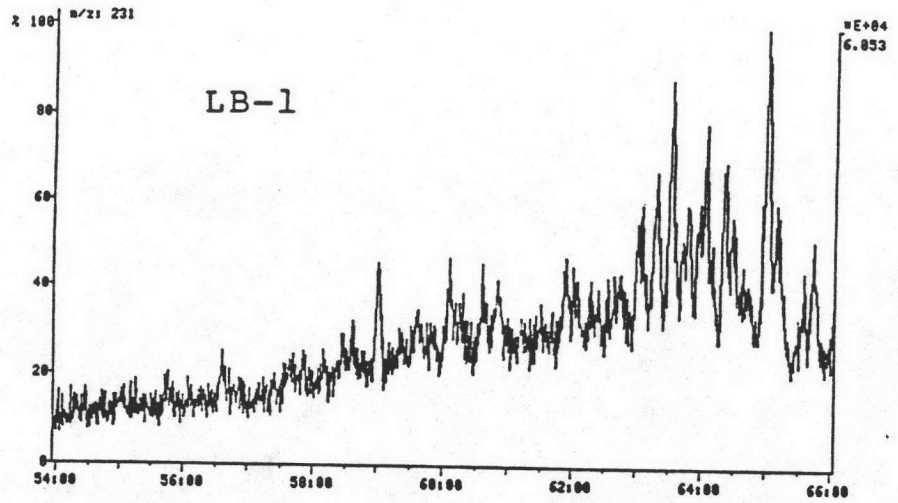
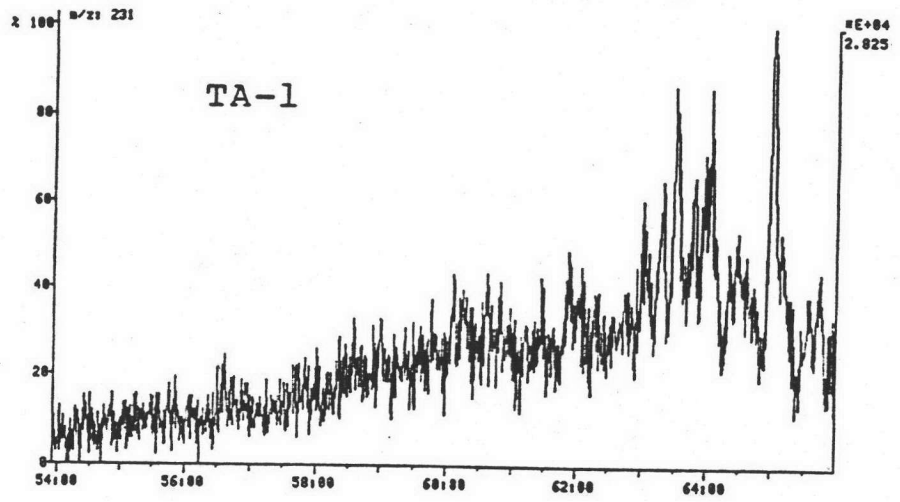


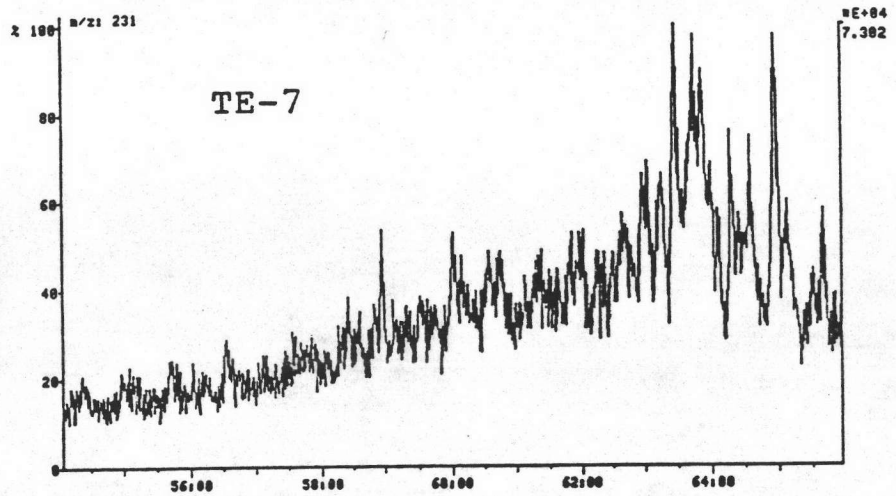
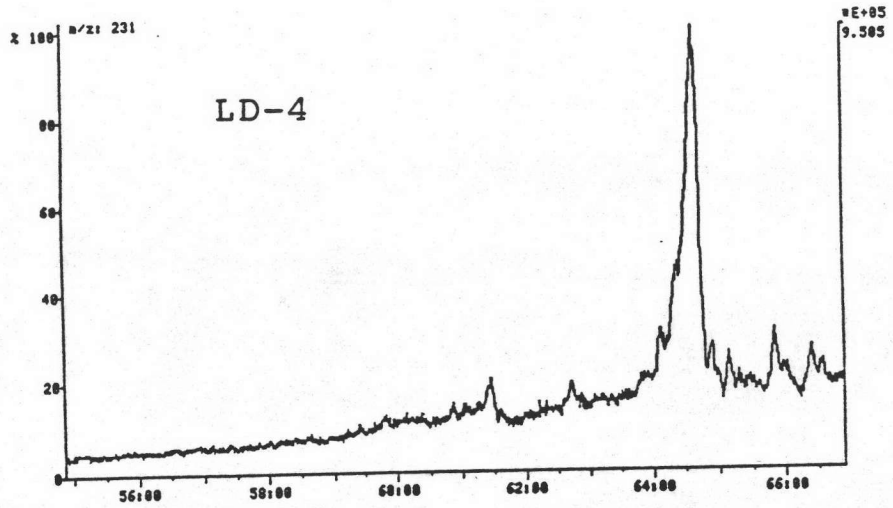
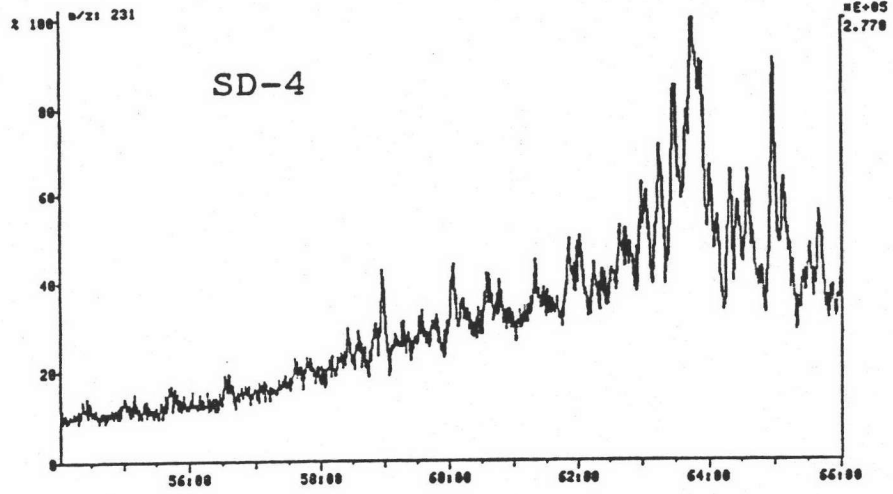


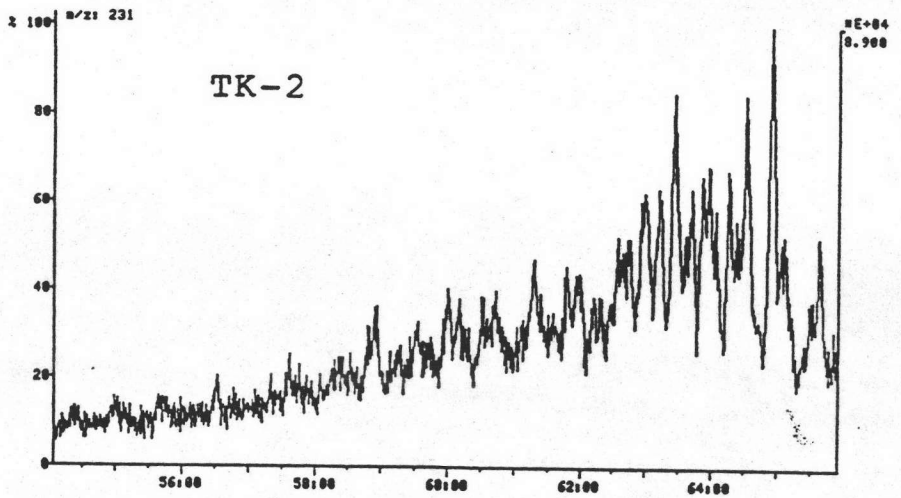
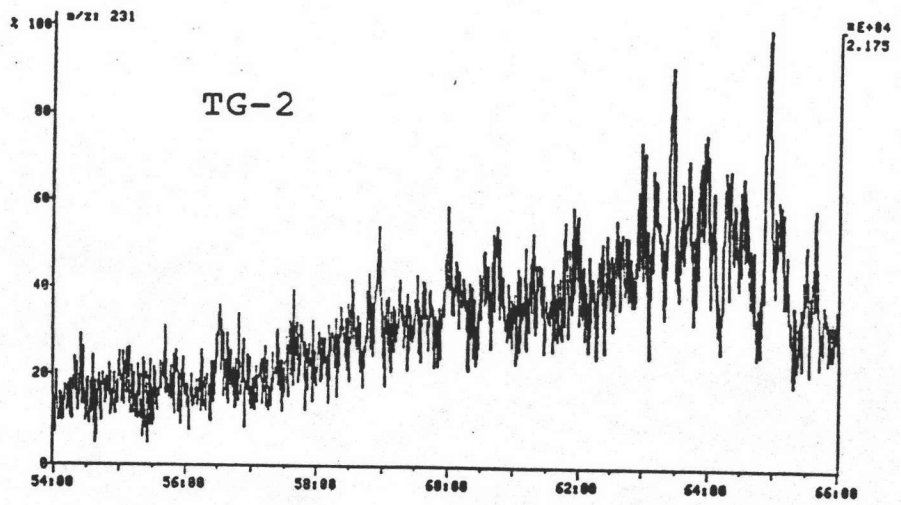
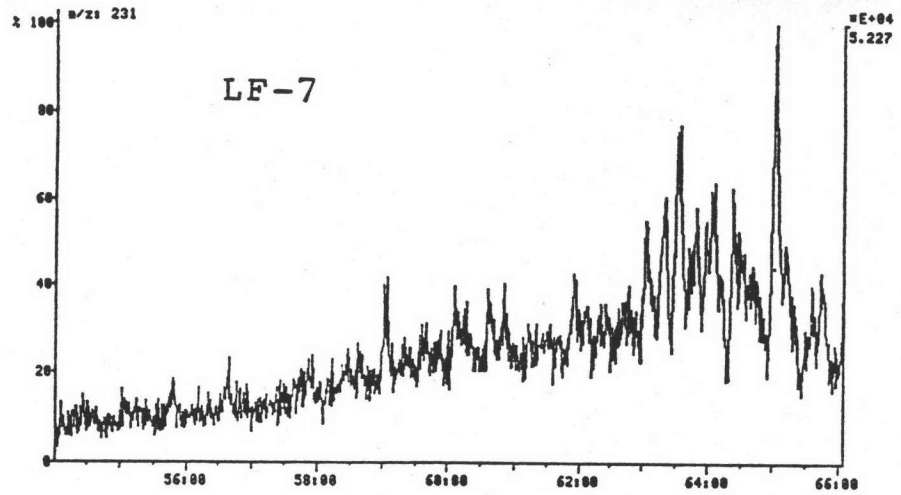


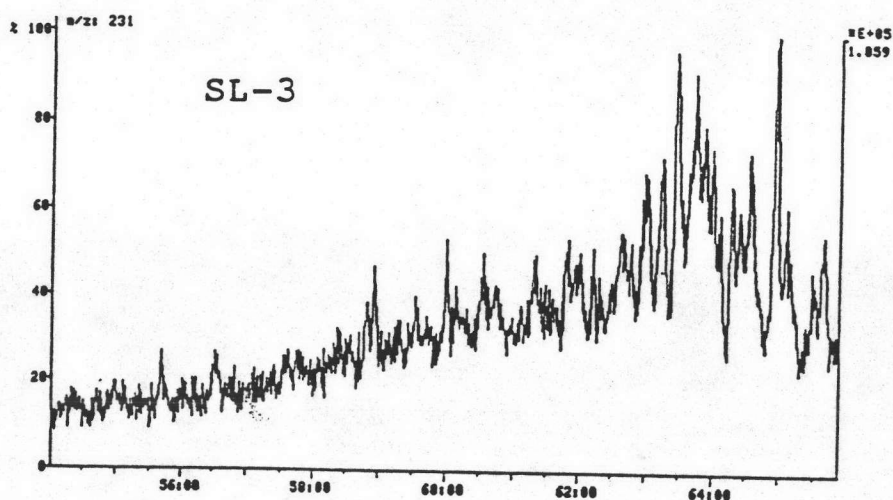
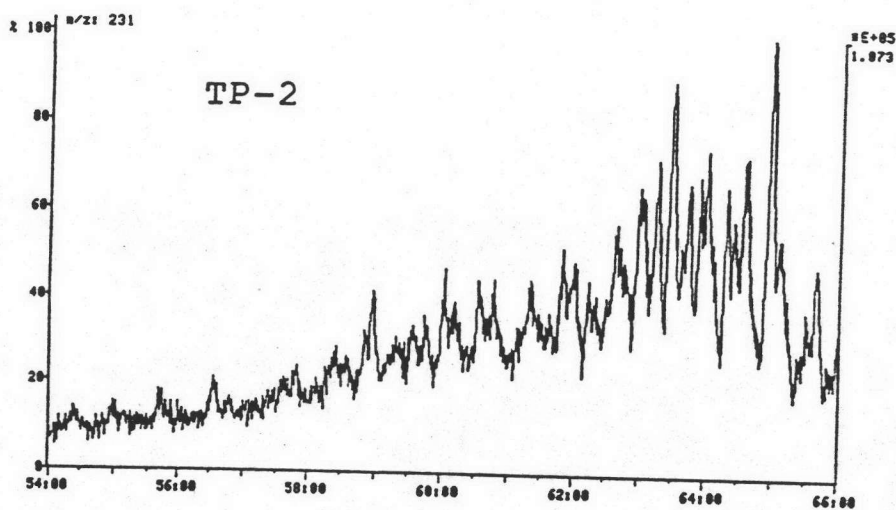
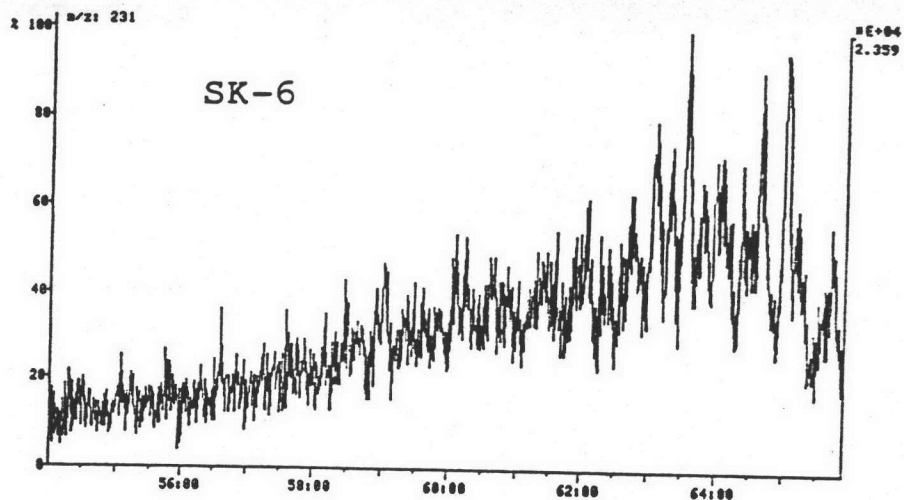
APPENDIX XIV

COMPILATION OF M/Z 231 MASS FRAGMENTOGRAM OF
METHYLSTERANES OF OIL SAMPLES



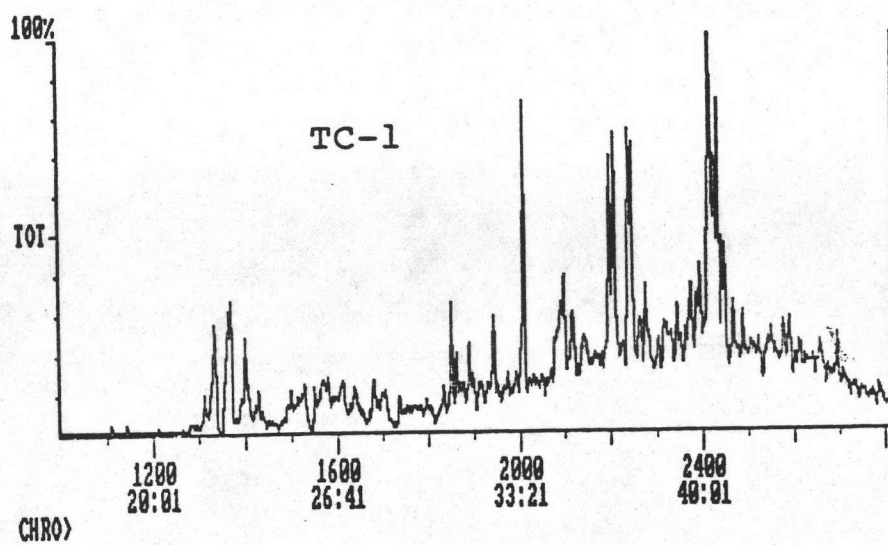
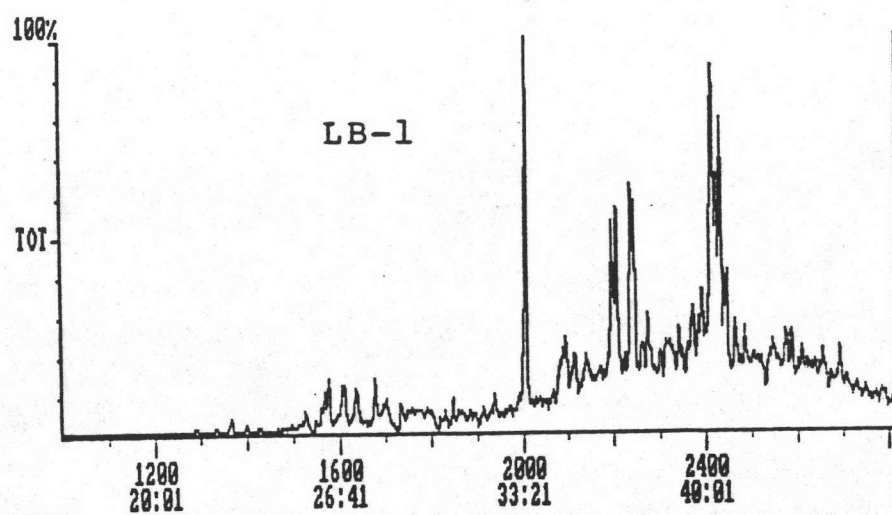
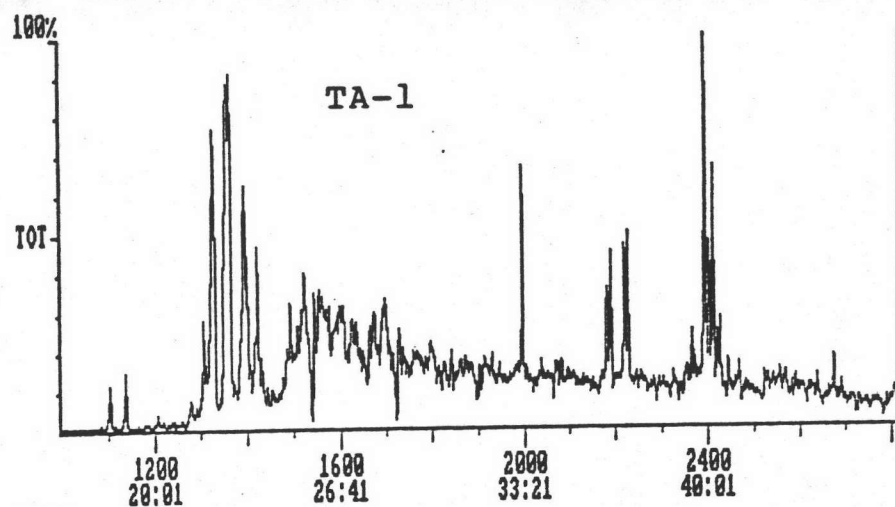


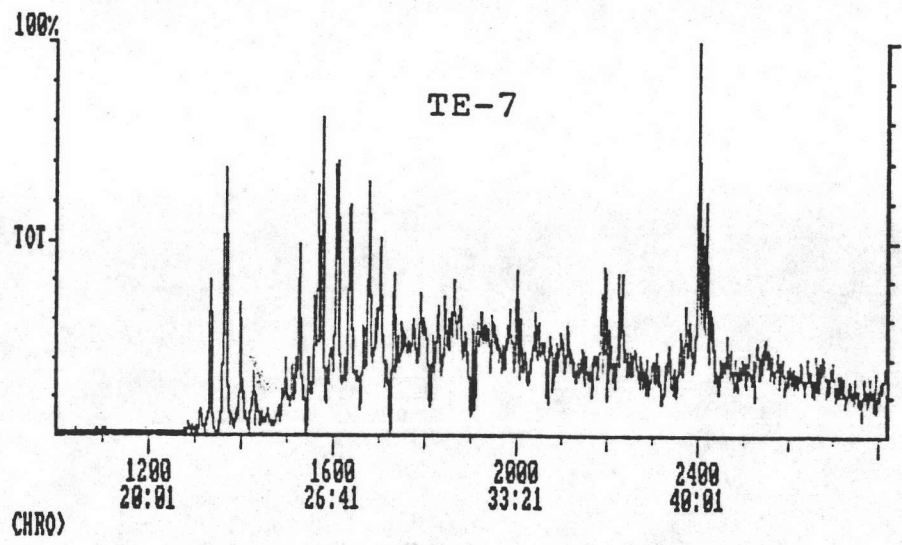
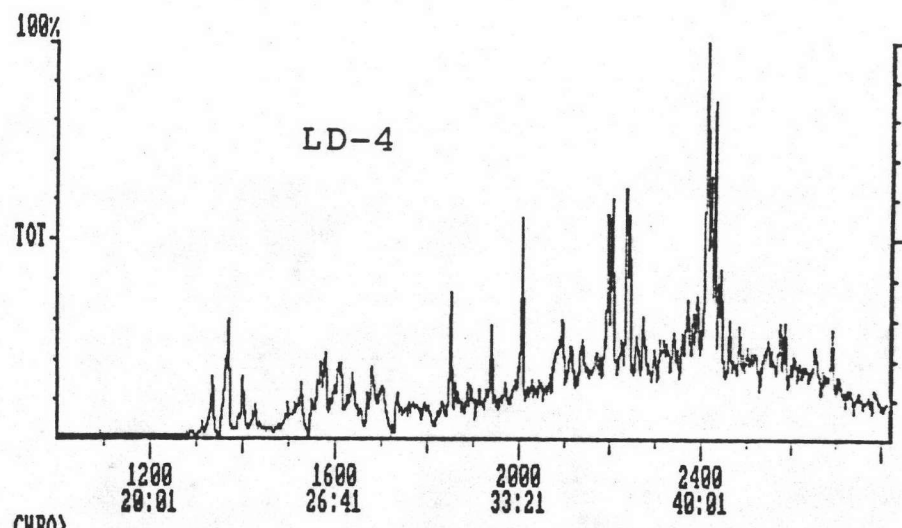
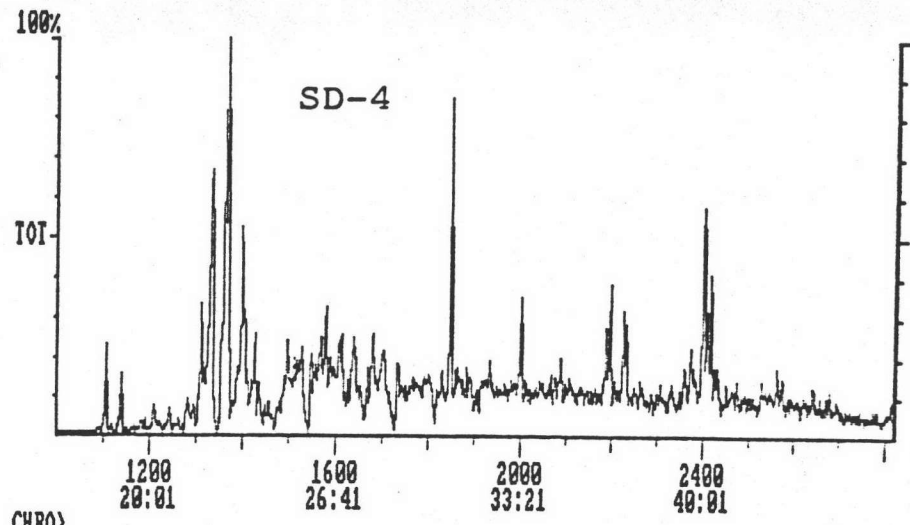


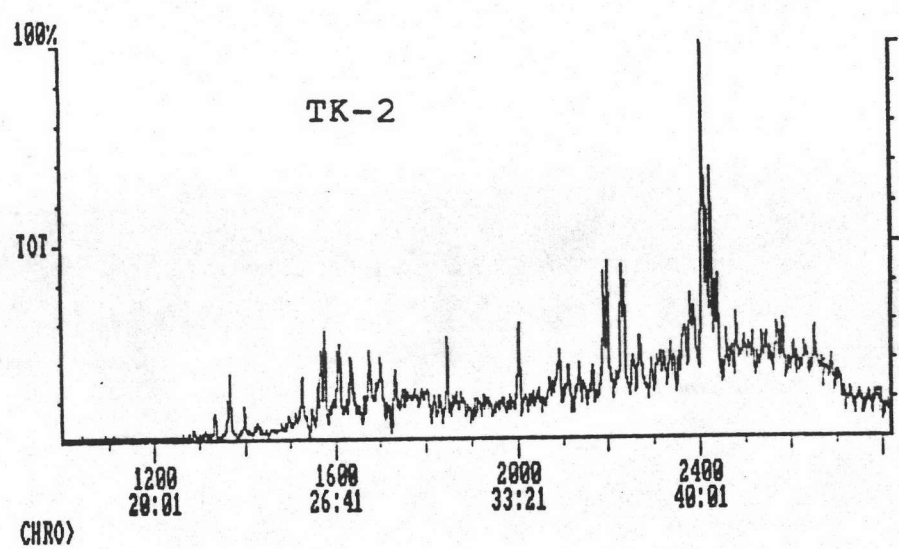
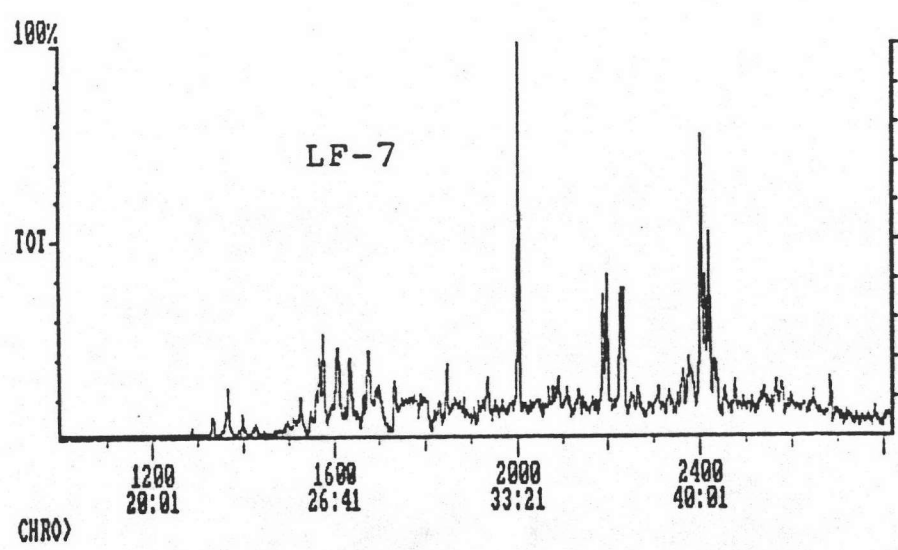
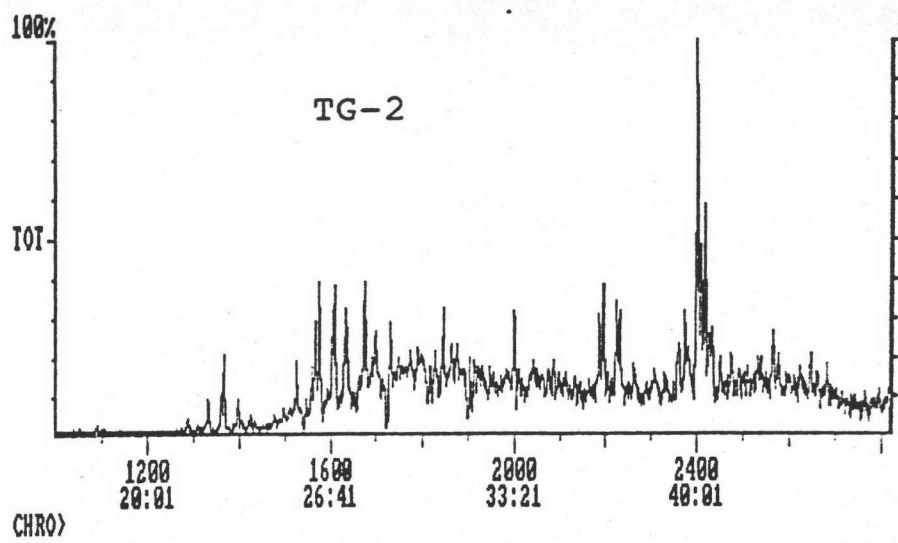


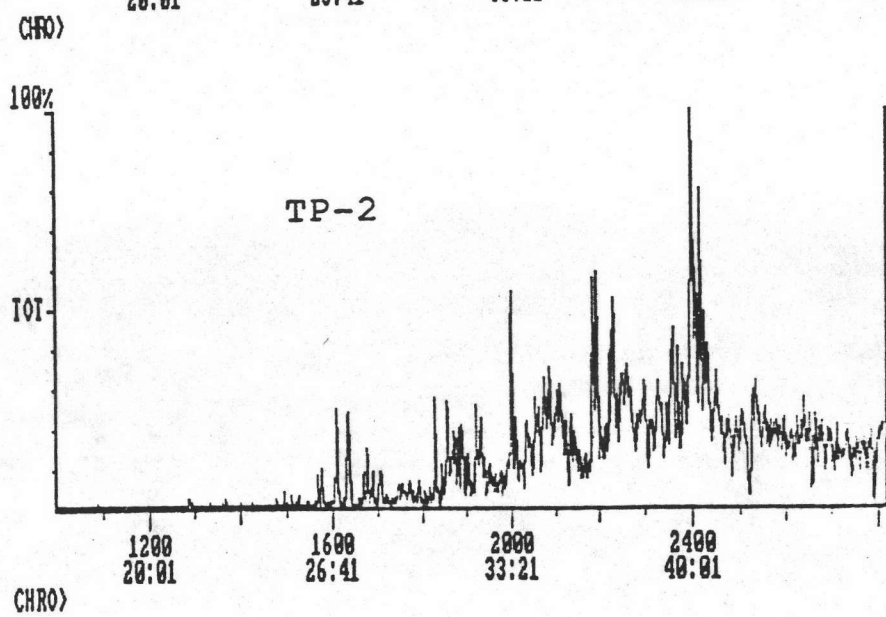
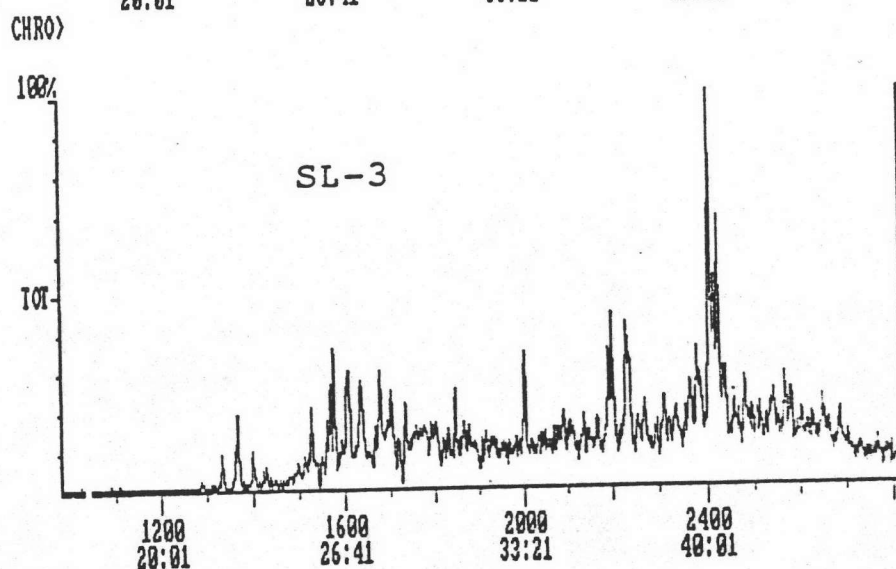
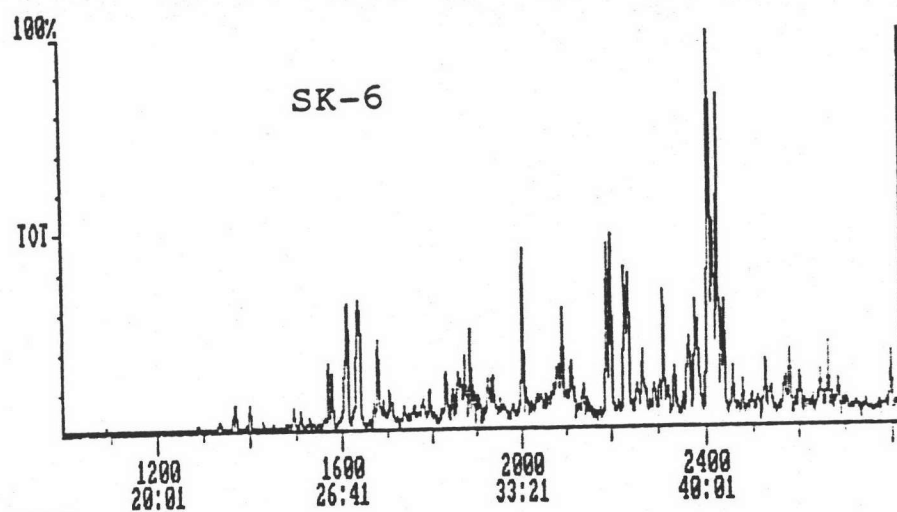
APPENDIX XV

COMPILATION OF M/Z 128, 142, 156, 178, 192
AND 206 MASS FRAGMENTOGRAM OF
AROMATIC FRACTIONS











BIOGRAPHY

Miss Kulwadee Lawwongngam was born on October, 6, 1959 at Kanchanaburi province, educated in bachelor degree of chemistry from Chiangmai University in 1981, at present office is Mineral Fuels Division, Department of Mineral Resources, Industry Ministry Bangkok 10900.