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Nutritive evaluation of Seeds of Sterculiya urens:

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Abstract
Sterculia urens belongs to family Malvaceae. The tree is highly valued ethano botanically .A large number of compounds have been isolated from fruits ,stem and bark of the plant .In the present investigation ,chemical investigation of seeds has been taken up .
Keywords*: Ethano botany, medicinal uses, Seeds*

I. Introduction:

Sterculia urens belongs to family Malvaceae.It is a medium sized tree commonly called Katira,Kulu, Indian Tragacanth.

The plant is native to India and found in tropical Himalayan ,Western ,Central India and Rajasthan . Studies have shown that the tree is widely used by tribals in the treatment of various diseases.

The bark of the tree excludes gum karaya (,12).This is used in food stuff as emulsifier and stabilizer. The gum is also used to treat blisters,blood dysentry and stomach(3,4) disorders. The gum is given as medicine for gynaecological(5,6) disorders .Stem bark is powdered and mixed with turmeric and it is used in the treatment of arthritis(7) .Seeds are oblong brown coloured and seed oil is reported to be edible.(8)The seeds of the tree are roasted and eaten .During famine young tender roots are also consumed . Though this tree has been helping tribals in raising economy(9),still it has received scanty attention.In this communication ,we have under taken analysis of seeds.

II. Experimental:

The seeds were
collected from forests of Kota divisions of Rajasthan. The seeds were washed with water and air dried for 4 to 5 days. Identification of the seeds was done with the help of Botany,Department, University of Rajasthan Jaipur .
Seeds were grounded in cyclotec tecator mill. Ashing Singh was done in Muffle furnace (T empo Make). Calcium was determined titrimetrically using centrifuging machine .Iron and Phosphorus were determined on spectrophotometer . Seeds were subjected to preliminary analysis with respect to moisture, protein ,fat and minerals .Procedures of A.O .A.C.(10)were used for determining proximate principles.
Moisture Weighed about 10 grams of material in a previously weighed porcelain dish .Dried the material in an air oven maintained at105°C,for 5 hours, cooled it and weighed. Heated it again at same temperature for 30 minutes,cooled and weighed.Repeated the process of heating ,cooling and weighing till difference in weights between successive reading was less than 1 mg.
% moisture =

(Initial weight - final weight) × 100 / weight of the sample

Ash
Ash was determined in muffle furnace at 550 degree° C .Weighed 5 to 10 grams of sample in a silica crucible. (previously heated to 600°c and cooled).Ignited the material by first heating over a low flame till it gets completely . Kept it in muffle furnace at 500° centigrade for its complete ignition.
Cooled it in a desiccator and weighed Repeated the process of heating and cooling till twoconsecutive weights were same and the ash isalmost white is green colour .%of Ash= weight of ash ×100 /weight of the sample

Protein
It was estimated by estimating the nitrogen content of material and multiplying nitrogen value by factor of 6.25.Estimation of nitrogen was done by Kjelaldahl method.(11)

Fat
It was estimated by extracting the dry material with hexane .% fat was calculated as weight of hexane extract×100 /weight of the sample

Crude Fibre
Accurately weighed 2.5 gram of the sample and transferred it in a 500 ml beaker .Added 2 50 ml of 0.25N sulphuric acid. Boiled the mixture for 30 minutes keeping the volume constant by addition of water at frequent intervals .Filtered the mixture and wash the residue with hot water till it becomes free from acid.Transferred the residue to the beaker and added 2 50 ml of 0.313 N NaOH to it. Finally washed the residue with alcohol ether 1:1 and transferred it to a previously weighed and dried crucible.Dried the crucible in oven at 105 ° C. Repeated the process of weighing and drying till two consecutive reading were same . Crude fiber was calculated as
%crude fiber = weight of fiber x 100/ weight of the sample

Minerals
First of all solution was prepared calcium was estimated as calcium oxalate by precipitating calcium from ash solution with saturated ammonium oxalate solution

Phosphorus
It was estimated by measuring colori materially the blue colour formed when ash solution is treated with ammonium mol blade and phosphorus formed is reduced

Iron
Iron was determined Iron determined colorimetrically making use of the fact that ferric ion gives blood red colour with potassium thiocyanate solution

III. Results And Discussion

As is evident from results cited in tables of proximate and mineral element composition ,data are in good agreement with results reported by earlier workers(8).The use of these seeds by tribals is fully justified .

IV. Conclusion

It can be concluded that recipes could be made from flour of these seeds after analyzing toxic factors in them. The medicinal roles of these seeds could be enhanced. Thus revival of forgotten food value of forest will be restored.It will reserve the trend and prompt planting with conservation of such valuable trees and will help a long way to improve environment .

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