EVALUATION OF POWDER MICROSCOPY AND PHYSICOCHEMICAL STUDIES ON THE FRUIT OF AMALAKI (EMBLICA OFFICINALIS GAERTN)

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INTRODUCTION
Local name of Amalaki (Embilica officinalis Gaertn., family Euphorbiaceae) is Amla. Amalaki is one of the most celebrated herbs in the Indian system of traditional medicine, with intense regard in the minds of common people. Amalaki is eaten raw or cooked into various dishes, also murabba a sweet dish indigenous to the northern part of India (where in the berries are soaked in sugar syrup for a long time till they are imparted the sweet flavor) is traditionally consumed after meals. Amalaki is easily available, easily identified by the common people and also cost effective drug. It is considered as a single herb treatment for majority of the disease. It helps in maintaining the balance in all the three doshas that is vital for proper functioning of the body. It is widely used in Ayurvedic preparations as one of the prime Rasayana dravya like Chyavanaprasha, Amalaka Rasayana, Amalaka avaleha, Bramha Rasayana, Triphala Rasayana, etc. Amalaki is classified under Kustaghna, Virechanopaga, Kasahara, Jwarahara, Prajasthapana and Vayasthapana. Aqueous as well as ethanol extract of the fruits of Amalaki have been reported to possess cytoprotective and immunomodulating property in vivo and in vitro. Ethanol extract of the fruit prevented the country made liquor and paracetamol induced liver damage in rats and mice, respectively. Emblicanin A and B enriched fraction from fresh juice prevented the iron-induced hepatic damage in rat. Aqueous extract of dried fruit prevented the hepato-and renal- toxicity of heavy metals like lead and aluminium in mice.

BOTANICAL DISCRIPTION-
A medium sized deciduous tree, it is found throughout India. Occur commonly in tropical & subtropical regions. Fruit is a compact, heavy, fleshy drupe, almost globular in shape, 3 to 4 cm in diameter, smooth shining, shows 5 to 8 longitudinally running furrows and minute light coloured specks, a depression at the base and at the top, indicating the scar of pedicel and style, on drying it splits longitudinally, exposing the hard mesocarp and endocarp, and become highly shrivelled. Fresh fruits are yellowish green in colour, dried one are greyish white, dark brownish or black in colour. Odour characteristic; taste slightly bitter and sour, followed by a delicately sweet astringent feeling. Bark is light, greyish in colour. Leaf are small, very closely set in pinnate form giving a feathery appearance. Flowers are monoecious, greenish, yellow in axillary clusters. Flowering & Fruiting time are Autumn to spring season.

AYURVEDIC PROPERTIES:-
Rasa: Amla, Kasaya, Madhura, Tikta, Katu.
Guna: Laghu, Rukṣa.
Virya: Sita.
Vipaka: Madhura.
Dosakarma: Tridosahara

MATERIAL & METHOD
Amalaki (Emblica officinalis Gaertn.), has been identified by Prof. V.K. Joshi, Department of Dravyaguna, B.H.U. The mature fruit of Amalaki was collected from the Ayurvedic Dravyaguna garden, B.H.U. Fruit was pulverized in the mechanical grinder to a moderate fine powder to carry out powder microscopic studies and was stored in a well closed airtight vessel for further analysis.

PHYSICO-CHEMICAL ANALYSIS OF FRUIT OF AMALAKI-

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<td>Description</td>
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DISCUSSION AND CONCLUSION

The fruits of *Emblica officinalis* Gaertn were collected and analysed the various standardization parameters. Powder microscopy results showed the presence of Sclereids from endocarp, Epidermal cells, Parenchyma and Pitted vessels. Physiochemical parameters of the fruits of *Emblica officinalis* Gaertn are tabulated. Total ash value of plant material indicated the amount of minerals and earthy materials attached to the plant material and results showed total ash value content was 2.64% w/w. The negligible amount of acid-insoluble siliceous matter present in the plant was 0.54% w/w. The water-soluble extractive value was 60.21% w/w.

REFERENCES