

**Comparative studies of elemental composition in leaves and flowers of *Catharanthus roseus* growing in Bangladesh**

Shahin Aziz<sup>1</sup>, Koushik Saha<sup>2</sup>, Nasim Sultana<sup>1</sup>, Husna Parvin Nur<sup>1</sup>, Md Aminul Ahsan<sup>1</sup>, Shamim Ahmed<sup>1</sup> and Md Kamal Hossain<sup>2</sup>

<sup>1</sup>BCSIR, Bangladesh

<sup>2</sup>Jahangirnagar University, Bangladesh

**Aim:** During present study, we selected the leaves and flowers of *Catharanthus roseus* to investigate their elemental composition due to the plant's wide application in the indigenous medicinal system and its chemical constituents' importance.

**Methods:** The atomic absorption spectrophotometer (AAS) was used for quantitative analysis of various elements.

**Results:** Total 13 important elements were analyzed in leaves and flowers of *Catharanthus roseus*. Results indicated the presence of Na, K, Ca, Mg, Cr, Fe, Zn, Al, Cu, Ni, Pb, Cd and MN in both leaves and flowers. The most important finding of the work is that, leaves of *Catharanthus roseus* showed high concentration of all elements except K and Zn, while flowers of *Catharanthus roseus* showed higher concentration of K and Zn.

**Conclusions:** The elemental composition in both leaves and flowers of *Catharanthus roseus* were found to be different. Therefore, different parts of this medicinal plant are enriched in some micro and macro nutrients like Fe, Ca, Na, K, Zn, which are very important for biological metabolic system, as well as, human health.

shaziz2408@yahoo.com