

NOTES

A Rich Source of Amino Acids: *Crotalaria juncea* Seed

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The present paper deals with the isolation and identification of various amino acids from the seeds of *Crotalaria juncea*.

*Crotalaria juncea*¹⁻³ belongs to natural order Leguminosae, which is commonly known as sunn hemp in Hindi. It is found throughout India, Malaya and Ceylon.

The Aurvedic system of medicine describes that the leaves of the plant are used as analgesic and the flowers are used in the treatment of leucorrhoea and blood diseases. The seeds are used to purify the blood as cooling, astrigent and good for skin diseases. The present paper deals with the isolation and identification of various amino acids from the seed of *Crotalaria juncea*.

About 2 kg. of air dried and finely powered seeds of the plant were extracted with petroleum ether (40–60°C) in a soxhelt extractor for 80 hrs. The petroleum ether extract on concentration under reduced pressure gave a brown semisolid mass, which separated by filtration. The study of filtrate is under investigation.

The residue was then extracted with hot water and filtered. The filtrate was subjected to paper chromatography over Whatmann No. 1 filter paper using a mixture of *n*-butanol and 3% ammonia (1 : 1)⁴ and (II) tertiary amyl alcohol as eluents. The developed chromatograms were identified with the help of various spray reagents⁵⁻⁹. The quantitative estimation of amino acids was done by Price¹⁰ and defined in terms of glycine. The results are recorded in Table 1.

TABLE 1
AMINO ACIDS FROM THE SEEDS OF *CROTALARIA JUNCEA*

Amino acid	mg glycine/16 mgN	Amino acid	mg glycine/16 mgN
Glycine	4.23	Alanine	1.64
Leucine	2.48	Threonine	0.94
Arginine	1.98	Phenylalanine	0.86
Valine	1.82	Alanine	1.64
Lycine	1.38	Tyrosine	0.76
Cystine	0.64	Aspartic acid	1.82
Histidine	1.02	Isoleucine	1.94

The result revealed that glycine, leucine, arginine, valine, lycine, cystine, histidine, alanine, threonine, phenylalanine, alanine, tyrosine, aspartic acid and isoleucine are present in the seeds of *Crotalaria juncea*.

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