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INFLUENCE OF CLIMATIC PARAMETERS ON THE CHEMICAL COMPOSITION OF *Siparuna guianensis* ESSENTIAL OIL

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Siparuna guianensis Aubl. (Siparunaceae), popularly known as capitiú, is a small tree widely distributed in the Amazon region. Traditional communities use their leaves to treat migraines, fevers, respiratory syndromes, and inflammatory processes [1]. This study aims to evaluate the influence of climatic parameters on the chemical composition of *S. guianensis* essential oil (SgEO). The leaves were collected in the municipality of Bragança, state of Pará, Brazil, during the dry (November-December) and rainy (March-April) seasons. The essential oil was obtained by hydrodistillation for 3 h. The chemical composition was determined by gas chromatography-mass spectrometry [2]. The botanical material was registered in accordance with Brazilian legislation for the protection of biodiversity (SISGEN AF7AC26). The SgEO yield varied from 0.5% (November 2024) to 1.4% (April 2025) with an average of 0.8 ± 0.4 throughout the study. According to INMET, between July and December 2024 (dry season), sunshine was high (208.4–262 h), accompanied by low precipitation. This period also recorded the highest average maximum temperatures (up to 35.3 °C) and a gradual decrease in relative humidity, which ranged from 85.4% (July) to 71.7% (November). In December, the transition to the rainy season began, marked by increased precipitation and a recovery in humidity levels [3]. The main classes among the 104 constituents identified were oxygenated sesquiterpenes (62.8-88.4%), followed by sesquiterpene hydrocarbons (3.9-26.7%). Spathulenol stood out as the majority, ranging from 14.3% in the rainy season to 42.0% in the dry season. Other constituents, although in smaller proportions, were the oxygenated sesquiterpenes germacrene B (1.5-6.1%), cyclocolorenone (0.8-40.8%) and β-Muurola-4,10(14)-dien-1-ol (0.4-8.4%). Thus, the chemical composition of the essential oil of Siparuna guianensis varied according to seasonality, with higher yield in the rainy season and emphasis on spathulenol. The climatic differences between the dry and wet periods directly influenced the production of volatile constituents.

Keywords: volatiles, capitiú, environmental factors

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