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Study substance specters in infrared region: functional groups predominant in seeds bio processed *Myrciaria dubia*

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Introduction: Infrared spectroscopy enables rapid determination of the presence and information regarding the main predominant groups present in the structure of organic substances. The fruits of caçari, *Myrciaria dubia* (H.B.K.) McVaugh, Myrtaceae, have bioactive compounds with potential for human health. However, its seeds are still discarded, possibly due to ignorance of the agrifood potential. **Objectives:** Investigate and characterize functional groups in extracts, powder and oil seeds caçari through study of the specters obtained in the infrared region with a view to identifying sources of compounds with potential agrifood. **Material and Methods:** The extracts were analyzed on Shimadzu FTIR spectrophotometer. The samples were mixed and macerated with pure potassium bromide in ratio 1:7 (sample: potassium bromide) and then placed on polished windows coupled to the mounting bracket of windows working conditions: measurement mode (absorbance), number of scans (16), resolution (4 cm^{-1}) and wavelength range ($4000 - 400\text{ cm}^{-1}$). **Results and Discussion:** In the specters was observed qualitatively showed no significant differences, it is possible to distinguish some important regions: the first of between $3000-2800\text{ cm}^{-1}$ which is observed absorption band characteristics of symmetric vibrations and asymmetric methyl groups and methylenes. From 1600 to 1450 cm^{-1} , characteristic of the stretching of the C=C aromatic groups. The absorption situated between 1700 and 1600 cm^{-1} is characteristic of the stretching of the carbonyl which with axial deformation vibration of C=O bond which appears in the region between 1300 and 1000 cm^{-1} suggests the presence of acid carboxylic acids and esters linked to aromatic groups. And in the region from $1000-700\text{ cm}^{-1}$ indicative of aromatic substitution of the ring in the region $700-400\text{ cm}^{-1}$. It is possible the existence of hydrocarbon functions, carboxylic acid, amide, ester, NO_2 , and phenols in the molecular structure. **Conclusions:** The specters indicate important, phenolic and carboxylic functional groups in the extracts.

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Keywords: agrifood, caçari, extracts, infrared spectroscopy, phenolics.

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