

Joint Event

9<sup>th</sup> World Congress on Chromatography | 24<sup>th</sup> International meet on Pharmaceutical Biotechnology  
May 13-14, 2019 | Paris, France

## Characterization of anthocyanins from *Camellia sinensis* growing in Kangra Valley by UPLC/Q-TOF-MS analysis and their stability studies

**Amita Kumari, Ashu Gulati and Sushil Kumar Maurya**

CSIR-Institute of Himalayan Bioresource Technology, India

Extraction of anthocyanins from purple tea shoots (*Camellia sinensis*) growing in Kangra valley, India was carried out using column chromatography. Characterization of anthocyanins was done by ultra-performance liquid chromatography-quadrupole-time of flight mass spectrometry. Fourteen (14) anthocyanins viz., pelargonidin-3- 5-di-glucoside, pelargonidin-3-sophoroside, pelargonidin-3- glucoside-5-glucoside, delphinidin-3-rutinoside, pelargonidin-3-rutinoside, cyanidin-3-5-O-di- glucoside, cyanidin-3-rhamnoside, pelargonidin-3-glucoside, cyanidin-3-rhamnoside, cyanidin-3-rutinoside, cyanidin-3-rutinoside-5-glucoside, delphinidin-3-glucoside, catechinpelargonidin-3-rutinoside dimer, cyanidin-3-glucoside, peonidin-3-rutinoside, peonidin-3-glucoside, peonidin-3-sophroside-5-glucoside were characterized on the basis of mass fragmentation pattern. The anthocyanins content ranged between  $0.066 \pm 0.038$  to  $2.341 \pm 0.015\%$  on dry weight in purple tea shoots. Catechin-rich fraction was extracted as a by-product from purple tea shoots and identified by HPLC. Intermolecular copigmentation was performed with catechin-rich extract and ascorbic acid for increasing the stability of anthocyanins. Catechin-rich extract showed higher stability of anthocyanins compared to ascorbic acid, which was investigated using UPLC-QTOF-MS. These copigmented anthocyanins can be used as a natural food colorant.