Locust bean gum, xanthan gum, Sodium carboxymethyl cellulose and olive oil based novel bigels for controlled Acai berry extracts

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Bigels are biphasic systems produced with an orgnogel and hydrogel mixed together. The novel formulation is able to control the delivery of both lipophilic and hydrophilic active agents. The objective of this study was to develop and characterize novel bigels by mixing locust bean gum, xanthan gum sodium carboxymethyl cellulose based bigel and sorbitan monostearate-olive oil based organogel for controlled Acai berry extracts application. The in vitro active agent release study, MTT assay, TGA, swelling ratio and compressive strength measurements confirmed characteristic of bigels.