



HIGH-PERFORMANCE LIQUID CHROMATOGRAPHY TECHNIQUE USED FOR SEPARATION AND IDENTIFICATION OF ROSE EXTRACT

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ABSTRACT:

High-performance liquid chromatography is a technique in analytical chemistry used to separate, identify, and quantify each component in a mixture. It relies on pumps to pass a pressurized liquid solvent containing the sample mixture through a column filled with a solid adsorbent material. Each component in the sample interacts slightly differently with the adsorbent material, causing different flow rates for the different components and leading to the separation of the components as they flow out of the column. The antioxidant and antibacterial activities, and total phenolic contents of Rose flower extracts were investigated. The chemical compositions of these extracts were analysed by HPLC. Tocopherol and carotene were determined by high performance liquid chromatography (HPLC) analysis. Polyphenols such as gallic acid, rutin, quercitrin, myricetin, quercetin, and kaempferol, were detected and quantified in Rosa genus belonging to family Rosaceae. HPLC offers a quick, automated and highly accurate method to identify certain chemical components in a sample. Thus, it is Beneficial for claiming herbal cosmetics products.

KEYWORDS: HPLC, automated, accuracy, herbal cosmetic, rose.

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