

CHEMICAL CHARACTERIZATION, ANTIOXIDANT AND ANTIACETYLCHOLINESTERASE ACTIVITIES FROM THE ESSENTIAL OIL *Ocimum* sp.

BARBOSA, Celma O.¹
SOUSA, H. A.²
RODRIGUES, A. L. M.³
R. Cassia A. Pereira⁴
VIEIRA, I.G.P¹
MORAIS, S. M.⁵
CARIOCA, J. O. B.⁶

¹Universidade Federal do Ceará

²Curso de Licenciatura Plena em Química - Universidade Estadual do Ceará - Universidade Estadual do Ceará

³Licenciatura Plena em Química - Universidade Estadual do Ceará - Universidade Estadual do Ceará

⁴Empresa Brasileira de Pesquisa Agropecuária

⁵Programa de Pós-graduação em Biotecnologia - Universidade Estadual do Ceará - Universidade Estadual do Ceará

⁶Parque de Desenvolvimento Tecnológico / UFC - Universidade Federal do Ceará - Universidade Federal do Ceará

Categoria de apresentação | Presentation type:

Pôster

Eixo temático | Track category:

Química e Análise de Alimentos e Análise Sensorial (QA)

Palavras-chave | Keywords:

basil

chemical characterization

antioxidant activity

Resumo (Texto Científico) - Máximo 300 palavras | Abstract (Scientific Text) - (Maximum 300 words):

The genus *Ocimum* belonging to Lamiaceae family has an economic interest because it is the source of essential oils with some components, such as methyl-chavicol, methyl-cinamato, eugenol, citral, linalool, thymol, camphor, with stimulant properties, anti-inflammatory and antioxidant. The aim of this study was to characterize chemically and to evaluate the antioxidant and antiacetylcholinesterase activity in the essential oil of *Ocimum* sp. (*Greco a palla* Basil). The essential oil was extracted using hydrodistillation in Clevenger apparatus in the Natural Products Chemistry Laboratory at the State University of Ceará (NPCL/UFC). The chemical composition was determined by Gas-chromatography/mass spectral (GC-MS) analysis and the antioxidant activity by sequestering the testing of DPPH radicals and the oxidation of β -carotene/linoleic acid system. The antiacetylcholinesterase activity was performed by inhibition of the enzyme acetylcholinesterase by sample tested. The results showed a chemical composition of the essential oil (EO) with 25 chemical components, being the majority: eugenol (42.15%), linalool (23.54%), 1,8-cineole (11, 46%), epi- α -cadinol (4.67%), among other minorities. In relation to antioxidant activity, the EO had an IC50 of 4,60 ug/mL (\pm 0,14) for the sequestering method of DPPH radicals and for the β -carotene/linoleic acid system had IC50 of 12,02 ug/mL (\pm 3,08). The essential oil study showed interesting antioxidant capacity with proximity compared to eugenol standards with IC50 of 1.90 ug/mL according to the

DPPH method and 7.80 ug/mL according to the β -carotene/linoleic acid system. The results obtained in the test inhibition of AChE, indicated that the essential oil studied showed inhibitory activity of 7 mm, which means an action against Alzheimer's disease. Thus, the essential oil of *Ocimum* sp. (Greco a palla Basil) because of the presence of the compound eugenol, which has a high antioxidant activity and against Alzheimer, represents a natural antioxidant for food products or as an additive against oxidative deterioration.

Órgão de fomento e número do processo | Funding agency and case number:
FUNCAP-CE