EFFECT ON MALTODEXTRIN CONCENTRATION IN THE PRODUCTION OF DRIED ANTHOCYANINS EXTRACTED FROM MOLASSESGRASS

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The anthocyanin pigments present in many plant sources, are very unstable compounds requiring conservation methods, and currently the one most used is the addition of antioxidants and encapsulation using spray drying. The aim of this research was to study the effect of maltodextrin concentration on dried anthocyanins characteristics. Powdered anthocyanin, added of 3, 5.5 and 8% of maltodextrin, was produced from aqueous extracts of anthocyanins of molassesgrass (Melinis minutiflora), by spray drying. Moisture content, higroscopicity, water activity, anthocyanin content, color parameters and antioxidant activity were measured.

Maltodextrin concentration did not affect the moisture content and water activity of the samples. However, the higher the maltodextrin content, the lowest the higroscopicity was. This is due to maltodextrin being a material with lower hygroscopicity than anthocyanins, which confirms its efficiency as a carrier agent, for helping reduce the hygroscopicity of dried products by atomization. The sample presented lighter color with increases in the maltodextrin concentrations, which could be observed through higher L* (Luminosity) values. This is due to the maltodextrin being a white product, which leads to a less intense colored product. The results for antioxidant activity and anthocyanins showed that the maltodextrin presented a significant negative effect. Such result was expected since maltodextrin does possess any antioxidant activity, which contributes the a decrease in the overall activity of the sample.

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