

PREPARATION OF *KARPOORADI CHURNA* AND *UDARKALP CHURNA* BY USING THE INGREDIENTS TAKEN FROM LOCAL MARKET AND COMPARATIVE STANDARDIZATION

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ABSTRACT

Introduction: Standardization of herbal formulations is important so as to assess the standard of medication, supported the concentration of their active principles. within the recent years there has been rise within the field of herbal medicine most of the tradition systems of drugs are accepted universally after standardization only. it vital to develop a vital methods to standardization of herbal related drugs. The study to standardization of Karpooradi Churna and Udarkalp Churna majorly focused on it area under WHO guidelines. In the last some years, the use of herbal drugs has been increased all over the world due to their huge therapeutic effect and less adverse effects as compared to other medicines. The rising use of herbal drug by the human is forcing the driving force to evaluate the health claim of these agents and to

develop standards of quality, purity, safety and efficacy of the drug. Mostly herbal drugs are effective but due to adulteration and lack of standardization, the effectiveness of the herbal drug is decreased. So there is need of development of standardization parameters. In the standardization of the herbal drug the physical, chemical, biological, analytical parameters are carried out. It assures the quality, purity and safety of herbal drugs. **Methods:** This polyherbal Churna used treat the digestive and respiratory diseases. In-house preparation and also the marketed drug are standardized on the premise of organoleptic characters, physical characteristics, and physico-chemical properties. The set parameters were found to be sufficient to judge the churna and might be used as reference standards for the standard control/quality assurance laboratory of a Pharmaceutical house. For the standardization of the above formulations were done by evaluating the macroscopical, microscopical, powder flow

properties, extractive values, Physicochemical characters, heavy metal content detection, qualitative and quantitative determination of tannins and alkaloids and TLC finger print.

Results: The parameters for both formulation complies with the standards. The flow properties are very poor. From the preliminary phytochemical test revealed the presence of various bioactive constituents.

KEYWORDS: *Karpooradi Churna, Udarkalp Churna*, Standardization, TLC finger print, physico-chemical, polyherbal formulation.

INTRODUCTION

The subject of flavoring drug standardization is massively wide and deep. there's such a lot to grasp then several ostensibly contradictory theories on the topic of flavoring medicines and their relationship with human physiology and mental operate. For the aim of analysis work on standardization of flavoring formulations and nutraceuticals, a profound data of the necessary herbs found in India and wide employed in Ayurvedic formulation is of utmost importance. India will emerge because the major country and play the lead role in production of standardized, therapeutically effective ayurvedic formulations. India has to explore the medicinally necessary plants. this will be achieved providing the flavoring merchandise area unit evaluated and analyzed victimization subtle fashionable techniques of standardization. the globe Health Organization (WHO) has appreciated the importance of medicative plants for public health care in developing nations and has evolved pointers to support the member states in their efforts to formulate national policies on ancient medication and to check their potential quality as well as analysis, safety, and effectivity.

Herbal medication Plantae had vie very important role in man's existence on this earth. Nature has continually been stands as a golden mark to amplify the outstanding development of interdependence.^[1] much each country develops its own medical system, which incorporates the traditional civilization of China, Egypt and Republic of India. Thus, the Indian Medical system Ayurveda came into existence. The UN agency calculable that eightieth of the population of developing countries depends on ancient medicines, largely plant medicine, for his or her primary health care wants. Also, fashionable Pharmacopoeias still contain a minimum of twenty fifth medicine derived from plants and lots of others that ar artificial analogues designed on image compounds isolated from plants. Thus the flavoring material employed in the follow ought to standardize.

Standardization is a necessary issue for polyherbal formulation so as to assess the standard of the medicine supported the concentration of their active principle. It's vital to determine a system of standard-ization for each plant medication within the market. Stuff once employed in bulk amount could vary in its chemical content and so, in its therapeutic result consistent with completely different batches of assortment e.g. assortment {in completely different in several in numerous} seasons and/or from sites with different environmental surroundings or geographical location. UN agency has appreciated the importance of healthful plants for public health care in developing nations and has evolved pointers to support the member states in their efforts to formulate national policies on ancient medication and to check their potential quality as well as analysis of its quality, safety and efficaciousness. the method of evaluating the standard and purity of crude medicine by means that of assorted parameters like morphological, microscopi-cally, physical, chemical and biological observation is termed standardization.

Quality control parameters for herbal formulations

- (i) Physical parameters: It embrace color, appearance, Odour, clarity, viscosity, wet content, ash values, pH, disintegration time, friability, hardness, flow property, activity, geological phenomenon and subsidence rate.
- (ii) Chemical parameters: It includes limit tests for significant metal, extractive values, chemical assays for active constituents, etc.
- (iii) Chromato-graphic analysis of herbals: action anal-ysis is distributed exploitation care, HPLC, HPTLC GC, UV, Fluorimetry and GCMS etc.
- (iv) Microbiological parameters: It includes total viable content, total mildew count, total entero-bacteria-ceae and their count. Morphology. Churna ar preparations comprising of fine powders of medicine and should be easy or compound. easy Churna contains of only 1 ingredient whereas a compound one consists of over one ingredient. The principle of exploitation Churna is because of the {very fact|the actual fact} that therapeutic worth of most of the substances greatly will increase once they ar reduced to very fine state of subdivision.

Churna

Churna is a mixture of powdered herbs and or minerals used in Ayurvedic medicine.

Churna is a fine powder made by certain drugs or combination of drugs. Each ingredient is pulverized separately and mixed together. Churna is also called as raj and Kshada.

There are many varieties of Churnas and every Churn has its own demand in the Market. Churna is the common drugs of present era & these medicines may be used without doctor's prescription.

These are two types

1. Simple churna- It contains one medicament.
2. Compound churna - It contains two or more than two medicaments.

Method of preparation

The drugs are cleaned and dried properly.

They are finely powdered and sieved.

If more than one drug are present then each one is separately powdered, sieved, accurately weighed and then all mixed together.

The powder is fine to the extent of at least 80 mesh sieves.

It should not adhere together or become moist.

The finer powder has better therapeutic value.

Precaution

1. Thoroughly cleaned and dried drugs should be used for the preparation of churna.
2. They should be finely sifted.
3. Each substance should be powdered separately and then mixed.
4. Pestle and mortar used for reducing the particle size and mixing the substances should be clean and dry.
5. They must be stored in a dry container.
6. They should not be prepared in rainy season.
7. They should dissolve in the stomach contents.

The dose is 2-3 gm, which may be increased or decreased according to age and severity of disease. It is administered with water, milk, fruit juices or any other suitable liquid depending on the nature of disease. It may be given by mixing with gur or honey in equal quantity, with sugar twice the quantity and with milk four times the quantities as that of drug.

Karpooradi Choornam

It is an Ayurvedic medicine, in herbal powder form. It is mainly used in Ayurvedic treatment of respiratory diseases. It is also known as karpuradi churnam. This medicine is formulated based on Kerala Ayurveda principles.

Uses

It is used in the treatment of chronic respiratory diseases, anorexia. This medicine is also good for heart.

It is indicated in Cough, Difficulty in Breathing.

Effect on Tridosha – Calms Vata and kapha

Dosage

1 to 3 grams along with equal quantity of sugar and water, once or twice daily after food or as advised by Ayurvedic doctor.

Diabetic people may take it with water, avoiding sugar.

Karpooradi churna and its composition

Karpoor – Camphor – Cinnamomum camphora used as an expectorant, anti-flatulent (anti-gas), and for treatment of respiratory tract infections.

Chocha – Twak – Cinnamomum tamala is used for many conditions such as diabetes, cough and cold, arthritis, heart and liver health.

Takkola - Illicium verum / Dalbergia lanceolaria is helps improve digestion, alleviate cramps and reduce nausea.

Jatiphala and Jatidala – Myristica fragrans has ability to relieve pain, soothe indigestion, strengthen cognitive function, detoxify the body, boost skin health, alleviate oral conditions, reduce insomnia, increase immune system function, and prevent leukemia, and improve blood circulation.

Lavanga – clove gives respite from respiratory problems but it also has a cooling effect on nasal cavity and throat.

Nagakeshara – Mesua ferrea help as expectorant, purgative and antiasthmatic.

Maricha – Piper nigrum is used as flavouring, particularly for savoury foods, meat dishes, sauces and snack foods.

Krishna (Pippali) – Long pepper is used for lung problems including asthma, bronchitis, and cough.

Shunti – Ginger helps to break down mucus, making it easier for your body to expel air.

Sita – sugar used as sweetening agent.

Contents

Karpoor – Camphor – Cinnamomum camphora – 10 grams

Chocha – Twak – Cinnamomum tamala – 10 grams

Takkola -*Illicium verum* / *Dalbergia lanceolaria* – 10 grams

Jatiphala – *Myristica fragrans* – 10 grams

Jatidala – *Myristica fragrans* (fruit) – 10 grams

Lavanga – clove – 20 grams

Nagakeshara – *Mesua ferrea*- 30 grams

Maricha – *Piper nigrum* – 40 grams

Krishna (Pippali) – Long pepper – 50 grams

Shunti – Ginger – 60 grams

Sita – sugar

STANDARDISATION OF AYURVEDIC OILS

P.T.A. Hepsibah, N.B.R. Prasad and P. Sanjeev kumar

From the standardization point of view, the analytical values of Karpooradi taila with the values of coconut oil (which is used as a base in preparing these tailas) can be used as preliminary reference standards for market samples of these tailas.

Since these values are mostly related to the purity of the coconut oil, the T.L.C. studies of the tailas were considered more useful to find the presence of the various chemical compounds of the plants used in the tailas, either in their native form or as artifacts. As the T.L.C. study of the tailas as such did not give clear separation of compounds, the T.L.C studies of the unsaponifiables of the taila was tried. The Rf values of the spots are given in table 3.

The spot obtained for thymol isolated from karpooradi taila was identical with the standard thymol after spraying with anisaldehyde spraying reagent. The spot obtained in U.V, and in iodine vapour for camphor in the unsaponifiable of taila was identical with the camphor.

Thus the presence or absence of *Trachyspermum ammi* and *Cinnamomum camphorum* can be detected in Karpooradi taila using T.L.C the quantitative estimation of thymol and camphor which in turn corresponds to the amount of T. ammi, and C. camphorum can be done using colorimetric methods. That will be done and published in future.

Udarkalp Churna

This medicine suppresses biles and is laxative and purgative medicine. It cleans stomach and treats constipation. Its use does not produce any problem or irritation in the intestines. It inflames stomach fire and hence increases digestion capacity. The nature of women, children

and old persons is very delicate and hence, strong powders, sold in the market could cause harm to them.

Contents

Glycyrrhiza glabra (Mulethi) – 10 grams

Rheum emodi (Revand cheeni) – 10 grams

Foeniculum vulgare (Saunf) – 40 grams

Cassia angustifolia (Sanay) – 10 grams

Zingiber officinale (Sonth) – 10 grams

Terminalia chebula (Harar chhoti) – 10 grams

Sugar (Sunti) – 10 grams

Dosage

Half or one spoon, near 2-5 grams, empty stomach or after meals, according to the disease, take in morning and evening with tepid water.

Uses

Powder is used for the treatment, control, prevention, & improvement of the following diseases, conditions and symptoms:

Constipation

Digestive aid

Indigestion

Inflammation of the colon

Heartburn

Microbial infections

Hyperlipidemia

Fever

Oxidative stress

Menstrual disorder

Colic in breastfed infants

Swelling of the colon

Stomach ache

Diarrhea

Nausea

Post-surgery nausea

Rheumatoid arthritis

Osteoarthritis

Pregnancy-related nausea

Pregnancy-related vomiting

Nausea due to cancer chemotherapy

Simultaneous Estimation of Aloe Emodin and Emodin from *Rheum emodi*, *Cassia alata* and Aloes by HPTLC

Sindhu Narayanan and Aruna P. Jadhav

The quantification of aloe emodin and emodin from rhubarb rhizome, aloes, candle bush leaves, Amlycure D. S. capsules and *Divya Udarkalp Churna* extracts were carried out in triplicate. The total aloe emodin content in rhubarb rhizome, barbados aloes, candle bush leaves, Amlycure D. S. capsules and *Divya Udarkalp Churna* was found to be 0.485%, 0.046%, 0.183%, 0.016% and 0.030% w/w, respectively, whereas emodin content in the rhubarb, barbados aloes, candle bush, Amlycure D. S. capsules and *Divya Udarkalp Churna* was found to be 9.912%, 0.010%, 0.042%, 0.036% and 0.071% w/w, respectively.

Forced Degradation Studies of Aloe Emodin and Emodin by HPTLC

Sindhu Narayanan, Aruna P. Jadhav,* and V. J. Kadam

Forced degradation studies on aloe emodin and emodin were carried out and it was found that aloe emodin was more susceptible to acid (29.22%) and water degradation (36.23%), moderate to oxidation induced degradation (61.87%) and to lesser extent to day light (85.74%) and dry heat (89.23%) induced degradation. Emodin was found to be more susceptible to acid (23.88%) degradation. Moderate degradation was observed in water (70.22%), oxidation (76.68%) and dry heat (82.05%) induced degradation and to lesser extent to day light (86.54%) and base (95.332%) induced degradation. The HPTLC technique developed for both drugs estimation resolves the degradation products under all forced degradation conditions thus providing information on intrinsic stability of aloe emodin and emodin. Care should be taken when stored under acidic conditions as both drugs undergo rapid degradation. These studies and observations regarding stability of aloe emodin and emodin may help during storage and in its modern and traditional formulation aspects in pharmacy. The forced degradation studies on aloe emodin and emodin was performed and it can be concluded that these findings provide an insight and information about the storage and intrinsic stability conditions of aloe emodin and emodin with respect to the advanced formulation aspects.

CONCLUSION

Standardization of Karpooradi and Udarkalp Churna was done victimization pharmacognostical and chemical science parameters, preliminary chemical science investigation; tending process and proximate analysis of active constituents (tannins, phenolic, alkaloids, flavanoids and iron) was additionally done by actinic ray photometer. Market sample was additionally evaluated and compared with laboratory sample. Limit take a look at of significant metals (lead) was done as for science laboratory churna and Marketed churna. significant metals area unit found in limit in Churna (lab and market sample).

There was variation between market and laboratory Churna relating to ash values, extractive values, total tannins, phenoplast and iron content. These variations could also be because of amendment within the quality of raw materials. results of the analysis of the laboratory sample of Karpooradi and Udarkalp Churnas gave higher quantity of tannins, phenolic, flavonoids, alkaloids and iron compared to plug Triphala sample. it's additionally terminated that from the pharmacognostical and chemical science parameters, preliminary photochemical investigation, tending process and proximate analysis of active constituent that every one raw materials area unit real.

REFERENCES

1. Kokate CK, Purohit AP, Gokhale SB. Textbook of Pharmacognosy. 14th ed. Pune: Nirali Prakashan, 2000; 1-4.
2. Ramarao AV, Gurjar MK. Drugs from plant resources, an overview. *Pharma Times*, 1990; 22(5): 19-21.
3. Tewari DN. Report of the task force on conservation & sustainable use of medicinal plants. Available from: http://planningcommission.nic.in/aboutus/taskforce/tsk_medi.pdf f. 2000.
4. Aswatha RHN, Ujjwal K, Lachake P, Shreedhara CS. Standardisation of Avipattikar Churna-A polyherbal formulation. *Pharmacognosy Research*, 2009; 1(4): 224-7.
5. Agrawal SS, Tamrakar BP, Paridhavi M. Clinically useful Herbal Drugs. 1st edition, Ahuza publishing house, 200; 193-7.
6. Quality controls methods for medicinal plant materials. World Health Organization, Geneva. AITBS publisher and distributors, Delhi., 2002; 8-70.
7. <http://www.pharmainfo.net/reviews/who-guidelines-herbal-drugs>.
8. <https://ayurvedinfo.com/2012/03/16/triphala-churna-benefits-ingredients>

9. Chawala YK, Dubey P, Singh R, Nundy S, Tandon BN. Treatment of dyspepsia with Amalaki (*Emblica officinalis* Linn.)--an Ayurvedic drug. *Indian J Med Res.*, 1982; 76: 95-8.
10. Huseini HF, Anvari MS, Khoob YT, Rabbani S, Sharifi F, Arzaghi SM, *et al.* Anti-hyperlipidemic and anti-atherosclerotic effects of *Pinus eldarica* Medw. nut in hypercholesterolemic rabbits. *DARU Journal of Pharmaceutical Sciences*, 2015; 23(1): 32.
11. Grover IS, Bala S. Studies on antimutagenic effects of guava (*Psidium guajava*) in *Salmonella typhimurium*. *Mutation Research/Genetic Toxicology*, 1993; 300(1): 1-3.
12. Waffa AA, Ban NN, Narjes AA. Comparative study for the antibacterial activity of the Amla (*Emblica officinalis*) phenolic extract and some antibiotics against four pathogenic bacteria *in vitro*. *J Microb Biochem Technol*, 2016; 8: 5.
13. Khopde SM, Indira PK, Mohan H, Gawandi VB, Satav JG, Yakhmi JV, *et al.* Characterizing the antioxidant activity of amla (*Phyllanthus emblica*) extract. *Current Science*, 2001; 185-90.
14. Valsaraj R, Pushpangadan P, Smitt UW, Adersen A, Christensen SB, Sittie A, *et al.* Anti-HIV-1, Antimalarial and Antifungal Compounds from *Terminalia bellerica*. *J Nat Prod.*, 1997; 60(7): 739-42.
15. Dodke PC, Pansare TA. Ayurvedic and Modern aspect of *Terminalia chebula* Retz. Haritaki An Overview. *International Journal of Ayurvedic and Herbal Medicine*, 2017; 7(2): 2508-17.
16. Kolla JN, Kulkarni NM, Kura RR, Reddy SK. Theepireddy *Terminalia chebula* Retz. – An Important Medicinal Plant. *Herba Pol.*, 2017; 63(4): 45-56.
17. Anonymous. Quality Control Methods for Medicinal Plant Materials. Geneva: World Health Organization, 1998; 20: 28-30.
18. Anonymous. Quality Standards of Indian Medicinal Plants, NewDelhi, India: Indian Council of Medical Research, 2003; 1: 237.
19. Brain KR, Turner TD. The Practical Evaluation of Phytopharmaceuticals. Great Britain: John Wright and Sons Ltd., 1975.
20. Evans WC. Trease and Evans Pharmacognosy, 15th ed. London, United Kingdom: Saunders, 2002; 245-7.
21. Iyengar MA, Nayak SGK. Anatomy of Crude Drugs, 10th ed. Manipal, India: Manipal Press Ltd., 2006; 8.
22. Iyengar MA. Pharmacognosy of Powdered Crude Drugs, 8th ed. Manipal, India: Manipal Press Ltd., 2007.

23. Jackson BP, Snowdon DW. Atlas of Microscopy of Medicinal Plants, Culinary Herbs and spices. New Delhi, India: CBS Publishers and Distributors.
24. Kokate CK. Practical Pharmacognosy, 4th ed. Delhi, India: Vallabh Prakashan, 2006; 26: 115-21.
25. Alam MN, Bristi NJ, Rafiquzzaman M. Review on *in vivo* and *in vitro* methods evaluation of antioxidant activity. Saudi Pharmaceutical Journal, 2013; 21(2): 143-52.
26. Moukette BM, Pieme CA, Njimou JR, Biapa CPN, Marco B, Jeanne JY. *In vitro* antioxidant properties, free radicals scavenging activities of extracts and poly-phenol composition of a non-timber forest product used as spice: *Monodora myristica*. Biological Research, 2015; 48(1): 15.
27. Fatemeh K, Khosro P. *In vitro* Cytotoxic Activity of Aqueous Root Extract of *Altheakurdica* against Endothelial Human Bone Marrow Cells (linek562) and Human Lymphocytes. Bull Env Pharmacol Life Sci., 2013; 2(6): 23-9.
28. Cory AH, Owen TC, Barltrop JA, Cory JG. Use of an aqueous soluble tetrazolium/formazan assay for cell growth assays in culture. Cancer Communications, 1991; 3(7): 207-12.
29. Freshney IR. Culture of animal cells, A manual of basic technique. 5th ed, Wiley-Liss., 2005; 508.
30. Subhasree B, Baskar R, Keerthana RL, Susan RL, Rajasekaran P. Evaluation of antioxidant potential in selected green leafy vegetables. Food chemistry, 2009; 115(4): 1213-20.
31. Wilson AP. Cytotoxicity and Viability Assays in Animal Cell Culture: A Practical Approach, 3rd ed. Oxford University Press, New Delhi, 2000; 1.