8.Verwysings

ABAD, M J, BERMEJO, P, VILLAR, A, SANCHEZ-PALOMINO, S & CARRASCO, L (1997) Antiviral Activity of Medicinal Plant Extracts, Phytotherapy Research, **11 (3)**, 198–202

ABAD FAROOQI, A H, SHARMA, S, NAQVI, A A & KHAN, A (1993) The Effect of Kinetin on Flower and Oil Production in *Rosa damascena*, Journal of Essential Oil Research, **5 (May/Jun)**, 305–309

ADLER, P R, SIMON, J E & WILCOX, G E (1989) Nitrogen Form Alters Sweet Basil Growth and Essential Oil Content and Composition, Hort Science, **24 (5)**, 789–790

ADU, B, OTTEN, L, AFENYA, E & GROENEVELT, P (1995) Thermodynamics of Microwave (Polarized) Heating Systems, Journal of Microwave Power and Electromagnetic Energy, **30 (2)**, 90–96

ARAMBASIC, M B, BJELIC, S & SUBAKOV, G (1995) Acute Toxicity of Heavy Metals (Copper, Lead, Zinc), Phenol and Sodium on *Allium cepa* L., *Lepidium sativum* L. and *Daphnia magna* St.; Comparative Investigations and the Practical Applications, Water Research, **29 (2)**, 497–503

ARCHIMEX (1998) Archimex Extrait Ses Produits Actifs Grâce Aux Micro-ondes, Industries et Techniques, **No. 792 Avril**, 113

ASTM (1989) Standard Method for Distillation of Petroleum Products D86 - 82^{E2}, Annual Book of ASTM Standards, Section 5: Petroleum Products, Lubricants, and Fossil Fuels, Volume 05.01: Petroleum Products and Lubricants (l) D56–D1947, pp.7–20

ATKINS, P W (1990) Physical Chemistry, 4^{th} Edition, Oxford University Press, Suffolk, pp.460, 937

AYENSU, E S (1978) Medicinal Plants of West Africa, Reference Publications, Michigan, p.267

BALANDRIN, M F, KLOCKE, J A, WURTELE, E S & BOLLINGER, W H (1985) Natural Plant Chemicals: Sources of Industrial and Medicinal Materials, Science, **228**, 1154–1160

BARITAUX, O, RICHARD, H, TOUCHE, J & DERBESY, M (1992) Effects of Drying and Storage of Herbs and Spices on the Essential Oil. Part I. Basil, *Ocimum basilicum* L., Flavour and Fragrance Journal, **7**, 267–271

BARRINGER, S A, DAVIS, E A, GORDON, J, AYAPPA, K G & DAVIS, H T (1994) Effect of Sample Size on the Microwave Heating Rate: Oil vs. Water, AIChE Journal, **40 (9)**, 1433–1439

BAUER, K, GARBE, D & SURBURG, H (1988) Flavors and Fragrances, In: Ullmann's Encyclopedia of Industrial Chemistry, 5th Completely Revised Edition, Volume A11, (Eds. Gerhartz, Yamamoto et al), VCH Verlagsgesellschaft mbH, Weinheim, 141–250

BENOIT, F, VALENTIN, A, PELISSIER, Y, DIAFOUKA, F, MARION, C, KONE-BAMBA, D, KONE, M, MALLIE, M, YAPO, A & BASTIDE, J-M (1996) *In vitro* Antimalarial Activity of Vegetal Extracts Used in West African Traditional Medicine, American Journal of Tropical Medicine and Hygiene, **54 (1)**, 67–71

BHARTIA, P & BAHL, I J (1984) Millimeter Wave Engineering and Applications, John Wiley & Sons, New York, pp.208–209

BONNARDEAUX, J (1992) The Effect of Different Harvesting Methods on the Yield and Quality of Basil Oil in the Ord River Irrigation Area, Journal of Essential Oil Research, **4 (Jan/Feb)**, 65–69

BOUHLAL, K, MEYNADIER, J, PEYRON, J L, MEYNADIER, J, PEYRON, L & SENAUX, M S (1989) The Cutaneous Effects of the Common Concretes and Absolutes Used in the Perfume Industry, Journal of Essential Oil Research, **1 (Jul/Aug)**, 169–195

BOX, E O (1982) Productivity of Aromatic Plants: Climatic Models, In: Aromatic Plants: Basic and Applied Aspects (Eds. Margaris, Koedam & Vokou), Martinus Nijhoff Publishers, Den Haag, 87–99

BURBOTT, A J & LOOMIS, W D (1957) Effects of Light and Temperature on the Monoterpenes of Peppermint, Plant Physiology, **42**, 20–28

CACERES, A, FIGUEROA, L, TARACENA, A M & SAMAYOA, B (1993) Plants Used in Guatemala for the Treatment of Respiratory Diseases. 2: Evaluation of Activity of 16 Plants Against Gram-positive Bacteria, Journal of Ethnopharmacology, **39**, 77–82

CHALCHAT, J, GARRY, R P & MUHAYIMANA, A (1995) Essential Oil of *Tagetes minuta* from Rwanda and France: Chemical Composition According to Harvesting Location, Growth Stage and Part of Plant Extracted, Journal of Essential Oil Research, **7 (Jul/Aug)**, 375–386

CHANH, P H, KOFFI, Y & CHANH, A P H (1988) Comparative Hypotensive Effects of Compounds Extracted from *Lippia multiflora* Leaves, Planta Medica, **54**, 294–296

CHARLES, D J & SIMON, J E (1990) Comparison of Extraction Methods for the Rapid Determination of Essential Oil Content and Composition of Basil, Journal of the American Society for Horticultural Science, **115 (3)**, 458–462

CHEMAT, F, POUX, M, DI MARTINO, J L & BERLAN, J (1996) A New Continuous-Flow Recycle Microwave Reactor for Homogeneous and Heterogeneous Chemical Reactions, Chemical Engineering & Technology, **19 (5)**, 420–424

CHEN, S S & SPIRO, M (1994) Study of Microwave Extraction of Essential Oil Constituents from Plant Materials, Journal of Microwave Power and Electromagnetic Energy, **29 (4)**, 231–241

CLARK, R J & MENARY, R C (1979) The Importance of Harvest Date and Plant Density on the Yield and Quality of Tasmanian Peppermint Oil, Journal of the American Society for Horticultural Science, **104 (5)**, 702–706

CLARK, R J & MENARY, R C (1984) The Effect of Two Harvests per Year on the Yield and Composition of Tasmanian Peppermint Oil (*Mentha piperita* L.), Journal of the Science of Food and Agriculture, **35**, 1191–1195

CLEVENGER, J F (1928) Apparatus for the Determination of Volatile Oil, Journal of the American Pharmaceutical Association, **17 (4)**, 345–349

COMPADRE, C M, ROBBINS, E F & KINGHORN, A D (1986) The Intensely Sweet Herb, *Lippia dulcis* Trev.; Historical Uses, Field Inquiries and Constituents, Journal of Ethnopharmacology, **15**, 89–106

COSGROVE, D J, ISLIP, H T & MAJOR, F (1950) Oil of *Lippia carviodora* from Kenya, Colonial Plant and Animal Products, **1**, 56–62

CRAVEIRO, A A, MATOS, F J A, ALENCAR, J W & PLUMEL, M M (1989) Microwave Oven Extraction of an Essential Oil, Flavour and Fragrance Journal, **4**, 43–44

DANG, Y P, CHABRA, R & VERMA, K S (1990) Effect of Cd, Ni, Pb and Zn on Growth and Chemical Composition of Onion and Fenugreek, Communications in Soil Science and Plant Analysis, **21 (9&10)**, 717–735

DATTA, A K (1990) Heat and Mass Transfer in the Microwave Processing of Food, Chemical Engineering Progress, **June**, 47–53

DATTA, A, PROSETYA, H & HU, W (1992) Mathematical Modelling of Batch Heating of Liquids in a Microwave Cavity, Journal of Microwave Power and Electromagnetic Energy, **27 (1)**, 38–48

DEANS, S G, SVOBODA, K P & BARTLETT, M C (1991) Effect of Microwave Oven and Warm-Air Drying on the Microflora and Volatile Oil Profile of Culinary Herbs, Journal of Essential Oil Research, **3 (Sept/Oct)**, 341–347

DE ASSIS BRASIL E SILVA, G A, BAUER, L, SARAIVA DE SIQUEIRA, N C, MOREIRA BACHA, C T & SANT'ANA, B M S (1979) O óleo Essencial de *Lippia citriodora* Kunth do Rio Grande do Sul, Tribuna Farmaceutica, **47 (1)**, 96–98

DEMISSEW, S (1993) A Description of Some Essential Oil Bearing Plants in Ethiopia and Their Indigenous Uses, Journal of Essential Oil Research, **5 (5)**, 465–479

DOMINGUEZ, X A, SANCHEZ, S H, SUAREZ, V M, BALDAS, J H & ROSARIO GONZALEZ, M (1989) Chemical Constituents of *Lippia graveolens*, Planta Medica, **55**, 208–209

DORAN, J C, CARUHAPATTANA, B, NAMSAVAT, S & BROPHY, J J (1995) Effect of

Harvest Time on the Leaf and Essential Oil Yield of *Eucalyptus camaldulensis*, Journal of Essential Oil Research, **7 (Nov/Dec)**, 627–632

DORMAN, H J D, DEANS, S G, NOBLE, R C & SURAI, P (1995) Evaluation *in vitro* of Plant Essential Oils as Natural Antioxidants, Journal of Essential Oil Research, **7 (Nov/Dec)**, 645–651

DUKE, J A (1987) CRC Handbook of Medicinal Herbs, CRC Press, Florida, p.559

DURIYAPRAPAN, S & BRITTEN, E J (1982) The Effect of Age and Location of Leaf on Quantity and Quality of Japanese Mint Oil Production, Journal of Experimental Botany, **33 (135)**, 810–814

DURIYAPRAPAN, S & BRITTEN, E J (1986) The Effect of Photoperiod on Flowering and Oil Production of Japanese Mint Under Controlled Environment Conditions, Thai Journal of Agricultural Science, **19**, 313–320

DU TOIT, J, JOUBERT, E & BRITZ, T J (1998) Honeybush Tea - A Rediscovered Indigenous South African Herbal Tea, Journal of Sustainable Agriculture, **12 (2/3)**, 67–84

FAHLÉN, A, WELANDER, M & WENNERSTEN, R (1997) Effects of Light-Temperature Regimes on Plant Growth and Essential Oil Yield of Selected Aromatic Plants, Journal of the Science of Food and Agriculture, **73 (1)**, 111–119

FINCH-SAVAGE, W E (1986) Effects of Soil Moisture and Temperature on Seedling Emergence from Natural and Pre-germinated Onion Seeds, Journal of Agricultural Science, **107**, 249–256

FINCH-SAVAGE, W E & PHELPS, K (1993) Onion (*Allium cepa* L.) Seedling Emergence Patterns can be Explained by the Influence of Soil Temperature and Water Potential on Seed Germination, Journal of Experimental Botany, **44 (259)**, 407–414

FOURIE, N (1984) *Lippia* Giftig vir Beeste, Onderstepoort-nuusbrief, **2 (3)**, 11

FOX, F W & NORWOOD YOUNG, M E (1982) Food from the Veld, Delta books, Cape Town, p.363

FRANKLIN, W J & KEYZER, H (1962) Semimicro and Micro Steam Distillation, Analytical Chemistry, **34 (12)**, 1650–1653

FRIGHETTO, N, DE OLIVEIRA, J G, SIANI, A C & CALAGO DAS CHAGAS, K (1998) *Lippia alba* Mill N.E.Br. (*Verbenaceae*) as a Source of Linalool, Journal of Essential Oil Research, **10 (Sep/Oct)**, 578–580

FURIA, T E & BELLANCA, N (1975) Fenaroli's Handbook of Flavor Ingredients (2nd Edition), Volume 1, CRC Press, Cleveland, p.392

GALAMBOSI, B & PEURA, P (1996) Agrobotanical Features and Oil Content of Wild and Cultivated Forms of Caraway (*Carum carvi* L.), Journal of Essential Oil Research, **8 (Jul/Aug)**, 389–397

GARNICA FLORES, J G (1994) Ensayo de Prediccion del Rendimento de Origano (*Lippia berlandieri* Shawer) en la Zona Norte de Jalisco, Ciencia Forestal, **19 (76)**, 15–26

GASIC, O, LUKIC, V & ADAMOVIC, D (1991) The Influence of Sowing and Harvest Time on the Essential Oils of *Chamomilla recutita* (L.) Rausch., Journal of Essential Oil Research, **3 (Sept/Oct)**, 295–302

GASQUET, M, DELMAS, F, TIMON-DAVID, P, KEITA, A, GUINDO, M, KOITA, N, DIALLO, D & DOUMBO, O (1993) Evaluation *in vitro* and *in vivo* of a Traditional Antimalarial, "Malarial 5", Fitoterapia, **64 (5)**, 423–426

GBOLADE, A A & ADEBAYO, T A (1993) Fumigant Properties of Some Volatile Oils on Fecundity and Adult Emergence of *Callosobruchus maculatus* F., Insect Science and Its

Application, **14 (5/6)**, 631–636

GBOLADE, A A & LOCKWOOD, G B (1992) Some Factors Affecting Productivity of *Allium cepa* L. Callus Cultures, Journal of Essential Oil Research, **4 (Jul/Aug)**, 381–385

GILDENHUYS, A E (1995) Taksonomiese Ondersoek van *Lippia* L. (*Verbenaceae*) in Suider-Afrika, B.Sc (Hons.) (Plantkunde) verhandeling, Universiteit van Pretoria, Suid-Afrika

GOSSEL, T A (1983) Camphorated Oil, U. S. Pharmacist, **April**, 12–16

GRAVEN, E H, GARDNER, J B & TUTT, C L C (1986) Native South African Plants - A Possible Vehicle for Rural Development, In: Progress in Essential Oil Research (Ed. Brunke), Walter de Gruyter & Co., Berlyn, 237–248

GRAVEN, E H, WEBBER, L, BENIANS, G, VENTER, M & GARDNER, J B (1991) Effect of Soil Type and Nutrient Status on the Yield and Composition of Tagetes Oil (*Tagetes minuta* L.), Journal of Essential Oil Research, **3 (Sept/Oct)**, 303–307

GRAVEN, E H, WEBBER, L, VENTER, M & GARDNER, J B (1990) The Development of *Artemisia afra* (Jacq.) as a New Essential Oil Crop, Journal of Essential Oil Research, **2 (Sept/Oct)**, 215–220

GRIEVE, M (1967) A Modern Herbal, Volume II, Hafner Publishing, New York, p.486

GUERRERA, P M, LEPORATTI, M L, FODDAI, S, MORETTO, D & MERCANTINI, R (1995) Antimycotic Activity of the Essential Oil of *Lippia citriodora* Kunt (*Aloysia triphylla* Britton), Rivista Italiana EPPOS, **15**, 23–25

GUIMARD, B (1994) Des Micro-ondes Pour Extraire Les Huiles Essentielles, L'Usine Nouvelle, **No. 2474 (13 Octobre)**, 4

HAMPTON, M G (1992) Production of Black Tea, In: Tea: Cultivation to Consumption (Eds. Wilson & Clifford), Chapman & Hall, London, 459–511

HEDRICK, U P (1972) Sturtevant's Edible Plants of the World, Dover Publications, New York, p.338

HELSZAJN, J (1992) Microwave Engineering: Passive, Active and Non-Reciprocal Circuits, McGraw-Hill, London, pp. 132–133

HERTOG, M G L, FESKENS, E J M, HOLLMAN, P C H, KATAN, M B & KROMHOUT, D (1993) Dietary Antioxidant Flavonoids and Risk of Coronary Heart Disease: The Zutphen Elderly Study, The Lancet, **342 October 23**, 1007–1011

HEWITT, E J (1963) Enzymatic Enhancement of Flavor, Agricultural and Food Chemistry, **11 (1)**, 14–19

HORNOK, L (1986) Effect of Environmental Factors on the Production of Some Essential Oil Plants, In: Flavors and Fragrances: A World Perspective (Eds. Lawrence, Mookerjee & Willis), Elsevier, Amsterdam, 129–140

HUGHES, A D (1952) Improvements in the Field Distillation of Peppermint Oil, Bulletin no. 31, Engineering Experiment Station, Oregon State College, Corvallis, pp.1–64

HUTCHINGS, A (1996) Zulu Medicinal Plants: An Inventory, University of Natal Press, Pietermaritzburg, pp.262–263

HUXLEY, A, GRIFFITHS, M & LEVY, M (1992) Dictionary of Gardening, Volume 3 L to Q, Macmillan Press, London, p.94

International Standard ISO 212 (1973) Essential Oils - Sampling, pp.1–3

International Standard ISO 279 (1981) Essential Oils - Determination of Relative Density at 20°C (Reference Method), pp.1–2

International Standard ISO 280 (1976) Essential Oils - Determination of Refractive Index, pp.1–2

International Standard ISO 356 (1996) Essential Oils - Preparation of Test Sample, pp.1–2

International Standard ISO 592 (1981) Essential Oils - Determination of Optical Rotation, pp.1–2

International Standard ISO 709 (1980) Essential Oils - Determination of Ester Value, pp.1–2

International Standard ISO 875 (1981) Essential Oils - Evaluation of Miscibility in Ethanol, pp.1–3

International Standard ISO 1041 (1973) Essential Oils - Determination of Freezing Point, pp.1–2

International Standard ISO 1241 (1996) Essential Oils - Determination of Ester Values, Before and After Acetylation, and Evaluation of the Contents of Free and Total Alcohols, pp.1–6

International Standard ISO 1242 (1973) Essential Oils - Determination of the Acid Value, pp.1–2

International Standard ISO 1271 (1983) Essential Oils - Determination of Carbonyyl Value - Free Hydroxylamine Method, pp.1–3

International Standard ISO 1272 (1973) Essential Oils - Determination of Phenols Content, pp.1–2

JEAN, F I, COLLIN, G J & LORD, D (1992) Essential Oils and Microwave Extracts of Cultivated Plants, Perfumer & Flavorist, **17 (3)**, 35–41

JHA, P K & SINGH, N P (1979) Response of *Mentha spicata* L. (spearmint) to Different Levels of Nitrogen Application and Row Spacings, Indian Perfumer, **23 (2)**, 95–99

JONER, P E & DOMMARSNES, K (1983) Effects of Herbal and Ordinary Teas on the Mutagenicity of Benzo(a)pyrene in the Ames Test, Acta Agriculturae Scandinavica, **33 (1)**, 53–56

JOUBERT, E (1990) Chemical and Sensory Analyses of Spray- and Freezedried Extracts of Rooibos Tea (*Asphalathus linearis*), International Journal of Food Science and Technology, **25**

(3), 344–349

JOUBERT, E (1990) Effect of Batch Extraction Conditions on Extraction of Polyphenols from Rooibos Tea (*Asphalathus linearis*), International Journal of Food Science and Technology, **25 (3)**, 339–343

JOUBERT, E (1991) Instant Rooibos Tea, Food Review, **18 (5)**, 23–27

JOUBERT, E (1994) Processing of Rooibos Tea (*Asphalathus linearis*) Under Controlled Conditions, Ph.D (Food Science), University of Stellenbosch, South Africa

JOUBERT, E & DE VILLIERS, O T (1997) Effect of Fermentation and Drying Conditions on the Quality of Rooibos Tea, International Journal of Food Science and Technology, **32**, 127–134

JOUBERT, E & FERREIRA, D (1996) Antioxidants of Rooibos Tea - A Possible Explanation for its Health Promoting Properties ?, The SA Journal of Food Science and Nutrition, **8 (3) September**, 79–83

JOUBERT, E & MULLER, R (1997) A Small-scale Rotary Fermentation Unit for Rooibos Tea, International Journal of Food Science and Technology, **32**, 135–139

JOUBERT, J (1998) Persoonlike kommunikasie met Prof. Johan Joubert, Departement Elektroniese Ingenieurswese, Universiteit van Pretoria

KANEDA, N, LEE, I S, GUPTA, M P, SOEJARTO, D D & KINGHORN, A D (1992) (+)-4ß-Hydroxyhernandulcin, A New Sweet Sesquiterpene from the Leaves and Flowers of *Lippia dulcis*, Journal of Natural Products, **55 (8)**, 1136–1141

KARAWYA, M S, EL-WAKEIL, F A, HIFNAWY, M S, ISMAIL, F A & KHALIFA, M Y (1980) Study of Certain Factors Affecting Yield and Composition of Herb Parsley Essential Oil, Egyptian Journal of Pharmaceutical Sciences, **21 (1&2)**, 69–75

KATIYAR, S K & MUKHTAR, H (1996) Tea in Chemoprevention of Cancer: Epidemiologic and Experimental Studies (Review), International Journal of Oncology, **8**, 221–238

KATSIOTIS, S T (1988) Study of Different Parameters Influencing the Composition of Hydrodistilled Sweet Fennel Oil, Flavour and Fragrance Journal, **4**, 221–224

KAUL, P N, RAJESWARA RAO, B R, BHATTACHARYA, A K, MALLAVARAPU, G R & RAMESH, S L (1997) Changes in Chemical Composition of Rose-Scented Geranium (*Pelargonium* sp.) Oil during Storage, Journal of Essential Oil Research, **9 (Jan/Feb)**, 115–117

KAWAKAMI, M, KOBAYASHI, A & KATOR, K (1993) Volatile Constituents of Rooibos Tea (*Asphalathus linearis*) as Affected by Extraction Process, Journal of Agricultural and Food Chemistry, **41 (4)**, 633–636

KERVEN, G L, DWYER, W, DURIYAPRAPAN, S & BRITTEN, E J (1980) A Semimicro Apparatus for Essential Oil Determination of Multiple Mint Samples by Steam Distillation, Journal of Agricultural and Food Chemistry, **28 (1)**, 162–164

KIM, H & GILBERT, S G (1989) Thermally Generated Volatile Compounds in Packaging Materials, In: Thermal Generation of Aromas (Eds. Parliment, McGorrin & Ho), American Chemical Society, Washington DC, 396–404

KINGSTON, H M & JASSIE, L B (1986) Microwave Energy for Acid Decomposition at Elevated Temperatures and Pressures Using Biological and Botanical Samples, Analytical Chemistry, **58 (12)**, 2534–2541

KINGSTON, H M & JASSIE, L B (1988) Introduction to Microwave Sample Preparation, American Chemical Society, Washington DC, pp.234, 240

KOEDAM, A (1982) The Influence of Some Distillation Conditions on Essential Oil Composition, In: Aromatic Plants: Basic and Applied Aspects (Eds. Margaris, Koedam & Vokou), Martinus Nijhoff Publishers, Den Haag, 229–236

KOKWARO, J O (Sine anno) Medicinal Plants of East Africa, East African Literature Bureau, Nairobi, p.223

KOTHARI, S K & SINGH, U B (1995) The Effect of Row Spacing and Nitrogen Fertilization on Scotch Spearmint (*Mentha gracilis* Sole), Journal of Essential Oil Research, **7 (May/Jun)**, 287–297

KOTZ, J C & PURCELL, K F (1987) Chemistry and Chemical Reactivity, CBS College Publishing, New York, pp.563–565

KOUMAGLO, K H, AKPAGANA, K, GLITHO, A I, GARNEAU, F X, GAGNON, H, JEAN, F I, MOUDACHIROU, M & ADDAE-MENSAH, I (1996) Geranial and Neral, Major Constituents of *Lippia multiflora* Moldenke Leaf Oil, Journal of Essential Oil Research, **8 (May/Jun)**, 237–240

LAGROTTERIA, M & LOZADA, C (1993) Medicinal and Aromatic Plants from Cordoba, Argentina; Their Commercial and Socio-Cultural Aspects, Acta Horticulturae, **330**, 101–106

LAMATY, G, MENUT, C, BESSIERE, J M, OUAMBA, J A & SILOU, T (1990) 2-Methyl-6-methylene-7-octen-4-one, a Constituent of *Lippia multiflora* Essential Oil, Phytochemistry, **29 (2)**, 521–522

LANDMAN, J J (1990) Die Ontwikkeling van 'n Deurlopende Mikrogolfoond, M.Ing (Landbou) verhandeling, Universiteit van Pretoria, Suid-Afrika

LAPLINSKAS, P (1993) Factors Affecting the Commercial Success of a Novel Crop, Acta Horticulturae, **333**, 73–79

LAWRENCE, B (1985a) A Review of the World Production of Essential Oils (1984), Perfumer & Flavorist, **10 Oct/Nov**, 2–16

LAWRENCE, B (1985b) Uncommon Essential Oils as Sources of Common Natural Aroma Chemicals, Perfumer & Flavorist, **10 Oct/Nov**, 45–58

LEMOS, T L G, MONTE, F J Q, MATOS, F J A, ALENCAR, J W, CRAVEIRO, A A, BARBOSA, R C S B & LIMA, E O (1992) Chemical Composition and Antimicrobial Activity

of Essential Oils from Brazilian Plants, Fitoterapia, **63 (3)**, 266–268

LENTZ, R R (1980) On the Microwave Heating of Saline Solutions, Journal of Microwave Power, **15 (2)**, 107–111

LI, Y, CRAKER, L E & POTTER, T (1996) Effect of Light Level on Essential Oil Production of Sage (*Salvia officinalis*) and Thyme (*Thymus vulgaris*), Acta Horticulturae, **426**, 419–426

LIAO, S Y (1990) Microwave Devices and Circuits, 3rd Edition, Prentice-Hall, Englewood Cliffs, pp.102, 105–106, 113–114, 119, 125, 129, 133, 524, 529

LINDSTROM, T R & PARLIMENT, T H (1994) Microwave Volatilization of Aroma Compounds, In: Thermally Generated Flavors (Eds. Parliment, Morello & McGorrin), American Chemical Society, Washington DC, 405–413

LORENZETTI, B B, SOUZA, G E P, SARTI, S J, FILHO, D S & FERREIRA, S H (1991) Myrcene Mimics the Peripheral Analgesic Activity of Lemongrass Tea, Journal of Ethnopharmacology, **34**, 43–48

MAFFEI, M (1988) Environmental Factors Affecting the Oil Composition of Some *Mentha* Species Grown in North West Italy, Flavour and Fragrance Journal, **3**, 79–84

MAFFEI, M & CODIGNOLA, A (1990) Photosynthesis, Photorespiration and Herbicide Effect on Terpene Production in Peppermint (*Mentha piperita* L.), Journal of Essential Oil Research, **2 (Nov/Dec)**, 275–286

MAHMOUD, A L E (1994) Antifungal Action and Antiaflatoxigenic Properties of Some Essential Oil Constituents, Letters in Applied Microbiology, **19**, 110–113

MAISCH, J M (1885) On Some Useful Plants of the Natural Order of *Verbenaceae*, American Journal of Pharmacy, **57**, 330–335

MALIZIA, R A, MOLLI, J S, GARDELL, D A & RETAMAR, J A (1996) Essential Oil of *Mentha citrata* Grown in Argentina. Variation in the Composition and Yield at Full- and Post-Flowering, Journal of Essential Oil Research, **8 (Jul/Aug)**, 347–349

MANS, C C & HATTINGH (1992) Evaluering van Permanente Grondbedekkers te Everdon-Landgoed, Natal, Suid-Afrikaanse Avokadokwekersvereniging Jaarboek, **15**, 94–96

MANTEIGA, R, PARK, D L & ALI, S S (1997) Risks Associated with Consumption of Herbal Teas, Reviews of Environmental Contamination and Toxicology, **150**, 1–30

MARGINA, A & ZHELJAZKOV, V (1994) Control of Mint Rust (*Puccinia menthae* Pers.) on Mint with Fungicides and Their Effect on Essential Oil Content, Journal of Essential Oil Research, **6 (Nov/Dec)**, 607–615

MAROTTI, M & PICCAGLIA, R (1992) The Influence of Distillation Conditions on the Essential Oil Composition of Three Varieties of *Foeniculum vulgare* Mill., Journal of Essential Oil Research, **4 (Nov/Dec)**, 569–576

MAROTTI, M, PICCAGLIA, R, GIOVANELLI, E, DEANS, S G & EAGLESHAM, E (1994) Effects of Variety and Ontogenic Stage on the Essential Oil Composition and Biological Activity of Fennel (*Foeniculum vulgare* Mill.), Journal of Essential Oil Research, **6 (Jan/Feb)**, 57–62

MAUREL, E C (1995) Les Micro-ondes Assistent L'extraction par Solvant, Process, **60 No. 1103 Mars**

McKAY, D W, SEVIOUR, J P, COMERFORD, A, VASDEV, S & MASSEY, L K (1995) Herbal Tea: An Alternative to Regular Tea for Those Who form Calcium Oxalate Stones, Journal of the American Dietetic Association, **95 (3)**, 360–361

McMURRAY, J (1988) Organic Chemistry, 2nd Edition, Brooks/Cole Publishing, Pacific Grove, pp.259–260

MENGAL, P, BEHN, D, GIL, M B & MOMPON, B (1993) VMHD: Extraction D'Huile Essentielle par Micro-ondes, Parfums Cosmétiques Arômes, **No. 114 (Decembre)**

MENGAL, P & MOLON, D (1997) Extraction et Synthese Assistees par Micro-ondes, Novelect Jonctions, **No. 113 Fevrier**

MENUT, C, LAMATY, G, SOHOUNHLOUE, D K, DANGOU, J & BESSIèRE, J M (1995) Aromatic Plants of Tropical West Africa. III. Chemical Composition of Leaf Oil of *Lippia multiflora* Moldenke from Benin, Journal of Essential Oil Research, **7 (May/Jun)**, 331–333

MEYER, B J, MEIJ, H S, GREY, S V, VAN PAPENDORP, D H, SEEGERS, J C, LABUSCHAGNE, C J J, STEWART, R I, BROWN, J M M, MEYER, A C, THERON, J J, PITOUT, M J, SMIT, Z M & HAAG, M (1988) Die Fisiologiese Basis van Geneeskunde, 4de Uitgawe, Haum Uitgewery, Pretoria, pp. 3.4–3.5

MING, L C (1996) Rooting of Cuttings of *Lippia alba* (Mill) N.E.Br. - *Verbenaceae*, Acta Horticulturae, **426**, 643–646

MING, L C, FIGUEIREDO, R O, MACHADO, S R & ANDRADE, R M C (1996) Yield of Essential Oil of and Citral Content in Different Parts of Lemongrass Leaves (*Cymbopogon citratus* (D.C.) Stape) *Poaceae*, Acta Horticulturae, **426**, 555–559

MISRA, A (1995) Critical Manganese Levels for Japanese Mint (*Mentha arvensis L. var. piperascens* Malinv.) Grown in Nutrient Solution, Journal of Essential Oil Research, **7 (Jan/Feb)**, 57–62

MISRA, A & SHARMA, S (1991) Critical Zn Concentration for Essential Oil Yield and Menthol Concentration of Japanese Mint, Fertilizer Research, **29**, 261–265

MITSUI NORIN CO. (1995) Prophylactic Functions of Tea Polyphenols, Mitsui Norin Co. Food Research Laboratories, Fujieda City

MOATES, G K & REYNOLDS, J (1991) Comparison of Rose Extracts Produced by Different Extraction Techniques, Journal of Essential Oil Research, **3 (Sept/Oct)**, 289–294

MOORE, W R (1992) Herbal Tea Update in the U.S., Tea & Coffee Trade Journal, **164 (10)**, 30–32

MURTAGH, G J & CURTIS, A (1991) Post-Harvest Retention of Oil in Tea Tree Foliage, Journal of Essential Oil Research, **3 (May/Jun)**, 179–184

MURTAGH, G J & ETHERINGTON, R J (1990) Variation in Oil Concentration and Economic Return from Tea Tree (*Melaleuca alternifolia* Cheel) Oil, Australian Journal of Experimental Agriculture, **30**, 675–679

MWANGI, J W, ADDAE MENSAH, I, MURIUKI, G, MUNAVU, R, LWANDE, W & HASSANALI, A (1992) Essential Oils of *Lippia* species in Kenya. IV: Maize weevil (*Sitophilus zeamais*) Repellancy and Larvicidal Activity, International Journal of Pharmacognosy, **30 (1)**, 9–16

MWANGI, J W, NJONGE, E W, ADDAE MENSAH, I, MUNAVU, R W & LWANDE, W (1994) Antimicrobial Activity of Essential Oil of *Lippia* species in Kenya, Discovery and Innovation, **6 (1)**, 58–60

NAIR, E V G, CHINNAMMA, N P & NAIR K C (1980) Optimization Studies on the Factors of Processing of Essential Oils, Indian Perfumer, **24 (2)**, 110–114

NAMIKI, M (1990) Antioxidants/Antimutagens in Food, Food Science and Nutrition, **29 (4)**, 273–300

NEDKOV, N K & GEORGIEV, G V (1991) A Study of Different Irrigation Practices Used for *Mentha piperita* in Bulgaria, Journal of Essential Oil Research, **3 (Nov/Dec)**, 435–440

NIEMAND, J G (1985) Is There a Remedy ?, Food Industries of South Africa, **38 (3) March**, 3–9

NOAMESI, B K, ADEBAYO, G I & BAMGBOSE, S O A (1985a) Muscle Relaxant Properties of Aqueous Extract of *Lippia multiflora*, Planta Medica, **51**, 253–255

NOAMESI, B K, ADEBAYO, G I & BAMGBOSE, S O A (1985b) The Vascular Actions of Aqueous Extract of *Lippia multiflora*, Planta Medica, **51**, 256–258

NOUR EL-DIN, H, ABOU DAHAB, A M, DALALY, B K & EL-ANI, F (1976) Effect of Seasonal Variations on the Physical and Chemical Properties of Essential Oils in *Eucalyptus camaldulensis* Dehn, Mesopotamia Journal of Agriculture, **11 (1)**, 17–24

NUNES, M J, CAMOES, M F & FOURNIER, J (1997) Analysis of Organophosphorus, Organochlorine and Pyrethroid Insecticides in Medicinal Plants, Chromatographia, **44 (9&10)**,

NYKÄNEN, L & NYKÄNEN, I (1987) The Effect of Drying on the Essential Oil of Some *Labiatae* Herbs Cultivated in Finland, In: Flavour Science and Technology (Eds. Martens, Dalen & Russwurm), John Wiley & Sons, Chichester, 83–88

ODEYEMI, O (1993) Insecticidal Properties of Certain Indigenous Plant Oils Against *Sitophilus zeamais* Mots., Applied Entomology and Phytopathology, **60 (1&2)**, 19–27

OHLSSON, T & RISMAN, P O (1978) Temperature Distribution of Microwave Heating - Spheres and Cylinders, Journal of Microwave Power, **13 (4)**, 303–309

PAEZ, A S & GALVIZ VALDEZ, C (1993) Canales y Margenes de Commercializacion de Oregano (*Lippia palmeri*) en el Sur de Sonora y Norte de Sinaloa, Revista Chipingo, **17 (81)**, 20–25

PALMER, E (1985) Kruie vir Huis en Tuin, Tafelberg Uitgewers, Kaapstad

PARE, J (1993) Microwave Assisted Generation of Volatiles, of Supercritical Fluid, and Apparatus Therefor, European Patent no. 93101943.4, assigned to the Minister of the Environment, Canada

PARE, J (1995) Microwave Assisted Extraction from Materials containing Organic Matter, U.S.A. Patent no. 5,458,897, assigned to the Minister of the Environment, Canada

PARE, J, BELANGER, J M R & STAFFORD, S S (1994) Microwave-Assisted Process (MAP™): A New Tool for the Analytical Laboratory, Trends in Analytical Chemistry, **13 (4)**, 176–184

PARE, J, SIGOUIN, M & LAPOINTE, J (1991) Microwave Assisted Natural Products Extraction, U.S.A. Patent no. 5,002,784, assigned to the Minister of the Environment, Canada

PéLISSIER, Y, MARION, C, CASADEBAIG, J, MILHAU, M, KONE, D, LOUKOU, G, NANGA, Y & BESSIèRE, J M (1994) A Chemical, Bacteriological, Toxicological and Clinical Study of the Essential Oil of *Lippia multiflora* Mold. (*Verbenaceae*), Journal of Essential Oil Research, **6 (Nov/Dec)**, 623–630

PERRIN, A & COLSON, M (1991) Timing of the Harvest Date for *Mentha x piperita* Based on Observations of the Floral Development, Journal of Essential Oil Research, **3 (Jan/Feb)**, 17–25

PERRY, R H, GREEN, D & MALONEY, J O (1984) Perry's Chemical Engineers' Handbook, 6th Edition, McGraw-Hill, Singapore, pp. 3.127, 3.251–3.252

PHYBIOTEX (1997) Phybiotex: Un Procédé Exclusif D'Extraction Micro-ondes, Parfums Cosmetiques Actualités, **No. 138 Decembre**, 48–49

PICCAGLIA, R, MAROTTI, M & DELLACECCA, V (1997) Effect of Planting Density and Harvest Date on Yield and Chemical Composition of Sage Oil, Journal of Essential Oil Research, **9 (March/Apr)**, 187–191

PICCAGLIA, R, MAROTTI, M & GALLETTI, G C (1989) Effect of Mineral Fertilizers on the Composition of *Salvia officinalis* Oil, Journal of Essential Oil Research, **1 (March/Apr)**, 73–83

PINO, J A, BOROES, P, FUENTES, V, MARTINEZ, M A & ROSADO, A (1997) Produccion de Oregano en Cuba: Una Alternativa a la Importacion, Alimentaria, **No. 280**, 69–71

PINO, J, HERNADEZ, I A & RONCAL, E (1990) Comparison of Isolation Procedures for Mexican Oregano (*Lippia graveolens*) Oil, Nahrung, **34 (9)**, 825–830

PIPREK, S R K, GRAVEN, E H & WHITFIELD, P (1982) Some Potentially Important Indigenous Aromatic Plants for the Eastern Seaboard Areas of Southern Africa, In: Aromatic Plants: Basic and Applied Aspects (Eds. Margaris, Koedam & Vokou), Martinus Nijhoff Publishers, Den Haag, 255–263

PORTER, N G & LAMMERINK, J P (1994) Effect of Temperature on the Relative Densities of Essential Oils and Water, Journal of Essential Oil Research, **6 (May/Jun)**, 269–277

POWER, F B & TUTIN, F (1907) Chemical Examination of *Lippia scaberrima*, Sonder ("Beukess Boss"), The American Journal of Pharmacy, **79**, 449–462

PRAKASA RAO, E V S & SINGH, M (1991) Long-term Studies on Yield and Quality of Java Citronella (*Cymbopogon winterianus* Jowitt) in Relation to Nitrogen Application, Journal of Essential Oil Research, **3 (Nov/Dec)**, 419–424

PRAKASA RAO, E V S, SINGH, M, NARAYANA, M R & CHANDRA SEKHARA, G (1985) Effect of N, P and K Nutrition on Herb and Oil Yield of *Geranium*, Indian Perfumer, **29 (3&4)**, 147–150

PROSETYA, H & DATTA, A (1991) Batch Microwave Heating of Liquids: An Experimental Study, Journal of Microwave Power and Electromagnetic Energy, **26 (4)**, 215–226

PUTIEVSKY, E & RAVID, U (1981) Variations in Yield Parameters in a Wild Population of *Origanum vulgare* L., In: Aromatic Plants: Basic and Applied Aspects (Eds. Margaris, Koedam & Vokou), Martinus Nijhoff Publishers, Den Haag, 237–248

PUTIEVSKY, E, RAVID, U & DUDAI, N (1986) The Influence of Season and Harvest Frequency on Essential Oil and Herbal Yields from a Pure Clone of Sage (*Salvia officinalis*) Grown Under Cultivated Conditions, Journal of Natural Products, **49 (2)**, 326–329

PUTIEVSKY, E, RAVID, U & DUDAI, N (1990) The Effect of Water Stress on Yield Components and Essential Oil of *Pelargonium graveolens* L., Journal of Essential Oil Research, **2 (May/Jun)**, 111–114

RAJESWARA RAO, B R, SASTRY, K P, PRAKASA RAO, E V S & RAMESH, S I (1990) Variation in Yields and Quality of Geranium (*Pelargonium graveolens* L'Hér. ex Aiton) Under Varied Climatic and Fertility Conditions, Journal of Essential Oil Research, **2 (March/Apr)**, 73–79

RAJESWARA RAO, B R, SINGH, S P & PRAKASO RAO, E V S (1984) Effect of Row Spacings and Nitrogen Application on Biomass Yield, Essential Oil Concentration and Essential Oil Yield of Bergamot mint (*Mentha citrata* Ehrh.), Indian Perfumer, **28 (3&4)**, 150–152

RAJESWARA RAO, B R, SINGH, S P, PRAKASO RAO, E V S, CHANDRASEKHARA, G & RAMESH, S (1984) A Note on the Influence of Location, Season and Strain on *Eucalyptus citriodora* Hook. Oil, Indian Perfumer, **28 (3&4)**, 153–155

RAMASWAMI, R (1992) Herbals Dominate Specialty Tea Segment, Tea & Coffee Trade Journal, **164 (7)**, 32–36

RAMASWAMI, R (1993) Herbal Tea Packaging: A Slave to Fashion, Tea & Coffee Trade

Journal, **165 (4)**, 62–66

RANDHAWA, G S, GILL, B S, SAINI, S S & SINGH, J (1996) Effect of Plant Spacings and Nitrogen Levels on the Seed Yield of Dillseed (*Anethum graveolens*), Acta Horticulturae, **426**, 623–628

RANDHAWA, G S & KAUR, S (1996) Optimization of Harvesting Time and Row Spacing for the Quality Oil in Japanese Mint (*Mentha arvensis*), Acta Horticulturae, **426**, 615–622

RAWLS, R (1996) Europe's Strong Herbal Brew, Chemical and Engineering News, September 23, 53–60

RETAMAR, J A, DELFINI, A A & ITURRASPE, J B (1981) Aceite Esencial de *Lippia integrifolia*, Essenze e Derivati Agrumari, **51**, 40–43

RICHMAN, D A (1983) FDA's Regulation of One "All Natural" Product: The Herbal Tea, Food Drug Cosmetic Law Journal, **38 (2)**, 155–176

RIDKER, P M (1989) Health Hazards of Unusual Herbal Teas, American Family Physician, **39 (5) May**, 153–156

RISMAN, P O (1988) Microwave Properties of Water in the Temperature Range +3 to 140°C, Electromagnetic Energy Reviews, **1 (2)**, 3–5

ROQUE, O R (1989) Seasonal Variation in Oil Composition of *Laurus nobilis* Grown in Portugal, Journal of Essential Oil Research, **1 (Jul/Aug)**, 199–200

SASAKI, K, SHIMADA, A, HATAE, K & SHIMADA, A (1988) Influence of State of Mixing of the Sample on Total Absorbed Energy in Microwave Cooking, Agricultural and Biological Chemistry, **52 (9)**, 2273–2278

SAUERWEIN, M & SHIMOMURA, K (1991) Secondary Metabolites in Green Hairy Root Cultures, Planta Medica, **57 (8)**, A10–A11

SCHEFFER, J J C (1996) Various Methods for the Isolation of Essential Oils, Phytotherapy Research, **10**, s6–s7

SCHIFFMANN, R F (1994) Critical Factors in Microwave-Generated Aromas, In: Thermally Generated Flavors (Eds. Parliment, Morello & McGorrin), American Chemical Society, Washington DC, 386–394

SCHWARZENBACH, R (1990) Microwave Stable Flavours - Development or Promotion ?, In: Flavour Science and Technology (Eds. Bessière & Thomas), John Wiley & Sons, Surrey, 281–296

SCHWIMMER, S & WESTON, W J (1961) Enzymatic Development of Pyruvic Acid in Onion as Measure of Pungency, Agricultural and Food Chemistry, **9 (4)**, 301–304

SEEGER, J A (1986) Microwave Theory, Components, and Devices, Prentice-Hall, Englewood Cliffs, pp.11–13, 16, 57, 59, 61, 63–64

SHAHIDI, F, JANITHA, P K & WANASUNDARA, P D (1992) Phenolic Antioxidants, Critical Reviews in Food Science and Nutrition, **32 (1)**, 67–103

SHARMA, S N & SINGH, A (1980) Response of Japanese Mint to Nitrogen, Phosphorus and Potassium, Indian Journal of Agronomy, **25 (3)**, 428–432

SILOU, T & OUAMBA, J M (1992) Evolution de la Teneur et de la Composition des Huiles Essentielles de *Lippia multiflora* en Fonction de la Periode de Recolte, Revue de Medecines et Pharmacopees Africaines, **6 (2)**, 103–108

SILVA, O, FERREIRA, E, PATO, M V & GOMES, E (1997) Guinda,9 au's Plants: In vitro Susceptibility Studies on *Neisseria Gonorrhoeae*, International Journal of Pharmacognosy, **35 (5)**, 323–328

SIMON, J E & REISS-BUBENHEIM, D (1992) Water-Stress Induced Alterations in Essential Oil Content and Composition of Sweet Basil, Journal of Essential Oil Research, **4 (Jan/Feb)**, 71–75

SINGH, A K, NAQVI, A A & SINGH, K (1994) Effect of Hay Storage on Oil Yield and Quality in Three *Cymbopogon* Species (*C. winterianus, C. martinii* and *C. flexuosus*) during Different Harvesting Seasons, Journal of Essential Oil Research, **6 (May/Jun)**, 289–294

SINGH, A K, SINGH, K, NAQVI, A A & THAKUR, R S (1990) Effect of Storage of Herb on the Quality and Yield of Oil in Mint Species, Research and Industry, **35 (March)**, 46–48

SINGH, D V & RAM, M (1987) Effect of Spacing, Extent of Pruning, Growth Hormone and Nutrients on Flower Yield of Essential Oil Bearing Rose (*Rosa damascena*) in Subtropical India, Acta Horticulturae, **208**, 83–86

SINGH, M, CHANDRASEKHARA, G D & PRAKASA RAO, E V S (1996) Oil and Herb Yield of Java Citronella (*Cymbopogon winterianus* Jowitt.) in Relation to Nitrogen and Irrigation Regimes, Journal of Essential Oil Research, **8 (Sept/Oct)**, 531–534

SINGH, N, & LUTHRA, R (1988) Sucrose Metabolism and Essential Oil Accumulation during Lemongrass (*Cymbopogon flexuosus* Stapf.) Leaf Development, Plant Science, **57**, 127–133

SINGH, S P, MISHRA, M, RAO, G P, SINGH, M & UPADHYAYA, P P (1997) Efficacy of Essential Oils of Aromatic Angiosperms Against Plant Viruses, Journal of Living World, **4 (2)**, 39–44

SINGH, S P, RAO, G P & UPADHYAYA, P P (1998) Fungitoxicity of Essential Oils of Some Aromatic Plants Against Sugarcane Pathogens, Sugar Cane, **2**, 14–17

SKRUBIS, B G (1982) The Drying of Laurel Leaves, Perfumer & Flavorist, **7 (Oct/Nov)**, 37–40

SPIRO, M & CHEN, S S (1994) Kinetics of Solvent Extraction of Essential Oil from Rosemary Leaves, Flavour and Fragrance Journal, **9**, 187–200

STAROSCIK, J A & WILSON, A A (1982) Seasonal and Regional Variation in the Quantitative Composition of Cold-Pressed Lemon Oil from California and Arizona, Journal of Agricultural and Food Chemistry, **30 (5)**, 835–837

STÖLLMAN, U (1990) Microwave Heating and Flavour Quality, In: Flavour Science and Technology (Eds. Bessière & Thomas), John Wiley & Sons, Surrey, 297–313

SURYAKALA, S & THAKUR, S S (1997) Natural Products as Insect Growth Regulators, Indian Journal of Plant Protection, **25 (2)**, 128–129

TAKASAKI, H & HUNT, K (1987) Further Medicinal Plant Consumption in Wild Chimpanzees?, African Study Monographs, **8 (2)**, 125–128

TAKEO, T (1992) Green and Semi-Fermented Teas, In: Tea: Cultivation to Consumption (Eds. Wilson & Clifford), Chapman & Hall, London, 413–457

TERBLANCHÉ, F C (1995) Die Ekstraksie en Medisinale Aktiwiteit van Essensiële Oliekomponente van *Lippia scaberrima* Sond., M.Ing (Chemies) verhandeling, Universiteit van Pretoria, Suid-Afrika

TERBLANCHÉ, F C & KORNELIUS, G (1996) Essential Oil Constituents of the Genus *Lippia* (*Verbenaceae*) - A Literature Review, Journal of Essential Oil Research, **8 (Sep/Oct)**, 471–485

TERBLANCHÉ, F C & KORNELIUS, G (2000) A Literature Survey of the Antibacterial Activity of Essential Oil Constituents, Journal of Essential Oil Bearing Plants, **3 (1)**, 45–64

TERBLANCHÉ, F C, KORNELIUS, G, HASSETT, A J & ROHWER, E R (1998) Composition of the Essential Oil of *Lippia scaberrima* Sond. from South Africa, Journal of Essential Oil Research, **10 (Mar/Apr)**, 213–215

THACH, L N, ANH, T H, TRAM, H D, QUYEN, D N T, LOUPY, A, HAI, D H & TRAM, L Q (1996) Microwave Assisted Extraction Process of the Basil Oil (South Vietnam), Tap Chi Hoa Hoc, **34 (2)**, 94–98

THAPPA, R K, AGARWAL, S G, KALIA, N K & KAPOOR, R (1993) Changes in Chemical Composition of *Tagetes minuta* Oil at Various Stages of Flowering and Fruiting, Journal of Essential Oil Research, **5 (Jul/Aug)**, 375–379

THONNER, F R (1915) The Flowering Plants of Africa, Dulau & Co., London, p.468

TINGA, W R & NELSON, S O (1973) Dielectric Properties of Materials for Microwave Processing - Tabulated, Journal of Microwave Power, **8 (1)**, 23–65

URIBE-HERNANDEZ, C J, HURTADO-RAMOS, J B, OLMEDO-ARCEGA, E R & MARTINEZ-SOSA, M A (1992) The Essential Oil of *Lippia graveolens* H.B.K. from Jalisco, Mexico, Journal of Essential Oil Research, **4 (Nov/Dec)**, 647–649

USAI, M, PICCI, V & ARRAS, G (1996) Influence of Cultivar on the Composition of Lemon Peel Oil, Journal of Essential Oil Research, **8 (March/Apr)**, 149–158

VALENTIN, A, PÉLISSIER, Y, BENOIT, F, MARION, C, KONE, D, MALLIE, M, BASTIDE, J M & BESSIÉRE, J M (1995) Composition and Antimalarial Activity *in vitro* of Volatile Components of *Lippia multiflora*, Phytochemistry, **40 (5)**, 1439–1442

VAN DER RIET, B (1933) Essential Oils of Certain South African Plants, Journal of the Chemical, Metallurgical and Mining Society of South Africa, **34**, 78–85

VAN EIJK, T (1994) Flavor and Flavorings in Microwave Foods - An Overwiev, In: Thermally Generated Flavors (Eds. Parliment, Morello & McGorrin), American Chemical Society, Washington DC, 395–404

VAN WIJK, Y (1986) The Practical Book of Herbs, Chameleon Press, Cape Town, pp.22, 125

VENSKUTONIS, R, GRAMSHAW, J W, DAPKEVICIUS, A & BARANAUSKIENE, M (1996) Composition of Volatile Constituents in Tarragon (*Artemisia dracunculus*) at Different Vegetative Periods, In: Flavour Science (Eds. Taylor & Mottram), The Royal Society of Chemistry, Bodmin, 46–51

VINSON, J A, DABBAGH, Y A, SERRY, M M & JANG, J (1995) Plant Flavonoids, Especially Tea Flavonols, are Powerful Antioxidants Using an *in Vitro* Oxidation Model for Heart Disease, Journal of Agricultural and Food Chemistry, **43 (11)**, 2800–2802

WATSON, V K & St. JOHN, J L (1955) Relation of Maturity and Curing of Peppermint Hay to Yield and Composition of Oil, Agricultural and Food Chemistry, **3 (12)**, 1033–1038

WATT, J M & BREYER-BRANDWIJK, M G (1962) The Medicinal and Poisonous Plants of Southern and Eastern Africa, 2nd Edition, E & S Livingstone, Edinburgh, pp.1051–1053

WEIZMAN, Z, ALKRINAWI, S, GOLDFARB, D & BITRAN, C (1993) Efficacy of Herbal Tea Preparation in Infantile Colic, The Journal of Pediatrics, **122 (4)**, 650–652

WHEELER, T R & ELLIS, R H (1992) Seed Quality and Seedling Emergence in Onion (*Allium cepa* L.), Journal of Horticultural Science, **67 (3)**, 319–332

WHISH, J P M (1996) A Flexible Distillation System for the Isolation of Essential Oils, Journal of Essential Oil Research, **8 (Jul/Aug)**, 405–410

WHISH, J P M & WILLIAMS, R R (1996) Effects of Post Harvest Drying on the Yield of Tea Tree Oil (*Melaleuca alternifolia*), Journal of Essential Oil Research, **8 (Jan/Feb)**, 47–51

YEN, G & CHEN, H (1994) Comparison of Antimutagenic Effect of Various Tea Extracts (Green, Oolong, Pouchong, and Black Tea), Journal of Food Protection, **57 (1)**, 54–58

ZHELJAZKOV, V & JEKOV, D (1996) Heavy Metal Content in Some Essential Oils and Plant Extracts, Acta Horticulturae, **426**, 427–433

ZHELJAZKOV, V D & NIELSEN, N E (1996) Studies on the Effect of Heavy Metals (Cd, Pb, Cu, Mn, Zn and Fe) upon the Growth, Productivity and Quality of Lavender (*Lavandula angustifolia* Mill.) Production, Journal of Essential Oil Research, **8 (May/Jun)**, 259–274

ZLOTOZYNSKI, A (1995) The Application of Microwave Radiation to Analytical and Environmental Chemistry, Critical Reviews in Analytical Chemistry, **25 (1)**, 43–76

ZRIRA, S S & BENJILALI, B B (1996) Seasonal Changes in the Volatile Oil and Cineole Contents of Five *Eucalyptus* Species Growing in Morocco, Journal of Essential Oil Research, **8 (Jan/Feb)**, 19–24

ZYGADLO, J A & GROSSO, N R (1995) Comparative Study of the Antifungal Activity of Essential Oils from Aromatic Plants Growing Wild in the Central Region of Argentina, Flavour and Fragrance Journal, **10 (2)**, 113–118

ZYGADLO, J A, GROSSO, N R, ABBURRA, R E & GUZMAN, C A (1990) Essential Oil Variation in *Tagetes minuta* Populations, Biochemical Systematics and Ecology, **18 (6)**, 405–407

Bylaag A : Berekening van ekwivalente kwantumenergie van elektromagnetiese straling

Die volgende verband geld tussen die frekwensie van elektromagnetiese straling en die energie-inhoud daarvan (Atkins, 1990):

$$h f = E_1 - E_2 \quad \ldots\ldots\ldots \text{(A.1.)}$$

In hierdie vgl. stel h Planck se konstante voor met 'n waarde van ca. 6.62608 x 10^{-34} J s. Die energievlak van UV-strale met 'n frekwensie van 3 PHz (oftewel 3 x 10^{15} s^{-1}) is

$$(6.62608 \times 10^{-34})\ (3 \times 10^{15}) = E_1 - E_2$$

oftewel E_1 - E_2 . 1.988 x 10^{-18} J. Om die energiewaarde per mol te verkry word hierdie waarde vermenigvuldig met Avogadro se getal, nl. N_A 6.02214 x 10^{23} mol^{-1}. Die resulterende antwoord is 1.988 x 10^{-18} J (6.02214 x 10^{23} mol^{-1}) 1.2 x 10^6 J/mol oftewel 1200 kJ/mol.

UV-straling by 'n frekwensie van 3 PHz se ekwivalente energievlak is gevolglik 1200 kJ/mol. Bg. stel berekeninge kan toegepas word op elektromagnetiese straling by enige gegewe frekwensie om 'n ekwivalente energievlak te bepaal.

***Bylaag B : Ondersoek na die kamfer inhoud van* L. scaberrima**

Die hoeveelhede kamfer in L. scaberrima *essensiële olies, bepaal volgens verskillende metodes en vanuit verskillende plantdele (Terblanché, 1995: 81•82), word getoon in Tabel B.1.*

Tabel B.1. : Hoeveelhede kamfer in* L. scaberrima *essensiële olies (Molpersentasies)

Plantdeel	***Waterdistillasie (%)***	***Mikrogolfdistillasie (%)***
Droë blomhofies	*3.088*	*0.310*
Vars blomhofies	*0.228*	*4.404*
Droë blaartjies	*3.291*	*5.747*
Vars blaartjies	*0.612*	*0.141*

Die molekulêre massa van L. scaberrima *olie kan nie bepaal word alvorens al die samestellende komponente daarvan geïdentifiseer is nie. Komponente reeds geïdentifiseer se molekulêre massas is o.a. kamfer (152.24 g/mol), α- en ß-pineen (136.24 g/mol), linaloöl (154.25 g/mol), α-terpineol (154.25 g/mol), limoneen (136.24 g/mol), fellandreen (136.24 g/mol) en gamma-terpineen (136.24 g/mol) (Bauer, Garbe* et al*, 1988: 156, 166, 167, 170, 173). Hierdie oliekomponente verskaf 'n duidelike aanduiding van die ordegrootte van die molekulêre massa van* L. scaberrima *olie. Verder, omdat vlugtige essensiële oliemolekules almal vlugtig moet wees en olfaktoriese kwaliteit by kamertemperatuur moet besit per definisie, is die molekulêre massa reikwydte van die olies betreklik nou om vlugtigheid te verseker by kamertemperatuur. (Molekules fisies te groot en te swaar kan nie by voorkeur verdamp nie en sal nie as deel van die essensiële olie herwin kan word nie.) Die essensiële oliekomponente se molekulêre massas is van vergelykbare ordegrootte en dus kan, by benadering, molpersentasies van* L. scaberrima *essensiële olies as massapersentasies geneem word.*

Die waardes in Tabel B.1. word vir die doel van die berekeninge wat volg derhalwe as massa-

persentasies geneem. Ooreenkomstige olie opbrengste vir die olies van Tabel B.1. word getoon in Tabel B.2. (Terblanché, 1995: 72•73).

Tabel B.2. : Essensiële olie opbrengste vir olies genoem in Tabel B.1. (Massapersentasies)

Plantdeel	***Waterdistillasie (%)***	***Mikrogolfdistillasie (%)***
Droë blomhofies	*1.34*	*0.7481*
Vars blomhofies	*0.606*	*0.3228*
Droë blaartjies	*0.195*	*0.2260*
Vars blaartjies	*0.355*	*0.1192*

Die hoeveelhede olies (t.o.v. Tabel B.1.) wat 50 mg kamfer daarin sal bevat, word getoon in Tabel B.3. Bv., 100 g watergedistilleerde droë blomhofie olie bevat 3.088 g kamfer en gevolglik sal 50 mg kamfer gevind word in 100000 x 50) 3088 . 1619.2 mg olie. Die ander waardes is sg. bepaal. Die getalle in hakies verwys na die waardes in gram wat die waarskynlike dodelike dosisse van die essensiële olies aantoon vir 'n man van 70 kg; en wat dus 70 x 50 = 3.5 g kamfer bevat.

Tabel B.3. : Hoeveelhede* L. scaberrima *essensiële olies wat 50 mg kamfer bevat

Plantdeel	***Waterdistillasie waardes (mg)***	***Mikrogolfdistillasie waardes (mg)***
Droë blomhofies	*1619 (113)*	*16129 (1129)*
Vars blomhofies	*21930 (1535)*	*1135 (79)*
Droë blaartjies	*1519 (106)*	*870 (61)*
Vars blaartjies	*8170 (572)*	*35461 (2482)*

Die waardes genoem in Tabel B.3. kan in verband gebring word met 'n sekere massa plantmateriaal deur gebruik te maak van die waardes van Tabel B.2. Dit word aangetoon in Tabel B.4. Bv., om 1.619 g olie te herwin vanuit lugdroë blomhofies, word 100) 1.34 x 1.619 . 120.8

g plantmateriaal benodig. Die waardes tussen hakies verwys na die waardes in gram wat die waarskynlike dodelike dosisse van L. scaberrima *plantmateriaal aantoon vir 'n man van 70 kg; en wat dus 70 x 50 = 3.5 g kamfer bevat.*

Tabel B.4. : Hoeveelhede* L. scaberrima *plantmateriaal wat 50 mg kamfer bevat

Plantdeel	***Hoeveelheid plantmateriaal (g) (Vanaf waterdistillasie waardes)***	***Hoeveelheid plantmateriaal (g) (Vanaf mikrogolfdistillasie waardes)***
Droë blomhofies	*121 (8457)*	*2156 (150920)*
Vars blomhofies	*3619 (253317)*	*352 (24612)*
Droë blaartjies	*779 (54528)*	*385 (26947)*
Vars blaartjies	*2301 (161099)*	*29749 (2082441)*

Nie waterdistillasie óf mikrogolfdistillasie as produksiemetode kan uitgesonder word as om selektief meer kamfer te herwin nie (volgens Tabel B.1.). Essensiële olie herwin vanuit droë blaartjies met watter metode ookal blyk die gevaarlikste te wees t.o.v. kamfer toksisiteit (volgens Tabel B.1.). T.o.v. die hoeveelheid plantmateriaal benodig vir kamfer toksisiteit blyk droë blomhofies weer die gevaarlikste (volgens Tabel B.4.).

Droë en vars plantmateriaal kan egter nie sonder meer vergelyk word nie (soos getoon in Bylaag D) omrede die plantmateriaalvoginhoud verminder vanaf ca. 77 % (vars) tot 12 % (lugdroog) tydens progressiewe droging en die gepaardgaande massaveranderinge resultate wesenlik beïnvloed.

Bylaag C : Voorbeelde van plante wat kommersieel belangrike geneesmiddels lewer (Balandrin, Klocke* et al*, 1985)

Tabel C.1. : Plante wat kommersieel belangrike geneesmiddels lewer

Plant	***Komponent/werkingsklas***	***Geneesmiddel***
Dioscorea *sp. (Meksikaanse broodwortel)*	*Steroïedhormone (95% vanaf diosgenien)*	*Orale kontrasepsie, kortikosteroïde, mineralokortikoïede, anaboliese steroïede*
Digitalis purpurae, D. lanata *(Vingerhoedkruid)*	*Digitalis glikosiede nl. digoksien, digitoksien*	*Kardiotoniese glikosiede*
Atropa belladonna, Datura stramonium	*Belladonna alkaloïede nl. atropien, skopolamien en hiossien*	*Parasimpatolitika*
Papaver somniferum *(Opium papawer)*	*Opium alkaloïede nl. kodeïen, morfien*	*Analgetika (Opiate)*
Rauvolfia serpentina	*Reserpien*	*Antihipertensiewe en psigotrope middels*
Cantharanthus roseus *(Madagaskar maagdepalm)*	*Vinchristien, vinblastien*	*Antikanker agense*
Physostigma venenosum *(Kalabar boontjie)*	*Fisostigmien*	*Parasimpatomimetika*
Pilocarpus *sp.*	*Pilokarpien*	*Parasimpatomimetika*
Cinchona *sp.*	*Kinien, kinidien*	*Anti-aritmiese en antimalariale agense*
Colchicum autumnale *(Herfs krokus)*	*Kolgisien*	*Anti-jig agens*
Erythroxylon coca	*Kokaïen*	*Lokaalverdower*
Strychnos *sp.*, Chondodendron tomentosum	*Kurare (*d-*tubokurarien)*	*Skeletspier verslapper*

Bylaag C : Voorbeelde van plante wat kommersieel belangrike geneesmiddels lewer (Balandrin, Klocke* et al*, 1985)

Tabel C.1. : Plante wat kommersieel belangrike geneesmiddels lewer

Plant	***Komponent/werkingsklas***	***Geneesmiddel***
Dioscorea *sp. (Meksikaanse broodwortel)*	*Steroïedhormone (95% vanaf diosgenien)*	*Orale kontrasepsie, kortikosteroïde, mineralokortikoïede, anaboliese steroïede*
Digitalis purpurae, D. lanata *(Vingerhoedkruid)*	*Digitalis glikosiede nl. digoksien, digitoksien*	*Kardiotoniese glikosiede*
Atropa belladonna, Datura stramonium	*Belladonna alkaloïede nl. atropien, skopolamien en hiossien*	*Parasimpatolitika*
Papaver somniferum *(Opium papawer)*	*Opium alkaloïede nl. kodeïen, morfien*	*Analgetika (Opiate)*
Rauvolfia serpentina	*Reserpien*	*Antihipertensiewe en psigotrope middels*
Cantharanthus roseus *(Madagaskar maagdepalm)*	*Vinchristien, vinblastien*	*Antikanker agense*
Physostigma venenosum *(Kalabar boontjie)*	*Fisostigmien*	*Parasimpatomimetika*
Pilocarpus *sp.*	*Pilokarpien*	*Parasimpatomimetika*
Cinchona *sp.*	*Kinien, kinidien*	*Anti-aritmiese en antimalariale agense*
Colchicum autumnale *(Herfs krokus)*	*Kolgisien*	*Anti-jig agens*
Erythroxylon coca	*Kokaïen*	*Lokaalverdower*
Strychnos *sp.*, Chondodendron tomentosum	*Kurare (*d-*tubokurarien)*	*Skeletspier verslapper*

Bylaag D : Verwerking van literatuur olie opbrengste verkry by verskillende voginhoudswaardes

Die hoeveelhede plantmateriaal wat ondersoek is by die verskillende plantmateriaal voginhoudswaardes tydens water- en mikrogolfdistillasie (Terblanché, 1995) word getoon in Tabel D.1.

Tabel D.1. : Hoeveelhede plantmateriaal ondersoek

Plantmateriaal	***Voginhoud (%)***	***Hoeveelheid materiaal (g)[1]***	***Hoeveelheid materiaal (g)[2]***
Droë blare	*9.2*	*397.7*	*127.0*
Droë blomhofies	*9.8*	*200.4*	*200.1*
Vars blare	*69.7*	*400.1*	*440.4*
Vars blomhofies	*61.4*	*400.2*	*400.9*

Nota: Boskrif (1) verwys na waterdistillasie en boskrif (2) na mikrogolfdistillasie.

Bg. hoeveelhede plantmateriaal kan elkeen in verband gebring word met 'n sekere massa

Tabel D.2. : Ooreenstemmende hoeveelhede droë plantmateriaal

Plantmateriaal	***Droë materiaal (g) (Waterdistillasie)***	***Droë materiaal (g) (Mikrogolfdistillasie)***
Droë blare	*361.1*	*115.3*
Droë blomhofies	*180.8*	*180.5*
Vars blare	*121.2*	*133.4*
Vars blomhofies	*154.5*	*154.7*

plantmateriaal wat oor geen voginhoud sal beskik nie maar in ooreenstemming is met die hoeveelheid materiaal en voginhoud in Tabel D.1. genoteer. Hierdie ooreenstemmende massas verteenwoordig die totale hoeveelhede droë plantmateriaal wat aanwesig was en word weergegee in Tabel D.2. Die hoeveelhede olie wat herwin is vanuit hierdie plantmateriaal (Terblanché, 1995) word verskaf in Tabel D.3.

Tabel D.3. : Hoeveelhede olie herwin

Plantmateriaal	***Olie verkry (g) (Waterdistillasie)***	***Olie verkry (g) (Mikrogolfdistillasie)***
Droë blare	*0.77*	*0.29*
Droë blomhofies	*2.69*	*1.50*
Vars blare	*1.42*	*0.53*
Vars blomhofies	*2.42*	*1.29*

Vergelykbare olie opbrengswaardes word verkry deur die waardes van Tabel D.3. te deel deur die ooreenstemmende hoeveelhede droë plantmateriaal waaruit dit verkry is (soos getoon in Tabel D.2.) Die olie opbrengste só bereken word getoon in Tabel D.4.

Tabel D.4. : Vergelykbare olie opbrengswaardes

Plantmateriaal	***Olie opbrengs (%) (Waterdistillasie)***	***Olie opbrengs (%) (Mikrogolfdistillasie)***
Droë blare	*0.21*	*0.25*
Droë blomhofies	*1.49*	*0.83*
Vars blare	*1.17*	*0.40*
Vars blomhofies	*1.57*	*0.83*

Enkelladingsmikrogolfdistillasie veranderlikes ondersoek

Tabel A.1. : Effek van tydsduur van irradiasie op opbrengs

Totale irradiasietyd (min)	*Olie verkry (g)*	*% Olie opbrengs (g olie/g plant)*
6	*0.72*	*0.36*
9	*1.40*	*0.70*
12	*1.65*	*0.83*
15	*1.73*	*0.87*
18	*1.86*	*0.93*
21	*1.95*	*0.98*
24	*2.59*	*1.30*

Tabel A.2. : Effek van verhouding water tot plantmateriaal gebruik op opbrengs

Water/Plantmateriaal (ml/g)	*Olie verkry (g)*	*% Olie opbrengs (g olie/g plant)*
1.25	*1.16*	*0.58*
1.875	*1.82*	*0.91*
2.25	*1.87*	*0.94*
2.75	*2.24*	*1.12*
3.125	*1.92*	*0.96*

Tabel A.3. : Effek van voginhoud op opbrengs

Vog (%)	*Droë materiaal[1] (g)*	*Olie verkry (g)*	*% Olie opbrengs[2] (g olie/g plant)*
12	*176*	*1.63*	*0.93 (0.82)*
24	*152*	*1.04*	*0.68 (0.52)*
51	*98*	*0.67*	*0.68 (0.34)*
77	*46*	*0.36*	*0.78 (0.18)*

Notas: (1) Vir elke eksperimentele datapunt is 200 g plantmateriaal met 'n bepaalde voginhoud gebruik. Die hoeveelhede droë plantmateriaal gelys in kolom twee stem ooreen met hierdie 200 g plantmateriaal en is verkry deur die voginhoudspersentasies van kolom een in berekening te bring. (2) Die persentasies olie opbrengste tussen hakies in kolom vier verteenwoordig die opbrengs uitgedruk as 200 g plantmateriaal beskou word. Die persentasies olie opbrengste in kolom vier sonder hakies is die olie opbrengs uitgedruk i.t.v. die droë plantmateriaalmassas gelys in kolom twee.

Tabel A.4. : Effek van hersirkulasiewater op opbrengs

Hersirkulasiewater gebruik (%)	*Olie verkry (g)*	*% Olie opbrengs (g olie/g plant)*
0	*1.77*	*0.89*
10	*1.90*	*0.95*
20	*2.24*	*1.12*
30	*2.41*	*1.21*
40	*2.41*	*1.21*
50	*2.50*	*1.25*
60	*2.66*	*1.33*
70	*2.78*	*1.39*
80	*3.26*	*1.63*
90	*3.28*	*1.64*
100	*3.54*	*1.77*

Tabel A.5. : Effek van verdelingsgraad op opbrengs

Verdelingsgraad (mm)	*Olie verkry (g)*	*% Olie opbrengs (g olie/g plant)*
Heel materiaal	*1.76*	*0.88*
4 tot 10	*1.97*	*0.99*
1.4 tot 4	*2.08*	*1.04*
1 tot 1.4	*2.13*	*1.07*
kleiner as 1	*2.46*	*1.23*