

Bibliography of the Sources examined for the SCCS opinion on Fragrance allergens in cosmetic products (2012)

Aalto-Korte K, Lauerma A, Alanko K. Occupational allergic contact dermatitis from lichens in present-day Finland. *Contact Dermatitis* 2005;52:36-38

Aalto-Korte K, Valimaa J, Henriks-Eckerman M L, Jolanki R. Allergic contact dermatitis from salicyl alcohol and salicylaldehyde in aspen bark (*Populus tremula*). *Contact Dermatitis* 2005; 52: 93-95.

Adisen E, Önder M. Allergic contact dermatitis from *Laurus nobilis* oil induced by massage. *Contact Dermatitis* 2007; 56: 360-361.

Agner T, Andersen K E, Brandao F M, Bruynzeel D P, Bruze M, Frosch P, Goncalo M, Goossens A, Le Coz C J, Rustemeyer T, White I R, Diepgen T. Contact sensitisation in hand eczema patients-relation to subdiagnosis, severity and quality of life: a multi-centre study. *Contact Dermatitis* 2009; 61: 291-296.

Akyol A, Boyvat A, Peksari Y, Gurgey E. Contact sensitivity to standard series allergens in 1038 patients with contact dermatitis in Turkey. *Contact Dermatitis* 2005; 52: 333-337.

Ale I, Maibach H I. Clinical Relevance in Allergic Contact Dermatitis. An algorithmic approach. *Derm Beruf Umwelt* 1995; 43: 119-121.

An S, Lee A Y, Lee C H, Kim D W, Hahm J H, Kim K J, Moon K C, Won Y H, Ro Y S, Eun H C. Fragrance contact dermatitis in Korea: a joint study. *Contact Dermatitis* 2005; 53: 320-323.

Andersen A. Final report on the safety assessment of benzaldehyde. *Int J Toxicol* 2006; 25 Suppl 1: 11-27.

Andersen A. Final report on the safety assessment of sodium p-chloro-m-cresol, p-chloro-m-cresol, chlorothymol, mixed cresols, m-cresol, o-cresol, p-cresol, isopropyl cresols, thymol, o-cymen-5-ol, and carvacrol. *Int J Toxicol* 2006; 25 Suppl 1: 29-127.

Andersen K E, Johansen J D, Bruze M, Frosch P J, Goossens A, Lepoittevin J P, Rastogi S, White I, Menne T. The time-dose-response relationship for elicitation of contact dermatitis in isoeugenol allergic individuals. *Toxicol Appl Pharmacol* 2001; 170: 166-171.

Andersen K E. Contact allergy to toothpaste flavors. *Contact Dermatitis* 1978; 4: 195-198.

Andersson M, Hindsen M. Rhinitis because of toothpaste and other menthol-containing products. *Allergy* 2007; 62: 336-337.

Anonymous. 76/768/EEC - Council Directive 76/768/EEC of 27 July 1976 on the approximation of the laws of the Member States relating to cosmetic products. *Official Journal L* 1976; 262, 27/09/1976: 169.

Anonymous. Guidance to Regulation (EC) No 1272/2008 on classification, labelling and packaging (CLP) of substances and mixtures. ECHA Reference: ECHA-11-G-06-EN. Date: 04/2011 http://echa.europa.eu/documents/10162/17217/clp_en.pdf 2011.

Anonymous. OECD Guidelines for the Testing of Chemicals / Section 4: Health Effects. Test No.

429: Skin Sensitisation (Local Lymph Node Assay). Paris: OECD, 2002.

Api A M (2004). Ethanol and Diethyl Phthalate: Vehicle Effects in the Local Lymph Node Assay. *International Journal of Toxicology*, 23, 171-177

Api A M (2006). Only Peru Balsam extracts or distillates are used in perfumery. *Contact Dermatitis*: 54: 179.

Api A M, Vey M. A new IFRA Standard on the fragrance ingredient, hydroxyisohexyl 3-cyclohexene carboxaldehyde. *Contact Dermatitis* 2010: 62: 254-255.

Api A M, Basketter D, Cadby P A, Cano M-F, Ellis G, Gerberick F, Griem P, McNamee P M, Ryan C A, Safford B. Dermal Sensitization Quantitative Risk Assessment (QRA) For Fragrance Ingredients Technical Dossier. June 22, 2006 QRA Expert Group. http://www.ifraorg.org/en-us/search/tags_21261 (last accessed 2011-11-27). 2006.

Api A M, Basketter D A, Cadby P A, Cano M-F, Ellis G, Gerberick F, Griem P, McNamee P M, Ryan C A, Safford R. Dermal Sensitization Quantitative Risk Assessment (QRA) for fragrance ingredients. *Regul Toxicol Pharmacol* 2008: 52: 3-23

Api A M, Bredbenner A, McGowen M, Niemiera D, Parker L, Renskers K, Selim S, Sgaramella R, Signorelli R, Tedrow S, Troy W. Skin contact transfer of three fragrance residues from candles to human hands. *Regul Toxicol Pharmacol* 2007: 48: 279-283.

Aptula A O, Roberts D W. Mechanistic applicability domains for nonanimal-based prediction of toxicological end points: general principles and application to reactive toxicity. *Chem Res Toxicol* 2006: 19: 1097-1105.

Aptula, N., Roberts, D.W., Schultz, T.W., Pease, C., 2007. Reactivity assays for non-animal based prediction of skin sensitisation potential. *Toxicology*, 231(2-3), 117-118

Arnau E G, Andersen K E, Bruze M, Frosch P J, Johansen J D, Menne T, Rastogi S C, White I R, Lepoittevin J P. Identification of Lillial as a fragrance sensitizer in a perfume by bioassay-guided chemical fractionation and structure-activity relationships. *Contact Dermatitis* 2000: 43: 351-358.

Ashby J, Basketter D.A., Patton, D., Kimber I. 1995. Structure activity relationships in skin sensitization using the murine local lymph node assay. *Toxicology* 103:177-194

Athanasiadis G I, Pfab F, Klein A, Braun-Falco M, Ring J, Ollert M. Erythema multiforme due to contact with laurel oil. *Contact Dermatitis* 2007: 57: 116-118.

Avalos-Peralta P, Garcia-Bravo B, Camacho F M. Sensitivity to Myroxylon pereirae resin (balsam of Peru). A study of 50 cases. *Contact Dermatitis* 2005: 52: 304-306.

Barbaud A, Reichert-Penetrat S, Trechot P, Granel F, Schmutz J L. [Sensitization to resorcinol in a prescription verrucide preparation: unusual systemic clinical features and prevalence]. *Ann Dermatol Venereol* 2001: 128: 615-618.

Basketter D A, Andersen K E, Liden C, Van Loveren H, Boman A, Kimber I, Alanko K, Berggren E. Evaluation of the skin sensitizing potency of chemicals by using the existing methods and considerations of relevance for elicitation. *Contact Dermatitis* 2005: 52: 39-43.

Basketter D A, Flyvholm M A, Menne T. Classification criteria for skin-sensitizing chemicals: a commentary. *Contact Dermatitis* 1999; 40: 175-182.

Basketter D A. Skin Sensitization to Cinnamic Alcohol: The Role of Skin Metabolism. *Acta Derm Venereol* 1992; 72: 264-265.

Basketter, D.A., Gilmour, N., Dearman, R.J., Kimber, I., Ryan, C.A., Gerberick, F., 2003. Classification of skin sensitisation potency using the Local Lymph Node Assay. *The Toxicologist*, 72(S-1), 101

Basketter D, Horev L, Slodovnik D, Merimes S, Trattner A, Ingber A. Investigation of the threshold for allergic reactivity to chromium. *Contact Dermatitis* 2001; 44: 70-74.

Basketter DA, White IR. Diagnostic patch testing-does it have a wider relevance? *Contact Dermatitis*. 2012 Jul;67(1):1-2

Basketter, D.A., Wright, Z., Gilmour, N.J., Ryan, C.A., Gerberick, G.F., Robinson, M.K., Dearman, R.J., Kimber, I., 2002. Prediction of human sensitization potency using local lymph node assay EC3 values. *The Toxicologist*, 66(1-S), 240

Basra M K, Fenech R, Gatt R M, Salek M S, Finlay A Y. The Dermatology Life Quality Index 1994-2007: a comprehensive review of validation data and clinical results. *Br J Dermatol* 2008; 159: 997-1035.

Beliauskiene A, Valiukeviciene S, Uter W, Schnuch A. The European baseline series in Lithuania: results of patch testing in consecutive adult patients. *Journal of the European Academy of Dermatology and Venereology: JEADV* 2011; 25: 59-63.

Belsito D, Bickers D, Bruze M, Calow P, Greim H, Hanifin JM, Rogers AE, Saurat JH, Sipes IG, Tagami H (2008). A toxicologic and dermatologic assessment of cyclic and non-cyclic terpene alcohols when used as fragrance ingredients. *Food Chem Toxicol* 46 Suppl 11: S1-S71.

Belsito D V, Fowler J F, Jr., Sasseville D, Marks J G, Jr., De Leo V A, Storrs F J. Delayed-type hypersensitivity to fragrance materials in a select North American population. *Dermatitis* 2006; 17: 23-28.

Berglund V. Master Thesis University of Gothenburg. 2011.

Bergström M A, Luthman K, Nilsson J L, Karlberg A T. Conjugated dienes as prohaptens in contact allergy: in vivo and in vitro studies of structure-activity relationships, sensitizing capacity, and metabolic activation. *Chem Res Toxicol* 2006; 19: 760-769.

Bergström M A, Ott H, Carlsson A, Neis M, Zwadlo-Klarwasser G, Jonsson C A, Merk H F, Karlberg A T, Baron J M. A skin-like cytochrome P450 cocktail activates prohaptens to contact allergenic metabolites. *J Invest Dermatol* 2007; 127: 1145-1153.

Bernaola G, Escayol P, Fernandez E, de Corres L F. Contact dermatitis from methylnone fragrance. *Contact Dermatitis* 1989; 20: 71-72.

Bernard G, Gimenez-Arnau E, Rastogi S C, Heydorn S, Johansen J D, Menne T, Goossens A, Andersen K, Lepoittevin J P. Contact allergy to oak moss: search for sensitizing molecules using combined bioassay-guided chemical fractionation, GC-MS, and structure-activity relationship analysis. *Arch Dermatol Res* 2003; 295: 229-235.

Bertrand F, Basketter D A, Roberts D W, Lepoittevin J P. Skin sensitization to eugenol and isoeugenol in mice: possible metabolic pathways involving ortho-quinone and quinone methide intermediates. *Chemical research in toxicology* 1997; 10: 335-343.

Betts CJ et al. (2007). The use of ethanol:DEP as a vehicle for the local lymph node assay. *Contact Dermatitis*. 56, 70-75.

Bhalla M, Thami G P. Acute urticaria due to dental eugenol. *Allergy* 2003; 58: 158.

Bhatia S P, Jones L, Letizia C S, Api A M. Fragrance material review on 2-tert-butylcyclohexyl acetate. *Food Chem Toxicol* 2008; 46 Suppl 12: S44-47.

Bhatia S P, Jones L, Letizia C S, Api A M. Fragrance material review on 4-tert-butylcyclohexyl acetate. *Food Chem Toxicol* 2008; 46 Suppl 12: S36-41.

Bhatia S P, Jones L, Letizia C S, Api A M. Fragrance material review on tricyclodecanyl acetate. *Food Chem Toxicol* 2008; 46 Suppl 12: S93-96.

Bhatia S P, Letizia C S, Api A M. Fragrance material review on (-)-alpha-terpineol. *Food Chem Toxicol* 2008; 46 Suppl 11: S204-205.

Bhatia S P, Letizia C S, Api A M. Fragrance material review on alpha-terpineol. *Food Chem Toxicol* 2008; 46 Suppl 11: S280-285.

Bhatia S P, Letizia C S, Api A M. Fragrance material review on cyclohexyl acetate. *Food Chem Toxicol* 2008; 46 Suppl 12: S52-55.

Bhatia S P, Letizia C S, Api A M. Fragrance material review on tricyclo[5.2.1.0^{2,6}]dec-4-en-8-yl acetate. *Food Chem Toxicol* 2008; 46 Suppl 12: S100-101.

Bhatia S P, McGinty D, Foxenberg R J, Letizia C S, Api A M. Fragrance material review on terpineol. *Food Chem Toxicol* 2008; 46 Suppl 11: S275-279.

Bhatia S P, McGinty D, Letizia C S, Api A M. Fragrance material review on myrtenol. *Food Chem Toxicol* 2008; 46 Suppl 11: S237-240.

Bhatia S P, McGinty D, Letizia C S, Api A M. Fragrance material review on menthol. *Food Chem Toxicol* 2008; 46 Suppl 11: S209-214.

Bhatia S P, McGinty D, Letizia C S, Api A M. Fragrance material review on d-menthol. *Food Chem Toxicol* 2008; 46 Suppl 11: S215-217.

Bhatia S P, McGinty D, Letizia C S, Api A M. Fragrance material review on l-menthol. *Food Chem Toxicol* 2008; 46 Suppl 11: S218-223.

Bhatia S P, McGinty D, Letizia C S, Api A M. Fragrance material review on d,l-menthol. *Food Chem Toxicol* 2008; 46 Suppl 11: S224-227.

Bhatia S P, McGinty D, Letizia C S, Api A M. Fragrance material review on menthol racemic. *Food Chem Toxicol* 2008; 46 Suppl 11: S228-233.

Bhatia S P, McGinty D, Letizia C S, Api A M. Fragrance material review on myrtenol. *Food*

Chem Toxicol 2008: 46 Suppl 11: S237-240.

Bhatia S P, McGinty D, Letizia C S, Api A M. Fragrance material review on alpha-santalol. Food Chem Toxicol 2008: 46 Suppl 11: S267-269.

Bhatia S P, McGinty D, Letizia C S, Api A M. Fragrance material review on santalol. Food Chem Toxicol 2008: 46 Suppl 11: S263-266.

Bhatia S P, McGinty D, Letizia C S, Api A M. Fragrance material review on sclareol. Food Chem Toxicol 2008: 46 Suppl 11: S270-274.

Bhatia S P, Wellington G A, Cocchiara J, Lalko J, Letizia C S, Api A M. Fragrance material review on alpha-amylcinnamyl alcohol. Food Chem Toxicol 2007: 45 Suppl 1: S32-39.

Bhatia S P, Wellington G A, Cocchiara J, Lalko J, Letizia C S, Api A M. Fragrance material review on benzyl cinnamate. Food Chem Toxicol 2007: 45 Suppl 1: S40-48.

Bhatia S P, Wellington G A, Cocchiara J, Lalko J, Letizia C S, Api A M. Fragrance material review on methyl cinnamate. Food Chem Toxicol 2007: 45 Suppl 1: S113-119.

Bickers D, Calow P, Greim H, Hanifin J M, Rogers A E, Saurat J H, Sipes I G, Smith R L, Tagami H. A toxicologic and dermatologic assessment of cinnamyl alcohol, cinnamaldehyde and cinnamic acid when used as fragrance ingredients. Food Chem Toxicol 2005: 43: 799-836.

Bickers D, Calow P, Greim H, Hanifin J M, Rogers A E, Saurat J H, Sipes I G, Smith R L, Tagami H. A toxicologic and dermatologic assessment of linalool and related esters when used as fragrance ingredients. Food Chem Toxicol 2003: 41: 919-942.

Bilsland D, Strong A. Allergic contact dermatitis from the essential oil of French marigold (*Tagetes patula*) in an aromatherapist. Contact Dermatitis 1990: 23: 55-56.

Boonchai W, Iamtharachai P, Sunthonpalin P. Occupational allergic contact dermatitis from essential oils in aromatherapists. Contact Dermatitis 2007: 56: 181-182.

Braendstrup P, Johansen J D. Hydroxyisohexyl 3-cyclohexene carboxaldehyde (Lyrall) is still a frequent allergen. Contact Dermatitis 2008: 59: 187-188.

Brared Christensson J, Matura M, Backtorp C, Borje A, Nilsson J L, Karlberg A T. Hydroperoxides form specific antigens in contact allergy. Contact Dermatitis 2006: 55: 230-237.

Brites M M, Goncalo M, Figueiredo A. Contact allergy to fragrance mix--a 10-year study. Contact Dermatitis 2000: 43: 181-182.

Bruynzeel DP, Maibach HI. Excited skin syndrome (angry back). Archives of Dermatology 1986: 122, 323-328.

Bruynzeel D P, Diepgen T L, Andersen K E, Brandao F M, Bruze M, Frosch P J, Goossens A, Lahti A, Mahler V, Maibach H I, Menne T, Wilkinson J D. Monitoring the European standard series in 10 centres 1996-2000. Contact Dermatitis 2005: 53: 146-149.

Bruze M, Conde-Salazar L, Goossens A, Kanerva L, White I R. Thoughts on sensitizers in a

standard patch test series. *Contact Dermatitis* 1999; 41: 241-250

Bruze M. Principle of occupational hand eczema. CRC Press, Boca Raton, 2000: 181-194

Bruze M, Andersen K E, Goossens A. Recommendation to include fragrance mix 2 and hydroxyisohexyl 3-cyclohexene carboxaldehyde (Lyal) in the European baseline patch test series. *Contact Dermatitis* 2008; 58: 129-133.

Bruze M, Johansen J D, Andersen K E, Frosch P, Goossens A, Lepoittevin J P, Rastogi S C, White I, Menne T. Deodorants: an experimental provocation study with isoeugenol. *Contact Dermatitis* 2005; 52: 260-267.

Bruze M, Johansen J D, Andersen K E, Frosch P, Lepoittevin J P, Rastogi S, Wakelin S, White I, Menne T. Deodorants: an experimental provocation study with cinnamic aldehyde. *J Am Acad Dermatol* 2003; 48: 194-200.

Bruze M, Svedman C, Andersen KE, Bruynzeel D, Goossens A, Johansen JD, Matura M, Orton D, Vigan M; ESCD. Patch test concentrations (doses in mg/cm²) for the 12 non-mix fragrance substances regulated by European legislation. *Contact Dermatitis* 2012; 66: 131-136

Bruze M, Zimerson E. Cross-reaction patterns in patients with contact allergy to simple methylol phenols. *Contact Dermatitis* 1997; 37: 82-86.

Bruze M. What is a relevant contact allergy? *Contact Dermatitis* 1990; 23: 224-225.

Buckley D A, Basketter D A, Kan-King-Yu D, White I R, White J L, McFadden J P. Atopy and contact allergy to fragrance: allergic reactions to the fragrance mix I (the Larsen mix). *Contact Dermatitis* 2008; 59: 220-225.

Buckley D A, Basketter D A, Smith Pease C K, Rycroft R J, White I R, McFadden J P. Simultaneous sensitivity to fragrances. *Br J Dermatol* 2006; 154: 885-888.

Buckley D A, Rycroft R J, White I R, McFadden J P. Contact allergy to individual fragrance mix constituents in relation to primary site of dermatitis. *Contact Dermatitis* 2000; 43: 304-305.

Buckley D A, Rycroft R J, White I R, McFadden J P. The frequency of fragrance allergy in patch-tested patients increases with their age. *Br J Dermatol* 2003; 149: 986-989.

Buckley D A. Allergy to oxidized linalool in the UK. *Contact Dermatitis* 2011; 64: 240-241.

Buckley D A. Fragrance ingredient labelling in products on sale in the U.K. *Br J Dermatol* 2007; 157: 295-300.

Buffet M, Dupin N. Current treatments for scabies. *Fundam Clin Pharmacol* 2003; 17: 217-225.

Bundesinstitut für Risikobewertung (BfR), BfR empfiehlt europaweit einheitliche Regelung für den Einsatz neuer Duftstoffe in kosmetischen Mitteln. Stellungnahme Nr. 024/2008 des BfR vom 5. März 2008

Burdock G A, Carabin I G. Safety assessment of sandalwood oil (*Santalum album* L.). *Food Chem Toxicol* 2008; 46: 421-432.

Cachao P, Menezes Brandao F, Carmo M, Frazao S, Silva M. Allergy to oil of turpentine in

Portugal. Contact Dermatitis 1986: 14: 205-208.

Cadby P A, Ellis G, Hall B, Surot C, Vey M. Identification of the cause of an allergic reaction to a fragranced consumer product. Flavour and Fragrance Journal 2011: 26: 2-6

Cancian M, Fortina A B, Peserico A. Contact urticaria syndrome from constituents of balsam of Peru and fragrance mix in a patient with chronic urticaria. Contact Dermatitis 1999: 41: 300.

Cardoso J C, Canelas M M, Goncalo M, Figueiredo A. Photopatch testing with an extended series of photoallergens: a 5-year study. Contact Dermatitis 2009: 60: 325-329.

Castelain P Y, Camoin J P, Jouglard J. Contact dermatitis to terpene derivatives in a machine cleaner. Contact Dermatitis 1980: 6: 358-360.

Cheung C, Hotchkiss S A, Pease C K. Cinnamic compound metabolism in human skin and the role metabolism may play in determining relative sensitisation potency. J Dermatol Sci 2003: 31: 9-19.

Christensen L P, Jakobsen H B, Paulsen E, Hodal L, Andersen K E. Airborne Compositae dermatitis: monoterpenes and no parthenolide are released from flowering Tanacetum parthenium (feverfew) plants. Arch Dermatol Res 1999: 291: 425-431.

Christensson J B, Johansson S, Hagvall L, Jonsson C, Borje A, Karlberg A T. Limonene hydroperoxide analogues differ in allergenic activity. Contact Dermatitis 2008: 59: 344-352.

Christensson J B, Matura M, Gruvberger B, Bruze M, Karlberg A T. Linalool-a significant contact sensitizer after air exposure. Contact Dermatitis 2010: 62: 32-41.

Clayton R, Orton D. Contact allergy to spearmint oil in a patient with oral lichen planus. Contact Dermatitis 2004: 51: 314-315.

Cocchiara J, Letizia C S, Lalko J, Lapczynski A, Api A M. Fragrance material review on cinnamaldehyde. Food Chem Toxicol 2005: 43: 867-923.

Cockayne S E, Gawkrödger D J. Occupational contact dermatitis in an aromatherapist. Contact Dermatitis 1997: 37: 306-307.

Commission M. List of MAK and BAT Values 2010 (Report No. 46). Weinheim: Wiley-VCH, 2011.

Corazza M, Levratti A, Virgili A. Allergic contact cheilitis due to carvone in toothpastes. Contact Dermatitis 2002: 46: 366-367.

Corazza M, Manovani L, Maranini C, Virgili A. Allergic Contact Dermatitis from benzyl alcohol. Contact Dermatitis 1996: 34: 74.

Corea N V, Basketter D A, Clapp C, Van Asten A, Marty J P, Pons-Guiraud A, Laverdet C. Fragrance allergy: assessing the risk from washed fabrics. Contact Dermatitis 2006: 55: 48-53.

Coulson I H, Khan A S. Facial 'pillow' dermatitis due to lavender oil allergy. Contact Dermatitis 1999: 41: 111.

Cronin E. Contact Dermatitis. Churchill Livingstone, Edinburgh 1980:

Cronin E. Photosensitivity to musk ambrette. *Contact Dermatitis* 1984; 11: 88-92.

Cuesta L, Silvestre J F, Toledo F, Lucas A, Perez-Crespo M, Ballester I. Fragrance contact allergy: a 4-year retrospective study. *Contact Dermatitis* 2010; 63: 77-84.

Darvay A, White I R, Rycroft R J, Jones A B, Hawk J L, McFadden J P. Photoallergic contact dermatitis is uncommon. *Br J Dermatol* 2001; 145: 597-601.

de Groot A C, Frosch P J. Adverse reactions to fragrances. A clinical review. *Contact Dermatitis* 1997; 36: 57-86.

de Groot A C, Bruynzeel D P, Bos J D, der Meeren H L v, van Joost T, Jagtman B A, Weyland J W. The allergens in cosmetics. *Arch Dermatol* 1988; 124: 1525-1529.

de Groot A C, Liem D H, Nater J P, van Ketel W G. Patch tests with fragrance materials and preservatives. *Contact Dermatitis* 1985; 12: 87-92.

Dearman R J, Wright Z M, Basketter D A, Ryan C A, Gerberick G F, Kimber I. The suitability of hexyl cinnamic aldehyde as a calibrant for the murine local lymph node assay. *Contact Dermatitis* 2001; 44: 357-361.

Decapite T J, Anderson B E. Allergic contact dermatitis from cinnamic aldehyde found in an industrial odour-masking agent. *Contact Dermatitis* 2004; 51: 312-313.

DeGroot A C, Frosch P J. Adverse reactions to fragrances. A clinical review. *Contact Dermatitis* 1997; 36: 57-86.

deGroot A C, Coenraads P J, Bruynzeel D P, Jagtman B A, van_Ginkel C J W, Noz K, van_der_Valk P G M, Pavel S, Vink J, Weyland J W. Routine patch testing with fragrance chemicals in The Netherlands. *Contact Dermatitis* 2000; 42: 184-185.

Diba V C, Statham B N. Contact urticaria from cinnamal leading to anaphylaxis. *Contact Dermatitis* 2003; 48: 119.

dos Santos M A, Santos Galvao C E, Morato Castro F. Menthol-induced asthma: a case report. *J Investig Allergol Clin Immunol* 2001; 11: 56-58.

Dotterud L K, Smith-Sivertsen T. Allergic contact sensitization in the general adult population: a population-based study from Northern Norway. *Contact Dermatitis* 2007; 56: 10-15.

Dupuis G, Benezra C. Allergic contact dermatitis to simple chemicals: a molecular approach New York: Marcel Dekker, 1982.

Edman B. The influence of shaving method on perfume allergy. *Contact Dermatitis* 1994; 31: 291-292.

Elahi E N, Wright Z, Hinselwood D, Hotchkiss S A, Basketter D A, Pease C K. Protein binding and metabolism influence the relative skin sensitization potential of cinnamic compounds. *Chem Res Toxicol* 2004; 17: 301-310.

Elberling J, Linneberg A, Dirksen A, Johansen J D, Frolund L, Madsen F, Nielsen N H, Mosbech H. Mucosal symptoms elicited by fragrance products in a population-based sample in relation to

atopy and bronchial hyper-reactivity. *Clin Exp Allergy* 2005; 35: 75-81.

Elberling J, Linneberg A, Mosbech H, Dirksen A, Frolund L, Madsen F, Nielsen N H, Johansen J D. A link between skin and airways regarding sensitivity to fragrance products? *Br J Dermatol* 2004; 151: 1197-1203.

English J S, Rycroft R J. Allergic contact dermatitis from methyl heptine and methyl octine carbonates. *Contact Dermatitis* 1988; 18: 174-175.

Epstein W L. The use test for contact hypersensitivity. *Archives of Dermatological Research* 1982; 272: 279-281

Estrada, E., Patlewicz, G., Chamberlain, M., Basketter, D., Larbey, S., 2003. Computer aided Knowledge Generation for Understanding Skin Sensitization Mechanisms: The TOPS-MODE Approach. *Chem. Res. Toxicol.*, 16, 1226-1235

European Commission. Manual on the scope of application of the cosmetics directive 76/768/EEC (art. 1(1) cosmetics directive), version 8.0 (June 2011) http://ec.europa.eu/consumers/sectors/cosmetics/files/doc/manual_borderlines_ol_en.pdf

Fahlbusch K-G, Hammerschmidt F-J, Panten J, Pickenhagen W, Schatkowski D, Bauer K, Garbe D, Surburg H. Flavors and Fragrances. In: Wiley-VCH, eds. *Ullmann's Encyclopedia of Industrial Chemistry*. Weinheim: Wiley-VCH, 2002:

Fenn R S. Aroma chemical usage trends in modern perfumery. *Perfumer Flavorist* 1989; 14: 1-10.

Ferguson J E, Beck M H. Contact sensitivity to vanilla in a lip salve. *Contact Dermatitis* 1995; 33: 352.

Fischer L A, Johansen J D, Menne T. Methylidibromoglutaronitrile allergy: relationship between patch test and repeated open application test thresholds. *Br J Dermatol* 2008; 159: 1138-1143.

Fischer L A, Johansen J D, Menne T. Nickel allergy: relationship between patch test and repeated open application test thresholds. *Br J Dermatol* 2007; 157: 723-729.

Fischer L A, Menné T, Avnstorp C, Kasting G B, Johansen J D. Hydroxyisohexyl 3-cyclohexene carboxaldehyde allergy: relationship between patch test and repeated open application test thresholds. *Br J Dermatol* 2009; 161: 560-567.

Fischer L A, Menne T, Voelund A, Johansen J D. Can exposure limitations for well-known contact allergens be simplified? An analysis of dose-response patch test data. *Contact Dermatitis* 2011; 64: 337-342.

Fischer L A, Voelund A, Andersen K E, Menne T, Johansen J D. The dose-response relationship between the patch test and ROAT and the potential use for regulatory purposes. *Contact Dermatitis* 2009; 61: 201-208.

Fisher A A. Allergic paraben and benzyl alcohol hypersensitivity relationship of the "delayed" and "immediate" varieties. *Contact Dermatitis* 1975; 1: 281-284.

Fisher A A. Cosmetic dermatitis in childhood. *Cutis* 1995; 55: 15-16.

Flyvholm M A, Andersen K E, Baranski B, Sarlo K. Criteria for classification of skin- and airway-

sensitizing substances in the work and general environments. Regional Office for Europe: WHO, 1996.

Flyvholm M A, Hall B M, Agner T, et al. Threshold for occluded formaldehyde patch test in formaldehyde- sensitive patients. Relationship to repeated open application test with a product containing formaldehyde releaser. *Contact Dermatitis* 1997; 36: 26-33.

Ford R A, Api A M, Letizia C S. Monographs on fragrance raw materials. *Food Chem Toxicol* 1992; 30 Suppl: 1S-138S.

Ford R A, Letizia C S, Api A M. Longifolene. *Food Chem Tox* 1992; 30(Suppl.): 67S-68S.

Forsbeck M, Skog E. Immediate reactions to patch tests with balsam of Peru. *Contact Dermatitis* 1977; 3: 201-205.

Foti C, Conserva A, Antelmi A, Lospalluti L, Angelini G. Contact dermatitis from peppermint and menthol in a local action transcutaneous patch. *Contact Dermatitis* 2003; 49: 312-313.

Foti C, Zambonin C G, Conserva A, Casulli C, D'Accolti L, Angelini G. Occupational contact dermatitis to a limonene-based solvent in a histopathology technician. *Contact Dermatitis* 2007; 56: 109-112.

Foti M C, Ingold K U. Mechanism of inhibition of lipid peroxidation by gamma-terpinene, an unusual and potentially useful hydrocarbon antioxidant. *J Agric Food Chem* 2003; 51: 2758-2765.

Franks A. Contact allergy to anethole in toothpaste associated with loss of taste. *Contact Dermatitis* 1998; 38: 354-355.

Franot C, Roberts D W, Basketter D A, Benezra C, Lepoittevin J P. Structure-activity relationships for contact allergenic potential of gamma,gamma-dimethyl-gamma-butyrolactone derivatives. 2. Quantitative structure-skin sensitization relationships for alpha- substituted-alpha-methyl-gamma, gamma-dimethyl-gamma-butyrolactone s. *Chem Res Toxicol* 1994; 7: 307-312.

Franz H, Frank R, Rytter M, Haustein U F. Allergic contact dermatitis due to cedarwood oil after dermatoscopy. *Contact Dermatitis* 1998; 38: 182-183.

Fregert S, Hjorth N. Results of Standard Patch Tests with Substances Abandoned. *Contact Dermatitis Newsletter* 1969; 5: 85-86.

Freireich-Astman M, David M, Trattner A. Standard patch test results in patients with contact dermatitis in Israel: age and sex differences. *Contact Dermatitis* 2007; 56: 103-107.

Friedmann P S. The relationship between exposure dose and response n induction and elicitation of contact hypersensitivity in humans. *British Journal of Dermatology* 2007; 157: 1093-1102

Frosch P J, Johansen J D, Menne T, Pirker C, Rastogi S C, Andersen K E, Bruze M, Goossens A, Lepoittevin J P, White I R. Further important sensitizers in patients sensitive to fragrances. I. Reactivity to 14 frequently used chemicals. *Contact Dermatitis* 2002; 47: 78-85.

Frosch P J, Johansen J D, Menne T, Pirker C, Rastogi S C, Andersen K E, Bruze M, Goossens A,

Lepoittevin J P, White I R. Further important sensitizers in patients sensitive to fragrances. II. Reactivity to essential oils. *Contact Dermatitis* 2002; 47: 279-287.

Frosch P J, Johansen J D, Menne T, Rastogi S C, Bruze M, Andersen K E, Lepoittevin J P, Gimenez Arnau E, Pirker C, Goossens A, White I R. Lyril is an important sensitizer in patients sensitive to fragrances. *Br J Dermatol* 1999; 141: 1076-1083.

Frosch P J, Pilz B, Andersen K E, Burrows D, Camarasa J G, et al. Patch testing with fragrances: results of a multicenter study of the European Environmental and Contact Dermatitis Research Group with 48 frequently used constituents of perfumes. *Contact Dermatitis* 1995; 33: 333-342.

Frosch P J, Pirker C, Rastogi S C, Andersen K E, Bruze M, Svedman C, Goossens A, White I R, Uter W, Arnau E G, Lepoittevin J P, Menne T, Johansen J D. Patch testing with a new fragrance mix detects additional patients sensitive to perfumes and missed by the current fragrance mix. *Contact Dermatitis* 2005; 52: 207-215.

Frosch P J, Rastogi S C, Pirker C, Brinkmeier T, Andersen K E, Bruze M, Svedman C, Goossens A, White I R, Uter W, Arnau E G, Lepoittevin J P, Johansen J D, Menne T. Patch testing with a new fragrance mix - reactivity to the individual constituents and chemical detection in relevant cosmetic products. *Contact Dermatitis* 2005; 52: 216-225.

Garcia-Bravo B, Perez Bernal A, Garcia-Hernandez M J, Camacho F. Occupational contact dermatitis from anethole in food handlers. *Contact Dermatitis* 1997; 37: 38.

Geier J, Brasch J, Schnuch A, Lessmann H, Pirker C, Frosch P J. Lyril has been included in the patch test standard series in Germany. *Contact Dermatitis* 2002; 46: 295-297.

Geier J, Lessmann H, Schnuch A, Uter W. Contact sensitizations in metalworkers with occupational dermatitis exposed to water-based metalworking fluids: results of the research project "FaSt". *Int Arch Occup Environ Health* 2004; 77: 543-551.

Gerberick G F, Kern P S, Schlatter H, Dearman R J, Kimber I, Patlewicz G Y, Basketter D A. Compilation of historical local lymph node data for evaluation of skin sensitization alternative methods *Dermatitis* 2005; 16: 157-202.

Gerberick, G.F., Ryan, C.A., Kern, P.S., Dearman, R.J., Kimber, I., Patlewicz, G.Y., Basketter, D.A. 2004. A chemical dataset for evaluation of alternative approaches to skin-sensitization testing. *Contact Dermatitis* 50, 274-288

Gerberick G F, Troutman J A, Foertsch L M, Vassallo J D, Quijano M, Dobson R L, Goebel C, Lepoittevin J P. Investigation of peptide reactivity of pro-hapten skin sensitizers using a peroxidase-peroxide oxidation system. *Toxicological sciences : an official journal of the Society of Toxicology* 2009; 112: 164-174.

Gerberick G F, Vassallo J D, Bailey R E, Chaney J G, Morrall S W, Lepoittevin J P. Development of a peptide reactivity assay for screening contact allergens. *Toxicological sciences : an official journal of the Society of Toxicology* 2004; 81: 332-343.

Gilpin S, Maibach H 2010 Allergic contact dermatitis from farnesol: clinical relevance. *Cutaneous & Ocular Toxicology* 29:278-287

Giusti F, Porcaro V, Seidenari S. Evaluation of eugenol allergy in a patch-test population.

Contact Dermatitis 2001: 44: 37-38.

Goiriz R, Delgado-Jimenez Y, Sanchez-Perez J, Garcia-Diez A. Photoallergic contact dermatitis from lavender oil in topical ketoprofen. Contact Dermatitis 2007: 57: 381-382.

Goossens A, Merckx L. Allergic Contact Dermatitis from farnesol in a deodorant. Contact Dermatitis 1997: 37: 179-180.

Guarneri F, Barbuzza O, Vaccaro M, Galtieri G. Allergic contact dermatitis and asthma caused by limonene in a labourer handling citrus fruits. Contact Dermatitis 2008: 58: 315-316.

Guin J D, Berry V K. Perfume sensitivity in adult females. A study of contact sensitivity to a perfume mix in two groups of student nurses. J Am Acad Dermatol 1980: 3: 299-302.

Guin J D, Goodman J. Contact urticaria from benzyl alcohol presenting as intolerance to saline soaks. Contact Dermatitis 2001: 45: 182-183.

Gupta N, Shenoi S D, Balachandran C. Fragrance sensitivity in allergic contact dermatitis. Contact Dermatitis 1999: 40: 53-54.

Hagvall L, Backtorp C, Norrby PO, Karlberg AT, Borje A. Experimental and theoretical investigations of the autoxidation of geraniol: a dioxolane hydroperoxide identified as a skin sensitizer. Chemical research in toxicology 2011: 24: 1507-1515.

Hagvall L, Backtorp C, Svensson S, Nyman G, Borje A, Karlberg A T. Fragrance compound geraniol forms contact allergens on air exposure. Identification and quantification of oxidation products and effect on skin sensitization. Chem Res Toxicol 2007: 20: 807-814.

Hagvall L, Baron J M, Borje A, Weidolf L, Merk H, Karlberg A T. Cytochrome P450-mediated activation of the fragrance compound geraniol forms potent contact allergens. Toxicol Appl Pharmacol 2008: 233: 308-313.

Hagvall L, Karlberg AT, Bråred Christensson J. Contact allergy to air-exposed geraniol: clinical observations and report of 14 cases. Contact Dermatitis 2012: 67:20-27

Hagvall L, Skold M, Brared-Christensson J, Borje A, Karlberg A T. Lavender oil lacks natural protection against autoxidation, forming strong contact allergens on air exposure. Contact Dermatitis 2008: 59: 143-150.

Hald M, Agner T, Blands J, Ravn H, Johansen J D. Allergens associated with severe symptoms of hand eczema and a poor prognosis. Contact Dermatitis 2009: 61: 101-108.

Handley J, Burrows D. Allergic contact dermatitis from the synthetic fragrances Lylal and acetyl cedrene in separate underarm deodorant preparations. Contact Dermatitis 1994: 31: 288-290.

Hannuksela M, Kousa M, Pirila V. Allergy to ingredients of vehicles. Contact Dermatitis 1976: 2: 105-110.

Hannuksela M. Sensitivity of Various Skin Sites in the Repeated Open Application Test. Am J Contact Dermatitis 1991: 2: 102-104.

Hänsel R, Keller K, Rimpler H, Schneider G. Hagers Handbuch der pharmazeutischen Praxis.

Drogen E - O. Berlin, 894-902: Springer, 1993.

Hartmann K, Hunzelmann N. Allergic contact dermatitis from cinnamon as an odour-neutralizing agent in shoe insoles. *Contact Dermatitis* 2004; 50: 253-254.

Hausen B M, Wollenweber E. Propolis allergy. (III). Sensitization studies with minor constituents. *Contact Dermatitis* 1988; 19: 296-303.

Hausen B M, Brinkmann J, Dohn W. Lexikon der Kontaktallergene (6. Erg.-Lieferung). Landsberg am Lech: Ecomed, 1998.

Hausen B M, Reichling J, Harkenthal M. Degradation products of monoterpenes are the sensitizing agents in tea tree oil. *Am J Contact Dermat* 1999; 10: 68-77.

Hausen B M, Simatupang T, Bruhn G, Evers P, König W A. Identification of new allergenic constituents and proof of evidence for coniferyl benzoate in Balsam of Peru. *Am J Contact Dermat* 1995; 6: 199-208.

Hausen B M. Contact allergy to balsam of Peru. II. Patch test results in 102 patients with selected balsam of Peru constituents. *Am J Contact Dermat* 2001; 12: 93-102.

Hausen B M. Zahnpasta-Allergie. *Dtsch Med Wochenschr* 1984; 109: 300-302.

Hausen, M B, Evers, P, Stüwe, T H, et al. Propolis allergy (IV) Studies with further sensitizers from propolis and constituents common to propolis, poplar buds and balsam of Peru. *Contact Dermatitis* 1992; 26: 34-44.

Hegewald J, Uter W, Aberer W, Ayala F, Beliauskiene A, Belloni Fortina A, Bircher A, Brasch J, Chowdhury M M, Coenraads P J, Schuttelaer M-L, Elsner P, English J, Fartasch M, Mahler V, Frosch P J, Fuchs T, Gawkrödger D J, Giménez-Arnau A M, Green C M, Johansen J D, Menné T, Jolanki R, King C M, Krecisz B, Kiec-Swierczynska M, Larese F, Ormerod A D, Orton D, Peserico A, Rantanen T, Rustemeyer T, Sansom J E, Statham B N, Corradin M T, Wallnofer W, Wilkinson M, Schnuch A. The European Surveillance System of Contact Allergies (ESSCA): results of patch testing the standard series, 2004. *J Eur Acad Dermatol Venereol* 2008; 22: 174-181.

Heisterberg M V, Johansen J D. Contact allergy to trimethyl-benzenepropanol (Majantol). *Contact Dermatitis* 2009; 61: 360-361.

Heisterberg M V, Andersen K E, Avnstorp C, al. e. Fragrance mix II in the baseline series contributes significantly to detection of fragrance allergy. *Contact Dermatitis* 2010: (accepted):

Heisterberg M V, Laurberg G, Veien N, Menné T, Avnstorp C, Kaaber K, Andersen K A, Sommerlund M, Danielsen A, Andersen B, Kristensen B, Kristensen O, Nielsen N H, Thormann J, Vissing S, Johansen J D. Prevalence of allergic contact dermatitis caused by hydroxyisohexyl 3-cyclohexene carboxaldehyde has not changed in Denmark. *Contact Dermatitis* 2012; 67: 49-51.

Heisterberg M V, Menne T, Johansen J D. Contact allergy to the 26 specific fragrance ingredients to be declared on cosmetic products in accordance with the EU cosmetics directive. *Contact Dermatitis* 2011; 65: 266-275.

Heisterberg M V, Vigan M, Johansen J D. Active sensitization and contact allergy to methyl 2-

octynoate. *Contact Dermatitis* 2010; 62: 97-101.

Hemmer W, Focke M, Leitner B, Gotz M, Jarisch R. Axillary dermatitis from farnesol in a deodorant. *Contact Dermatitis* 2000; 42: 168-169.

Hendriks S A, van Ginkel C J. Evaluation of the fragrance mix in the European standard series. *Contact Dermatitis* 1999; 41: 161-162.

Hendriks S A, Bousema M T, van Ginkel C J. Allergic contact dermatitis from the fragrance ingredient Lyril in underarm deodorant. *Contact Dermatitis* 1999; 41: 119.

Heydorn S, Andersen K E, Johansen J D, Menne T. A stronger patch test elicitation reaction to the allergen hydroxycitronellal plus the irritant sodium lauryl sulfate. *Contact Dermatitis* 2003; 49: 133-139.

Heydorn S, Johansen J D, Andersen K E, Bruze M, Svedman C, White I R, Basketter D A, Menne T. Fragrance allergy in patients with hand eczema - a clinical study. *Contact Dermatitis* 2003; 48: 317-323.

Heydorn S, Menne T, Johansen J D. Fragrance allergy and hand eczema - a review. *Contact Dermatitis* 2003; 48: 59-66.

Heydorn S, Menne T, Andersen K E, Bruze M, Svedman C, White I R, Basketter D A. Citral a fragrance allergen and irritant. *Contact Dermatitis* 2003; 49: 32-36.

Hindle E, Ashworth J, Beck M H. Chelitis from contact allergy to citral in lip salve. *Contact Dermatitis* 2007; 57: 125-126.

Hindsén M, Bruze M, Christensen O B (1999). Individual variation in nickel patch testing reactivity. *Am J Contact Dermatitis* 10, 62-67.

Hindson C. Contact eczema from methyl salicylate reproduced by oral aspirin (acetyl salicylic acid). *Contact Dermatitis* 1977; 3: 348-349.

Hjorth N. Eczematous allergy to balsams, allied perfumes and flavouring agents. *Acta Derm Venereol* 1961; 41 (Suppl. 46): 1-216.

Hoskyn J, Guin J D. Contact allergy to cinnamal in a patient with oral lichen planus. *Contact Dermatitis* 2005; 52: 160-161.

Hostynek J J. (2004). Is there evidence that amylcinnamic aldehyde causes allergic contact dermatitis? *Exog Dermatol* 2004; 3:35-46.

Hostynek J J, Maibach H I. Is there evidence that alpha-isomethylionone causes allergic contact dermatitis? *Exog Dermatol* 2004; 3: 121-125.

Hostynek J J, Maibach H I. Is there evidence that anisyl alcohol causes allergic contact dermatitis? *Exog Dermatol* 2003; 2: 230-233.

Hostynek J J, Maibach H I. Is there evidence that geraniol causes allergic contact dermatitis? *Exog Dermatol* 2004; 3: 318-331.

Hostynek J J, Maibach H I. Is there evidence that linalool causes allergic contact dermatitis?

Exog Dermatol 2003: 2: 223-229.

Hostynek J J, Maibach H I. Is there evidence that methyl heptine carbonate causes allergic contact dermatitis? *Cutan Ocul Toxicol* 2006: 25: 259-271.

Hostynek J J, Maibach H I. Operational definition of a causative contact allergen – A study with six fragrance allergens. *Exogenous Dermatology* 2003: 2: 279-285

Hostynek J J, Maibach H I. Sensitization Potential of Citronellol. *Exog Dermatol* 2004: 3: 307-312.

Hostynek J J, Maibach H I. Threshold of elicitation depend on induction conditions. Could low level exposure induce sub-clinical allergic state that are only elicited under severe conditions of clinical diagnosis? *Food and Chemical Toxicology* 2004:42:1859-1865

Howes M J, Simmonds M S, Kite G C. Evaluation of the quality of sandalwood essential oils by gas chromatography-mass spectrometry. *J Chromatogr A* 2004: 1028: 307-312.

Hussain I, Rani Z, Rashid T, Haroon T S. Suitability of the European standard series of patch test allergens in Pakistani patients. *Contact Dermatitis* 2002: 46: 50-51.

Jacob S E, Barron G S. Benzyl alcohol: a covert fragrance. *Dermatitis* 2007: 18: 232-233.

Johansen J D, Andersen K E, Menné T. Quantitative aspects of isoeugenol contact allergy assessed by use and patch tests. *Contact Dermatitis* 1996: 34: 414-418.

Johansen J D, Andersen K E, Rastogi S C, Menne T. Threshold responses in cinnamic-aldehyde-sensitive subjects: results and methodological aspects. *Contact Dermatitis* 1996: 34: 165-171.

Johansen J D, Andersen K E, Svedman C, Bruze M, Bernard G, Gimenez-Arnau E, Rastogi S C, Lepoittevin J P, Menne T. Chloroatranol, an extremely potent allergen hidden in perfumes: a dose-response elicitation study. *Contact Dermatitis* 2003: 49: 180-184.

Johansen J D, Andersen T F, Kjoller M, Veien N, Avnstorp C, Andersen K E, Menne T. Identification of risk products for fragrance contact allergy: a case-referent study based on patients' histories. *Am J Contact Dermat* 1998: 9: 80-86.

Johansen J D, Andersen T F, Veien N, Avnstorp C, Andersen K E, Menne T. Patch testing with markers of fragrance contact allergy. Do clinical tests correspond to patients' self-reported problems? *Acta Derm Venereol* 1997: 77: 149-153.

Johansen J D, Frosch P J, Svedman C, Andersen K E, Bruze M, Pirker C, Menne T. Hydroxyisohexyl 3-cyclohexene carboxaldehyde- known as Lylal: quantitative aspects and risk assessment of an important fragrance allergen. *Contact Dermatitis* 2003: 48: 310-316.

Johansen J D, Heydorn S, Menne T. Oak moss extracts in the diagnosis of fragrance contact allergy. *Contact Dermatitis* 2002: 46: 157-161.

Johansen J D, Rastogi S C, Menné T. Contact allergy to popular perfumes: assessed by patch test, use test and chemical analysis. *Br J Dermatol* 1996: 135: 419-422.

Johansen J D, Rastogi S C, Andersen K E, Menne T. Content and reactivity to product perfumes in fragrance mix positive and negative eczema patients. A study of perfumes used in toiletries

and skin-care products. *Contact Dermatitis* 1997; 36: 291-296.

Johansen J D, Rastogi S C, Bruze M, Andersen K E, Frosch P, Dreier B, Lepoittevin J P, White I, Menne T. Deodorants: a clinical provocation study in fragrance-sensitive individuals. *Contact Dermatitis* 1998; 39: 161-165.

Johansen J D. Contact allergy to fragrances: clinical and experimental investigations of the fragrance mix and its ingredients. *Contact Dermatitis* 2002; 46 (suppl. 3): 4-31.

Jorgensen P H, Jensen C D, Rastogi S, Andersen K E, Johansen J D. Experimental elicitation with hydroxyisohexyl-3-cyclohexene carboxaldehyde-containing deodorants. *Contact Dermatitis* 2007; 56: 146-150.

Jung P, Sesztak-Greinecker G, Wantke F, Gotz M, Jarisch R, Hemmer W. Mechanical irritation triggering allergic contact dermatitis from essential oils in a masseur. *Contact Dermatitis* 2006; 54: 297-299.

Jung P, Sesztak-Greinecker G, Wantke F, Gotz M, Jarisch R, Hemmer W. Mechanical irritation triggering allergic contact dermatitis from essential oils in a masseur. *Contact Dermatitis* 2006; 54: 297-299.

Kaidbey K H, Kligman A M. Photocontact allergy to 6-methylcoumarin. *Contact Dermatitis* 1978; 4: 277-282.

Kalavala M, Hughes T M, Goodwin R G, Anstey A V, Stone N M. Allergic contact dermatitis to peppermint foot spray. *Contact Dermatitis* 2007; 57: 57-58.

Kalgutkar A S, Gardner I, Obach R S, Shaffer C L, Callegari E, Henne K R, Mutlib A E, Dalvie D K, Lee J S, Nakai Y, O'Donnell J P, Boer J, Harriman S P. A comprehensive listing of bioactivation pathways of organic functional groups. *Curr Drug Metab* 2005; 6: 161-225.

Kanerva L, Estlander T, Jolanki R. Dental nurse's occupational allergic contact dermatitis from eugenol used as a restorative dental material with polymethylmethacrylate. *Contact Dermatitis* 1998; 38: 339-340.

Kanerva L, Estlander T, Jolanki R. Occupational allergic contact dermatitis caused by ylang-ylang oil. *Contact Dermatitis* 1995; 33: 198-199.

Kanerva L, Jolanki R, Estlander T. Hairdresser's dermatitis caused by oak moss in permanent waving solution. *Contact Dermatitis* 1999; 41: 55-56.

Karlberg A T, Doms-Gossens A. Contact allergy to oxidized d-limonene among dermatitis patients. *Contact Dermatitis* 1997; 36: 201-206.

Karlberg A T, Bergstrom M A, Borje A, Luthman K, Nilsson J L. Allergic contact dermatitis--formation, structural requirements, and reactivity of skin sensitizers. *Chem Res Toxicol* 2008; 21: 53-69.

Karlberg A T, Boman A, Melin B. Animal experiments on the allergenicity of d-limonene--the citrus solvent. *Ann Occup Hyg* 1991; 35: 419-426.

Karlberg A T, Magnusson K, Nilsson U. Air oxidation of d-limonene (the citrus solvent) creates

potent allergens. *Contact Dermatitis* 1992; 26: 332-340.

Karlberg A T, Shao L P, Nilsson U, Gafvert E, Nilsson J L. Hydroperoxides in oxidized d-limonene identified as potent contact allergens. *Arch Dermatol Res* 1994; 286: 97-103.

Karlberg A T. Contact allergy to colophony. Chemical identifications of allergens, sensitization experiments and clinical experiences. *Acta Dermatol Venerol (Stockh) Suppl* 1988; 139: 1-43.

Kashani M N, Gorouhi F, Behnia F, Nazemi M J, Dowlati Y, Firooz A. Allergic contact dermatitis in Iran. *Contact Dermatitis* 2005; 52: 154-158.

Katsarma G, Gawkrödger D J. Suspected fragrance allergy requires extended patch testing to individual fragrance allergens. *Contact Dermatitis* 1999; 41: 193-197.

Katsarou A, Armenaka M, Ale I, Koufou V, Kalogeromitros D. Frequency of immediate reactions to the European standard series. *Contact Dermatitis* 1999; 41: 276-279.

Keane F M, Smith H R, White I R, Rycroft R J. Occupational allergic contact dermatitis in two aromatherapists. *Contact Dermatitis* 2000; 43: 49-51.

Keller D, Krauledat M and Scheel J (2009). Feasibility study to support a threshold of sensitization concern concept in risk assessment based on human data. *Archives of Toxicology* 83, 1049-1060.

Kern P S, Gerberick G F, Ryan C A, Kimber I, Aptula A, Basketter D A. Local lymph node data for the evaluation of skin sensitization alternatives: a second compilation. *Dermatitis* 2010; 21: 8-32.

Kim H J, Chen F, Wu C, Wang X, Chung H Y, Jin Z. Evaluation of antioxidant activity of Australian tea tree (*Melaleuca alternifolia*) oil and its components. *J Agric Food Chem* 2004; 52: 2849-2854.

Kimber I, Dearman R J, Basketter D A, Ryan C A, Gerberick G F, McNamee P M, Lalko J, Api A M. Dose metrics in the acquisition of skin sensitization: thresholds and importance of dose per unit area. *Regulatory toxicology and pharmacology: RTP* 2008; 52: 39-45.

Kortenkamp A, Martin O, Faust M, Evans R, McKinlay R, Orton F, Rosivatz E (2011). State of the Art of the Assessment of Endocrine Disruptors. Project Contract Number 070307/2009/550687/SER/D3.

http://ec.europa.eu/environment/endocrine/documents/studies_en.htm

Kortenkamp A, Backhaus T, Faust M (2009). State of the Art Report on Mixture Toxicity. Project contract No. 070307/2007/485103/ETU/D.1

http://ec.europa.eu/environment/chemicals/pdf/report_Mixture%20toxicity.pdf

Krautheim A, Uter W, Frosch P, Schnuch A, Geier J. Patch testing with fragrance mix II: results of the IVDK 2005-2008. *Contact Dermatitis* 2010; 63: 262-269.

Kumar P, Caradonna-Graham V M, Gupta S, Cai X, Rao P N, Thompson J. Inhalation challenge effects of perfume scent strips in patients with asthma. *Ann Allergy Asthma Immunol* 1995; 75: 429-433.

Lachapelle J M. A proposed relevance scoring system for positive allergic patch test reactions:

practical implications and limitations. *Contact Dermatitis* 1997: 36:39-43

Lalko J, Api A M. Investigation of the dermal sensitization potential of various essential oils in the local lymph node assay. *Food Chem Toxicol* 2006: 44: 739-746.

Lalko J, Api A M, Politano V T, Letizia C. Quantitative risk assessment for dermal sensitization to fragrance ingredients: The utility of LLNA data in the weight of evidence approach to identifying thresholds. 46th Congress of the European Societies of Toxicology, September 13-16 2009, Dresden, Germany 2009:

Lalko J, Isola D, Api AM (2004). Ethanol and diethyl phthalate: vehicle effects in the local lymph node assay. *Int J Toxicol.*: 23:171-7.

Lalko J, Lapczynski A, Letizia C S, Api A M(2007). Fragrance material review on cis-beta-damascone. *Food Chem Toxicol*: 45 Suppl 1: S192-198.

Lalko J, Lapczynski A, McGinty D, Bhatia S P, Letizia C S, Api A M. Fragrance material review on alpha-ionone. *Food Chem Toxicol* 2007: 45 Suppl 1: S272-275.

Lalko J, Lapczynski A, McGinty D, Bhatia S, Letizia C S, Api A M. Fragrance material review on delta-damascone. *Food Chem Toxicol* 2007: 45 Suppl 1: S205-210.

Lalko J, Lapczynski A, McGinty D, Bhatia S, Letizia C S, Api A M. Fragrance material review on ionone. *Food Chem Toxicol* 2007: 45 Suppl 1: S251-257.

Lalko J, Lapczynski A, McGinty D, Bhatia S, Letizia C S, Api A M. Fragrance material review on beta-ionone. *Food Chem Toxicol* 2007: 45 Suppl 1: S241-247.

Lalko J, Lapczynski A, McGinty D, Bhatia S, Letizia C S, Api A M. Fragrance material review on methyl ionone (mixture of isomers). *Food Chem Toxicol* 2007: 45 Suppl 1: S300-307.

Lalko J, Lapczynski A, McGinty D, Bhatia S, Letizia C S, Api A M. Fragrance material review on gamma-damascone. *Food Chem Toxicol* 2007: 45 (Suppl. 1): S216-S220.

Lalko J, Lapczynski A, Politano V T, McGinty D, Bhatia S, Letizia C S, Api A M. Fragrance material review on alpha-ionone. *Food Chem Toxicol* 2007: 45 Suppl 1: S235-240.

Lammintausta K, Kalimo K, Havu V K. Occurrence of contact allergy and hand eczemas in hospital wet work. *Contact Dermatitis* 1982: 8: 84-90.

Lammintausta K, Maibach H I, Wilson D. Mechanisms of subjective (sensory) irritation. Propensity to non-immunologic contact urticaria and objective irritation in stingers. *Derm Beruf Umwelt* 1988: 36: 45-49.

Landsteiner K, Jacobs J. Studies on the sensitization of animals with simple chemical compounds. *J Exp Med* 1936: 64: 625-629.

Lapczynski A, Bhatia S P, Foxenberg R J, Letizia C S, Api A M. Fragrance material review on geraniol. *Food Chem Toxicol* 2008: 46 Suppl 11: S160-170.

Lapczynski A, Bhatia S P, Letizia C S, Api A M. Fragrance material review on nerolidol (isomer unspecified). *Food Chem Toxicol* 2008: 46 Suppl 11: S247-250.

Lapczynski A, Bhatia S P, Letizia C S, Api A M. Fragrance material review on rhodinol. Food Chem Toxicol 2008: 46 Suppl 11: S259-262.

Lapczynski A, Bhatia S P, Letizia C S, Api A M. Fragrance material review on l-citronellol. Food Chem Toxicol 2008: 46 Suppl 11: S110-113.

Lapczynski A, Bhatia S P, Letizia C S, Api A M. Fragrance material review on dl-citronellol. Food Chem Toxicol 2008: 46 Suppl 11: S103-109.

Lapczynski A, Bhatia S P, Letizia C S, Api A M. Fragrance material review on farnesol. Food Chem Toxicol 2008: 46 Suppl 11: S149-156.

Lapczynski A, Bhatia S P, Letizia C S, Api A M. Fragrance material review on hydroxycitronellol. Food Chem Toxicol 2008: 46 Suppl 11: S179-181.

Lapczynski A, Bhatia S P, Letizia C S, Api A M. Fragrance material review on nerolidol (isomer unspecified). Food Chem Toxicol 2008: 46 Suppl 11: S247-250.

Lapczynski A, Bhatia S P, Letizia C S, Api A M. Fragrance material review on rhodinol. Food Chem Toxicol 2008: 46 Suppl 11: S259-262.

Lapczynski A, Foxenberg R J, Bhatia S P, Letizia C S, Api A M. Fragrance material review on nerol. Food Chem Toxicol 2008: 46 Suppl 11: S241-244.

Lapczynski A, Foxenberg R J, Bhatia S P, Letizia C S, Api A M. Fragrance material review on tetrahydrolinalool. Food Chem Toxicol 2008: 46 Suppl 11: S286-288.

Lapczynski A, Jones L, McGinty D, Bhatia S P, Letizia C S, Api A M. Fragrance material review on methyl salicylate. Food Chem Toxicol 2007: 45 Suppl 1: S428-452.

Lapczynski A, Jones L, McGinty D, Bhatia S, Letizia C S, Api A M. Fragrance material review on hexyl salicylate. Food Chem Toxicol 2007: 45 Suppl 1: S410-417.

Lapczynski A, Jones L, McGinty D, Bhatia S, Letizia C S, Api A M. Fragrance material review on isoamyl salicylate. Food Chem Toxicol 2007: 45 Suppl 1: S418-423.

Lapczynski A, Lalko J, McGinty D, Bhatia S P, Letizia C S, Api A M. Fragrance material review on alpha-isodamascone. Food Chem Toxicol 2007: 45 Suppl 1: S267-271.

Lapczynski A, Lalko J, McGinty D, Bhatia S P, Letizia C S, Api A M. Fragrance material review on alpha-isodamascone. Food Chem Toxicol 2007: 45 Suppl 1: S267-271.

Lapczynski A, Lalko J, McGinty D, Bhatia S, Letizia C S, Api A M. Fragrance material review on trans,trans-delta-damascone. Food Chem Toxicol 2007: 45 Suppl 1: S211-215.

Lapczynski A, Lalko J, McGinty D, Bhatia S, Letizia C S, Api A M. Fragrance material review on damascenone. Food Chem Toxicol 2007: 45 Suppl 1: S172-178.

Lapczynski A, Lalko J, McGinty D, Bhatia S, Letizia C S, Api A M. Fragrance material review on alpha-damascone. Food Chem Toxicol 2007: 45 Suppl 1: S179-187.

Lapczynski A, Lalko J, McGinty D, Bhatia S, Letizia C S, Api A M. Fragrance material review on

cis-alpha-damascone. *Food Chem Toxicol* 2007; 45 Suppl 1: S188-191.

Lapczynski A, Lalko J, McGinty D, Bhatia S, Letizia C S, Api A M. Fragrance material review on trans-beta-damascone. *Food Chem Toxicol* 2007; 45 Suppl 1: S199-204.

Lapczynski A, Lalko J, McGinty D, Bhatia S, Letizia C S, Api A M. Fragrance material review on trans,trans-delta-damascone. *Food Chem Toxicol* 2007; 45 Suppl 1: S211-215.

Lapczynski A, Lalko J, Politano V T, McGinty D, Bhatia S, Letizia C S, Api A M. Fragrance material review on alpha-iso-methylionone. *Food Chem Toxicol* 2007; 45 Suppl 1: S280-289.

Lapczynski A, Letizia C S, Api A M. Fragrance material review on (+)-(R)-citronellol. *Food Chem Toxicol* 2008; 46 Suppl 11: S114-116.

Lapczynski A, Letizia C S, Api A M. Fragrance material review on cis-nerolidol. *Food Chem Toxicol* 2008; 46 Suppl 11: S245-246.

Lapczynski A, McGinty D, Jones L, Bhatia S P, Letizia C S, Api A M. Fragrance material review on pentyl salicylate. *Food Chem Toxicol* 2007; 45 Suppl 1: S460-466.

Lapczynski A, McGinty D, Jones L, Bhatia S, Letizia C S, Api A M. Fragrance material review on benzyl salicylate. *Food Chem Toxicol* 2007; 45 Suppl 1: S362-380.

Lapczynski A, McGinty D, Jones L, Bhatia S, Letizia C S, Api A M. Fragrance material review on phenethyl salicylate. *Food Chem Toxicol* 2007; 45 Suppl 1: S467-471.

Larsen W G. Perfume Dermatitis. A Study of 20 Patients. *Arch Dermatol* 1977; 113: 623-626.

Larsen W, Nakayama H, Fischer T, Elsner P, Frosch P, Burrows D, Jordan W, Shaw S, Wilkinson J, Marks J, Jr., Sugawara M, Nethercott M, Nethercott J. Fragrance contact dermatitis: a worldwide multicenter investigation (Part II). *Contact Dermatitis* 2001; 44: 344-346.

Larsen W, Nakayama H, Fischer T, Elsner P, Frosch P, Burrows D, Jordan W, Shaw S, Wilkinson J, Marks J, Sugawara M, Nethercott M, Nethercott J. Fragrance contact dermatitis - a worldwide multicenter investigation (Part III). *Contact Dermatitis* 2002; 46: 141-144.

Larsen W, Nakayama H, Fischer T, Elsner P, Frosch P, Burrows D, Jordan W, Shaw S, Wilkinson J, Marks J, Jr., Sugawara M, Nethercott M, Nethercott J. Fragrance contact dermatitis: a worldwide multicenter investigation (Part II). *Contact Dermatitis* 2001; 44: 344-346.

Lazarov A. European Standard Series patch test results from a contact dermatitis clinic in Israel during the 7-year period from 1998 to 2004. *Contact Dermatitis* 2006; 55: 73-76.

Lear J T, Heagerty A H M, Tan B B, et al. Transient re-emergence of oil of turpentine allergy in the pottery industry. *Contact Dermatitis* 1996; 34: 169-172.

Lepoittevin J P. Metabolism versus chemical transformation or pro- versus prehapten? *Contact Dermatitis* 2006; 54: 73-74.

Lepoittevin JP, Mutterer V. Molecular Aspects of Fragrance Sensitisation. In: Frosch P.J., Johansen J.D., White I.R. (eds.), *Fragrances: Beneficial and Adverse Effects*, pp. 49-56. Springer Verlag Berlin Heidelberg, 1998.

Letizia C S, Cocchiara J, Lalko J, Api A M. Fragrance material review on linalool. *Food Chem Toxicol* 2003; 41: 943-964.

Letizia C S, Cocchiara J, Lalko J, Api A M. Fragrance material review on linalyl acetate. *Food Chem Toxicol* 2003; 41: 965-976.

Letizia C S, Cocchiara J, Lalko J, Lapczynski A, Api A M. Fragrance material review on cinnamyl alcohol. *Food Chem Toxicol* 2005; 43: 837-866.

Letizia C S, Cocchiara J, Wellington G A, Funk C, Api A M. Food and chemical toxicology. *Food Chem Toxicol* 2000; 38 Suppl 3: S1-236.

Lindberg M, Matura M. Patch Testing. In: Johansen J D, Frosch P, Lepoittevin J P, eds. *Contact Dermatitis*. Heidelberg etc., : Springer, 2011: 439-464.

Lindberg M, Edman B, Fischer T, Stenberg B. Time trends in Swedish patch test data from 1992 to 2000. A multi-centre study based on age- and sex-adjusted results of the Swedish standard series. *Contact Dermatitis* 2007; 56: 205-210.

López-Nogueroles M, Chisvert A, Salvador A. A chromatometric approach for evaluation and selecting the perfume maceration time. *J Chromatography A* 2010;1217: 3150-3160

Loveless, S. E., Ladics, G. S., Gerberick, G. F., Ryan, C. A., Basketter, D. A., Scholes, E. W., House, R. V., Hilton, J., Dearman, R. J., Kimber, I., 1996. Further evaluation of the local lymph node assay in the final phase of an international collaborative trial. *Toxicology*, 108(1-2), 141-152

Lu X, Li L F, Wang W, Wang J. A clinical and patch test study of patients with positive patch test reactions to fragrance mix in China. *Contact Dermatitis* 2005; 52: 188-191.

Lunder T, Kansky A. Increase in contact allergy to fragrances: patch-test results 1989-1998. *Contact Dermatitis* 2000; 43: 107-109.

Lysdal S H, Johansen J D. Fragrance contact allergic patients: strategies for use of cosmetic products and perceived impact on life situation. *Contact Dermatitis* 2009; 61: 320-324.

Machovcova A, Dastychova E, Kostalova D, Vojtechovska A, Reslova J, Smejkalova D, Vaneckova J, Vocilkova A. Common contact sensitizers in the Czech Republic. Patch test results in 12,058 patients with suspected contact dermatitis*. *Contact Dermatitis* 2005; 53: 162-166.

Malten K E, van Ketel W G, Nater J P, Liem D H. Reactions in selected patients to 22 fragrance materials. *Contact Dermatitis* 1984; 11: 1-10.

Marks J G, Belsito D V, DeLeo V A, et al. North American Contact Dermatitis Group patch test results for the detection of delayed-type hypersensitivity to topical allergens. *J Am Acad Dermatol* 1998; 38: 911-918.

Martins C, Goncalo M, Goncalo S. Allergic contact dermatitis from dipentene in wax polish. *Contact Dermatitis* 1995; 33: 126-127.

Matura M, Goossens A, Bordalo O, Garcia-Bravo B, Magnusson K, Wrangsjö K, Karlberg A T. Oxidized citrus oil (R-limonene): a frequent skin sensitizer in Europe. *J Am Acad Dermatol*

2002: 47: 709-714.

Matura M, Goossens A, Bordalo O, Garcia-Bravo B, Magnusson K, Wrangsjo K, Karlberg A T. Patch testing with oxidized R-(+)-limonene and its hydroperoxide fraction. *Contact Dermatitis* 2003: 49: 15-21.

Matura M, Skold M, Borje A, Andersen K E, Bruze M, Frosch P, Goossens A, Johansen J D, Svedman C, White I R, Karlberg A T. Selected oxidized fragrance terpenes are common contact allergens. *Contact Dermatitis* 2005: 52: 320-328.

Matura M, Skold M, Borje A, Andersen K E, Bruze M, Frosch P, Goossens A, Johansen J D, Svedman C, White I R, Karlberg A T. Not only oxidized R-(+)- but also S-(-)-limonene is a common cause of contact allergy in dermatitis patients in Europe. *Contact Dermatitis* 2006: 55: 274-279.

McGinty D, Letizia C S, Api A M. Fragrance material review on 3,7-dimethyl-1,6-nonadien-3-ol. *Food Chem Toxicol* 2010: 48 Suppl 3: S52-55.

McGinty D, Letizia C S, Api A M. Fragrance material review on 4-methyl-3-decen-5-ol. *Food Chem Toxicol* 2010: 48 Suppl 3: S93-96.

McGinty D, Letizia C S, Api A M. Fragrance material review on dihydromyrcenol. *Food Chem Toxicol* 2010: 48 Suppl 3: S70-75.

McGinty D, Letizia C S, Api A M. Fragrance material review on phytol. *Food Chem Toxicol* 2010: 48 Suppl 3: S59-63.

Meding B, Swanbeck G. Consequences of having hand eczema. *Contact Dermatitis* 1990: 23: 6-14.

Meding B, Swanbeck G. Occupational hand eczema in an industrial city. *Contact Dermatitis* 1990: 22: 13-23.

Meding B, Barregard L, Marcus K. Hand eczema in car mechanics. *Contact Dermatitis* 1994: 30: 129-134.

Meding B, Wrangsjo K, Jarvholm B. Fifteen-year follow-up of hand eczema: predictive factors. *J Invest Dermatol* 2005: 124: 893-897.

Meding B. Epidemiology of Hand Eczema in an Industrial City. *Acta Dermatol Venerol (Stockh) Suppl* 1990: 153: 2-43.

Meneghini C L, Sertoli A, Nava C, Angelini G, Francalani S, Foti C, Moroni P. Irritant contact dermatitis of the hands in housewives. In: Elsner P, Maibach H I, eds. *Irritant Dermatitis New Clinical and Experimental Aspects Curr Probl Dermatol*. Basel: Karger, 1995: 41-48.

Meyer U. Verträglichkeit natürlicher ätherischer Öle bei ausgewiesenen Duftstoff-Mix-Allergikern. *Der Merkestab* 2004: 57: 51-53

Millqvist E, Bende M, Lowhagen O. Sensory hyperreactivity--a possible mechanism underlying cough and asthma-like symptoms. *Allergy* 1998: 53: 1208-1212.

Mitchell D M, Beck M H. Contact allergy to benzyl alcohol in a cutting oil reodorant. *Contact*

Dermatitis 1988: 18: 301-302.

Mitchell J C, Calnan C D, Clendenning W E, Cronin E, Hjorth N, Magnusson B, Maibach H I, Meneghini C L, Wilkinson D S. Patch testing with some components of balsam of Peru. *Contact Dermatitis* 1976: 2: 57-58.

Mitchell J C. Contact hypersensitivity to some perfume materials. *Contact Dermatitis* 1975: 1: 196-199.

Moberg C, Alderling M, Meding B. Hand eczema and quality of life: a population-based study. *Br J Dermatol* 2009: 161: 397-403.

Morton C A, Garioch J, Todd P, et al. Contact sensitivity to menthol and peppermint in patients with intra-oral symptoms. *Contact Dermatitis* 1995: 32: 281-284.

Mørtz C G, Bindslev-Jensen C, Lauritsen J, Andersen K E. Allergic contact sensitization in 8th grade school children in Odense, Denmark. . Abstract presented at the Jadassohn Centenary Congress, London 9-12 Oct 1996 1996:

Müller P M, Lamparsky D. *Perfumes: Art Science and Technology*. London: Elsevier Applied Science, 1991.

Murphy L A, White I R. Contact dermatitis from geraniol in washing-up liquid. *Contact Dermatitis* 2003: 49: 52.

Mutterer V, Gimenez Arnau E, Lepoittevin J P, Johansen J D, Frosch P J, Menne T, Andersen K E, Bruze M, Rastogi S C, White I R. Identification of coumarin as the sensitizer in a patient sensitive to her own perfume but negative to the fragrance mix. *Contact Dermatitis* 1999: 40: 196-199.

Nadiminti H, Ehrlich A, Udey M C. Oral erosions as a manifestation of allergic contact sensitivity to cinnamon mints. *Contact Dermatitis* 2005: 52: 46-47.

Nair B. Final report on the safety assessment of Benzyl Alcohol, Benzoic Acid, and Sodium Benzoate. *Int J Toxicol* 2001: 20 Suppl 3: 23-50.

Nair B. Final report on the safety assessment of Mentha Piperita (Peppermint) Oil, Mentha Piperita (Peppermint) Leaf Extract, Mentha Piperita (Peppermint) Leaf, and Mentha Piperita (Peppermint) Leaf Water. *Int J Toxicol* 2001: 20 Suppl 3: 61-73.

Nakayama H, Harada R, Toda M. Pigmented cosmetic dermatitis. *Int J Dermatol* 1981: 15: 673-675.

Naldi L. Assessment of the Risk of Fragrance Allergy in the General Population - Challenges and Methodological Issues. *Drug Safety* 2008: 31: 440-443

Nardelli A, Carbonez A, Ottoy W, Drieghe J, Goossens A. Frequency of and trends in fragrance allergy over a 15-year period. *Contact Dermatitis* 2008: 58: 134-141.

Nardelli A, D'Hooghe E, Drieghe J, Dooms M, Goossens A. Allergic contact dermatitis from fragrance components in specific topical pharmaceutical products in Belgium. *Contact Dermatitis* 2009: 60: 303-313.

Nardelli A, Drieghe J, Claes L, Boey L, Goossens A. Fragrance allergens in 'specific' cosmetic products. *Contact Dermatitis* 2011; 64: 212-219

Nardelli A, Gimenez-Arnau E, Bernard G, Lepoittevin J P, Goossens A. Is a low content in atranol/chloroatranol safe in oak moss-sensitized individuals? *Contact Dermatitis* 2009; 60: 91-95.

Nardelli A, Thijs L, Janssen K, Goossens A. Rosa centifolia in a 'non-scented' moisturizing body lotion as a cause of allergic contact dermatitis. *Contact Dermatitis* 2009; 61: 306-309.

Natsch A, Gfeller H, Rothaupt M, Ellis G. Utility and limitations of a peptide reactivity assay to predict fragrance allergens in vitro. *Toxicology in vitro: an international journal published in association with BIBRA* 2007; 21: 1220-1226.

Nguyen S H, Dang T P, MacPherson C, Maibach H, Maibach H I. Prevalence of patch test results from 1970 to 2002 in a multi-centre population in North America (NACDG). *Contact Dermatitis* 2008; 58: 101-106.

Nilsson, A.-M., Bergstrom, M.A., Luthman, K., Nilsson, J.L.G., Karlberg, A.-T., 2005. An alpha,beta-unsaturated oxime identified as a strong contact allergen. Indications of antigen formation via several pathways. *Food and Chemical Toxicology*, 43(11), 1627-1636

Nielsen N H, Menné T. Allergic contact sensitization in an unselected Danish population - the Glostrup allergy study, Denmark. *Acta Dermatol Venerol (Stockh)* 1992; 72: 456-460.

Nielsen N H, Linneberg A, Menne T, Madsen F, Frolund L, Dirksen A, Jorgensen T. Allergic contact sensitization in an adult Danish population: two cross-sectional surveys eight years apart (the Copenhagen Allergy Study). *Acta Derm Venereol* 2001; 81: 31-34.

Nilsson A M, Bergstrom M A, Luthman K, Nilsson J L, Karlberg A T. A conjugated diene identified as a prohaptens: contact allergenic activity and chemical reactivity of proposed epoxide metabolites. *Chem Res Toxicol* 2005; 18: 308-316.

Nilsson A M, Gafvert E, Salvador L, Luthman K, Bruze M, Gruvberger B, Nilsson J L, Karlberg A T. Mechanism of the antigen formation of carvone and related alpha, beta-unsaturated ketones. *Contact Dermatitis* 2001; 44: 347-356.

Noiles K., M. P. Contact dermatitis to Vicks VapoRub. *Dermatitis* 2010; 21: 167-169.

Oiso N, Fukai K, Ishii M. Allergic contact dermatitis due to methyl salicylate in a compress. *Contact Dermatitis* 2004; 51: 34-35.

Opdyke D L, Letizia C. Monographs on fragrance raw materials. *Food Chem Toxicol* 1983; 21: 645-667.

Ott H, Wiederholt T, Bergstrom M A, Heise R, Skazik C, Czaja K, Marquardt Y, Karlberg A T, Merk H F, Baron J M. High-resolution transcriptional profiling of chemical-stimulated dendritic cells identifies immunogenic contact allergens, but not prohaptens. *Skin Pharmacol Physiol* 2010; 23: 213-224.

Owen C M, August P J, Beck M H. Contact allergy to oak moss resin in a soluble oil. *Contact Dermatitis* 2000; 43: 112.

Özden M G, Öztas P, Öztas M O, Önder M. Allergic contact dermatitis from *Laurus nobilis* (laurel) oil. *Contact Dermatitis* 2001; 45: 178.

Paramasivan P, Lai C, Pickard C, Ardern-Jones M, Healy E, Friedmann PS. Repeated low-dose skin exposure is an effective sensitizing stimulus, a factor to be taken into account in predicting sensitization risk. *Brit. J. Dermatol.* 2010; 162: 594-597

Pasche F, Hunziker N. Sensitization to Kathon CG in Geneva and Switzerland. *Contact Dermatitis* 1989; 20: 115-119.

Paulsen E, Andersen K E, Carlsen L, et al. Carvone: an overlooked contact allergen cross-reacting with sesquiterpene lactones? *Contact Dermatitis* 1993; 29: 138-143.

Podda M, Zollner T, Grundmann-Kollmann M, Kaufmann R, Boehncke W H. Allergic contact dermatitis from benzyl alcohol during topical antimycotic treatment. *Contact Dermatitis* 1999; 41: 302-303.

Poulsen P B, Schmidt A. A survey and health assessment of cosmetic products for children. *Survey of Chemical Substances in Consumer Products*, No. 88. Copenhagen: Danish Environmental Protection Agency, 2007.

Quirce S, Fernandez-Nieto M, del Pozo V, Sastre B, Sastre J. Occupational asthma and rhinitis caused by eugenol in a hairdresser. *Allergy* 2008; 63: 137-138.

Rademaker M. Allergic contact dermatitis from lavender fragrance in Diffiam gel. *Contact Dermatitis* 1994; 31:

Rastogi S C, Johansen J D. Significant exposures to isoeugenol derivatives in perfumes. *Contact Dermatitis* 2008; 58: 278-281.

Rastogi S C, Bossi R, Johansen J D, Menne T, Bernard G, Gimenez-Arnau E, Lepoittevin J P. Content of oak moss allergens atranol and chloroatranol in perfumes and similar products. *Contact Dermatitis* 2004; 50: 367-370.

Rastogi S C, Heydorn S, Johansen J D, Basketter D A. Fragrance chemicals in domestic and occupational products. *Contact Dermatitis* 2001; 45: 221-225.

Rastogi S C, Jensen G H, Johansen J D. Survey and risk assessment of chemical substances in deodorants. *Survey of Chemical Substances in Consumer Products*, No. 86. Copenhagen: Danish Environmental Protection Agency, 2007.

Rastogi S C, Johansen J D, Bossi R. Selected important fragrance sensitizers in perfumes--current exposures. *Contact Dermatitis* 2007; 56: 201-204.

Rastogi S C, Johansen J D, Menne T. Natural ingredients based cosmetics. Content of selected fragrance sensitizers. *Contact Dermatitis* 1996; 34: 423-426.

Rastogi S C, Johansen J D, Frosch P, Menne T, Bruze M, Lepoittevin J P, Dreier B, Andersen K E, White I R. Deodorants on the European market: quantitative chemical analysis of 21 fragrances. *Contact Dermatitis* 1998; 38: 29-35.

Rastogi S C, Johansen J D, Menne T, Frosch P, Bruze M, Andersen K E, Lepoittevin J P, Wakelin S, White I R. Contents of fragrance allergens in children's cosmetics and cosmetic-toys.

Contact Dermatitis 1999: 41: 84-88.

Rastogi S C, Lepoittevin J P, Johansen J D, Frosch P J, Menne T, Bruze M, Dreier B, Andersen K E, White I R. Fragrances and other materials in deodorants: search for potentially sensitizing molecules using combined GC-MS and structure activity relationship (SAR) analysis. Contact Dermatitis 1998: 39: 293-303.

Rastogi S C, Menne T, Johansen J D. The composition of fine fragrances is changing. Contact Dermatitis 2003: 48: 130-132.

Rastogi S C. Contents of selected fragrance materials in cleaning products and other consumer products. Survey of chemical compounds in consumer products, No. 8. Copenhagen: Danish Environmental Protection Agency, 2002.

Ridriguez E, Towers G H N, Mitchell J C. Biological aspects of sesquiterpene lactones. Phytochemistry 1976: 15: 1573-1580.

RIFM. Local lymph node assay (LLNA) protocol summaries: Data presented at the 46th Congress of the European Societies of Toxicology. Research Institute for Fragrance Materials, Inc 2009

RIFM, 2001a. Local Lymph Node Assay on p-t-Butyl- α -methyl-hydrocinnamic aldehyde in EtOH . RIFM report number 37065 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2001b. Local Lymph Node Assay on p-t-Butyl- α -methyl-hydrocinnamic aldehyde in DEP. RIFM report number 37066 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2001c. Local Lymph Node Assay on p-t-Butyl- α -methyl-hydrocinnamic aldehyde in 1:3 EtOH:DEP. RIFM report number 37067 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2001d. Local Lymph Node Assay on p-t-Butyl- α -methyl-hydrocinnamic aldehyde in 1:3 DEP:EtOH. RIFM report number 37068 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2001e. Local Lymph Node Assay on p-t-Butyl- α -methyl-hydrocinnamic aldehyde in 4:1 acetone:olive oil. RIFM report number 41235. (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2001f. Local Lymph Node Assay on eugenol. RIFM report number 37076. (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2001g. Local Lymph Node Assay on eugenol. RIFM report number 37075. (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2001h. Local Lymph Node Assay on eugenol. RIFM report number 37073. (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2001i. Local Lymph Node Assay on eugenol. RIFM report number 37074. (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2001j. Local Lymph Node Assay on geraniol in ethanol. RIFM report number 37069 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2001k. Local Lymph Node Assay on geraniol in DEP. RIFM report number 37070 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2001l. Local Lymph Node Assay on geraniol in 1:3 EtOH:DEP. RIFM report number 37071 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2001m. Local Lymph Node Assay on geraniol in 3:1 EtOH:DEP. RIFM report number 37072 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2001n. Local Lymph Node Assay on hydroxycitronellal in 1:3 EtOH:DEP. RIFM report number 37079 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2001o. Local Lymph Node Assay on hydroxycitronellal in DEP. RIFM report number 37078 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2001p. Local Lymph Node Assay on hydroxycitronellal in 3:1 EtOH:DEP. RIFM report number 37080 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2001q. Local Lymph Node Assay on hydroxycitronellal in EtOH. RIFM report number 37080 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2001r. Local Lymph Node Assay on p-t-Butyl- α -methyl-hydrocinnamic aldehyde in 4:1 acetone:olive oil. RIFM report number 41235. Unpublished report from Unilever. (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2001s. Local Lymph Node Assay on isoeugenol in 4:1 acetone:olive oil. RIFM report number 59516. Unpublished report from Firmenich. (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2001t. Local Lymph Node Assay on isoeugenol in 4:1 acetone:olive oil. RIFM report number 42122. Unpublished report from Firmenich. (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2001u. Local Lymph Node Assay on isoeugenol in 4:1 acetone:olive oil. RIFM report number 40676. Unpublished report from Firmenich. (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2001v. Local Lymph Node Assay on isoeugenol in 4:1 acetone:olive oil. RIFM report number 42120. Unpublished report from Firmenich. (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2001w. Local Lymph Node Assay on p-isobutyl- α -methyl hydrocinnamaldehyde in 70% Ethanol. RIFM report number 41055. Unpublished report from Givaudan. (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2002a. Local Lymph Node Assay on isoeugenol in 4:1 acetone:olive oil. RIFM report number 42139. Unpublished report from Firmenich. (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2002b. Local Lymph Node Assay on isoeugenol in 4:1 acetone:olive oil. RIFM report number 42145. Unpublished report from Firmenich. (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2002c. Local Lymph Node Assay on isoeugenol in 4:1 acetone:olive oil. RIFM report number 42123. Unpublished report from Firmenich. (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2002d. Local Lymph Node Assay on majantol in 4:1 acetone:olive oil. RIFM report number 58693. Unpublished report from Symrise. (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2003a. Local Lymph Node Assay on cinnamic aldehyde in 3:1 EtOH:DEP. RIFM report number 42032 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2003b. Local Lymph Node Assay on cinnamic aldehyde in 3:1 EtOH:DEP with 0.1% tocopherol. RIFM report number 42033 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2003c. Local Lymph Node Assay on cinnamic aldehyde in 3:1 EtOH:DEP with 2.0% tocopherol. RIFM report number 42040 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2003d. Local Lymph Node Assay on cinnamic aldehyde in 3:1 EtOH:DEP with antioxidant mix. RIFM report number 42034 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2003e. Local Lymph Node Assay on cinnamic aldehyde in 3:1 EtOH:DEP with 0.1% Trolox C. RIFM report number 42036 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2003f. Local Lymph Node Assay on cinnamic aldehyde in 3:1 EtOH:DEP with 2.0% tocopherol. RIFM report number 42035 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2003g. Local Lymph Node Assay on cinnamic aldehyde in 3:1 EtOH:DEP. RIFM report

number 42037 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2003h. Local Lymph Node Assay on cinnamic aldehyde in 3:1 EtOH:DEP with 0.1% tocopherol. RIFM report number 42038 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2003i. Local Lymph Node Assay on cinnamic aldehyde in 3:1 EtOH:DEP with antioxidant mix. RIFM report number 42039 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2003j. Local Lymph Node Assay on cinnamic aldehyde in 3:1 EtOH:DEP with 0.1% Trolox C. RIFM report number 42041 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2003k. Local Lymph Node Assay on citral in 3:1 EtOH:DEP with 0.1% tocopherol. RIFM report number 42028 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2003l. Local Lymph Node Assay on citral in 3:1 EtOH:DEP with antioxidant mix. RIFM report number 42025 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2003m. Local Lymph Node Assay on citral in 3:1 EtOH:DEP with antioxidant mix. RIFM report number 42026 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2003n. Local Lymph Node Assay on citral in 3:1 EtOH:DEP. RIFM report number 42023 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2003o. Local Lymph Node Assay on citral in 3:1 EtOH:DEP with antioxidant mix. RIFM report number 42029 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2003p. Local Lymph Node Assay on citral in 3:1 EtOH:DEP with antioxidant mix. RIFM report number 42027 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2003q. Local Lymph Node Assay on citral in 3:1 EtOH:DEP with 0.1% Trolox C. RIFM report number 42030 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2003r. Local Lymph Node Assay on citral. RIFM report number 43822 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2003s. Local Lymph Node Assay on citral. RIFM report number 42024 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2003t. Local Lymph Node Assay on geraniol in 3:1 EtOH:DEP. RIFM report number 43812 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2004a. Local Lymph Node Assay on α -amylcinnamyl alcohol. RIFM report number 45128 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2004b. Local Lymph Node Assay on Citral. RIFM report number 45126 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2004c. Local Lymph Node Assay on d,l-Citronellol. RIFM report number 48752 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2004d. Local Lymph Node Assay on farnesol RIFM report number 47136. Unpublished report from Symrise (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2004e. Local Lymph Node Assay on isoeugenol RIFM report number 47326. Unpublished report from Firmenich (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2004f. Local Lymph Node Assay on 4-methoxy- α -methyl benzenpropanal. RIFM report number 47809. Unpublished report from IFF (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2004g. Local Lymph Node Assay on 1-Octen-3-yl acetate. RIFM report number 47809. Unpublished report from IFF (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2004h. Local Lymph Node Assay on Peru Balsam Oil. RIFM report number 44372. (RIFM,

Woodcliff Lake, NJ, USA)

RIFM, 2004i. Local Lymph Node Assay on Peru Balsam Absolute. RIFM report number 44371. (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2004j. Oakmoss absolute: Local lymph node assay. RIFM report number 43861 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2004k. Treemoss absolute: Local lymph node assay. RIFM report number 44368 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2004l. d-limonene: Local lymph node assay. RIFM report number 45756 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2004m. d-limonene: Local lymph node assay. RIFM report number 45753 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2004n. d-limonene: Local lymph node assay. RIFM report number 45755 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2004o. d-limonene: Local lymph node assay. RIFM report number 45754 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2005a. Local Lymph Node Assay on anisyl alcohol. RIFM report number 45755 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2005b. Local Lymph Node Assay on benzyl alcohol. RIFM report number 47376 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2005c. Local Lymph Node Assay on benzyl benzoate. RIFM report number 47377 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2005d. Local Lymph Node Assay on benzyl cinnamate. RIFM report number 48751 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2005e. Local Lymph Node Assay on benzyl salicylate. RIFM report number 47378 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2005f. Local Lymph Node Assay on cinnamyl nitrile. RIFM report number 51626 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2005g. Local Lymph Node Assay on trans-2-hexenal in 1:3 EtOH:DEP. RIFM report number 48756 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2005h. Local Lymph Node Assay on isocyclogeraniol in 1:3 EtOH:DEP. RIFM report number 48755 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2005i. Local Lymph Node Assay on α -Methyl-1,3-benzodioxole- 5-propionaldehyde in 1:3 EtOH:DEP. RIFM report number 50886 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2005j. Local Lymph Node Assay on α -iso-Methylionone in 1:3 EtOH:DEP. RIFM report number 48749 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2005k. Local Lymph Node Assay on Methyl 2-octynoate in 1:3 EtOH:DEP. RIFM report number 48753 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2005l. Local Lymph Node Assay on OTNE in 1:3 EtOH:DEP. RIFM report number 51630 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2005m. Local Lymph Node Assay on tea leaf absolute. RIFM report number 47597. Unpublished report from Robertet (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2006a. Local Lymph Node Assay on α -amylcinnamaldehyde. RIFM report number 52888

(RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2006b. Local Lymph Node Assay on hexyl salicylate. RIFM report number 51636 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2006c. Local Lymph Node Assay on isocyclocitral. RIFM report number 52892 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2006d. Local Lymph Node Assay on Jasmine Absolute (Grandiflorum). RIFM report number 53024 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2006e. Local Lymph Node Assay on Jasmine Absolute (Sambac). RIFM report number 52885 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2007b. Local Lymph Node Assay on p-t-Butyl-dihydrocinnamaldehyde. RIFM report number 52900 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2007c. Local Lymph Node Assay on carvone. RIFM report number 52902 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2007d. Local Lymph Node Assay on carvone. RIFM report number 52907 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2007e. Local Lymph Node Assay on dibenzyl ether. RIFM report number 52901 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2007f. Local Lymph Node Assay on Ylang Ylang Extra. RIFM report number 52903 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2008a. Local Lymph Node Assay on 2-hexylidene cyclopentanone. RIFM report number 55548 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2008b. Local Lymph Node Assay on p-mentha-1,8-dien-7-al. RIFM report number 54428 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2008c. Local Lymph Node Assay on menthadiene-7-methyl formate. RIFM report number 54429 (RIFM, Woodcliff Lake, NJ, USA)

RIFM, 2008d. Local Lymph Node Assay on 6-methyl-3,5-heptadien-2-one. RIFM report number 55564 (RIFM, Woodcliff Lake, NJ, USA)

RIFM. 2009. Research Institute for Fragrance Materials, Inc. Local lymph node assay (LLNA) protocol summaries: Data presented at the 46th Congress of the European Societies of Toxicology

Roberts D W, Lepoittevin J P. Hapten-Protein Interactions. In: Lepoittevin J P, Basketter D, Goossens A, Karlberg A T, eds. Allergic Contact Dermatitis The Molecular Basis. Heidelberg: Springer, 1998:

Roberts D W, Natsch A. High throughput kinetic profiling approach for covalent binding to peptides: application to skin sensitization potency of Michael acceptor electrophiles. Chem Res Toxicol 2009; 22: 592-603.

Roberts D W, Aptula A O, Patlewicz G Y. Chemistry-Based Risk Assessment for Skin Sensitization: Quantitative Mechanistic Modeling for the S(N)Ar Domain. Chem Res Toxicol 2011; 24: 1003-11

Roberts D W, Aptula A O, Patlewicz G. Mechanistic applicability domains for non-animal based prediction of toxicological endpoints. QSAR analysis of the schiff base applicability domain for skin sensitization. Chem Res Toxicol 2006; 19: 1228-1233.

Roberts D W, Goodwin B F J, Williams D L, Jones K, Johnson A W, Alderson J C E. Correlation between skin sensitization potential and chemical reactivity for nitrobenzyl compounds. *Food Chem Toxicol* 1984; 21: 811-813.

Roberts, D.W., Patlewicz, G., Kern, P.S., Gerberick, F., Kimber, I., Dearman, R.J., Ryan, C.A., Basketter, D.A., Aptula, A.O., 2007. Mechanistic applicability domain classification of a local lymph node assay dataset for skin sensitization. *Chemical Research in Toxicology*, 20(7), 1019-1030

Roberts D W. QSAR for upper-respiratory tract irritation. *Chem Biol Interact* 1986; 57: 325-345.

Romaguera C, Vilaplana J. Occupational contact dermatitis from ylang-ylang oil. *Contact Dermatitis* 2000; 43: 251.

Rossi M., Coenraads P-J., Diepgen T, Svensson A, Elstner P, Goncalo M, Bruze m, Naldi L. Design and Feasibility of an International Study Assessing the Prevalence of Contact Allergy to Fragrances in the General Population: The European Dermato-Epidemiology Network Fragrance Study. *Dermatology* 2010; 221:267-275

Rothenborg H W, Hjorth N. Allergy to perfumes from toilet soaps and detergents in patients with dermatitis. *Arch Dermatol* 1968; 97: 417-421.

Rothenborg H W, Menne T, Sjolín K E. Temperature dependent primary irritant dermatitis from lemon perfume. *Contact Dermatitis* 1977; 3: 37-48.

Ruberto G, Baratta M T, Deans S G, Dorman H J. Antioxidant and antimicrobial activity of *Foeniculum vulgare* and *Crithmum maritimum* essential oils. *Planta Med* 2000; 66: 687-693.

Rudback J, Bergstrom M A, Borje A, Nilsson U, Karlberg A T. alpha-Terpinene, an antioxidant in tea tree oil, autoxidizes rapidly to skin allergens on air exposure. *Chem Res Toxicol* 2012; 25: 713-721.

Rudzki E, Grzywa Z. Allergy to perfume mixture. *Contact Dermatitis* 1986; 15: 115-116.

Rudzki E, Grzywa Z. Dermatitis from propolis. *Contact Dermatitis* 1983; 9: 40-45.

Rudzki E, Grzywa Z. Sensitizing and irritating properties of star anise oil. *Contact Dermatitis* 1976; 2: 305-308.

Rudzki E, Grzywa Z, Bruo W S. Sensitivity to 35 essential oils. *Contact Dermatitis* 1976; 2: 196-200.

Rustemeyer T, van Hoogstraten I M W, von Blomberg M E, Scheper R J. Mechanisms in Allergic Contact Dermatitis. In: Frosch P J, Menné T, Lepoittevin J P, eds. *Contact Dermatitis*. Heidelberg: Springer, 2006:

Rycroft R J. Allergic contact dermatitis from dipentene in honing oil. *Contact Dermatitis* 1980; 6: 325-329.

Safford RJ, Aptula AO and Gilmour N (2011). Refinement of the Dermal Sensitisation Threshold (DST) approach using a larger dataset and incorporating mechanistic chemistry domains. *Regulatory Toxicology and Pharmacology* 60, 218-214.

Safford RJ (2008). The Dermal Sensitisation Threshold – a TTC approach for allergic contact dermatitis. *Regulatory Toxicology and Pharmacology* 51, 195-200.

Sanchez-Perez J, Garcia-Diez A. Occupational allergic contact dermatitis from eugenol, oil of cinnamon and oil of cloves in a physiotherapist. *Contact Dermatitis* 1999; 41: 346-347.

Sanchez-Politta S, Campanelli A, Pashe-Koo F, Saurat J H, Piletta P. Allergic contact dermatitis to phenylacetaldehyde: a forgotten allergen? *Contact Dermatitis* 2007; 56: 171-172.

Santucci B, Cristaudo A, Cannistraci C, Picardo M. Contact dermatitis to fragrances. *Contact Dermatitis* 1987; 16: 93-95.

Sarrami N, Pemberton M N, Thornhill M H, Theaker E D. Adverse reactions associated with the use of eugenol in dentistry. *Br Dent J* 2002; 193: 257-259.

SCCNFP (1999). Opinion concerning Fragrance Allergy in Consumers. A Review of the Problem. Analysis of the Need for appropriate Consumer Information and Identification of Consumer Allergens, adopted 8 December 1999. SCCNFP/0017/98

SCCNFP (2001). Memorandum on the SCCNFP opinion concerning fragrance allergy in consumers. Adopted 13 March 2001. SCCNFP/0450/01

SCCNFP (2003). Opinion concerning essential oils. Adopted 24-25 June 2003. SCCNFP/0673/03

SCCNFP (2003). Opinion on hydroxyisohexyl 3-cyclohexene carboxaldehyde. The Scientific Committee on Cosmetic products and Non-Food Products Intended for Consumers, adopted 9 December 2003.

SCCP. Memorandum on Classification and categorization of skin sensitizers and grading of test reactions (SCCP/0919/05). Scientific Committee for on Consumer Protection, adopted 20 September 2005. 2005.

SCCP. Memorandum on Hair Dye Substances and their Skin Sensitising Properties. Scientific Committee on Consumer Protection, adopted 19 December 2006. 2006.

SCCP. Opinion concerning the predictive testing of potentially cutaneous sensitizing cosmetic ingredients or mixtures of ingredients adopted by the SCCNFP during the 11th plenary session of 17 February 2000. 2000:

SCCP. Opinion on Atranol and Chloroatranol present in natural extracts (e.g. oak moss and tree moss extract). Scientific Committee on Consumer Products, adopted 7 December 2004. 2004.

SCCP. Opinion on Dermal Sensitisation Quantitative Risk Assessment (Citral, Farnesol and Phenylacetaldehyde). Scientific Committee for on Consumer Protection, adopted 24 June 2008. 2008.

SCCP. Opinion on Hydroxyisohexyl 3-cyclohexene carboxaldehyde (sensitisation only). Scientific Committee on Consumer Products. Adopted 7 December 2004. 2004.

SCCP. Opinion on Oak moss/Tree moss (sensitisation only). Scientific Committee on Consumer Products, adopted 15 April 2008. 2008.

SCCS. Notes of Guidance for the Testing of Cosmetic Ingredients and their Safety Evaluation,

7th revision . Scientific Committee for Consumer Safety, adopted 14 December 2010. 2010.

SCCS, SCHER, SCENIHR (2012). Joint Opinion on the Use of the Threshold of Toxicological Concern (TTC) Approach for Human Safety Assessment of Chemical Substances with focus on Cosmetics and Consumer Products, 8 June 2012.

Schäfer T, Böhler E, Ruhdorfer S, Weigl L, Wessner D, Filipiak B, Wichmann H E, Ring J. Epidemiology of contact allergy in adults. *Allergy* 2001; 56: 1192-1196.

Scheinmann P L. The foul side of fragrance-free products: What every clinician should know about managing patients with fragrance allergy. *J Am Acad Dermatol* 1999; 41: 1020-1024.

Schmidt E. Production of Essential Oils. In: Husnu Can Baser K, Buchbauer G, eds. *Handbook of Essential Oils - Science, Technology, and Applications*. Boca Raton: CRC Press, 2010: 88-95.

Schnuch A, Aberer W, Agathos M, Becker D, Brasch J, Elsner P, Frosch P J, Fuchs T, Geier J, Hillen U, Löffler H, Mahler V, Richter G, Szliska C. Durchführung des Epikutantests mit Kontaktallergenen. Leitlinien der Deutschen Dermatologischen Gesellschaft; Deutschen Gesellschaft für Allergie und klinische Immunologie. *J Dtsch Dermatol Ges* 2008; 6: 770-775.

Schnuch A, Geier J, Uter W. Is hydroxyisohexyl 3-cyclohexene carboxaldehyde sensitisation declining in central Europe? *Contact Dermatitis* 2012; 67: 47-49.

Schnuch A, Geier J, Uter W, Frosch P J. Another look on allergies to fragrances: frequencies of sensitisation to the fragrance mix and its constituents. Results from the IVDK. *Exog Dermatol* 2002; 1: 231-237.

Schnuch A, Geier J, Uter W, Frosch P J. Majantol-a new important fragrance allergen. *Contact Dermatitis* 2007; 57: 48-50.

Schnuch A, Geier J, Uter W. Is hydroxyisohexyl 3-cyclohexene carboxaldehyde sensitisation declining in central Europe? *Contact Dermatitis* 2012; 67: 47-49

Schnuch A, Lessmann H, Geier J, Frosch P J, Uter W. Contact allergy to fragrances: frequencies of sensitization from 1996 to 2002. Results of the IVDK*. *Contact Dermatitis* 2004; 50: 65-76.

Schnuch A, Lessmann H, Geier J, Uter W. White petrolatum (Ph. Eur.) is virtually non-sensitizing. Analysis of IVDK data on 80000 patients tested between 1992 and 2004 and short discussion of identification and designation of allergens. *Contact Dermatitis*, 54:338-343 (2006)

Schnuch A, Lessmann H, Schulz K H, Becker D, Diepgen T L, Drexler H, Erdmann S, Fartasch M, Greim H, Kricke-Helling P, Merget R, Merk H, Nowak D, Rothe A, Stropp G, Uter W, Wallenstein G. When should a substance be designated as sensitizing for the skin ('Sh') or for the airways ('Sa')? *Hum Exp Toxicol* 2002; 21: 439-444.

Schnuch A, Uter W, Dickel H, Szliska C, Schliemann S, Eben R, Rueff F, Gimenez-Arnau A, Löffler H, Aberer W, Frambach Y, Worm M, Niebuhr M, Hillen U, Martin V, Jappe U, Frosch P J, Mahler V. Quantitative patch and repeated open application testing in hydroxyisohexyl 3-cyclohexene carboxaldehyde sensitive-patients. *Contact Dermatitis* 2009; 61: 152-162.

Schnuch A, Uter W, Geier J, Lessmann H, Frosch P J. Contact allergy to farnesol in 2021 consecutively patch tested patients. Results of the IVDK. *Contact Dermatitis* 2004; 50: 117-

121.

Schnuch A, Uter W, Geier J, Lessmann H, Frosch P J. Sensitization to 26 fragrances to be labelled according to current European regulation. Results of the IVDK and review of the literature. *Contact Dermatitis* 2007; 57: 1-10.

Schnuch A, Uter W, White I R. The EU Clinical Trials Directive Jeopardises Consumer. *Contact dermatitis* 2011; 65: 251-253

Schubert H J. Skin diseases in workers at a perfume factory. *Contact Dermatitis* 2006; 55: 81-83.

Seidenari S, Manzini B M, Danese P, Motolese A. Patch and prick test study of 593 healthy subjects. *Contact Dermatitis* 1990; 23: 162-167.

Seite-Bellezza D, el Sayed F, Bazex J. Contact urticaria from cinnamic aldehyde and benzaldehyde in a confectioner. *Contact Dermatitis* 1994; 31: 272-273.

Selvaag E, Holm J O, Thune P. Allergic contact dermatitis in an aroma therapist with multiple sensitizations to essential oils. *Contact Dermatitis* 1995; 33: 354-355.

Sestini S, Mori M, Francalanci S. Allergic contact dermatitis from benzyl alcohol in multiple medicaments. *Contact Dermatitis* 2004; 50: 316-317.

Shaw D W. Allergic contact dermatitis to benzyl alcohol in a hearing aid impression material. *Am J Contact Dermat* 1999; 10: 228-232.

Shoji A. Allergic reaction to benzyl alcohol in an antimycotic preparation. *Contact Dermatitis* 1983; 9: 510.

Silvestre J F, Albares M P, Blanes M, Pascual J C, Pastor N. Allergic contact gingivitis due to eugenol present in a restorative dental material. *Contact Dermatitis* 2005; 52: 341.

Skoet R, Zachariae R, Agner T. Contact dermatitis and quality of life: a structured review of the literature. *Br J Dermatol* 2003; 149: 452-456.

Sköld M, Börje A, Harambasic E, Karlberg A T. Contact allergens formed on air exposure of linalool. Identification and quantification of primary and secondary oxidation products and the effect on skin sensitization. *Chem Res Toxicol* 2004; 17: 1697-1705.

Sköld M, Börje A, Matura M, Karlberg A T. Studies on the autoxidation and sensitizing capacity of the fragrance chemical linalool, identifying a linalool hydroperoxide. *Contact Dermatitis* 2002; 46: 267-272.

Sköld M, Hagvall L, Karlberg A T. Autoxidation of linalyl acetate, the main component of lavender oil, creates potent contact allergens. *Contact Dermatitis* 2008; 58: 9-14.

Sköld M, Karlberg A T, Matura M, Börje A. The fragrance chemical beta-caryophyllene-air oxidation and skin sensitization. *Food Chem Toxicol* 2006; 44: 538-545.

Sköld M. Contact allergy to autoxidized fragrance terpenes. Thesis University of Gothenburg 2005.

Skrebova N, Brocks K, Karlsmark T. Allergic contact cheilitis from spearmint oil. *Contact Dermatitis* 1998; 39: 35.

Smith C K, Hotchkiss S A. *Allergic Contact Dermatitis, Chemical and Metabolic Mechanisms*. London: Taylor and Francis, 2001.

Smith C K, Hotchkiss S A. Enzymes and mechanisms of xenobiotic metabolism. In: editor?)) w i, eds. *Allergic Contact Dermatitis Chemical and Metabolic Mechanisms*. Taylor and Francis, London and New York, 2001: 45-87.

Smith C K, Moore C A, Elahi E N, Smart A T, Hotchkiss S A. Human skin absorption and metabolism of the contact allergens, cinnamic aldehyde, and cinnamic alcohol. *Toxicol Appl Pharmacol* 2000; 168: 189-199.

Smith-Sivertsen T, Dotterud L K, Lund E. Nickel allergy and its relationship with local nickel pollution, ear piercing, and atopic dermatitis: a population-based study from Norway. *J Am Acad Dermatol* 1999; 40: 726-735.

Stevenson O E, Finch T M. Allergic contact dermatitis from rectified camphor oil in Earex ear drops. *Contact Dermatitis* 2003; 49: 51.

Sugawara M, Nakayama H, Watanabe S. Contact hypersensitivity to ylang-ylang oil. *Contact Dermatitis* 1990; 23: 248-249.

Sugiura M, Hayakawa R, Kato Y, Sugiura K, Hashimoto R. Results of patch testing with lavender oil in Japan. *Contact Dermatitis* 2000; 43: 157-160.

Surburg H, Panten J. *Common fragrance and flavor materials: preparation, properties and uses*. Weinheim: Wiley-VCH, 2006.

Suskind R R. The hydroxycitronellal story: What can we learn from it? In: Frosch P J, Johansen J D, White I R, eds. *Fragrances Beneficial and adverse effects*. Berlin, Heidelberg, New York: Springer, 1988: 159-165.

Svedman C, Bruze M, Johansen J D, Andersen K E, Goossens A, Frosch P J, Lepoittevin J P, Rastogi S, White I R, Menne T. Deodorants: an experimental provocation study with hydroxycitronellal. *Contact Dermatitis* 2003; 48: 217-223.

Sykes P. *A guidebook to mechanism in organic chemistry* Edinburgh: Pearson, 1961.

Takanami I, Nakayama H. TMCHB: a possible alternative to DNCB in skin testing for immune competence. *Contact Dermatitis* 1988; 19: 81-83.

Tamagawa-Mineoka R, Katoh N, Kishimoto S. Allergic contact cheilitis due to geraniol in food. *Contact Dermatitis* 2007; 56: 242-243.

Tanaka S, Matsumoto Y, Dlova N, Ostlere L S, Goldsmith P C, Rycroft R J, Basketter D A, White I R, Banerjee P, McFadden J P. Immediate contact reactions to fragrance mix constituents and Myroxylon pereirae resin. *Contact Dermatitis* 2004; 51: 20-21.

Tanaka S, Royds C, Buckley D, Basketter D A, Goossens A, Bruze M, Svedman C, Menne T, Johansen J D, White I R, McFadden J P. Contact allergy to isoeugenol and its derivatives:

problems with allergen substitution. *Contact Dermatitis* 2004; 51: 288-291.

Temesvari E, Nemeth I, Balo-Banga M J, Husz S, Kohanka V, Somos Z, Judak R, Remenyik E V, Szegedi A, Nebenfuhrer L, Meszaros C, Horvath A. Multicentre study of fragrance allergy in Hungary. Immediate and late type reactions. *Contact Dermatitis* 2002; 46: 325-330.

Temesvari E, Podanyi B, Ponyai G, Nemeth I. Fragrance sensitization caused by temporary henna tattoo. *Contact Dermatitis* 2002; 47: 240.

Temesvari E, Soos G, Podanyi B, Kovacs I, Nemeth I. Contact urticaria provoked by balsam of Peru. *Contact Dermatitis* 1978; 4: 65-68.

Thyssen J P, Carlsen B C, Menne T, Johansen J D. Trends of contact allergy to fragrance mix I and Myroxylon pereirae among Danish eczema patients tested between 1985 and 2007. *Contact Dermatitis* 2008; 59: 238-244.

Thyssen J P, Johansen J D, Menne T, Nielsen N H, Linneberg A. Nickel allergy in Danish women before and after nickel regulation. *The New England journal of medicine* 2009; 360: 2259-2260.

Thyssen J P, Linneberg A, Menne T, Nielsen N H, Johansen J D. The prevalence and morbidity of sensitization to fragrance mix I in the general population. *Br J Dermatol* 2009; 161: 95-101.

Thyssen J P, Linneberg A, Menne T, Nielsen N H, Johansen J D. The association between hand eczema and nickel allergy has weakened among young women in the general population following the Danish nickel regulation: results from two cross-sectional studies. *Contact Dermatitis* 2009; 61: 342-348.

Topham E J, Wakelin S H. D-Limonene contact dermatitis from hand cleansers. *Contact Dermatitis* 2003; 49: 108-109.

Trattner A, David M. Patch testing with fine fragrances: comparison with fragrance mix, balsam of Peru and a fragrance series. *Contact Dermatitis* 2003; 49: 287-289.

Trattner A, David M, Lazarov A. Occupational contact dermatitis due to essential oils. *Contact Dermatitis* 2008; 58: 282-284.

Treudler R, Richter G, Geier J, Schnuch A, Orfanos C E, Tebbe B. Increase in sensitization to oil of turpentine: recent data from a multicenter study on 45,005 patients from the German-Austrian Information Network of Departments of Dermatology (IVDK). *Contact Dermatitis* 2000; 42: 68-73.

Troutman J A, Foertsch L M, Kern P S, Dai H J, Quijano M, Dobson R L M, Lalko J F, Lepoittevin J-P, Gerberick G F. The incorporation of lysine into the peroxidase peptide reactivity assay for skin sensitization assessments. *Toxicol Sci* 2011; 122: 422-436.

Turcie P, Lipozencic J, Milavec-Peretic V, and Kulisie SM. Contact Allergy caused by Fragrance Mix and Myroxylonpereirae (Balsam of Peru) - A Retrospective study. *Collegium Antropologicum* 2011; 35: 83-87.

Turek C, Stintzing F. Evaluation of selected quality parameters to monitor essential oil alteration during storage. *Journal of Food Science* 2011;76:1365-1375

Turek C, Stintzing F. Impact of different storage conditions on the quality of selected essential oils. *Food Research International*: in press

Uter W, Lessmann H. Kontaktallergene. In: Schulze-Werninghaus G, Fuchs T, Bachert C, Wahn U, eds. *Manuale allergologicum*. Deisenhofen: Dustri, 2008: 237-308.

Uter W, Gefeller O, Geier J, Lessmann H, Pfahlberg A, Schnuch A. Untersuchungen zur Abhängigkeit der Sensibilisierung gegen wichtige Allergene von arbeitsbedingten sowie individuellen Faktoren. *Schriftenreihe der Bundesanstalt für Arbeitsschutz und Arbeitsmedizin, Forschung, Fb 949*. Bremerhaven: 2002.

Uter W, Geier J, Frosch P J, Schnuch A. Contact allergy to fragrances: current patch test results (2005 to 2008) from the IVDK network. *Contact Dermatitis* 2010; 63: 254-261.

Uter W, Geier J, Schnuch A, Frosch P J. Patch test results with patients' own perfumes, deodorants and shaving lotions: results of the IVDK 1998-2002. *J Eur Acad Dermatol Venereol* 2007; 21: 374-379.

Uter W, Hegewald J, Aberer W, Ayala F, Bircher A J, Brasch J, Coenraads P J, Schuttelaar M L, Elsner P, Fartasch M, Mahler V, Belloni Fortina A, Frosch P J, Fuchs T, Johansen J D, Menne T, Jolanki R, Krecisz B, Kiec-Swierczynska M, Larese F, Orton D, Peserico A, Rantanen T, Schnuch A. The European standard series in 9 European countries, 2002/2003 - First results of the European Surveillance System on Contact Allergies. *Contact Dermatitis* 2005; 53: 136-145.

Uter W, Räämsch C, Aberer W, Ayala F, Balato A, Beliauskienė A, Fortina A B, Bircher A, Brasch J, Chowdhury M M, Coenraads P J, Schuttelaar M L, Cooper S, Corradin M T, Elsner P, English J S, Fartasch M, Mahler V, Frosch P J, Fuchs T, Gawkrödger D J, Gimenez-Arnau A M, Green C M, Horne H L, Jolanki R, King C M, Krecisz B, Kiec-Swierczynska M, Ormerod A D, Orton D I, Peserico A, Rantanen T, Rustemeyer T, Sansom J E, Simon D, Statham B N, Wilkinson M, Schnuch A. The European baseline series in 10 European Countries, 2005/2006--results of the European Surveillance System on Contact Allergies (ESSCA). *Contact Dermatitis* 2009; 61: 31-38.

Uter W, Schmidt E, Geier J, Lessmann H, Schnuch A, Frosch P J. Contact allergy to essential oils: current patch test results (2000-2008) from the IVDK network. *Contact Dermatitis* 2010; 63: 277-283.

Uter W, Schnuch A, Gefeller O. Guidelines for the descriptive presentation and statistical analysis of contact allergy data. *Contact Dermatitis* 2004; 51: 47-56.

Uter W, Schnuch A, Geier J, Pfahlberg A, Gefeller O. Association between occupation and contact allergy to the fragrance mix: a multifactorial analysis of national surveillance data. *Occup Environ Med* 2001; 58: 392-398.

van Loveren H, Cockshott A, Gebel T, Gundert-Remy U, de Jong W H, Matheson J, McGarry H, Musset L, Selgrade M K, Vickers C. Skin sensitization in chemical risk assessment: report of a WHO/IPCS international workshop focusing on dose-response assessment. *Regulatory toxicology and pharmacology* : RTP 2008; 50: 155-199.

van Oosten E J, Schuttelaar M L, Coenraads P J. Clinical relevance of positive patch test reactions to the 26 EU-labelled fragrances. *Contact Dermatitis* 2009; 61: 217-223.

Varma S, Blackford S, Statham B N, Blackwell A. Combined contact allergy to tea tree oil and

lavender oil complicating chronic vulvovaginitis. *Contact Dermatitis* 2000; 42: 309-310.

Vermaat H, van Meurs T, Rustemeyer T, Bruynzeel D P, Kirtschig G. Vulval allergic contact dermatitis due to peppermint oil in herbal tea. *Contact Dermatitis* 2008; 58: 364-365.

Victor F C, Cohen D E, Soter N A. A 20-year analysis of previous and emerging allergens that elicit photoallergic contact dermatitis. *J Am Acad Dermatol* 2010; 62: 605-610.

Vigan M. Contact dermatitis sentinel network by GERDA. *Nouv Dermatol* 1996; 15: 677-678.

Vilaplana J, Romaguera C. Allergic contact dermatitis due to eucalyptol in an anti-inflammatory cream. *Contact Dermatitis* 2000; 43: 118.

Vilaplana J, Romaguera C. Contact dermatitis from the essential oil of tangerine in fragrance. *Contact Dermatitis* 2002; 46: 108.

Vilaplana J, Romaguera C, Campderros L. [Contact dermatitis by camphor present in a flushing solution]. *Actas Dermosifiliogr* 2007; 98: 345-346.

Vilaplana J, Romaguera C, Grimalt F. Contact dermatitis from geraniol in Bulgarian rose oil. *Contact Dermatitis* 1991; 24: 301.

Vocanson M, Goujon C, Chabeau G, Castelain M, Valeyrie M, Floc'h F, Maliverney C, Gard A, Nicolas J F. The skin allergenic properties of chemicals may depend on contaminants--evidence from studies on coumarin. *Int Arch Allergy Immunol* 2006; 140: 231-238.

Wahlberg J E, Liden C. Cross-reactivity patterns of cobalt and nickel studied with repeated open applications (ROATS) to the skin of guinea pigs. *American journal of contact dermatitis : official journal of the American Contact Dermatitis Society* 2000; 11: 42-48.

Wahlberg J E, Lindberg M. Patch Testing. In: Frosch P J, Menné T, Lepoittevin J P, eds. *Contact Dermatitis*. Berlin: Springer, 2006: 365-390.

Wakelin S H, McFadden J P, Leonard J N, Rycroft R J. Allergic contact dermatitis from d-limonene in a laboratory technician. *Contact Dermatitis* 1998; 38: 164-165.

Wallenhammar L M, Ortengren U, Adreasson H, Barregard L, Björkner B, Karlsson S, et al. Contact allergy and hand eczema in Swedish dentists. *Contact Dermatitis* 2000; 43: 192-199.

Wang L, Sterling B, Don P. Berloque dermatitis induced by "Florida water". *Cutis* 2002; 70: 29-30.

Warbrick, E.V.R., Dearman J., Ashby J., Schmezer P. and Kimber I. 2001. Preliminary assessment of the skin sensitizing activity of selected rodent carcinogens using the local lymph node assay. *Toxicology*, 163(1), 63-69

White I R, Johansen J D, Arnau E G, Lepoittevin J P, Rastogi S, Bruze M, Andersen K E, Frosch P J, Goossens A, Menne T. Isoeugenol is an important contact allergen: can it be safely replaced with isoeugenyl acetate? *Contact Dermatitis* 1999; 41: 272-275.

White JM, Gilmour N J, Jeffries D, Duangdeeden I, Kullavanijaya P, Basketter D A, McFadden J P. A general population from Thailand: incidence of common allergens with emphasis on para-

phenylenediamine. *Clin Exp Allergy* 2007; 37: 1848-1853.

White, JML. Patch testing: what allergists should know. *Clinical and Experimental Allergy* 2012; 42: 180-185

White JM, White I R, Glendinning A, Fleming J, Jefferies D, Basketter D A, McFadden J P, Buckley D A. Frequency of allergic contact dermatitis to isoeugenol is increasing: a review of 3636 patients tested from 2001 to 2005. *Br J Dermatol* 2007; 157: 580-582.

Wijnhoven S W P, Ezendam J, Schuur A G, van Loveren H, van Engelen J G M. Allergens in consumer products. RIVM Reprot 320025001. Bilthoven: Institute for Public Health and the Environment, 2008.

Wilkinson S M, Beck M H. Allergic contact dermatitis from menthol in peppermint. *Contact Dermatitis* 1994; 30: 42.

Wöhrl S, Hemmer W, Focke M, Götz M, Jarisch R. The significance of fragrance mix, balsam of Peru, colophony and propolis as screening tools in the detection of fragrance allergy. *Br J Dermatol* 2001; 145: 268-273.

Worm M, Jeep S, Sterry W, Zuberbier T. Perioral contact dermatitis caused by L-carvone in toothpaste. *Contact Dermatitis* 1998; 38: 338.

Wright, Z. M., Basketter, D. A., Blaikie, L., Cooper, K. J., Warbrick, E. V., Dearman, R. J., Kimber, I., 2001. Vehicle effects on skin sensitization potency of four chemicals assessment using the local lymph node assay. *International Journal of Cosmetic Science*, 23(2), 75-83

Wurm G. *Hagers Handbuch der pharmazeutischen Praxis. Waren und Dienste*. Berlin, 644-689: Springer, 1990.

Yamamoto A, Morita A, Tsuji T, Suzuki K, Matsunaga K. Contact urticaria from geraniol. *Contact Dermatitis* 2002; 46: 52.

Yazar K, Johnsson S, Lind M L, Boman A, Liden C. Preservatives and fragrances in selected consumer-available cosmetics and detergents. *Contact Dermatitis* 2011; 64: 265-272.

Zachariae C O, Agner T, Menné T. Chromium allergy in consecutive patients in a country where ferrous sulfate has been added since 1981. *Contact Dermatitis* 1996; 35: 83-85.

Zacher K D, Ippen H. Kontaktekzem durch Bergamottöl. *Derm Beruf Umwelt* 1984; 32: 95-97.

Zug K A, Warshaw E M, Fowler J F, Jr., Maibach H I, Belsito D L, Pratt M D, Sasseville D, Storrs F J, Taylor J S, Mathias C G, Deleo V A, Rietschel R L, Marks J. Patch-test results of the North American Contact Dermatitis Group 2005-2006. *Dermatitis* 2009; 20: 149-160.