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Short Communication

Carbohydrate Contents of the Authelmintic Plant Boswellia Serrata

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Abstract

Our research objective is to analyze the carbohydrate present in Boswellia Serrat. The existence will be assured by paper chromatography. Sugar content were found to 3.12% mono saccarid and di saccarid had found in it. D-Galactose-D-Mannose-D-Glucose-D-Fructose–D-Maltose- L-Rhamnose-Sucrose.

Keywords: *Boswellia Serrat,* roots, paper chromatography, sugars.

Introduction

Boswellia Serrat is commonly known as salai in Hindi, Sallaki in Sanskrit, Indian olibanumtree in English[1]. Different parts of this plant are used anthelmintic, for curing Rheumatism and Nervous disease. The plant is distributed in the hilly region of the country also occurs in quite abundance in the plains of Central India.

The gum resin is used as a stimulant antirheumatidu anti anfilammantory treatment for brain tumors chronic anflimmatory skin diseases as well as chronic inflammatory bowel dieses, urinary disorder obesity and scrofulous affections. The oil obtained from the resin is used as demulcent, incolic, chronic and topical ulcers and for ringworm.

Materials and Methods

The roots of the plant Boswellia Serrata were procured from standard herb supplier and identified by the reputed taxonomist of this region.[2]

About 300 gm of air-dried, powdered and defatted roots of Boswellia Serrata were refluxed with 350 mL of distilled water in a 500 mL beaker for 35 hours. The water extract was filtered and concentrated by evaporation. The extract was filtered by decantation.

A solution of Lead acetate was mixed to septrate the tanning in the form of lead tannate. It was separated and precipitate washed with small amount of pure water. Access of lead acetate was isolated by providing hydrogen sulphide gas in the solution.

Quantitative Analysis of Reducing Sugars: The concentrated solution of sugars thus obtained was titrated with standard Benedicts solution, on analysis it was found to contain 3.2% (w/w) of glucose.

Chromatographic Study: The spot of concentrated extract was applied on Whatman filter paper No.1 of a fine capillary and chromatogram was developed by descending technique in the solvent system; Butanol-Acetic acid-Water (5:1:6). The solution was concentrated under applied pressure.

Red precipitate occurred which was soluble in water. Soluble compound was concentrated and separated with alcohol Chloroform, ethyl acetate and heptanes.

Table-1
Solvent system-butanol-acetic acid-water (5:1:6 V/V) spraying reagent aniline Hydrogen Phthalate

Sugar	R_f found	R_f reported
D-galactose	0.17	0.18
D-Mannose	0.18	0.19
D-glucose	0.19	0.20
D-fructose	0.25	0.25
Maltose	0.36	0.37
L-rhamnose	0.38	0.38
Sucrose	0.61	0.61

Results and Discussion

The developed chromatogram was air dried, then sprayed with Aniline Hydrogen Phthhalate, and heated for 20 min in an air oven to develop the colour (spot). The R_f values were measured as recorded in the Table-1. The identity of various sugars was also confirmed by chromatography with authentic samples[3]. The observation and results are reported in Table-1.

Conclusion

The observation led to conclude the result regarding the presence of 3.2% reducing sugars, while, the following carbonydrate found in it D-Galactose-D-Mannose-D-Glucose-D-Fructose–D-Maltose-L-Rhamnose-Sucrose.

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