

COMPARISON BETWEEN THE COMPOSITION OF NUTMEG ESSENTIAL OILS FROM BRAZIL AND THAILAND

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The nutmeg, spice obtained from the seed of the fruit of the nutmeg tree (*Myristica fragrans*), is known for centuries for its therapeutic properties and its use in cooking. The safety of this use, however, is limited by the presence of hallucinogenic and toxic compounds. The qualitative and quantitative evaluation of these substances are commonly held by its essential oil extraction and subsequent analysis. In this work we performed the extraction of essential oils from Nutmegs produced in Brazil and Thailand, through hydrodistillation with a Clevenger modified apparatus. With the use of two-dimensional chromatography, coupled to a mass spectrometer, CG-CG/MS, analyzes were performed of its composition, illustrating a distinct difference between the nuts according to their different origins. The combined use of a polar column HP-FFAP 25mx0,20mm i.d.x0,33 μ m and one apolar Rtx-5MS 30mx0,25mm i.d.x0,25 μ m made possible to achieve better results. In Brazilian's nuts the five substances present in greater quantities were beta pinene, alpha-pinene, terpin-4-ol, 1,2-Dicyclopropylcyclobutane, and beta phellandrene, with 22.28%, 11.83%, 7.08%, 6.57% and 5.13%, respectively. In the five Thai origin nuts the substances present in greater quantity were sabinene, pseudolimonene, terpin-4-ol, tetradecanoic acid and safrole, with 14.22%, 13.25%, 9.81%, 8.99% and 8,72%, respectively. Among the significant differences in their compositions, there is the amount of myristicin. Its presence in the essential oil is probably the main responsible for the production of psychotropic effects, and fell from 3.55% in Brazilian nutmeg to a negligible amount, less than 1% in Thai.

Palavras-chave: Nutmeg; Essential oils; Multidimensional chromatography