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Spectrophotometric Determination of Coumarins Incorporated into Nanoemulsions Containing *Pterocaulon balansae* Extract

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SUMMARY. This article reports the validation of a spectrophotometric method to estimate coumarins incorporated into nanoemulsions containing *Pterocaulon balansae* Chodat extract. The quantification was based on the assay of esculin at 327 nm, which presents the same substitution pattern of coumarins isolated from *Pterocaulon* species. Linear response (R^2 > 0.995) was observed over the range of 5.0 to 25.0 μg/mL. The relative standard deviation values for the intra- and inter-days precision were lower than 3.0 %. The recovery ranged from 93.3 % to 104.1 %. The association efficiency was estimated after the determination of free coumarins in the water phase of nanoemulsions obtained after separation through ultrafiltration/centrifugation devices. The coumarins association was approximately 92 %.

KEY WORDS: Coumarins, Nanoemulsions, *Pterocaulon balansae,* UV spectrophotometry.

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