
REFERENCES

- Abelson, P.H. (1998) Airborne particulate matter. *Science* **281**, 1609.
- Albaiges, J., Albgaba, J. and Grimalt, J. (1985) Extractable and bound neutral lipids in some lacustrine sediments. *Organic Geochemistry* **6**, 223-236.
- Alves, C.A., Pio, C.A. and Duarte, A.C. (2000) Particulate size distributed organic compounds in forest atmosphere. *Environmental Science Technology* **34**, 4287-4293.
- Baker, E.A. (1982) Chemistry and morphology of plant epicuticular waxes. In: Cutler, D.F., Alvin, K.L. and Price, C.E. (Eds.), *The Plant Cuticle*. Linnean Society Symposium Series, vol. 10. Academic Press, London, pp. 139-165.
- Barrie, L.A., Gregor, D., Hargrave, B., Lake, R., Muir, D., Shearer, R., Tracey, B. and Bidleman, T. (1992) Arctic contaminants: sources, occurrence and pathways. *The Science of the Total Environment* **122**, 1-74.
- Bayona, J.M., Casellas, M., Fernandez, P., Solanas, A.M. and Albaiges, J. (1994) Sources and seasonal variability of mutagenic agents in the Barcelona city aerosol. *Chemosphere* **29**, 441-450.
- Bianchi, G. (1995) Plant waxes. In: Hamilton, R.J. (Ed.), *Waxes: Chemistry, Molecular, Biology and Functions*. The Oil Press, Dundee. Pp.175-222.
- Bird, C.W. and Lynch, J.M. (1974) Formation of hydrocarbons by micro-organisms. *Chemical Society Reviews* **3**, 309-328.
- Britannica Online Encyclopedia.
<http://www.Britannica.com/EBchecked/topic/359411/Strait-of-Malacca> (extracted on 1/11/2011).
- Boot, C.S., Ettwein, V.J., Maslin, M.A., Weyhenmeyer, C.E. and Pancost, R.D. (2006) A 35,000 year record of terrigenous and marine lipids in Amazon Fan sediments. *Organic Geochemistry* **37**, 208-219.
- Cardoso, J.N. and Chicarelli, M.I. (1983) The organic geochemistry of the Paraiba Valley and Marau oil-shales. *Advances in Organic Geochemistry*. Wiley, Chicester, 1981. Pp., 828-833.
- Cacho, I., Grimalt, J.O., Sierro, F.J., Shackleton, N. and Canals, M. (2000) Evidence for enhanced Mediterranean thermohaline circulation during rapid climatic coolings. *Earth and Planetary Science Letters* **183**, 417-429.
- Cecinato, A., Mabilia, R. and Marino, F. (2000) Relevant organic components in ambient particulate matter collected at Svalbard Islands (Norway). *Atmospheric Environment* **34**, 5061-5066.

- Chou, L.M. (1997) Southeast Asia as the global center of marine biodiversity. *Tropical Coasts* **4**, 4-8.
- Cincinelli, A., Stortini A.M., Perugini, M., Checchini, L. and Lepri, L. (2001) Organic pollutants in sea-surface microlayer and aerosol in the coastal environment of Leghorn-(Tyrrhenian Sea). *Marine Chemistry* **76**, 77-98.
- Cranwell, P.A. (1973) Chain-length distribution of *n*-alkanes from lake sediments in relation to post-glacial environmental change. *Freshwater Biology* **3**, 259-265.
- Cranwell, P.A. (1981) Diagenesis of free and bound lipid components in terrestrial detritus deposited in lacustrine sediment. *Organic Geochemistry* **3**, 79-89.
- Croteau, R. and Fagerson, I.S. (1971) The chemical composition of the cuticular wax of Cranberry. *Phytochemistry* **10**, 3239-3245.
- De Souza, R.M., Williams, J.S. and Meyerson, F.A.B. (2003) Critical links: population, health, and the environment. *Population Bulletin* **58(3)**, 3-42.
- Desideri, P.G., Lepri, L., Canovaro, M. and Checchini, L., (1987) Recovery identification and determination of organic compounds in marine sediments. In: Pawlowski, L., Mentasti, E., Lacy, W.J., Sarzanini, C. (Eds.), *Chemistry for Protection of the Environment 1987*. Elsevier, Amsterdam. Pp. 317-332.
- DeVantier, L., Alcala, A. and Wilkinson, C. (2004) The Sulu-Sulawesi Sea: Environmental and Socioeconomic Status, Future Prognosis and Ameliorative Policy Options. *Royal Swedish Academy of Sciences* **33**, 1-2.
- Discovering the South China Sea. <http://vm.nthu.edu.tw/southsea/english.index1.htm> (extracted on 1/11/2011)
- Dockery, D.W., Pope, C.A. III, Xu, X., Spengler, J.D., Ware, J.H., Martha, E.F., Ferris, B.G. Jr and Speizer, F.E. (1993) An association between air pollution and mortality in six U.S. cities. *New England Journal of Medicine* **329**, 1753-1759.
- Eglinton G. and Calvin, M. (1967) Chemical fossils. *Scientific American* **216**, 32-43.
- Eglinton, G. and Hamilton, R.J. (1967) Leaf cuticular waxes. *Science* **156**, 1322-1334.
- Eichmann, R., Neuling, P., Ketseridis, G., Hahn, J., Jaenicke, R., and Junge, C. (1979). *n*-Alkane studies in the troposphere-I: gas and particulate concentrations in North Atlantic air. *Atmospheric Environment* **13**, 587-599.
- Fernandez P., Grofoll, M., Solanas, A.M., Bayona, J.M. and Albaiges, J. (1992) Bioassay-directed chemical analysis of genotoxic components in coastal sediments. *Environmental Science and Technology* **26**, 817-829.
- Gagosian, R.B. and Peltzer, E.T. (1986) The importance of the atmospheric input of terrestrial organic matter to deep sea sediments. *Advances in organic geochemistry 1985*. *Organic Geochemistry* **10**, 661-669.

- Gagosian, R.B., Peltzer, E.T. and Zafiriou, O. (1981) Atmospheric transport of continentally derived lipids to the tropical North Pacific. *Nature* **291**, 312-314.
- Garrett, W.D. (1967) The organic chemical composition of the ocean surface. *Deep Sea Research* **14**, 221-227.
- Gao, X., Chen, S. and Long, A. (2008) Composition and sources of organic matter and its solvent extractable components in surface sediments of a bay under serious anthropogenic influences: Daya Bay, China. *Marine Pollution Bulletin* **56**, 1066-1075.
- Godish, T. (1991) *Air Quality* 2nd edition, Lewis Publishers, Boca Raton, FL. Pp. 65-173.
- Gogou, A., Stratigakis, N., Kanakidou M. and Stephanou, E.G. (1996) Organic aerosols in Eastern Mediterranean: components source reconciliation by using molecular markers and atmospheric back trajectories. *Organic Geochemistry* **25(1/2)**, 79-96.
- Harrison, R.M. (2004) Key pollutions-airborne particles. *Science of the Total Environment* **334-335**, 3-8.
- Hauser, T.R. and Pattison, J.N. (1972) Analysis of aliphatic fraction of air particulate matter. *Environmental Science and Technology* **6**, 549-555.
- Hernandez, M.E., Mead, R., Peralba, M.C. and Jaffé, R. (2001) Origin and transport of *n*-alkane-2-ones in a subtropical estuary: potential biomarkers for seagrass-derived organic matter. *Organic Geochemistry* **32**, 21-32.
- Hostettler, F.D. Rapp, J.B. Kvenvolden, K.A. and Luoma, S.N. (1989) Organic markers as source discriminants and sediment transport indicators in south San Francisco Bay, California. *Geochimica et Cosmochimica Acta* **53**, 1563-1576.
- Ishiwatari, R., Yamamoto, S. and Uemura, H. (2005) Lipid and lignin/cutin compounds in Lake Baikal sediments over the last 37 kyr: implications for glacial-interglacial paleoenvironmental change. *Organic Geochemistry* **36**, 327-347.
- Jeng, W.L. (2006) Higher plant *n*-alkane average chain length as an indicator of petrogenic hydrocarbon contamination in marine sediments. *Marine Chemistry* **102**, 242-251.
- Jeng, W.L. and Huh, C.A. (2001) Comparative study of sterols in shelf and slope sediments off northeastern Taiwan. *Applied Geochemistry* **16**, 95-108.
- Kolattukudy, P.E., Croteau, R. and Buckner, J.S. (1976) Biochemistry of plant waxes. In: Kolattukudy, P.E. (Ed.), *Chemistry and Biochemistry of Nature Waxes*. Amsterdam: Elsevier. Pp.289-347.
- Lamberton, J.A. (1965) The long-chain aldehydes of sugarcane wax. *Australian Journal of Chemistry* **18**, 911-913.

- Lehtonen, K. and Ketola, M. (1990) Occurrence of long-chain acyclic methyl ketones in Sphagnum and Carex peats of various degrees of humification. *Organic Geochemistry* **15**, 275-280.
- Malacca Straits Research and Development Centre (MASDEC). <http://www.fsas.upm.edu.my/~masdec/web/straits.html> (extracted on 24/4/2011).
- Marty, J.C. and Saliot, A. (1982). Aerosols in equatorial Atlantic air: *n*-alkanes as a function of particle size. *Nature* **298**, 144–147.
- Mazurek, M.A. and Simoneit, B.R.T. (1984) Characterization of biogenic and petroleum-derived organic matter in aerosols over remote, rural and urban areas. In: Keith, L.H. (Ed.), *Identification and Analysis of Organic Pollutants in Air*. Woburn, MA: Ann Arbor Science. Pp.353-370.
- Mazurek, M.A., Simoneit, B.R.T., Cass, G. R. and Gray, H.A. (1987) Quantitative high-resolution gas chromatography/mass spectrometry analyses of carbonaceous fine aerosol particles. *International Journal of Environmental and Analytical Chemistry* **29**, 119-139.
- Meyers, P.A., Kawka, O.E. and Whitehead, D.R. (1984) Geolipid, pollen and diatom stratigraphy in postglacial lacustrine sediments. *Organic Geochemistry* **6**, 727-732.
- Muir, D.C.G., Waemann, R., Hargrave, B.T., Thomas, D.J., Peakall, D.B. and Norstrom, R.J. (1992) Arctic marine ecosystem contamination. *The Science of the Total Environment* **122**, 75-134.
- Niessner, R. (1993) Sampling techniques for air pollutants. In: Barcelò, D. (Ed.), *Environmental Analysis: Techniques, Applications and Quality Assurance*. Elsevier, Amsterdam. Pp. 3-22.
- Oanh, N.T.K., Nghiem, L.H. and Phyu, Y.L. (2002) Emission of polycyclic aromatic hydrocarbons, toxicity, and mutagenicity from domestic cooking using sawdust briquettes, wood, and kerosene. *Environmental Science and Technology* **36**, 833–839.
- Ogura, K., Machihara, T. and Takada, H. (1990) Diagenesis of biomarkers in Biwa Lake sediments over 1 million years. *Organic Geochemistry* **16**, 805-813.
- Pancost, R.D., Baas, M., Van Geel, B. and Damsté, J.S.S (2002) Biomarkers are proxies for plant inputs to peats: an example from a sub-boreal ombrothrophic bog. *Organic Geochemistry* **33**, 675-690.
- Parish, C.C (1988) Dissolve and particulate marine lipid classes: a review. *Marine Chemistry* **23**, 17-40.
- Peters, K.E and Moldowan, J.M. (1993) *The Biomarkers Guide: Interpreting Molecular Fossils in Petroleum and Ancient Sediments*. Prentice Hall, Eaglewood Cliffs, NJ. Pp. 363.

- Pio, C.A., Salgueiro, M.L. and Nunes, T.V. (1991) Seasonal and air-mass trajectory effects on rainwater quality at the southwestern European border. *Atmospheric Environment* **25A(10)**, 2259-2266.
- Pio, C.A., Castro, L.M., Cerqueira, M.A., Santos, I.M., Belchior, F. and Salgueiro, M.L. (1996) Source assessment of particulate air pollutants measured at the Southwest European coast. *Atmospheric Environment* **30**, No. 19, 3309-3320.
- Pio, C.A., Alves, C.A. and Duarte, A.C. (2001) Identification, abundance and origin of atmospheric organic particulate matter in a Portuguese rural area. *Atmospheric Environment* **35**, 1365-1375.
- Poynter, J. and Eglinton, G. (1991) The biomarker concept: strengths and weaknesses. *Fresenius Journal of Analytical Chemistry* **339**, 725-731.
- Poynter, J.G., Farrimond, P., Robinson, N. and Eglinton, G. (1989) Acolian-derived higher plant lipids in the marine sedimentary record: Links with Paleoclimate. In: Leinen, M. and Surnthein, M. (Eds.), *Paleoclimatology and Paleometeorology: Modern and Past Patterns of Global Atmospheric Transport*. Kluwer Academic Publishers. Pp.435-462.
- Phral, F.G. and Pinto, L.A. (1987) A geochemical study of long-chain *n*-aldehydes in Washington Coastal sediments. *Geochimica Acta* **51**, 1573-1582.
- Prahl F.G., Crecellus, E. and Carpenter, R. (1984) polycyclic aromatic hydrocarbons in Washington coastal sediments: an evaluation of atmospheric and riverine routes of introduction. *Environmental Science and Technology* **18**, 687-693.
- Quemeneur, M. and Marty, Y. (1992) Sewage influence in a macrotidal estuary: fatty acid and sterol distributions. *Estuarine, Coastal and Shelf Science* **34**, 347-363.
- Rielly, G., Collier, R.J., Jones, D.M., and Eglinton, G. (1991) The biochemistry of Ellesmere Lake, UK-I: source correlation of leaf wax inputs to the sedimentary lipid record. *Organic Geochemistry* **17**, 901-912.
- Rogge W.F., Hildemann, L.M., Mazurek, M.A., Cass, G.R. and Simoneit, B.R.T. (1991) Sources of fine organic aerosol. 1. Charbroilers and meat cooking operations. *Environmental Science and Technology* **25**, 1112-1125.
- Rogge, W.F., Hildemann, L.M., Mazurek, M.A., Cass, G.R. and Simoneit, B.R.T. (1993) Sources of fine organic aerosol. 2. Noncatalyst and catalyst-equipped automobiles and heavy-duty diesel trucks. *Environmental Science and Technology* **27**, 636-651.
- Rogge, W.F., Hildemann, L.M., Mazurek, M.A., Cass, G.R. and Simoneit, B.R.T. (1997) Sources of fine organic aerosol. 8. Boilers burning No. 2 Distillate fuel oil. *Environmental Science and Technology* **31**, 2731-2737.
- Rogge, W.F., Hildemann, L.M., Mazurek, M.A. and Glen, R.C. (1998) *Environmental Science and Technology* **32**, 13-22.

- Rushdi, A.I., Al-Mutlaq, K.F., Simoneit, B.R.T., Al-Azri, A., DouAbul, A.A.Z., Al-Zarban, S. and Al-Yamani, F. (2010) Characteristics of lipid tracer compounds transported to the Arabian Gulf by runoff from rivers and atmospheric dust transport. *Arab Journal of Geosciences* **3**,113–131.
- Saliot, A. (1981) Natural hydrocarbons in seawater. In: Duursuma, E.K. and Dawson, R. (Eds.), *Marine Organic Chemistry*. Amsterdam, Elsevier.
- Schauer, J.J., Rogge, W.F., Hildemann, L.M., Mazurek, M.A., Cass, G.R. and Simoneit, B.R.T. (1996) Source apportionment of airborne particulate matter using organic compounds as tracers. *Atmospheric Environment* **30(22)**, 3837-3855.
- Sicre, M.A. and Peltzer, E.T. (2004) Lipid geochemistry of remote aerosols from the southwestern Pacific Ocean Sector. *Atmospheric Environment* **38**, 1615-1624.
- Simo, R., Grimalt, J.O., Colom-Altes, M. and Albaiges, A. (1990) The lipid composition of the Western Mediterranean aerosol. *French Journal of Analytical Chemistry* **339**, 757-764.
- Simoneit, B.R.T. (1977) Organic matter in aeolian dust over the Atlantic Ocean. *Marine Chemistry* **5**, 443-464.
- Simoneit, B.R.T. (1978) In: Riley J.P. and Chester, R. (Eds.), *Chemical Oceanography* 2nd edition, volume 7. Academic Press, New York. Pp. 233-311.
- Simoneit, B.R.T. (1980) Eolian particulates from oceanic and rural areas-their lipids, fulvic and humic acids and residual carbon. In: Douglas, A.G., Maxwell, J.R. (Eds.), *Advances in Organic Geochemistry 1979*. Pergamon Press, Oxford. Pp. 343–352.
- Simoneit, B.R.T. (1984) Organic matter of the troposphere-III. Characterization and sources of petroleum and pyrogenic residues in aerosols over the western United States. *Atmospheric Environment* **18**, 51-67.
- Simoneit, B.R.T. (1985) Application of molecular marker analysis to vehicular exhaust for source reconciliation. *International Journal of Environment and Analytical Chemistry* **23**, 207-237.
- Simoneit, B.R.T. (1989) Organic matter of the troposphere V: Application of molecular marker analysis to biogenic emissions into the troposphere for source reconciliations. *Journal of Atmospheric Chemistry* **8**, 251-275.
- Simoneit, B.R.T. and Mazurek, M.A. (1982) Organic matter of the troposphere-II. Natural background of biogenic lipid matter in aerosols over the rural western United States. *Atmospheric Environment* **16(9)**, 2139-2159.
- Simoneit, B.R.T., Mazurek, M.A. and Cahill, T.A. (1980) Contamination of the Lake Tahoe air basin by high molecular weight petroleum residues. *Journal of the Air Pollution Control Association* **30**,387–390.

- Simoneit, B.R.T., Cardoso, J.N. and Robinson, N. (1990a) An assessment of the origin and composition of higher molecular weight organic matter in aerosols over Amazonia. *Chemosphere* **21**, 1285-1301.
- Simoneit B.R.T., Cardoso J.N. and Robinson N. (1990b) An assessment of terrestrial higher molecular weight lipid compounds in aerosol particulate matter over the South Atlantic from about 30-70°S. *Chemosphere* **21**, 1285-1301
- Simoneit, B.R.T., Sheng, G., Chen, X., Fu, J., and Xu, Y. (1991a) Molecular marker study of extractable organic matter in aerosols from urban areas of China. *Atmospheric Environment* **25A**, 2111-2129.
- Simoneit, B.R.T., Crisp, P.T., Mazurek, M.A. and Standley, L.J. (1991b) Composition of extractable organic matter of aerosols from the Blue Mountains and southeast coast of Australia. *Environmental International Journal* **17**, 405-419.
- Simoneit, B.R.T., Rogge, W.F., Lang, Q. and Jaffe, R. (2000) Molecular characterization of smoke from campfire burning of pine wood (*Pinus elliottii*). *Chemosphere: Global Change Science* **2**,107-122.
- South China Sea Virtual Library. <http://www.southchinasea.org/intro.html> (extracted on 1/11/2011)
- Stephanou, E. G. (1989) Long-chain *n*-aldehydes. *Naturwissenschaften* **76**, 464-467.
- Stephanou, E.G. and Stratigakis, N. (1993) Determination of anthropogenic and biogenic organic compounds on airborne particles: flash chromatographic fractionation and capillary gas chromatographic analysis. *Journal of Chromatography* **644**, 141-151.
- TED Case Studies. MALACCA: The Impact of Transportation on Wildlife in the Malacca Straits. <http://www1.american.edu/ted/malacca.htm#r1> (extracted on 24/4/2011)
- Ternois, Y., Kawamura, K., Keigwin, L., Ohkouchi, N. and Nakatsuka, T. (2001) A biomarker approach for assessing marine and terrigenous inputs to the sediments of Sea of Okhotsk for the last 27,000 years. *Geochimica et Cosmochimica Acta* **65**, 791-802.
- Theissen, K.M., Zinniker, D.A., Moldowan, M., Dunbar, R.B. and Rowe, H.D. (2005) Pronounced occurrence of long-chain alkenones and dinosterol in 25,000-year lipid molecular fossil record from Lake Titicaca, South America. *Geochimica et Cosmochimica Acta* **69**, 623-626.
- Thomas, D.J., Tracey, B., Marshall, H. and Norstrom, R.J. (1992) Arctic terrestrial ecosystem contamination. *The Science of the Total Environment* **122**, 135-164.
- Tønnesson, S. (2005) Locating the South China Sea. In: Kratoska, P. *et al.* (Eds.), *Locating Southeast Asia: geographies of knowledge and politics of space*. Singapore: Singapore University Press. Pp. 203-233.
- Tulloch, A.P (1976) Chemistry of waxes in of higher plants. In: Kolattukudy, P.E. (Ed.), *Chemistry and Biochemistry of Nature Waxes*. Amsterdam, Elsevier. Pp.235-287.

Tuo, J. and Li, Q. (2005) Occurrence and distribution of long-chain acyclic ketones in immature coals. *Applied Geochemistry* **20**, 553-568.

Volkman, J.K., Gillian, F.T., Johns, R.B. and Eglinton, G. (1981) Source of neutral lipids in a temperate intertidal sediment. *Geochimica et Cosmochimica Acta* **45**, 1817-1828.

Weete, J.D. (1976) Algal and fungal waxes. In: Kolattukudy, P.E (Ed.), *Chemistry and Biochemistry of Natural Waxes*. Elsevier, Amsterdam. Pp. 349-418.

Wils, E.R.J., Hulst, A.J. and den Hartog, J.C. (1982) The occurrence of plant wax constituents in airborne particulate matter in urbanized area. *Chemosphere* **11(11)**, 1087-1096.

Yamamoto, S., Kawamura, K. and Seki, O. (2011) Long-range atmospheric transport of terrestrial biomarkers by the Asian winter monsoon: Evidence from fresh snow from Sapporo, northern Japan. *Atmospheric Environment*, 1-8.

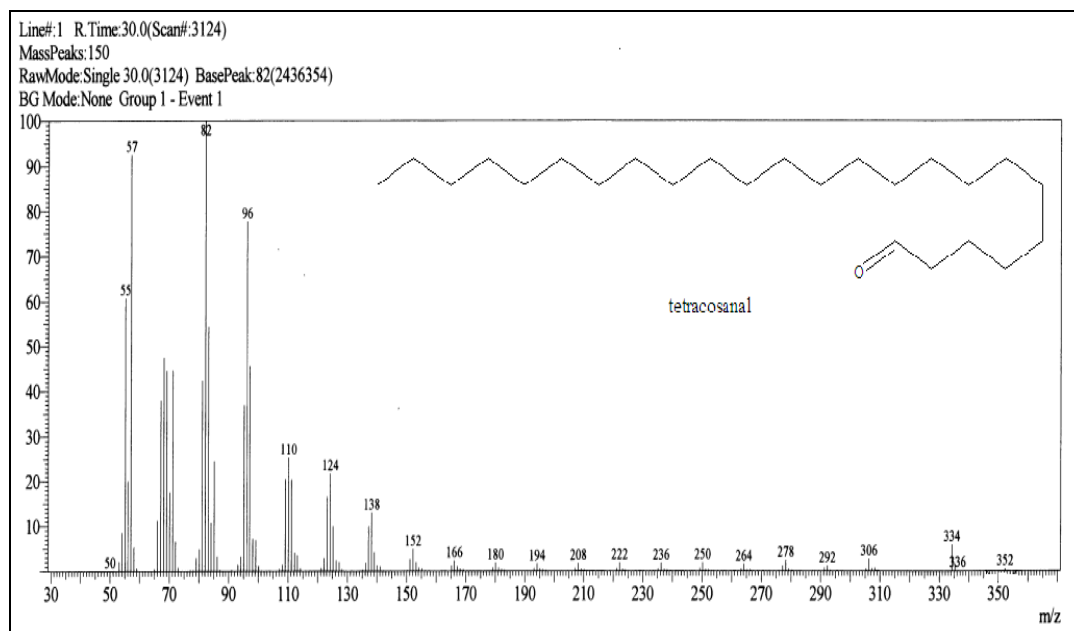
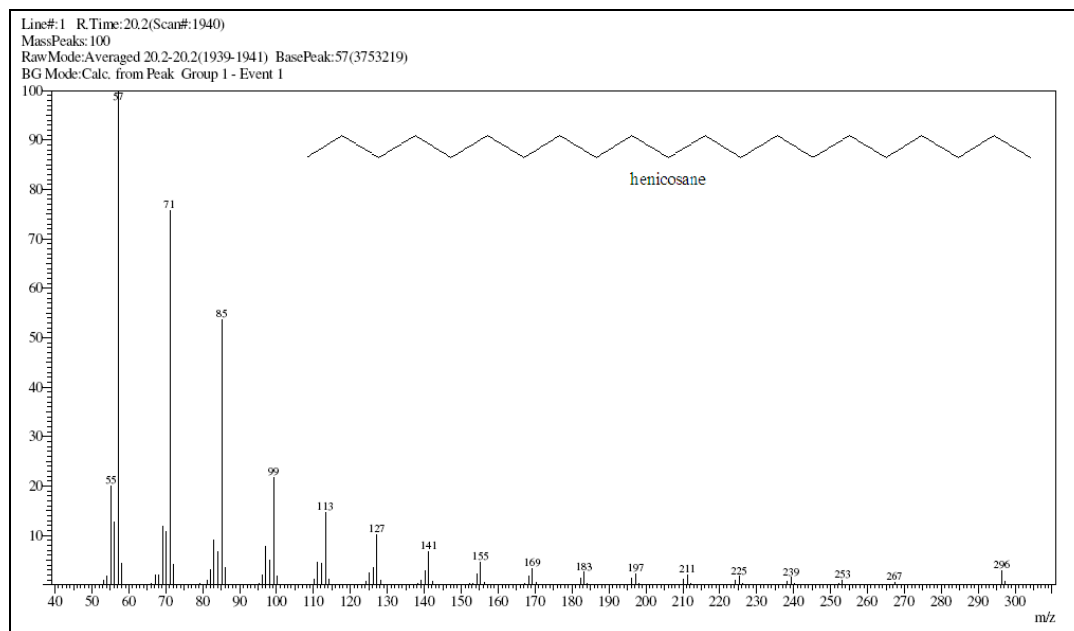
Zhu, Y., Liu, H., Cheng, H., Xi, Z., Liu, X. and Xu, X. (2005) The distribution and apportionment of aliphatic hydrocarbons in soils from the outskirts of Beijing. *Organic Geochemistry* **36**, 475-483.

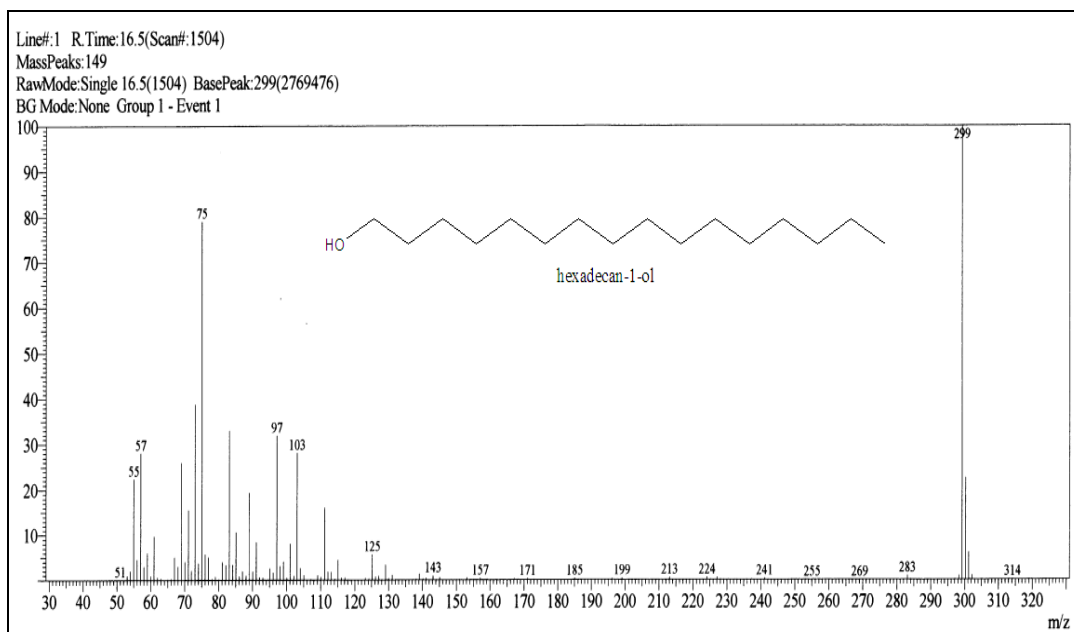
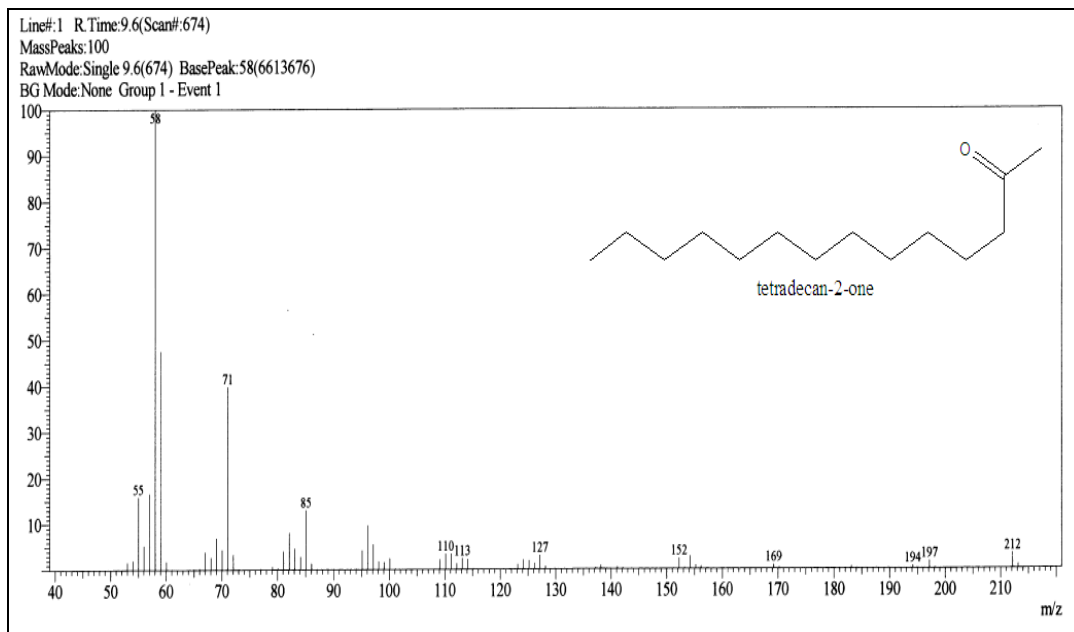
APPENDIX A

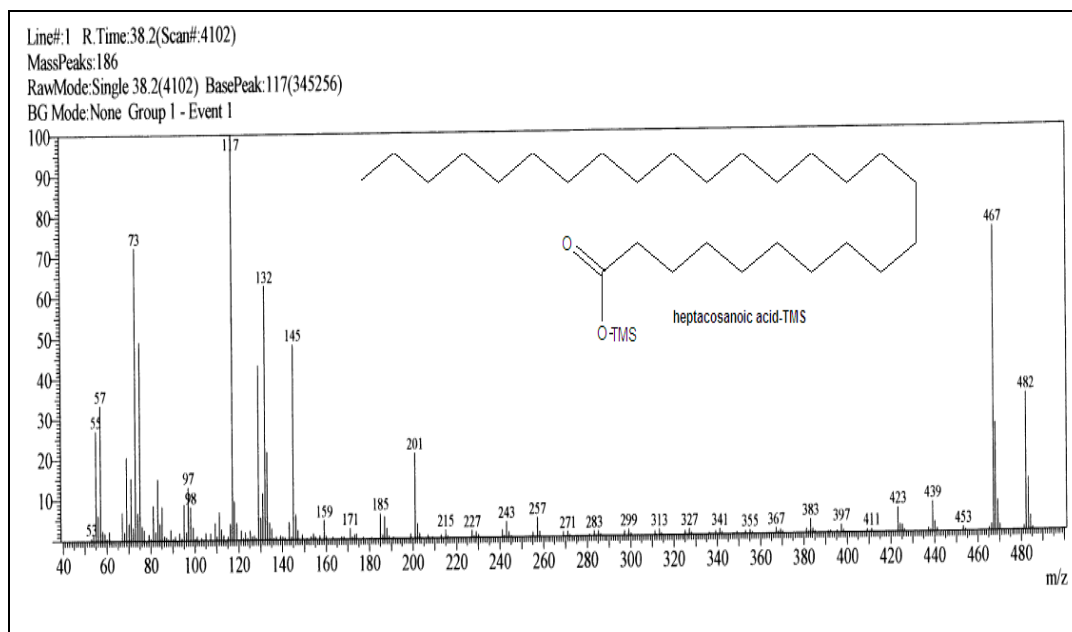
Distribution Graphs

APPENDIX B

Mass Spectra of some known compounds







n-Alkan-2-oic acids concentration for 26 sampling sites

