

NOTE

**Analysis of Carbohydrates from the Seeds of
Centratherum anthelminticum Kuntze**

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In the present note we reported our results on the analysis of carbohydrates from the seeds of *Centratherum anthelminticum* kuntze.

Centratherum anthelminticum Kuntze¹⁻⁴ (N.O. Compositae) is known as 'Somraj' and 'Kalajiri' in Hindi. The plant is widely distributed throughout India upto 5500 feet in the Himalayas and Khasia hills. This plant was locally collected from Sagar hills. The seeds have a hot sharp taste. It is reported to be of great medicinal importance in leucoderma and fever. It is also reported to be used in asthma, kidney troubles, cough and also used to remove blood from the liver.

The powdered seeds (2 kg) of *Centratherum anthelminticum* were mixed with small quantity of calcium carbonate in distilled water (500 mL) and refluxed on a water bath for 2 h. The aqueous extract was separated by decantation and the powder was further refluxed three times with distilled water. The aqueous filtrates were combined and 10% w/v solution of lead acetate added till the precipitate was obtained. The solution was filtered, small quantity of ammonia was then added to the filtrate and H₂S gas was bubbled through the filtrate in order to remove lead acetate as lead sulphide. Lead sulphide is removed by filtration. The neutral solution of filtrate obtained was concentrated over water bath under reduced pressure to a gummy mass.

Identification of sugars

The spots of the concentrated test mixture and authentic sugars were applied on Whatman No. 1 filter paper with the help of fine capillaries and chromatograms were developed in the following solvent systems:

(i) *n*-Butanol : Acetic acid : Water (4 : 1 : 5 v/v)⁶.

(ii) Iso-propanol : Pyridine : Water : Acetic acid (8 : 8 : 4 : 1 v/v)⁷.

The developed chromatograms were dried in air and sprayed with aniline hydrogen phthalate reagent⁵ and kept at 105°C for 5 min in an oven to develop the colour. The R_f values of the test sugars were then confirmed with authentic sugars (Tables 1 and 2).

TABLE-1
 SOLVENT SYSTEM: (i) *n*-BUTANOL : ACETIC ACID : WATER (4:1:5 v/v)
CENTRATHERUM ANTHELMINTICUM

S. No.	Sugar	R _f found	R _f reported ⁶
1.	D-Lactose	0.088	0.09
2.	D-Raffinose	0.045	0.05
3.	L-Sorbose	0.230	0.20
4.	D-Arabinose	0.170	0.14
5.	L-Rhamnose	0.400	0.37
6.	D-Glucose	0.160	0.18
7.	D-Galactose	0.180	0.16
8.	Maltose	0.090	0.11
9.	D-Fructose	0.260	0.23

TABLE-2
 SOLVENT SYSTEM: (ii) ISO-PROPANOL : PYRIDINE : WATER : ACETIC ACID
 (8:8:4:1 v/v)

S. No.	Sugar	R _f found	R _f reported ⁷
1.	D-Lactose	0.44	0.46
2.	D-Raffinose	0.48	0.45
3.	L-Sorbose	0.64	0.68
4.	D-Arabinose	0.34	0.31
5.	L-Rhamnose	0.84	0.82
6.	D-Glucose	0.62	0.64
7.	D-Galactose	0.64	0.62
8.	Maltose	0.60	0.58
9.	D-Fructose	0.66	0.68

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