



ANCESTRAL MEDICINAL PLANT FROM SOUTH AMERICA ANDES: CHEMICAL COMPOSITION OF PACHA MUÑA (*Hedeoma mandoniana*) LEAVES

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ABSTRACT

The Pacha muña (*Hedeoma mandoniana*), an ancestral medicinal plant, grows in the Andean mountains of Peru, Bolivia and northern Argentina, and has been used as a folk medicine for many years as an infusion to treat migraines, headaches, altitude sickness and dysentery. However, Pacha muña has received less attention and its chemical composition of leaves is completely unclear. Pacha muña leaves were collected at altitudes above 4056 meters, hand selected, dehydrated at room temperature and their proximate composition was determined in terms of moisture, ash, fat, protein and carbohydrates (crude fiber). The analysis of volatile compounds was carried out using the essential oil obtained by semi-industrial hydrodistillation and the bioactive compounds were obtained using 80% methanol as solvent. The determination of volatile compounds was by GC/MS and the bioactive compounds using HPLC with a DAD. Pacha muña leaves with moisture of $11.46 \pm 0.04\%$, has $8.85 \pm 0.02\%$ ash, $2.99 \pm 0.16\%$ fat, $15.09 \pm 0.13\%$ protein, $73.06 \pm 0.31\%$ carbohydrate ($12.18 \pm 0.01\%$ crude fiber) on dry basis. The volatile compounds most prominent are 2-methyl-1-pentene ($62.65 \pm 0.36\%$), 1-octen-3-yl-acetate ($7.33 \pm 0.12\%$), Isopulegone ($6.01 \pm 0.03\%$), Carvacryl acetate ($3.77 \pm 0.07\%$), o-Cymen-5-ol ($3.60 \pm 0.04\%$), thymol ($2.27 \pm 0.02\%$), caryophyllene oxide ($1.54 \pm 0.03\%$), D-limonene ($1.37 \pm 0.02\%$), caryophyllene ($1.22 \pm 0.03\%$) and 3-octanol acetate ($1.08 \pm 0.01\%$), and the bioactive compounds (mg/kg dry leaves) in higher proportion were chlorogenic acid (14872.17 ± 295.56), caffeine (7306.22 ± 38.30), luteolin (6090.08 ± 217.22), 4-hydroxyphenylacetic acid (828.66 ± 11.46), gallic acid (796.40 ± 4.29), catechin (595.37 ± 4.83), rutin (379.56 ± 4.40) and epigallocatechin-3-gallate (145.54 ± 4.08). The results obtained are valuable data that can be used by researchers, pharmaceutical, cosmetic and food industries to propose new supplements or products based on Pacha muña leaves.

Palavras chaves:

Informe de 4 a 8 palavras chaves, por exemplo:

Folk medicine, essential oil, chlorogenic acid, caffeine, luteolin.

Área temática:

Escolher uma das áreas temática descritas:

A4.5 - Valorização dos alimentos tradicionais ligados à origem geográfica

Preferência de apresentação:

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