



EUROPEAN MEDICINES AGENCY  
SCIENCE MEDICINES HEALTH

02 February 2016  
EMA/HMPC/63480/2015  
Committee on Herbal Medicinal Products (HMPC)

## List of references supporting the assessment of *Origanum majorana* L., herba

Draft

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

Al Dhaheri Y, Attoub S, Arafat K, AbuQamar S, Viallet J, Saleh A, et al. Anti-Metastatic and Anti-Tumor Growth Effects of *Origanum majorana* on Highly Metastatic Human Breast Cancer Cells: Inhibition of NFκB Signaling and Reduction of Nitric Oxide Production. *PLoS ONE* 2013, 8(7):e68808

Al-Howiriny T, Alsheikh A, Alqasoumi S, Al-Yahya M, ElTahir K, Rafatullah S. Protective Effect of *Origanum majorana* L. 'Marjoram' on Various Models of Gastric Mucosal Injury in Rats. *Am J Chin Med* 2009, 37(3):531–545

Alonso JR. Tratado de Fitomedicina. Bases Clínicas y Farmacológicas. ISIS, ed. S.R.L., Buenos Aires 1998, 766

Baratta MT, Dorman HJD, Deans SG, Figueiredo AC, Barroso JG, Ruberto G. Antimicrobial and antioxidant properties of some commercial essential oils. *Flavour Frag J* 1998, 13(4):235–244

Baricevic D, Bartol T. The biological/pharmacological activity of the *Origanum* genus. In *Oregano: the genera Origanum and Lippia*. Edited by Spiridon E. Kintzios. Taylor & Francis, London 2002

Baser KHC, Kirimer N. Composition of the essential oil of *Origanum majorana* L. from Turkey. *J Essent Oil Res* 1993, 5:577–579

Blumenthal M, Busse WR, Goldberg A, Gruenwald J, et al., editors. The Complete German Commission E Monographs. American Botanical Council, Austin Texas, USA 1998

Bobovska M, Gobiet K, Grzeda W, Kempisty A, Sadowsky Z. Prodanik Terapeutyczny. Widani Trzecie poprawione i uzupełnione. Państwowy Zakład Wydawnictw Lekarskich, Warszawa 1975, 874

Bown D. The Herb Society of America new encyclopedia of herbs & their uses. New York DK 2001

Elansary HO, Mahmoud EA. Egyptian herbal tea infusions' antioxidants and their antiproliferative and cytotoxic activities against cancer cells. *Nat Prod Res* 2015, 29(5):474-479

Fernandes R and Heywood VH *Origanum*. In Tutin TG, Heywood VH, Burges NA, Moore DM, Valentine DH, Walters SM, Webb DA, editors. *Flora Europaea*. Vol 3. Cambridge University Press, London 1972

Fischer G. Heilkräuter und Arzneipflanzen. 3 Auflage, Karl F. Haug Verlag – Ulm/Donau 1966, 138-139

Font Quer. Plantas Medicinales. El Dioscórides Renovado. Editorial Labor, Barcelona 1988



- Farmakopea Polska V. *Majoranae unguentum*. Polish Pharmaceutical Society, Warsaw 1995
- Farmakopea Polska X. *Majoranae unguentum*. Polish Pharmaceutical Society, Warsaw 2014
- Farmakopea Polska X. *Origanum majoranae herba*. Polish Pharmaceutical Society, Warsaw 2014
- Gajewska M, Worth A, Uranie C, Briesen H, Schramm K-W. Application of physiologically-based toxicokinetic modelling in oral-to-dermal extrapolation of threshold doses of cosmetic ingredients. *Toxicol Lett* 2014, 227(3):189–202
- Garcia de Arriba S, Naser B, Nolte KU. Risk assessment of free hydroquinone derived from *Arctostaphylos Uva-ursi folium* herbal preparations. *Int J Toxicol* 2013, 32(6):442-453
- Garnier G, Bezanger Beauquesne L, Debraux G. *Ressources Médicinales de la Flore Française*, Vigot Frères, Paris 1961, 1185-1187
- Gruenwald J, Brendler T, Jaenicke C, editors. PDR for herbal medicines. Medical Economics Company, Inc., Montvale NJ, USA 2000
- Gruenwald J, Brendler T, Jaenicke C, editors. PDR for Herbal Medicines. 4<sup>th</sup> ed. Sweet Marjoram. Thomson Medical Economics, Montvale, NJ 2007, 831 -832
- Hallard F. *Phytothérapie*. Masson, Paris 1988, 112
- Hu ZM, Zhou Q, Lei TC, Ding SF, Xu SZ. Effects of hydroquinone and its glucoside derivatives on melanogenesis and antioxidation: Biosafety as skin whitening agents. *J Dermatol Sci* 2009, 55:179-184
- Kaliora AC, Kogiannou DA, Kefalas P, Papassideri IS, Kalogeropoulos N. Phenolic profiles and antioxidant and anticarcinogenic activities of Greek herbal infusions; balancing delight and chemoprevention? *Food Chem* 2014, 142:233–241
- Khan IA, Abourashed EA. *Leung's encyclopedia of common natural ingredients used in food, drugs, and cosmetics*. 3<sup>th</sup> ed. John Wiley & Sons Inc., Hoboken, New Jersey 2010, 436-439
- Loi MC, Maxia L, Maxia A. Ethnobotanical Comparison Between the Villages of Escolca and Lotzorai (Sardinia, Italy). *Journal of Herbs Spices Med Plants* 2005, 11(3):67-84
- Mahady GB, Pendland SL, Stoia A, Hamill FA, Fabricant D, Dietz BM, et al. *Vitro* susceptibility of *Helicobacter pylori* to botanical extracts used traditionally for the treatment of gastrointestinal disorders. *Phytother Res* 2005, 19:988–991
- Matsumoto M, Masumori S, Hirata-Koizumi M, Ono A, Honma M, Yokoyama K, et al. Evaluation of in vivo mutagenicity of hydroquinone in Muta™ mice. *Mutat Res Genet Toxicol Environ Mutagen* 2014, 775-776: 94-98
- McGregor D. Hydroquinone: an evaluation of the human risks from its carcinogenic and mutagenic properties. *Crit Rev Toxicol* 2007, 37(10):887-914
- Novak J, Bitsch C, Langbehn J, Pank F, Skoula M, Gotsiou Y, et al. Ratios of cis- and trans-sabinene hydrate in *Origanum majorana* L. and *Origanum microphyllum* (Benth) Vogel. *Biochem Syst Ecol* 2000; 28(7): 697–704
- NTP, 1989 – Kari FW. Toxicology and carcinogenesis studies of hydroquinone. National Toxicology Program. Technical Report, Series No. 366, U.S. Department of Health and Human Services. Public Health Service. National Institutes of Health, United States of America 1989

OECD SIDS. "Hydroquinone" CAS 123-31-9, UNEP Publications 2012

Proença da Cunha A, Pereira da Silva A, Roque O. Plantas e Produtos Vegetais em Fitoterapia. Fundação Calouste Gulbenkian, Lisboa 2003, 448-449

Rychlińska I, Nowak S. Quantitative Determination of Arbutin and Hydroquinone in Different Plant Materials by HPLC. *Notulae Botanicae Horti Agrobotanici* 2012, 40(2):109-113

Teuscher, Eberhard. Gewürzdrogen: Handbuch der Gewürze, Gewürzkräuter, ihrer ätherischen Öle und der Gewürzmischungen. Gießen schaltiche Verlagsgesellschaft mbH, Stuttgart 2003

The Herb Society of America. Oregano and Marjoram. An Herb Society of America Guide to the Genus *Origanum*. The Herb Society of America, Kirtland, Ohio, USA 2005

Wurzer W, editor. Die Gross Enzyklopodiund heil pflanzen - German translation of "La grande enciclopedia delle erbe" (1977). Libri & Grandi Opera SPA, Milano - Neuer Kaiser Verlag, Gesellschaft m.b.H., Klagenfurt 1994, 408-409

Wester RC, Melendres J, Hui X, Cox R, Serranzana S, Zhai H et al. Human in vivo and in vitro hydroquinone topical bioavailability, metabolism, and disposition. *J Toxicol Environ Health A* 1998, 54(4):301-317

Yazdanparast R, Shahriyary L. Comparative effects of *Artemisia dracuncululus*, *Satureja hortensis* and *Origanum majorana* on inhibition of blood platelet adhesion, aggregation and secretion. *Vascular Pharmacology* 2008, 48:32-37