



## Quantitative Analysis of Elements in Some Efficacious Medicinal Plants by Using ICPMS and IRMS Method

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**Abstract:** Determination of chemical composition and element profile of medicinal plants used as pharmaceutical agents and herbal products is very important for understanding their beneficial and therapeutic value. The study aims to carry out a Quantitative elemental analysis of leaves of five efficacious medicinal plants of Bhilai in Chhattisgarh, India by using Inductively Coupled Plasma Mass Spectrometry (ICPMS) and Isotope Ratio Mass Spectrometry (IRMS) methods. The elements found in the dried leaf samples of *Clitoria ternatea*, *Calotropis gigantea*, *Mentha Arvensis*, *Aegle marmelos* and *Catharanthus roseus* were Fe, Co, Cu Cr, Mn, Zn, Se, Mo, As, Cd, Ni and Pb. To verify the precision of the proposed spectrophotometric techniques, standard reference material is used. The Pearson Correlation analysis method is used for the interpretation of the elements analysed. The investigation results confirm that the leaves of selected medicinal plants as a potential source of twelve elements, that are essential for the nutrition and health of human beings. The results obtained in this study will be useful for herbal medicine, alternative medicine and herbal products to ensure the standard.

**Keywords:** Elemental analysis, Herbal medicine, ICP-MS, IRMS, Medicinal plant, Pearson correlation

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