

Table 1. Main chemical characteristics of common spices.

Spice	Chemical profile	References
Clove <i>Eugenia caryophyllata</i>	Carvacrol, thymol, eugenol, cinnamaldehyde	Chaieb et al. (2007)
Coriander <i>Coriandrum sativum</i>	linalool, oxygenated monoterpenes, monoterpene hydrocarbons Coriander seed: 60–70% linalool 20% hydrocarbons	(Coleman and Lawrence, 1992) Leung and Foster, 1996
Cinnamon <i>Cinnamomum zeylanicum</i>	Essential oil of leaves and fruits: 2-decanoic acid (30.8%), E-11-tetradecenoic acid (13.4%), capric acid (12.7%), undecyl alcohol (6.4%), tridecanoic acid (5.5%), undecenoic acid (7.1%) Leaves oil: eugenol (76.10%), <i>trans</i> - β caryophyllene (6.7%), linalool (3.7%), eugenol acetate (2.8%) benzyl benzoate (1.9%).	Guenther, 1950 Bhuiyan et al., 2009 (Trajano et al., 2010) Lima et al., 2005
Indian babyleaf <i>Cinnamomum tejpata</i>	Branches oil: linalool (10.6%), α -pinene (9.9%), α -phellandrene (9.2%) Linalool (50%) is the major compound; α -pinene, <i>p</i> -cymene, β -pinene, limonene 5–10%	Sajilata and Singhal (2012)
Nutmeg <i>Myristica fragrans</i>	Nutmeg oil α -pinene, β -pinene, and sabinene (77.83%) in general 76.8% monoterpenes, 12.1% oxygenated monoterpenes, 9.8% phenyl propanoid ether	Mullavarapu and Ramesh, 1998
Origan <i>Origanum vulgare</i>	Leaf essential oil carvacrol (18.06%) thymol (7.36%), <i>g</i> -terpinene (5.25%), <i>p</i> -cymene (5.02%), limonene (4.68%), caryophyllene (4.12%), cymene (3.56%), ledene (3.41%), linalool (2.47%), α -pinene (2.15%), <i>g</i> -terpineol (2.10%), and germacrene (2.08%).	Gopalakrishnan, 1992 Derwich et al. (2010)
Rosemary <i>Rosmarinus officinalis</i>	α -Pinene (18.25%), followed by camphor (6.02%), 1,8-cineole (5.25%), camphene (5.02%), β -pinene (4.58%), bornyl acetate (4.35%), limonene (3.56%), borneol (3.10%), α -terpineol (2.89%), and cymene (2.02%)	Derwich et al. (2011)

Bhuiyan, M. N. I., Begum, J. and Sultana, M. (2009). Chemical composition of leaf and seed essential oil of *Coriandrum sativum* L. *Bangladesh J. Pharmacol.* **4**:150–153.

Chaieb, K., Hajlaoui, H., Zmantar, T., Ben, A., Rouabchia, M., Mahdouani, K. and Bakhrouf, A. (2007). The chemical composition and biological activity of clove essential oil, *Eugenia caryophyllata* (*Syzygium aromaticum* L. *Myrtaceae*): A short review. *Phytother. Res.* **21**:501–506.

Coleman, W. M. and Lawrence, B. M. (1992). Comparative automated static and dynamic quantitative headspace analyses of coriander oil. *J Chromatogr Sci.* **30**:396–398.

Derwich, E., Benziane, Z. and Chabir, R. (2011). Aromatic and medicinal plants of Morocco: Chemical composition of essential oils of *Rosmarinus officinalis* and *Juniperus Phoenicea*. *Int. J. Appl. Biol. Pharm. Technol.* **2**(1):145–153.

Derwich, E., Benziane, Z., Manar, A., Boukir, A. and Taouil, R. (2010). Phytochemical analysis and *in vitro* antibacterial activity of the essential oil of *Orignum vulgare* from Morocco. *Am.-Euras. J. Sci. Res.* **5** (2):120–129.

Gopalakrishnan, M. (1992). Chemical composition of nutmeg and mace. *J. Spices Aromat. Crops* **1**:49–54.

Guenther, E. (1950). *The Essential Oils*. Vol. IV. Van Nostrand, New York, pp. 602–615.

Leung, A. and Foster, S. (1996). Coriander. In: *Encyclopedia of Common Natural Ingredients Used in Food, Drugs and Cosmetics*, 2nd ed., pp. 193–195. J. Wiley, New York.

Lima, I. O., Oliveira, R. G., Lima, E., Souza, E. L., Farias, N. P. and Navarro, D. (2005). Inhibitory effect of some phytochemicals in the growth of yeasts potentially causing opportunistic infections. *Rev. Bras. Cienc. Farm.* **41**:199–203.

- Mullavarapu, G. R. and Ramesh, S. (1998). Composition of essential oils of nutmeg and mace. *Aromat. Plant Sci.* **20**:746–748.
- Sajilata, M. G. and Singhal, R. S. (2012). Quality indices for spice essential oils Institute of Chemical Technology, India. In: *The Handbook of Herbs and Spices*, 2nd ed., vol. 1, pp.42–54. Woodhead Publishing, Cambridge, UK.
- Trajano, V. N., Lima, E., Travassos, A. E. and De Souza, E. L. (2010). Inhibitory effect of the essential oil from *Cinnamomum zeylanicum* Blume leaves on some food-related bacteria. *Ciênc. Tecnol. Aliment., Campinas*, **30**(3):771–775.