Amino acid composition and protein contents of Fagonia indica

A.M. KHAN* A.H. SIDDIQUI* AND Z.H. ZAIDI**

**Department of Chemistry, University of Karachi, Karachi. **HEJ Postgraduate Institute of Chemistry, University of Karachi, Karachi-32, Pakistan.*

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Chemical studies on fagonia indica have not been carried out in detail. Ahmed *et al.*[1-3] have reported the lipid , carbohydrate, triterpenoid and alkaloidal constituents in some varieties of Fagonia. Other workers[4-6] have reported that it also contains ceryl alcohol chivonic acid and saponins. However, no studies have been carried out on its free amino acid and protein contents. In this communication we report the free amino acid composition and water soluble protein contents of this plant.

The fresh plant was cut into small pieces, defatted and soaked in water. The water soluble portion was used for the determination of free amino acid and protein contents. The concentrated water extract was separated into high molecular and low molecular weight fractions over a G-25 Sephadex column (2.5 cm x 60 cm) using 0.05M acetic acid. The low molecular weight fraction was further subjected to ion exchange chromatography Dowex 50 x 4 (0.9 x 30 cm) for separation of carbohydrate and amino acids. Elution was first carried out by 0.05 M acetic acid and later by 10% ammonia solution. The ammonia fraction was concentrated, ammonia removed and amino acid analysis carried out on Amino acid Analyser Beckman 120C using citrate buffer and two column system. It was found to contain, Alanine, Arginine, Glycine, Isoleucine, Leucine, Lysine, Phenyalanine, Proline, Tyrosine and Valine.

The protein contents were determined by Gel-electrophoresis using 7% poly-acrylamide Gel and pH 8.3 tris-HCl buffer. Five protein bands were observed. Separation and characterization of these will be reported later.

References

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