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Original Research Paper

Ayurveda

ANALYTICAL STUDY OF GOKSHURA CHURNA

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ABSTRACT In ancient era, Ayurved physicians used to collect medicinal plants personally and prepare formulations to treat the patients. In current scenario, it is very difficult for physicians or researchers to collect the raw drug material personally due to various reasons. Hence, physicians/researchers depend on the vendors for the medicinal plants / raw material where the possibility of adulteration is in evitable.In the current study, *Goksura Churna* was prepared according to the reference mentioned in Ayurveda classics and it was subjected to different analytical tests like organoleptic properties, pH value, and for the identification of materials, morphology and chemical composition,Qualitative Analysis, thin layer chromatography. Fresh *Gokshur* fruit was collected from the village area of Baroda, Gujarat. collected plants were allowed to dry in air and warmth. For analysis of drug, book of *Rashshastra* and *Bhaishjya Kalpana* as well as *Dravyaguna* were screened accordingly.The fruit showed the presence of Alkaloids, Saponin, Amino acid & Flavonoid.Here the observations and results obtained useful for further pharmacological and therapeutically evaluation along with the standardization of plant material.

KEYWORDS : *Gokshura churna*, Standardization, Quality tests, PH, Physicochemical parameters

INTRODUCTION:

India having a rich heritage of traditional medicine constituting with its different components like Ayurveda, Siddha and Unani. Botanical constituent of major part of these traditional medicines. The development of these traditional systems of medicines with the perspectives of safety, efficacy, and quality will helps not only to preserve the traditional heritage but also to rationalize the use of natural products in healthcare. ayurvedic medicine used as a diuretic and cardiac tonic. It increases vitality and decrease body weakness. It is a excellent remedy for sexual performance as per WHO guidelines.

Earliest ayurveda scholars have formulated different drug preparations to achieve desired therapeutic actions quickly from small dosage without producing other undesired effects. The process of making such formulations involved crude extraction, dependent upon the nature and solubility of active components from plants to accomplish anticipated action. Analytical study plays an imperative role in the standardization of the drugs. Ayurveda, the primordial system of medicine is gaining acknowledgement through out the World and many herbal, metallic and mineral drugs are now clinically tested and established. However, one of the impediments in the acceptance of these medicines is the lack of standard quality control profiles.

The superiority of the drug that is the profile of the constituents in the concluding product has implication on its efficacy and safety.In the current study, *Goksura Churna*[1].

MATERIAL AND METHODS:

Fresh *Gokshur* fruit was collected from the village area of Baroda, Gujarat. collected plants were allowed to dry in air and warmth. For analysis of drug, book of *Rashshastra* and *BhaishjyaKalpana* [2] as well as *Dravyaguna* were screened accordingly.

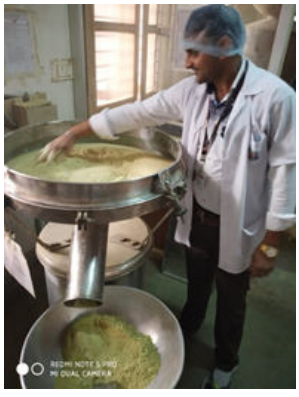
AIM AND OBJECTIVES:

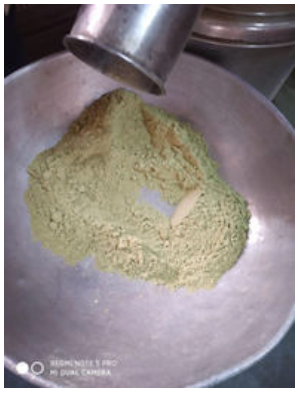
- Prepration of Gokshur Churna GMP certified pharmacy as per classical explanation
- Observe the physiocochemical Qualitative Charactrs of Gokshur Churna
- Observe the organoleptic characters of Gokshur Churna

METHOD OF PREPARATION OF DRUG:

GOKSHUR CHURNA:

Dried fruits of *Gokshur* plant was taken and powered with the help of disintegrator, then fine powder was obtained b sieve 120.





METHOD FOR ANALYTICAL STUDY OF DRUG:

a. Loss on drying at 105°C
b. Total ash value
c. Acid insoluble Ash
d. Water soluble extractive
e. Alcohol soluble extractive
f. PH
g. Mesh analysis

ANALYSIS OF DRUG:-

Table no 1. *Rasa Panchaka* of *Gokshura Churna*

Criteria	Gokshura
Rasa	*Madhura, Katu ,*

Guna	*Sheetala, Laghu, Snigdha*
Virya	*Sheet, Ushna*
Vipaka	*Madhura, Katu*
Prabhava	*Ashmarinaashana, Mootrala karmas*

Above table shows *Gokshur* [3] having *Madhurrasa,sheet guna* and sheetvirya also, madhura vipaka[4] and ashmari nashak and mootrala prabhav so it can be used in the diseases of urogenital sysyem and specially in ashmari.

TABLE NO .2

Organoleptic Characters of Gokshura Churna

The fruits of Tribulus terrestris and were evaluated for organoleptic characters like color, odor, taste and texture and details are given in the below Table.

Sr no	Parameter	Gokshur
1	Colour	Light green
2	Odour	Characteristic
3	Taste	Sweet
4	Consistency	Powder
5	Loss on drying at 105°C (% w/w)	7
6	Total ash value (%w/w)	12
7	Acid insoluble Ash (%w/w)	11
8	Water soluble extractive (%w/w)	32
9	Alcohol soluble extractive(%w/w)	25
10	PH(5% aqueous)	5.5
11	Mesh analysis	
	10-20 mesh (%w/w)	100
	20-40 mesh (%w/w)	98
	40-60 mesh (%w/w)	85
	60-80 mesh (%w/w)	80
	80-120 mesh (%w/w)	10.13

Table No 3

Qualitative Analysis of Gokshura Churna

Sr no	Solvent	Gokshurchurna
1	Glycoside sugar	Absent
2	Alkaloids	Present
3	Saponin	Present
4	Amino acid	Present
5	Flavonoid	Present
6	Tritrrpinoides	Absent
7	Sodium	Absent
8	Potassium	Absent

Above table shows qualitative analysis of Gokshurar.The fruit of Gokshurapowder showed the presence of Alkaloids, Saponin, Amino acid & Flavonoid.

Result of Qualitative Analysis of Gokshura Churna.

Coarsely powdered drug sample (5 g) was macerated with 100 ml methanol in a closed flask for 24 hours. The flask is shaken intermittently during the first 6 hours and allowed to stand for 18 hours. This process is consecutively done three times. Then the extract was filtered, concentrated distillation and make up the volume up to 10 ml with methanol. Different solvent systems were tested by trial and error method for thin layer chromatography for gokshurachurnaThe results of Qualitative tests of fruit of gokshura (Tribulus terrestris Linn) is given in Table .

Extract: methanol soluble
Solvent system: chloroform: Methanol: Acetic acid (7.5:2.5:0.2)
Distance travel by solvent: 6.5 cm

TABLE no 4.

THIN LAYER CHROMATOGRAPHY GOKSHURCHURN (Tribulusterrestris Linn.)

Spot no	Day light		Long UV		Short UV	
	Color of spot	RF value	Color of spot	RF value	Colour of spot	RF value
1	Light orange	0.09	Light pink	0.09	Light yellow	0.09
2	Orange	0.23	Brownish pink	0.23	Greenish yellow	0.57
3	Light yellow	0.47	Dark brown	0.31	yellow	0.76
4	Light green	0.57	Pinkish brown	0.41	Greenish yellow	0.79
5	Brown	0.76	Orange brown	0.57	-	-

DISCUSSION:-

Tribulus terrestris Linn (Zygophyllaceae) is a commonly used medicinal plant in Ayurveda. The use of the root of Tribulus terrestris Linn.is mentioned in many formulations but, in clinical practice, the aerial parts, especially the fruit, are commonly used. Since the drug is used extensively in Indian traditional medical system, the present work was taken up with an objective to lay down detailed pharmacognostical and phytochemical standards, which would contribute significantly to quality control of medicinally useful Tribulus terrestris Linn. The fruit showed the presence of Alkaloids, Saponin,Amino acid &Flavonoid. Here the observations and results obtained useful for further pharmacological and therapeutically evaluation along with the standardization of plant material.

CONCLUSION:-

This study can be conclude the physicochemical standardization of herbal formulation of GokshurChurna was carried out.The distinct ingredients of the formulation were authenticated and standardized as per guidelines and Indian Herbal Pharmacopoeia. Organoleptic along with the preliminary phytochemical evaluation of fruit of Gokshuracon firmed the quality and purity of plant and its identification.The current observations can be considered as a lead for further studies.

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