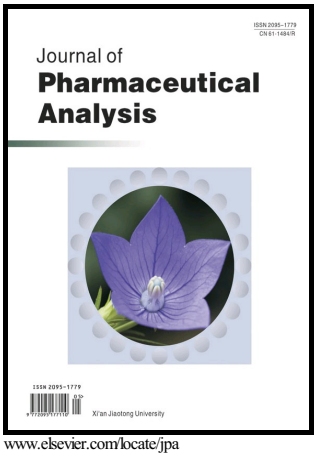

www.elsevier.com/locate/jpa

Identification and characterization of phenolics from ethanolic extracts of Phyllanthus species by HPLC-ESI-QTOF-MS/MS

Sunil Kumar, Awantika Singh, Brijesh Kumar

PII: S2095-1779(17)30016-3
DOI: http://dx.doi.org/10.1016/j.jpha.2017.01.005
Reference: JPHA347

To appear in: *Journal of Pharmaceutical Analysis*

Received date: 25 June 2016
Revised date: 13 January 2017
Accepted date: 17 January 2017

Cite this article as: Sunil Kumar, Awantika Singh and Brijesh Kumar, Identification and characterization of phenolics from ethanolic extracts o Phyllanthus species by HPLC-ESI-QTOF-MS/MS, *Journal of Pharmaceutica Analysis,* http://dx.doi.org/10.1016/j.jpha.2017.01.005

Identification and characterization of phenolics from ethanolic extracts of *Phyllanthus* species by HPLC-ESI-QTOF-MS/MS

Sunil Kumar[a], Awantika Singh[a,b], Brijesh Kumar[a,b]*

[a]Sophisticated Analytical Instrument Facility, CSIR-Central Drug Research Institute, Lucknow-226031, Uttar Pradesh, India

[b]Academy of Scientific and Innovative Research (AcSIR), New Delhi-110025, India

brijesh_kumar@cdri.res.in

gbrikum@yahoo.com

***Corresponding author at:** Sophisticated Analytical Instrument Facility, CSIR-Central Drug Research Institute, Lucknow-226031. Uttar Pradesh, India. Tel.: +91 0522 2612411 18x4507.

Abstract

Phyllanthus species plants are rich source of phenolics and widely used due to their medicinal properties. A liquid chromatography tandem mass spectrometry (LC-MS/MS) method was developed using high-pressure liquid chromatography coupled with quadrupole time-of-flight tandem mass spectrometry (HPLC-ESI-QTOF-MS/MS) for the identification and characterization of quercetin, kaempferol, ellagic acid and their derivatives in ethanolic extracts of *Phyllanthus* species. The chromatographic separation was carried on Thermo Betasil C8 column (250 mm × 4.5 mm, 5 μm) operated with 0.1% formic acid in water and 0.1% formic acid in methanol as the mobile phase. The identification of diagnostic fragment ions and optimization of collision energies were carried out using 21 reference standards. Total 51 compounds were identified which include 21 compounds identified and characterized unambiguously by comparison with their authentic standards and remaining 30 were tentatively