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Development and validation of a rapid LC-MS/MS method for simultaneous determination of Kaempferol and Quercetin in *Thespesia populnea* extract

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In this study, a simple and rapid liquid chromatography-tandem mass spectrometry (LC-MS/MS) method was developed and validated for simultaneous determination of Kaempferol and Quercetin in *Thespesia populnea* extract. The compounds were eluted using Gemini C18, (50×2.0 mm, 3µm) with the mobile phase consisting of acetonitrile and 0.3% formic acid in water at the flow rate of 0.400 mL/min. The assay exhibited a linear dynamic range of 25-2500 µg/ml for Kaempferol and Quercetin. The values for both intraday and interday precision and accuracy were within the generally accepted criteria for analytical methods (<15%). Selectivity, linearity, limit of detection (LOD), limit of quantification (LOQ), accuracy and precision were evaluated for all analytes. The proposed method is more accurate and sensitive can be used for the routine quantification of the Kaempferol and Quercetin in the herbal extracts as well as polyherbal formulations.

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