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PHARMACOGNOSTICAL AND PHYSICOCHEMICAL EVALUATION OF "DEEPNI-YA MAHAKASHAYA"

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ABSTRACT

Agnimandya and loss of appetite is the most typical problem in the present scenario. Ayurveda has its own concepts like agni, dosh, dusty, etc. Agni is one of the concepts which take the main role of digestion and produces a variety of diseases. according to charak Samhita Deepniya mahakashaya act on agni dealt with agnimandya. acharya charak described Deepniya mahakashaya in sutra sthan in charak Samhita. ten drugs of Deepniya mahakashaya is pippali, pippalimula, Chavya, chitraka, shunthi, Amlavetas, marich, Ajmoda, bhallataka, hingu. this paper seeks to present a review on pharmacognostical and physiochemical evaluation of Deepniya mahakashaya drugs.

Keywords: *Deepniya mahakashay, Agnimandya, Pharmacognosy, Pharmaceutics*

INTRODUCTION

According to Ayurveda, the major cause of various vyadhi is Agnimandya.[1] Malfunction of agni produce Ama. It means indigested food particle. Deepniya mahakashay help to increase agni. Acharya charak described Deepniya mahakashay in fourth chapter of sutra sthan in charak Samhita. Ten drugs of Deepniya mahakashay is pippali, pippalimula, Chavya, chitraka, shunti, Amlavetas, marich, Ajmoda, bhallataka, hingu.[2]

Definition of deepan: According to laghu vagbhata in ashtang hridaya Deepan means the drug which stimulate Agni (Digestive fire)[3] Acharya Sarangdhar says about deepan karma is Agni sandhukshana means process which stimulate digestive fire but do not digest the Ama.[4]

MATERIAL AND METHODS:

Collect the raw material of all drugs which in the Deepaniya mahakashay then prepair all yavakuta form separately and combined equal quantity. The patient was advised to make decoction with proper method.

The analysis of drugs was carried out in the pharmaceutical chemistry laboratory of Deendayal research institute, Chitrakmool satna (m.p.)

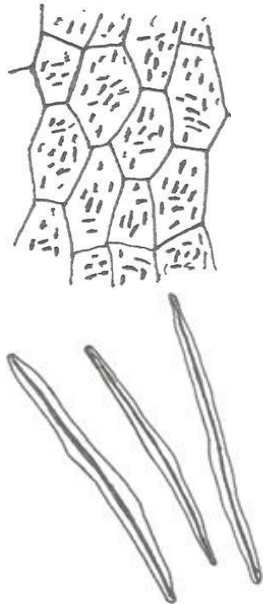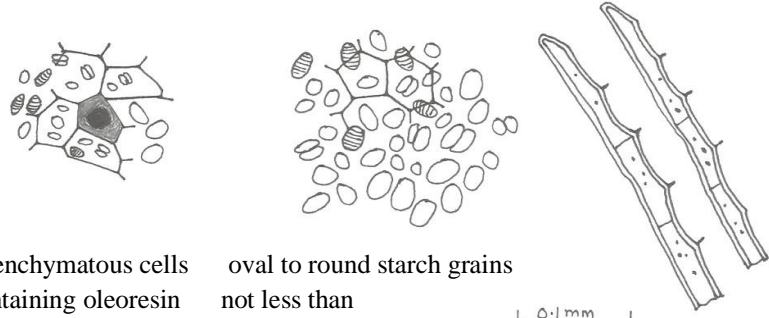**Charakokta Deepniya mahakashay formulated by following ingrediants**

Ingredients Name	Botanical Name	Part Used
1. Chitrak[5]	*Plumbago Zeylanica* Linn.	Root
2. Sunthi[6]	*Zingiber officinale* Rosc.	Rhizome
3. Ajmoda[7]	*Apium leptophyllum*	Fruit
4. Chavya[8]	*Piper retrofractum* Vahl.	Stem
5. Bhallataka[9]	*Semecarpus anacardium* Linn.	Seed
6. Kali Mirch[10]	*Piper nigrum.*	Fruit
7. Amlvetas[11]	*Garcinia pedunculata* Roxb.	Stem/Kand
8. Pippali[12]	*Piper longum*	Fruit
9. Pippali Mool[13]	*Piper longum*	Stem
10. Hingu[14]	*Ferula narthex* Boiss	Gum
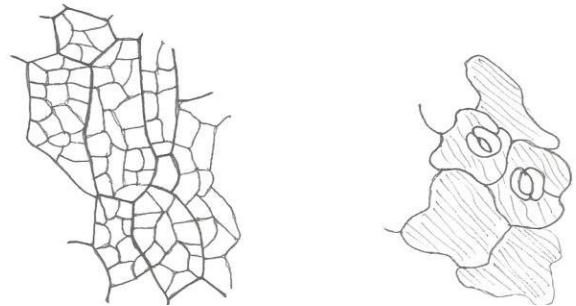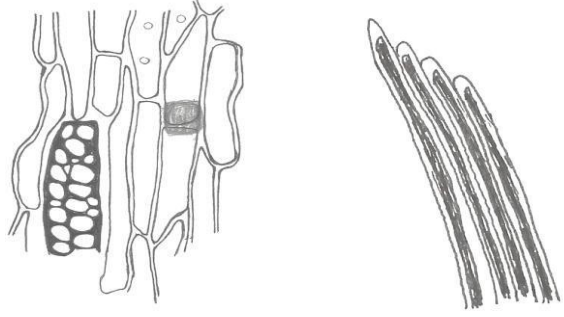
Quality checked for the following			
S. No.	Name of the tests	Permissible Limits API part II	Result
	Description- Colour Odour Taste	-	Dusty brown Characteristics Light bitter
	Botanical identification (Powder microscopy)		Annexure-1
1.	LOD (Loss on drying at 105^0C)		6.46%
2.	Alcohol soluble extractive value		14.7%
3.	Water soluble extractive value		35.75%
4.	Total cash value		8.90%
5.	Acid insoluble ash value		1.5%
6.	HPTLC fingerprints profile		Annexure-II

7.	**Microbial load**	10^5 cfu/g	Annexure-III
	Total microbial plate count. (TPC) Total Yeast and mould *Staphylococcus aureus /g Salmonella spp. /g*	10^3 cfu/g Absent Absent Absent Absent	140 cfu/g
	Pseudomonas aeruginosa /g E coli		120 cfu/g Absent Absent Absent Absent

Powder microscopy of Charakokta Deepniya Mahakashay Churna- Annexure-1

Chitrak	Sunthi
	Parenchymatous cells oval to round starch grains
	containing oleoresin not less than
	15µ to 30µ and several pitted septal fibres
	up to 70µ with hilum
	with indentations on
	ecentric, lamellae distinc its wall
Parenchymatous cell Fibres	
Filled with crystals	

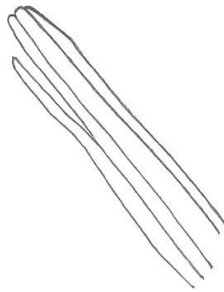| Ajmoda	Chavya
Parenchyma cell parenchyma with stomata	Medullary rays surrounding Xylem fibres with brown
	With phloem parenchyma content

Maricha

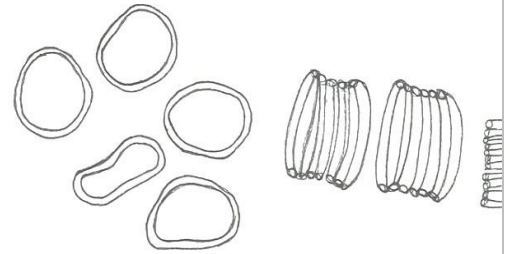Elongated cell from Perisperm Packed tightly with masses of minute compound and single starch grains
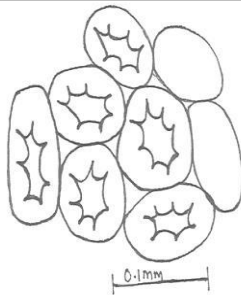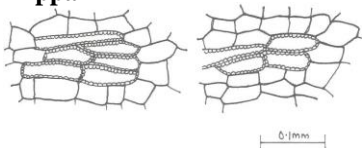
Hypodermal parenchyma with stone cell

Amalvetas

Fragment of endocarp   thick-walled round   spiral thickening
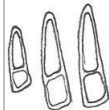to oval perisperm cell
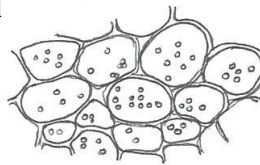
Pippali

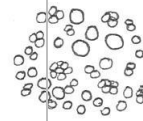Lignified spindle shaped stone cell with wide lumen associated with vascular element

Pippali mool

Tricomes   Parenchymatous cell
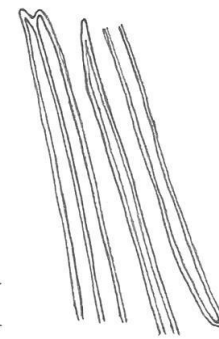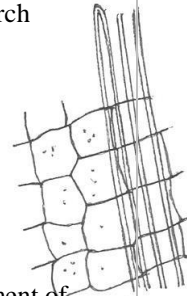Filled with starch grains

Epidermis in
Surface view   Fragment of
Medullary   rays
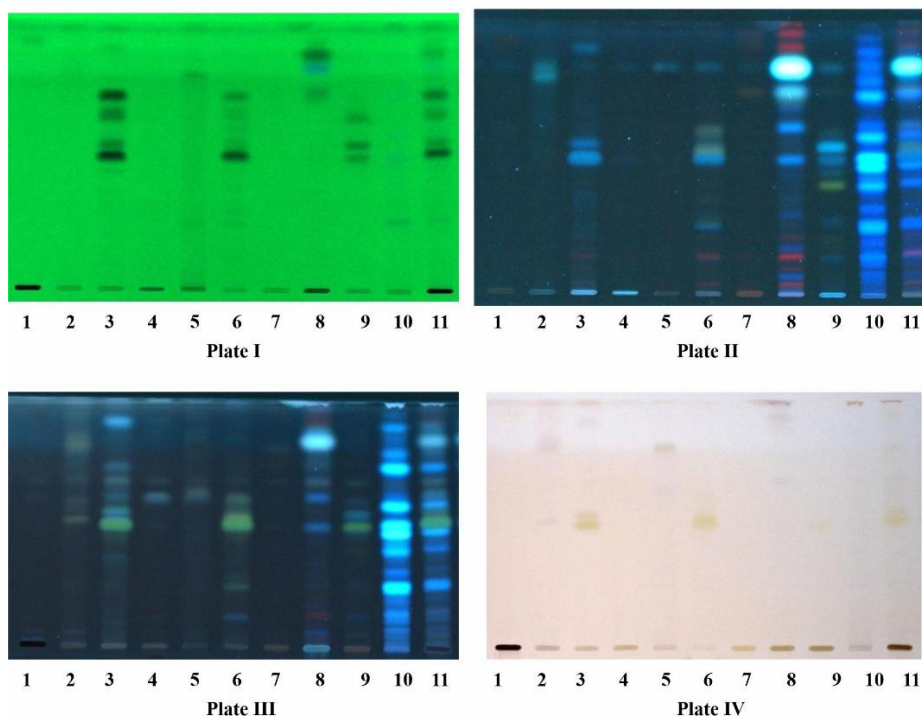crossin   Aseptete
The   fibres
fibres

HPTLC Fingerprints profile of Charkokta Deepniya Mahakashay Curna- Annexure-II

Tracks: 1. Chitrak, 2. Sonth, 3. Pippali, 4. Chavya, 5. Bhhallatak, 6. Maricha, 7. Amlavetas, 8. Azmoda, 9. Pippalimula, 10. Hingu and 11. Formulation

Plate-I; at 254 nm, Plate-II; at 366nm, Plate-III; at 366 nm after derivatization and Plate-IV; at visible light after derivatization

Table-1: Rf values of HPTLC fingerprints profile at 254 nm

Rf values	1	2	3	4	5	6	7	8	9	10	11
Rf1	0.94	0.97	0.50	0.97	0.24	0.24	-	0.73	0.50	0.25	0.25
Rf2	-	-	0.55	-	0.81	0.52	-	0.83	0.55	0.51	0.52
Rf3	-	-	0.67	-	0.97	0.73	-	0.89	0.64	-	0.55
Rf4	-	-	0.73	-	-	0.97	-	-	-	-	0.66
Rf5	-	-	0.91	-	-	-	-	-	-	-	0.74
Rf6	-	-	-	-	-	-	-	-	-	-	0.89
Rf7	-	-	-	-	-	-	-	-	-	-	0.97

Table-II Rf values of HPTLC fingerprints profile at 366nm

Rf values	1	2	3	4	5	6	7	8	9	10	11
Rf1	0.61	0.53	0.38	0.62	0.62	0.13	0.62	0.07	0.50	0.08	0.05
Rf2	0.69	0.60	0.51	0.67	0.67	0.25	0.67	0.14	0.56	0.14	0.09
Rf3	-	0.69	0.56	-	-	0.51	-	0.51	0.68	0.24	0.14
Rf4	-	0.82	0.63	-	-	0.61	-	0.62	-	0.30	0.25
Rf5	-	-	0.69	-	-	0.84	-	0.67	-	0.39	0.33
Rf6	-	-	0.75	-	-	-	-	0.84	-	0.46	0.41
Rf7	-	-	0.93	-	-	-	-	-	-	0.57	0.47
Rf8	-	-	-	-	-	-	-	-	-	0.73	0.50
Rf9	-	-	-	-	-	-	-	-	-	0.79	0.58

Rf10	-	-	-	-	-	-	-	-	-	0.85	0.63
Rf11	-	-	-	-	-	-	-	-	-	0.90	0.67
Rf12	-	-	-	-	-	-	-	-	-	-	0.73
Rf13	-	-	-	-	-	-	-	-	-	-	0.79
Rf14	-	-	-	-	-	-	-	-	-	-	0.86
	-	-	-	-	-	-	-	-	-	-	0.93

Table-III: Rf values of HPTLC fingerprints profile at 366 nm after derivatization

Rf values	1	2	3	4	5	6	7	8	9	10	11
Rf1	0.84	0.79	0.14red	0.48	0.83	0.14red	0.73db	0.04	0.14	0.08	0.05
Rf2	0.93	-	-	0.83	-	-	0.83b	0.08	0.26	0.14	0.11
Rf3	-	-	0.55	-	-	0.50	0.94red	0.14	0.41green	0.20	0.16
Rf4	-	-	0.89	-	-	0.60	-	0.17	0.46	0.26	0.29
Rf5	-	-	-	-	-	0.83	-	0.29	0.51	0.32	0.41
Rf6	-	-	-	-	-	-	-	0.49	0.54	0.39	0.47
Rf7	-	-	-	-	-	-	-	0.60	0.82	0.48	0.52
Rf8	-	-	-	-	-	-	-	0.67	-	0.57	0.55yello
Rf9	-	-	-	-	-	-	-	0.73	-	0.62	0.59b
Rf10	-	-	-	-	-	-	-	0.90	-	0.71	0.65
Rf11	-	-	-	-	-	-	-	0.95	-	0.78	0.74
Rf12	-	-	-	-	-	-	-	-	-	0.83	0.83
Rf13	-	-	-	-	-	-	-	-	-	0.89	0.93r
Rf14	-	-	-	-	-	-	-	-	-	0.93	0.97r

Table-IV: Rf values of HPTLC fingerprints profile at UVlight after derivatization

Rf values	1	2	3	4	5	6	7	8	9	10	11
Rf1	-	0.51	0.51	0.62	0.63	0.51	-	-	0.49	0.25	0.50
Rf2	-	0.82	0.55	-	0.81	-	-	0.92	-	0.48	0.61
Rf3	-	-	0.91	-		-	-		-	0.68	0.68
Rf4	-	-	-	-	-	-	-	-	-	-	0.68
Rf5	-	-	-	-	-	-	-	-	-	-	0.80
Rf6	-	-	-	-	-	-	-	-	-	-	0.93

Annexure-III   Microbiological limit tests of Charkokta Deepniya Mahakashay Curna

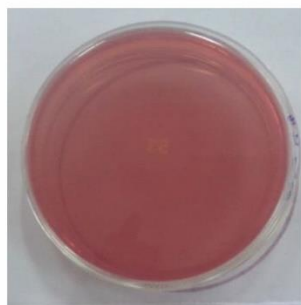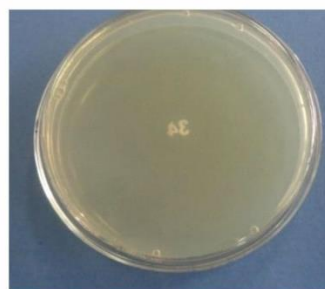Fig. 1.1: Showing negative results for *E.coli*

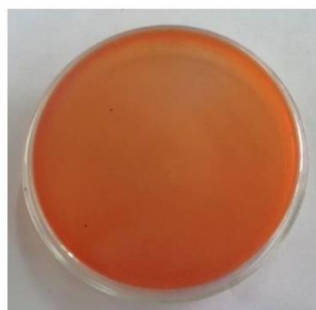Fig.12: Showing negative results for *Pseudomonas*
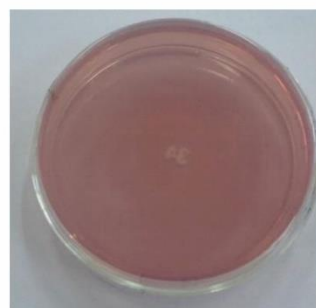
Fig.13: Showing negative results for Salmonella

Fig. 1.4: Showing negative results for Staphylococcus aureus

Fig.1.5: Showing result Total Bacterial Counts

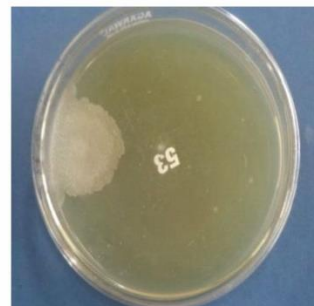Fig. 1.6 showing result ast & Mould

DISCUSSION

Deepniya mahakashay use in agnimandya it has increase agni. The ingredients of Deepniya dravya have agneya prakriti. Deepniya mahakashay mainly katu in ras, ushna veerya, laghu, snigdha, ruksha and teekshna gun, katu vipak in nature. In the study Pharmacognostical and Physicochemical study of the medicines of Deepniya mahakashay was conducted in which the result confirms the authenticity of the medicines of Deepniya mahakashaya

CONCLUSION

Ingradients of Deepniya mahakashay confirmed in pharmacognostical finding. Physiochemical and HPTLC studies are also confirmed in Deepniya mahakashay of all ingredients. Drug formation is the good quality standards at primary level

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