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Ultra performance liquid chromatography mass spectrometric analysis for rapid quantitation of isoquinoline alkaloids in *Thalictrum reniforme*

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Thalictrum (Ranunculaceae) is a very widely distributed genus of medicinal plants in India and has been reported to have many therapeutic properties like diuretic, stomachic, antiseptic, aperient etc. Approximately 290 alkaloids were reported from the 80 species of the genus *Thalictrum*. Alkaloids from *Thalictrum* are reported to exhibit various pharmacological activities like anti-amoebic, antimicrobial, anti-tumor and antiviral. Protoberberine and aporphine alkaloids are reported the major components in this plant. In present study, we present simultaneous quantification of some alkaloids in *Thalictrum reniforme* using ultra performance liquid chromatography coupled to hybrid triple quadrupole/linear ion trap mass spectrometry (UPLC-QqQLIT-MS) operated in the multiple reactions monitoring acquisition. The separation was achieved on an ACQUITY UPLC CSH™ C18 column using a gradient mobile phase at flow rate of 0.3 mL/min. Stock solutions of standards were prepared in methanol within the ranges from 0.5 to 1500 ng/mL. The calibration curves were constructed by plotting the peak areas versus the concentrations of each analyte. Five PBAs were quantified in which Berberine, Jatrorrhizine and Palmatine were detected in significant amount.

Biography

Vikas Bajpai is pursuing his PhD from CSIR- Central Drug Research Institute, Lucknow. He is Senior Research Fellow (Council of Scientific and Industrial Research, New Delhi). He has more than six years' experience in working and handling with many hyphenated mass spectrometric techniques. Currently he is engaged with the development of mass spectral fingerprints of natural products to check the different level of variations, adulteration from intact plant part using various mass spectrometric techniques.

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