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Dermal benefits of essential oil distilled from a high altitude damask rose cultivated in Armenia

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Several components of essential oil distilled from the flowers of *Rosa × damascene* Mill L, were reported to have anti-bacterial, antioxidant and relaxant properties. This is the reason why, apart from the fragrance industry, this oil is being widely used in cosmetics and pharmacopeia. As with any essential oil, the content and composition of it can change significantly, depending on the cultivation methods and terroir. The purpose of this research is to determine the chemical composition and to test biological activities of essential oil distilled from damask rose flowers cultivated in Armenia at an exceptionally high elevation of 1600 m above sea level. The essential oil was obtained by hydro-distillation method in a Clevenger type apparatus and its chemical composition was determined by HP GC-MS setup. As a result of analysis, the main compounds of obtained essential oil were determined to be citronellol (22.28%), nonadecane (15.09%), caryophyllene (10.82%), heneicosane (9.21%), farnesol (6.34%) and citral (6.15%). The antioxidant activity of the essential oil samples was measured through conducting DPPH assay. Minimal inhibition concentrations for both microbiological and anti-fungal properties were measured using the same agar diffusion method. The amount of this oil that can be safely used in cosmetic products was evaluated according to dermal maximum values for its constituents according to "Essential Oils Safety".

Biography

Arpi Avetisyan is a Research Associate at Nairian CJSC; an Armenia based all natural cosmetics manufacturer. Her primary responsibility in the company is technology development for production and scientific research in the field of herbal cosmetics. She is interested in safe use of various herbs and essential oils to address diverse cosmetology issues. Before joining Nairian CJSC, she was a Researcher at the Institute of Chemical Physics of NAS of Republic of Armenia. She has obtained her MS degree in Chemistry from Yerevan State University, Yerevan, Armenia.

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