DEVELOPMENT OF GELATIN BIOPOLYMERIC FILM IMPREGNATED WITH *Copaifera sp.* OLEORESIN

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SUMMARY

The human skin is subject several wound types, abrasions, perforations, burns, surgical wounds, etc, especially superficial wounds which produce low exudate, provoking physical, social, mental and financial damages. For protection and humidity control are generally used polymeric dressings film-like, aligning practicality, functionality and therapeutic efficacy. This work aimed to produce gelatin biopolymeric films impregnated with copaiba oleoresin, .The gelatin was the compound chosen to form the biopolymeric matrix, due its biocompatibility, biodegradability, non-toxicity and non-antigenic properties. The polymeric biomaterial was impregnated with copaiba oleoresin, a Brazilian traditional phytotherapic product, which are known for its anti-inflammatory, antimicrobial and healing properties. Samples of copaiba oleoresin were collected in three different places from two states of Brazil, from Cuiabá, city of Mato Grosso, Ituberá and Itacaré, both towns localized in the state of Bahia. The oleoresin was characterized by spectroscopic analyses, such as gas chromatography (GC-MS), Fourier transform infrared spectrometer (FTIR) and nuclear magnetic resonance (NMR). In the CG-EM, the main compounds identified were α-copaene, α-humulene, zingiberene, ß-caryophyllene, ß-bisabolene and Δ-cadinene. Additionally, the FTIR and NMR spectra of oleoresins corroborated the occurrence of major bonds of terpenic bioactive compounds, such as C-H, C-H_2, C-H_3 and C=C. The biopolymeric films samples were acquired by the methodology of solvent casting, using gelatin, water and sorbitol (plasticizer). Films produced without the oleoresin using a proportion 10:1 gelatin to sorbitol; in turn, films impregnated were produced with 1 % m/m of oleoresin impregnated. The films samples

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impregnated with copaiba used the oleoresin collected in Cuiabá. The results obtained were biopolymeric films in the solid state, with 0.05 mm ± 0.01 of thickness. The biopolymeric matrix was homogeneous visual appearance, in both films samples. When introduced the addiction of oleoresin was verified a slightly change on elasticity of samples. In the terms of odor, all the films produced were odourless. On the other hand, the products without oil were colourless; those with added oil presented slightly yellow tones. Nevertheless, it is necessary additional analysis of characterization with films impregnated with different oleoresin's sources to allow more analysis and details.

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