

Amino and fatty acid compositions in Haruan traditional extract (HTE)

ABSTRACT

Evaluation of amino and fatty acids compositions in Haruan Traditional Extracts (HTE) was done using HPLC and GC methods. The HTE contained at least 17 amino acids with glutamic acid, glycine, leusine, aspartic acid, proline, alanine and arginine are the most, with values 1.87-43.13 mg/g, 21.80-80.85 mg/g, 7.85-40.19 mg/g, 13.85-44.07 mg/g, 9.49-45.46 mg/g, 11.38-35.25 mg/g and 5.99-21.79 mg/g, respectively. Meanwhile, the highest percentage of fatty acids is palmitic acid; 3.54-26.84 % of total protein. The others major fatty acids are stearic acid, oleic acid and linoleic acid with values 3.25-15.90 %, 1.40-27.68 %, 0.51- 7.82 % of total protein, respectively. HTE also found to have 4 extra bioactive compounds labelled as 1 to 4 on chromatographic tracing which in line with previously finding. It is concluded that the HTE is containing all the important amino acids plus some fatty acids, which is the basis to conduct antioxidant composition in both fresh Haruan and the HTE which was claimed to have wound healing properties. Comparative study was also carried out in various other extraction protocols, including commercial product.

Keyword: Haruan channa striatus; Haruan traditional extract; biochemical analysis; Amino acid; Fatty acid profiles