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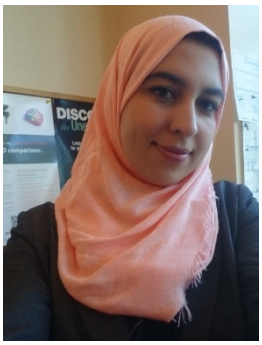

Stability study of *Cynara Scolimus* phenolic compounds during pre formulation of a cosmetic gel

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Formulas based on natural extracts have become increasingly used in the pharmaceutical or cosmetic industry. However, natural compounds are sensitive to handling and storage conditions. In this case, the study of their stability is necessary. Artichoke or "CYNARA *scolymus*" is a plant widely cultivated as food, it contains phenolic compounds that help prevent aging of the skin and have anti inflammatory, anti infectious properties. During this work the stems of artichoke was used as the raw material for the extraction of phenolic compounds, stems are not edible, and this will allow waste recovery as a source of active compounds.

50 g of the plant material was subjected to decoction in 1 liter of water for 30 min, this is the main step for the recovery of the bioactive phenolic compounds contained in the artichoke stems and the decoction was freeze-dried to obtain a dry extract [1]. Gel formulas were chosen for the topical administration of artichoke extract, Carbopol Ultrez 10 was used as the thickening agent (1%, 1.1%, 1.2%, 1.3%, 1.4%, 1.5%), water as solvent (q.s), propylene glycol as co solvent and preservative (15%) and Sodium Hydroxide as a neutralizing agent (q.s). Total phenolic compounds dosage was performed using the method of Folin-Ciocalteu on the dry extract and on the 6 formulations.

Total phenolic compounds of artichoke extract during gel formulation were stables with values varying between 11.53 to 12.86 of EAG/g of dry extract, the pHs were varying between 5.58 to 6.22 allowing topical administration. However, it is interesting to work with smaller amounts of thikening agent since the highest amount of phenolic compounds were found into the 1% Carbopol Gel.