10th Brazilian Conference on Natural Products
XXXVI RESEM
4-7 November 2025, Belo Horizonte, MG, Brazil

Section: 04

DEVELOPMENT OF AN ANTI-AGING SERUM CONTAINING *PASSIFLORA EDULIS* LEAF EXTRACT

Laura Aparecida Evangelista de Carvalho[1], *João Paulo Dourado Abade*[1*], *Claúdio Moreira de Lima*[1]

llauracarvalho@academico.ufs.br

1-Departamento de Farmácia, Universidade Federal de Sergipe, Campus Lagarto, Lagarto, Sergipe, 49400-000, Brazil.

Aging is a natural and irreversible phenomenon that affects everyone, occurring mainly due to the accumulation of free radicals, unstable and highly reactive molecules, that cause damage to biomolecules. This damage, in addition to serious diseases such as cancer and atherosclerosis, can lead to aesthetic manifestations such as the appearance of wrinkles. In this scenario, the search for anti-aging cosmetics and drugs has grown exponentially, especially among middle-aged and elderly individuals, aiming to delay or prevent expression lines and skin changes. Naturally occurring compounds, such as those found in passion fruit (*Passiflora edulis*), have attracted great interest due to their high antioxidant content. The present study aims to develop anti-aging serum formulations containing *Passiflora edulis* extract. The leaf extract was obtained by ultrasound and maceration methods, followed by phytochemical screening of the crude ethanolic extract (EEB) and quantification of total flavonoids and phenolic compounds. Serum formulations containing 5, 10, and 20% EEB were produced and evaluated for physicochemical parameters (pH, density, spreadability, flavonoid and phenolic content) and antioxidant activity using the DPPH method. The extraction yield was 25.3% (ultrasound) and 26.15% (maceration). Phytochemical screening revealed the presence of flavonols, steroids, triterpenes, polyphenols, and saponins. Quantification showed phenolic compound content (75.6 ± 3.7 mg/g) and flavonoids (36.2 ± 1.4 mg/g) in the ultrasound-assisted extract, 75.9 ± 3.9 mg/g of phenolic compounds and 34.1 ± 2.9 mg/g of flavonoids in the extract obtained by maceration. The 20% serum and extract showed high antioxidant activity, as well as adequate pH and spreadability. The serum containing *Passiflora edulis* shows potential as a promising alternative for preventing signs of skin aging.

Keywords: *Antioxidant; Anti-aging; Cosmetics; Phytochemical screening*