



EUROPEAN MEDICINES AGENCY  
SCIENCE MEDICINES HEALTH

15 June 2013  
EMA/HMPC/307783/2012  
Committee on Herbal Medicinal Products (HMPC)

## List of references supporting the assessment of *Eucalyptus globulus* Labill., *Eucalyptus polybractea* R.T. Baker and/or *Eucalyptus smithii* R.T. Baker, aetheroleum

Draft

**The Agency acknowledges that copies of the underlying works used to produce this monograph were provided for research only with exclusion of any commercial purpose.**

Abdullah D, Ping QN, Liu GJ. Enhancing effect of essential oils on the penetration of 5-fluorouracil through rat skin. *Yao Xue Xue Bao* 1996, 31:214-221

Agarwal V, Lal P, Pruthi V. Prevention of *Candida albicans* biofilm by plant oils. *Mycopathologia* 2008, 165:13-19

Anpalhan M, Le Couteur DG. Deliberate self-poisoning with Eucalyptus oil in an elderly woman. *Aust NZ J Med* 1998, 28:58

Astani A, Reichling J, Schnitzler P. Comparative study on the antiviral activity of selected monoterpenes derived from essential oils. *Phytother Res* 2010, 24:673-679

Baranska M, Schulz H, Reitzenstein S, Uhlemann U, Strehle MA, Krüger H, Quilitzsch R, Foley W, Popp J. Vibrational spectroscopic studies to acquire a quality control method of Eucalyptus essential oils. *Biopolymers* 2005, 78:237-248 (published online: [www.interscience.wiley.com](http://www.interscience.wiley.com))

Betts TJ. Solid phase microextraction of volatile constituents from individual fresh Eucalyptus leaves of three species. *Planta Med* 2000, 66:193-195

Blaschek W, Ebel S, Hilgenfeldt U, Holzgrabe U, Keller K, Reichling J, Schulz V, editors. Hagers Enzyklopädie der Arzneistoffe und Drogen. Eucalyptus. Wissenschaftliche Verlagsgesellschaft mbH, Stuttgart, 2007

Blumenthal M, Busse WR, Goldberg A, Gruenwald J, Hall T, Riggins W, Rister R, Klein S, editors. The Complete German Commission E Monographs. Eucalyptus leaves. The American Botanical Council, Austin, Texas, 1998

Bosnic T, Softic D, Grujic-Vasic J. Antimicrobial activity of some essential oils and major constituents of essential oils. *Acta Medica Academica* 2006, 35:19-22



- Boyd EM, Pearson G.L. On the expectorant action of volatile oils. *Am J Med Sci* 1946, 211:602-610
- Boyd EM, Sheppard EP. The effect of steam inhalation of volatile oils on the output and composition of respiratory tract fluid. *J Pharmacol Exp Ther* 1968, 163:250-256
- Bradley P. British herbal Compendium. A handbook of scientific information on widely used plant drugs. Eucalyptus oil. Companion to the British Herbal Pharmacopoeia, British Herbal Medicine Association, Bournemouth, 2007, 839-840
- Braun R, Haffner F, Schultz OE, Schmid W. Normdosen gebräuchlicher Arzneistoffe und Drogen. 16<sup>th</sup> ed. Eucalyptus aetheroleum E1. Wissenschaftliche Verlagsgesellschaft, Stuttgart, 2011
- Brown JS, Marcy SA. The use of botanicals for health purposes by members of a prepaid health plan. *Res Nurs Health* 1991, 14:339-350
- Burrow A, Eccles R, Jones AS. The effects of camphor, Eucalyptus and menthol vapour on nasal resistance to airflow and nasal sensation. *Acta Otolaryngol* 1983, 96:157-161
- Cermelli C, Fabio A, Fabio G, Quaglio P. Effect of Eucalyptus essential oil on respiratory bacteria and viruses. *Curr Microbiol* 2008, 56:89-92
- Chung KH, Yang KS, Kim J, Kim JC, Lee KY. Antibacterial activity of essential oils on the growth of *Staphylococcus aureus* and measurement of their binding interaction using optical biosensor. *J Microbial Biotechnol* 2007, 17(11):1848-1855
- Cimanga K, Kambu K, Tona L, Apers S, De Bruyne T, Hermans N et al. Correlation between chemical composition and antibacterial activity of essential oils of some aromatic medicinal plants growing in the Democratic Republic of Congo. *J Ethnopharmacol* 2002, 79:213-220
- Clare S. Eucalyptus for Coughs, Cold and Flu. 2010. Available at: <http://sciencera.com/biology/eucalyptus-for-cough-cold-and-flu/>
- Clegg RJ, Middleton B, Bell DG, White DA. The mechanism of cyclic monoterpene inhibition of hepatic 3-hydroxy-3-methylglutaryl Coenzym A reductase *in vivo* in the rat. *J Biol Chem* 1982, 257(5):2294-2299
- Clegg RJ, Middleton B, Bell DG, White DA. Inhibition of hepatic cholesterol synthesis and S-3-hydroxy-3-methylglutaryl-CoA reductase by mono and diterpenes administered *in vivo*. *Biochem Pharmacol* 1980, 29:2125-2127
- DAB 6 (1951) Deutsches Arzneibuch, 6. Ausgabe 1926, Neudruck 1951, Deutscher Apotheker-Verlag, Stuttgart
- DAB 7 (1968) Deutsches Arzneibuch, 7. Ausgabe 1968, Deutscher Apotheker-Verlag, Stuttgart
- Darben T, Cominos B, Lee CT. Topical Eucalyptus oil poisoning. *Aust J Dermatol* 1998, 39:265-267
- Daroui-Mokaddem H, Kabouche A, Bouacha M, Soumati B, El-Azzouny A, Bruneau C., Kabouche Z. GC/MS analysis and antimicrobial activity of essential oil and fresh leaves of *Eucalyptus globulus*, and leaves and stems of *Smyrniololus olusatrum* from Constantine (Algeria). *Nat Prod Commun* 2010, 5:1669-1672
- Das MK, Bhattacharya A, Ghosal SK. Effect of different terpene-containing essential oils on percutaneous absorption of trazodone hydrochloride through mouse epidermis. *Drug Deliv* 2006, 13:425-431

- Dayal R, Ayyar KS. Analysis of medicinal oil from *Eucalyptus globulus* ssp. *bicostata* leaves. *Planta Med* 1986, 162
- Dellacassa E, Menendez P. Bacterial activity of Eucalyptus essential oils. *Fitoterapia* 1989, 60:544-546
- De Smet PAGM, Keller K, Hänsel R, Chandler RF, editors. Adverse Effects of Herbal Drugs. Eucalyptus species. Springer-Verlag, Berlin, Heidelberg, New York, 1992, 125-132
- Dessi MA, Deiana M, Rosa A, Piredda M, Cottiglia F, Bonsignore L et al. Antioxidant activity of extracts from plants growing in Sardinia. *Phytother Res* 2001, 15:511-518
- De Vincenzi M, Silano M, De Vincenzi A, Maialetti F, Scazzocchio B. Constituents of aromatic plants: Eucalyptol. *Fitoterapia* 2002, 73:269-275
- Diepenbrock F. Gehes Codex der pharmazeutischen Spezialpräparate mit Angaben über Zusammensetzung, Indikationen, Zubereitungsformen und Hersteller. Wissenschaftliche Verlagsgesellschaft mbH, Stuttgart, Schwarzeck-Verlag GmbH, München 1960 IX Auflage, 441
- Dorow P. Welchen Einfluß hat Cineol auf die mukoziliäre Clearance? *Therapiewoche* 1989, 39:2652-2654 [German]
- Duisken M, Sandner F, Blömeke B, Hollender J. Metabolism of 1,8-cineole by human cytochrome P450 enzymes: identification of a new hydroxylated metabolite. *Biochim Biophys Acta* 2005, 1722:305-311
- European Pharmacopoeia 7<sup>th</sup> ed. Eucalyptus oil. Council of Europe. 07/2012:0390; 1123-1124
- Erler F, Ulug I, Yalcinkaya. Repellent activity of five essential oils against *Culex pipiens*. *Fitoterapia* 2006, 77:491-494
- ESCOP monographs. Eucalyptus oil - Eucalyptus aetheroleum. European Scientific Cooperative on Phytotherapy, 2<sup>nd</sup> ed. Thieme, Stuttgart, 2003, 150-156
- Faulds G. Eucalyptus in the treatment of diabetes. *Glasgow Med J* 1902, 57:342-348
- FDA U.S. Food and Drug Administration EAFUS list No 2081. Eucalyptus oil. 04/2013. Available at: <http://www.accessdata.fda.gov/scripts/fcn/fcnDetailNavigation.cfm?rpt=eafusListing&id=748>
- German Standardzulassung Eucalyptusöl Nr. 6599.99.99 published 02/1996
- Gomes-Carneiro MR, Felzenszwalb I, Paumgarten FJR. Mutagenicity testing of (±)-camphor, 1,8-cineole, citral, citronellal, (-)-menthol and terpineol with the *Salmonella*/microsome assay. *Mutat Res* 1998, 416:129-136
- Goodger JQD, Cao B, Jayadi I, Williams SJ, Woodrow IE. Non-volatile components of essential oil secretory cavities of Eucalyptus leaves: Discovery of two glucose monoterpene esters, cuniloside B and froggattiside A. *Phytochemistry* 2009, 70:1187-1194
- Goodger JQD, Heskes AM., Mitchell MC., King DJ, Neilson EH, Woodrow IE. Isolation of intact sub-dermal secretory cavities from *Eucalyptus*. *Plant Methods* 2010, 6:20  
<https://www.plantmethods.com/contents/6/1/20>
- Grimm H. Antiobstruktive Wirksamkeit von Cineol bei Atemwegserkrankungen. *Therapiewoche* 1987, 37:4306-4311 [German]
- Gurr FW, Scroggie JG. Eucalyptus oil poisoning treated by dialysis and mannitol infusion, with an appendix on the analysis of biological fluids for alcohol and eucalyptol. *Austral Ann Med* 1965, 14:238-249

- Habich G, Repges R. Chronisch obstruktive Atemwegserkrankungen - Cineol als Medikation sinnvoll und bewährt! *Therapiewoche* 1994, 44(6):356-365 [German]
- Harkenthal M, Reichling J, Geiss HK., Saller R. Comparative study on the *in vitro* antibacterial activity of Australian tea tree oil, cajuput oil, niaouli oil, manuka oil, kanuka oil and eucalyptus oil. *Pharmazie* 1999, 54:460-463
- Hasegawa T, Takano F, Takata T, Niiyama M, Ohta T. Bioactive monoterpene glycosides conjugated with gallic acid from the leaves of *Eucalyptus globulus*. *Phytochemistry* 2008, 69:747-753
- Hendry ER., Worthington T, Conway BR, Lambert PA. Antimicrobial efficacy of eucalyptus oil and 1,8-cineole alone and in combination with chlorhexidine digluconate against microorganisms grown in planktonic and biofilm cultures. *J Antimicrob Chemother* 2009, 64:1219-1225
- Hindle RC. Eucalyptus oil ingestion. *NZ Med J* 1994, 107:185-186
- Hohenwallner W, Klima J. *In vivo* activation of glucuronyl transferase in rat liver by eucalyptol. *Biochem Pharmacol* 1971, 20:3463-3472
- Hong CZ, Shellock FG. Effects of a topically applied counterirritant (Eucalyptamint) on cutaneous blood flow and on skin and muscle temperatures. *Am J Phys Med Rehabil* 1991, 70(1):29-33
- Horvathova E, Turcaniova V, Slamenova D. Comparative study of DNA-damaging and DNA-protective effects of selected components of essential plant oils in human leukemic cells K 652. *Neoplasma* 2007, 54(6):478-483
- Hümer M, Scheller G, Kapellen T, Gebauer C, Schmidt H, Kiess W. Phytotherapie in der Kinderheilkunde. *Dtsch Med Wochenschr* 2010, 135:959-964 [German]
- Ilmberger J, Heuberger E, Mahrhofer C, Desovic H, Kowarik D., Buchbauer G. The influence of essential oils on human attention: alertness. *Chem Senses* 2001, 26:239-245
- Jäger W, Nasel B, Nasel C, Binder R, Stimpfl T, Vycudilik W, Buchbauer G. Pharmacokinetic studies of the fragrance compound 1,8-cineole in human during inhalation. *Chem Senses* 1996, 21:477-480
- Jenner PM, Hagan EC, Taylor JM, Cook EL, Fitzhugh OG. Food flavourings and compounds of related structure I. Acute oral toxicity. *Food Cosmet Toxicol* 1964, 2:327-343
- Jorch G. Auslösungsmechanismus des Kratschmer-Reflexes. *Arzneimittel-, Therapie-Kritik & Medizin und Umwelt* 2009, 41:384 [German]
- Jori A, Bianchetti A, Prestini PE. Effect of essential oils on drug metabolism. *Biochem Pharmacol* 1969, 18:2081-2085
- Jori A, Bianchetti A, Prestini PE, Garattini S. Effect of eucalyptol (1,8-cineole) on the metabolism of other drugs in rats and in man. *Eur J Pharmacol* 1970, 9:362-366
- Jori A, Briatico G. Effect of eucalyptol on microsomal enzyme activity of foetal and newborn rats. *Biochem Pharmacol* 1973, 22:543-544
- Jori A, Di Sale E, Pescador R. On the inducing activity of eucalyptol. *J Pharm Pharmacol* 1972, 24:464-469
- Juan LW, Lucia A, Zerba EN., Harrand L, Marco M, Masuh HM. Chemical composition and fumigant toxicity of the essential oils from 16 species of *Eucalyptus* against *Haematobia irritans* (Diptera: Muscidae) adults. *J Econ Entomol* 2011, 104(3):1087-1092

- Juergens UR. Wirkt Eukalyptusöl bei Asthma? *MMW Fortschr Med* 2001, 13:14 [German]
- Juergens UR, Dethlefsen U, Steinkamp G, Gillissen A, Reppes R, Vetter H. Anti-inflammatory activity of 1,8-cineole (eucalyptol) in bronchial asthma: a double-blind placebo-controlled trial. *Respir Med* 2003, 97:250-256
- Juergens UR, Engelen T, Racke K, Gillissen A, Vetter H. Inhibitory activity of 1,8-cineole (eucalyptol) on cytokine production in cultured human lymphocytes and monocytes. *Pulm Pharmacol Ther* 2004, 17:281-287
- Juergens UR, Stöber M, Schmidt-Schilling I, Kleuver T, Vetter H. Anti-inflammatory effects of eucalyptol (1,8-cineole) in bronchial asthma: inhibition of arachidonic acid metabolism in human blood monocytes *ex vivo*. *Eur J Med Res* 1998a, 3:407-412
- Juergens UR., Stöber M, Vetter H. Inhibition of cytokine production and arachidonic acid metabolism by eucalyptol (1,8-cineole) in human blood monocytes *in vitro*. *Eur J Med Res* 1998b, 3:508-510
- Karpanen TJ, Conway BR, Worthington T, Hilton A, Elliott TSJ, Lambert PA. Enhanced chlorhexidine skin penetration with Eucalyptus oil. *BMC Infect Dis* 2010, 10:278-284
- Kehrl W, Sonnemann U, Dethlefsen U. Therapy for acute non-purulent rhinosinusitis with cineole: results of a double-blind randomised, placebo-controlled trial. *Laryngoscope* 2004, 114:738-742
- Kenia P, Houghton T, Beardsmore C. Does inhaling menthol affect nasal patency or cough? *Pediatr Pulmonol* 2008, 43:532-537
- Kirkness WR. Poisoning by oil of Eucalyptus. *Hospital reports* 1910, Jan 29:261
- Köhler H. Bericht über die neusten auf *Eucalyptus globulus* (Myrtaceae) bezüglichen Arbeiten. *Archiv der Pharmazie* 1873, 203(2):126-146 [German]
- Kohlert C, Van Rensen I, März R, Schindler G, Graefe EU, Veit M. Bioavailability and pharmacokinetics of natural volatile terpenes in animals and humans. *Planta Med* 2000, 66:495-505
- Kristiansen E, Madsen C. Induction of protein droplet ( $\alpha_2\mu$ -globulin) nephropathy in male rats after short-term dosage with 1,8-cineole and *l*-limonene. *Toxicol Lett* 1995, 80:147-152
- Laude EA, Morice H, Grattan TJ. The antitussive effects of menthol, camphor and cineol in conscious guinea-pigs. *Pulm Pharmacol* 1994, 7:179-184
- Lee KG, Shibamoto T. Antioxidant activities of volatile components isolated from *Eucalyptus* species. *J Sci Food Agric* 2001, 81:1573-1579
- Liapi C, Anifandis G, Chinou I, Kourounakis AP, Theodosopoulos S, Galanopoulou P. Antinociceptive properties of 1,8-cineole and beta-pinene, from the essential oil of *Eucalyptus camaldulensis* leaves, in rodents. *Plant Med* 2007, 73(12):1247-1254
- Madaus, Lehrbuch der biologischen Heilmittel. Georg Thieme Verlag, Leipzig, 1938, 2:1308
- Madyastha K, Chadha A. Metabolism of 1,8-cineole in rat: its effects on liver and lung microsomal cytochrome P-450 systems. *Bull Environ Contam Toxicol* 1986, 37:759-766
- McLean S, Boyle RR, Brandon NS, Davies NW, Sorensen JS. Pharmacokinetics of 1,8-cineole, a dietary toxin, in the brushtail possum (*Trichosurus vulpecula*): significance for feeding. *Xenobiotica* 2007, 37(9):903-922

- Melis K, Janssens G, Bochner A. Accidental nasal eucalyptol and menthol instillation. *Acta Clin Belg Suppl* 1990, 13:101-102
- Miyamoto CT, Rocha de Sant Anna J, Da Silva Franco CC, Cunico MM, Miguel OG, Cocco LC, Yamamoto CI et al. Genotoxic activity of *Eucalyptus globulus* essential oil in *Aspergillus nidulans* diploid cells. *Folia Microbiol* 2009, 54(6):493-498
- Miyazawa M, Kameoka H, Morinaga K, Negoro K, Mura N. Hydroxycineole: Four new metabolites of 1,8-cineole in rabbits. *J Agric Food Chem* 1989, 37:222-226
- Miyazawa M, Shindo M. Biotransformation of 1,8-cineole by human liver microsomes. *Natural Product Letters* 2001a, 15(1):49-53
- Miyazawa M, Shindo M, Shimada T. Oxidation of 1,8-cineole, the monoterpene cyclic ether originated from *Eucalyptus polybractea*, by cytochrome P450 3A enzymes in rat and human liver microsomes. *Drug Metab Dispos* 2001b, 29:200-205
- Neher A, Gstöttner M, Thaurer M, Augustijns P, Reinelt M, Schobersberger W. Influence of essential and fatty oils on ciliary beat frequency of human nasal epithelial cells. *Am J Rhinol* 2008, 22:130-134
- OECD Guideline for testing of chemicals, 1997 No 471
- Opdyke DLJ. Eucalyptus oil. *Food Cosmet Toxicol* 1975, 13:107-108
- Packman EW, London SJ. The utility of artificially induced cough as a clinical model for evaluating the antitussive effects of aromatics delivered by inunction. *Eur Resp J* 1980, 61(110):101-109
- Pages N, Fournier G, Le Luyer F, Marques M. Les Huiles essentielles et leur propriétés tératogènes potentielles: Exemples de l'huile essentielle d'*Eucalyptus globulus*. Etude préliminaire chez la souris. *Plantes Méd Phytothér* 1990, 24:21-26
- Pass GJ, McLean S, Stupans I, Davies N. Microsomal metabolism of terpene 1,8-cineole in the common brushtail possum (*Trichosurus vulpecula*), koala (*Phascolarctos cinereus*), rat and human. *Xenobiotica* 2001, 31(4):205-221
- Patel S, Wiggins J. Eucalyptus oil poisoning. *Arch Dis Child* 1980, 55:405-406
- Pattnaik S, Subramanyam VR, Kole C. Antibacterial and antifungal activity of ten essential oils *in vitro*. *Microbios* 1996, 86:237-246
- Pharmacopée française 9<sup>ème</sup> ed. Commission Permanente de la Pharmacopée. Monographie: 'Huile essentielle d'Eucalyptus'. Paris, 1976 [French]
- Pharmacopée française 9<sup>ème</sup> ed. Commission Permanente de la Pharmacopée. Les fiches de pratique officinale. 'Huile essentielle d'Eucalyptus'. Paris, 1978 [French]
- Prabuseenivasan S, Jyakumar M, Ignacimuthu S. *In vitro* antibacterial activity of some plant essential oils. *BMC Complement Altern Med* 2006, 6:39
- Rai MK, Qureshi S, Pandey AK. *In vitro* susceptibility of opportunistic *Fusarium* spp. to essential oils. *Mycoses* 1999, 42:97-101
- Rantzsch U, Vacca G, Dück R, Gillissen A. Anti-inflammatory effects of myrtol standardized and other essential oil on alveolar macrophages from patients with chronic obstructive pulmonary disease. *Eur J Med Res* 2009, 14:205-209
- Real Farmacopea Espanola 3<sup>rd</sup> ed. Eucalipto, Aceite esencial de. 2005, 1563-1564 [Spanish]

Reynolds JE, Parfitt K, Parson AS, Sweetmann SC, editors. Martindale, The Extra Pharmacopoeia. The Pharmaceutical Press, London, 1989

Reynolds JEF, Parfitt K, Parson AS, Sweetmann SC, editors. Martindale, The Extra Pharmacopoeia. 31<sup>st</sup> ed. The Pharmaceutical Press, London, 1996. The Pharmaceutical Society

Riechelmann H, Brommer C, Hinni M, Martin C. Response of human ciliated respiratory cells to a mixture of menthol, Eucalyptus oil and Pine needle oil. *Arzneim-Forsch/Drug Res* 1997, 47(II):1034-1039

Rivera JO, Hughes HW, Stuart G. Herbals and asthma: usage patterns among a border population. *Ann Pharmacother* 2004, 38:220-225

Römmelt H, Zuber A, Dirnagl K, Drexel H. Zur Resorption von Terpenen aus Badezusätzen [The absorption of terpenes from bath additives]. *Münch Med Wochenschr* 1974, 116:537-540 [German]

Saify ZS, Ahsan O, Dayo A. Cineole as skin penetration enhancer. *Pak J Pharm Sci* 2000, 13:29-32

Saller R, Hellstern A, Hellenbrecht D. Klinische Pharmakologie und therapeutische Anwendung von Cineol (Eucalyptusöl) und Menthol als Bestandteile ätherischer Öle. *Intern Praxis* 1988, 28:355-364 [German]

Santos FA, Rao VSN. Anti-inflammatory and antinociceptive effects of 1,8-cineole a terpenoid oxide present in many plant essential oils. *Phytother Res* 2000, 14:240-244

Sasaki YF, Imanishi H, Ohta T, Shirasu Y. Modifying effects of components of plant essence on the induction of sister-chromatid exchange in cultured Chinese hamster ovary cells. *Mutat Res* 1989, 226:103-110

Schaller M, Korting HC. Allergic airborne contact dermatitis from essential oils used in aromatherapy. *Clin Exp Dermatol* 1995, 20:143-145

Schmid W, Schultz OE, Haffner F. Normdosen der gebräuchlichen Arzneimittel. 6<sup>th</sup> edition, Wissenschaftliche Verlagsgesellschaft mbH, Stuttgart, 1979

Schnitzler P, Schön K, Reichling J. Antiviral activity of Australian tea tree oil and eucalyptus oil against *Herpes simplex* virus in cell culture. *Pharmazie* 2001, 56:343-347

Serafino A, Vallebona PS, Andreola F, Zonfrillo M, Mercuri L, Federici M et al. Stimulatory effect of Eucalyptus essential oil on innate cell-mediated immune response. *BMC Immunol* 2008, 9:17-33

Sherry E, Boeck H, Warnke PH. Topical application of a new formulation of Eucalyptus oil phytochemical clears methicillin-resistant *Staphylococcus aureus* infection. *Am J Infect Control* 2001, 29(5):346

Shishir RS, Renita C, Kumuda AR, Subhas BG. Irrational use of Eucalyptus oil in dentistry: a case report. *Bangladesh Journal of Medical Science* 2011, 10 (2):121-124

Silva J, Abebe W, Sousa SM, Duarte VG, Machado MIL, Matos FJA. Analgesic and anti-inflammatory effects of essential oils of Eucalyptus. *J Ethnopharmacol* 2003, 89:277-83

Silvestre AJD, Cavaleiro JAS, Delmond B, Filliatre C, Burgeois G. Analysis of the variation of essential oil composition of *Eucalyptus globulus* Labill. from Portugal using multivariate statistical analysis. *Ind Crop Pro* 1997, 6:27-33

Southwell IA, Flynn TM. Metabolism of  $\alpha$ -pinene and  $\beta$ -pinene, *p*-cymene and 1,8-cineole in brushtail possum, *Trichosurus vulpecula*. *Xenobiotica* 1980, 10(1):17-23

- Spoerke DG, Vandenberg SA, Smolinske SC, Kulig K, Rumack BH. Eucalyptus oil: 14 cases of exposure. *Vet Hum Toxicol* 1989, 31:166-168
- Stimpfl T, Našel B, Našel Ch, Binder R, Vycudilik W, Buchbauer G. Concentration of 1,8-cineole in human blood during prolonged inhalation. *Chem Senses* 1995, 20:349-350
- Stoner GD, Shimkin MB, Kniazeff AJ, Weisburger JH, Weisburger EK, Gori GB. Test for carcinogenicity of food additives and chemotherapeutic agents by pulmonary tumor response in strain A mice. *Cancer Res* 1973, 33:3069-3085
- Sweetman SC editor. Martindale: The complete drug reference. 35<sup>th</sup> ed. Eucalyptus oil. The Pharmaceutical Press, London, 2007
- Swenberg JA, Short B, Borghoff S, Strasser J, Charbonneau M. The comparative pathobiology of alpha-2-globulin nephropathy. *Toxicol Appl Pharmacol* 1989, 97:35-46
- Tesche S, Metternich F, Sonnemann U, Engelke JC, Dethlefsen U. The value of herbal medicines in the treatment of acute non-purulent rhinosinusitis. *Eur Arch Otorhinolaryngol* 2008, 265:1355-1359
- Tibballs J. Clinical effects and management of Eucalyptus oil ingestion in infants and young children. *Med J Aust* 1995, 163:177-180
- Tolozza AC, Zygadlo J, Cueto G, Biurrun F, Zerba E, Picollo MI. Fumigant and repellent properties of essential oils and compounds against permethrin-resistant *Pediculus humanus capitis* (Anoplura: Pediculidae) from Argentina. *J Med Entomol* 2006, 43(5):889-895
- Tolozza AC, Lucia A, Zerba E, Masuh H, Picollo MI. Eucalyptus essential oil toxicity against permethrin-resistant *Pediculus humanus capitis* (Phthiraptera: Pediculidae). *Parasitol Res* 2010, 106:409-414
- Unger M, Frank A. Simultaneous determination of the inhibitory potency of herbal extracts on the activity of six major cytochrome P450 enzymes using liquid chromatography/mass spectrometry and automated online extraction. *Rapid Commun Mass Spectrom* 2004, 18:2273-2281
- Webb NJA, Pitt WR. Eucalyptus oil poisoning in childhood: 41 cases in south-east Queensland. *J Paediatr Child Health* 1993, 29:368-371
- Weyers W, Brodbeck R. Hautdurchdringung ätherischer Öle. *Pharm Unserer Zeit* 1989, 18(3):82-86 [German]
- WHO monographs on selected medicinal plants. Vol. 2. Aetheroleum Eucalypti. World Health Organization. Geneva, 2002, 106-113
- Wichtl M. Teedrogen und Phytopharmaka 3<sup>rd</sup> ed. Eucalyptus leaf. Wissenschaftliche Verlagsgesellschaft mbH, Stuttgart, 2004
- Willms RU, Funk P, Walther C. Lokale Verträglichkeit zweier eucalyptus- und kiefernadelöl-haltiger Topika. *MMW Fortschr Med* 2005, 147:109-112 [German]
- Wittmann M, Petro W, Kaspar P, Repges R, Dethlefsen U. Zur Therapie chronisch obstruktiver Atemwegserkrankungen mit Sekretolytika. *Atemwegs- und Lungenkrankungen* 1998, 24(2):67-74 [German]
- Worth H, Schacher C, Dethlefsen U. Concomitant therapy with cineole (eucalyptol) reduces exacerbations in COPD: a placebo-controlled double-blind trial. *Respir Res* 2009, 10:69-75



Yang YC, Choi HY, Choi WS, Clark JM, Ahn YJ. Ovicidal and adulticidal activity of *Eucalyptus globulus* leaf oil terpenoids against *Pediculus humanus capitis* (Anoplura: Pediculidae). *J Agric Food Chem* 2004, 52:2507-2511

Zänker KS, Tölle W, Blümel G, Probst J. Evaluation of surfactant-like effects of commonly used remedies for colds. *Respiration* 1980, 39:150-157

Zimmermann T, Seibering M, Thomann P, Karabelnik D. Untersuchungen zur relativen Bioverfügbarkeit und zur Pharmakokinetik von Myrtol standardisiert. *Arzneim-Forsch/Drug Res* 1995, 45(II):1198-1201 [German]