

**COMPARATIVE QUANTITATIVE ESTIMATION OF SECONDARY METABOLITES AND  
HPLC ANALYSIS IN DIFFERENT PLANT PARTS OF *TRIGONELLA  
FOENUM GRACEUM* (L.)**

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**Received: 11 Aug 2018**

**Accepted: 17 Aug 2018**

**Published: 30 Aug 2018**

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**ABSTRACT**

*Medicinal plants used in folk medicine may be an interesting and largely unexplored source for the development of potential new compounds. But it is necessary to isolate the active principles and characterize their constituents for the benefit of human being. Trigonella foenum graceum is one of the most promising medicinal herbs since ancient times. Its seeds and green leaves are used for multipurpose. The fenugreek seed contains a number of important compounds such as volatile oils, flavonoidssaponins, fatty acids and a rich source of polysaccharide galactomannan. In the present study, qualitative & quantitative estimation of Trigonellafoenum-graecum plant extracts like Mature plant leaf and stem, Immature plant (cotyledonary stage) leaf and stem, seeds(Green and brown) and Kasoorimethi(dried plant) were carried out. The comparative study showed that phenolic content was found the maximum in the kasoorimethi. Using TLC presence of flavonoids in mature plant leaf and Kasoorimethi were identified.HPLC analysis detected the presence of Quercetin, rutin, luteolin, and kaempferol. The presence of various secondary metabolites justifies the use of this plant in the medicinal system of healthcare.*

**KEYWORDS:** *Trigonellafoenum-Graecum, Phenolic Content, Flavonoids, TLC, HPLC*