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Circadian and seasonal evaluation of the essential oil of *Myrcia sylvatica* (G. Mey) DC.

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Among *Myrcia* species occurring in Brazil, *M. sylvatica* (G. Mey) DC. reveals significant economic potential for the Lower Amazon River region, due to the high yield of its greenish essential oil and the special spicy-woody scent. Particularly due to its wide distribution in underutilized areas of secondary forests and savannas, which can lead to its densification and commercial exploitation (1,2). Results of the seasonal and circadian study of the leaf oils and the oil composition of *M. sylvatica* fruits were performed by GC and GC-MS. Leaf oil yield ranged from 0.9 to 1.6% in the rainy season (January-June) and was 1.3% in the dry season (July-December). The oil yield of the fruit was 1.7% (April, fruiting period). The sesquiterpenes were predominant in the oils studied: in the fruits oil were δ-cadinene (11.3%), β-selinene (6.0%), 1-epi-cubenol (5.1%), cubenol (3.5%), α-calacorene (3.4%) and trans-muurola-3,5-diene (3.4%); in the leaves oils were β-selinene (6.2%-10.5%), 1-epi-cubenol (5.9%-9.8%), cadalene (4.7%-8.2%), (δ-cadinene (0.0%-6.0%), α-calacorene (1.5%-6.0%), *trans*-calamene (3.5%-6.5%), cubenol (2.4%-4.6%) and caryophyllene oxide (2.5%-4.0%). The PCA and HCA analyzes applied to leaf oils showed a quantitative variation in the composition according to the collection period, whether rainy or dry season (circadian study). In addition, the collection time in the rainy season also influenced the composition of these oils. The seasonal variation observed for the composition of the leaves oils of *M. sylvatica* can be attributed to the influence of the climatic parameters of the region, particularly temperature and relative humidity, which were monitored throughout the collection period. These results can be considered of great importance for the economical exploitation of the species.

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