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A Review on Standardization of polyherbal Topical Antiseptic Solution

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ABSTRACT : Standardization characterization is an crucial need in Traditional system of medicine. The Indigenous system of medicine is much productive but issue is regarding insufficiency in quality review.This equip us to recognise the consistency of formulation. The Ministry of Ayush and Food Safety & Standards Authority of India (FSSAI) assign the guidelines for analysing quality of product for these formulations.The present data aim to review the standardized polyherbal topical medicaments in market.

I. INTRODUCTION : -

Polyherbal Formulation deals with the synergistic effect or action of herb after on its administration of it over the Body. Herb with multi-effect produces desirable impact for treating the various disorders. Now for which the Qualitative Determination of thosedosage form which is been prepared to be performed & validated for avoiding the debasement in formulations. So for the Topically applied dosage form of medicament the different synthetic drugs in different dosage form are been available although achieving desirable effect further produces an undesirable response by body leading to skin irritation, hypersensitivity, itching, redness of skin,etc. But in cases of herbal formulation none of adverse effect is been observed or in negligible state. Topical Antispetics are those agents which prevents the growth of microorganisms leading to infection applied externally over the skin.

Benefits of Herbal Medicine :-

- They strengthen the immune system.
- Low Side effects on Body.
- Better compatibility rate with human body.
- They are widely available.
- Better Therapeutic effect.

ESSENTIALITY OF STANDARDIZATION :-

- Standardization refers to vital step involving in determination of purity & quality of the compound.
- For rectifying the adulteration in herb the standardization is an important parameter to be considered.
- The crude form which is to be utilised for preparation of formulation is been identified by standardization process.
- Drug use is been authenticated &later on these by considering the keypoints of standardization is been done.

Some of the Common examples of Herbs acting as an Topical Antiseptics

HERB	**PLANT PART**
NEEM	Leaves.
TULSI	Whole Plant.
TURMERIC	Rhizomes.

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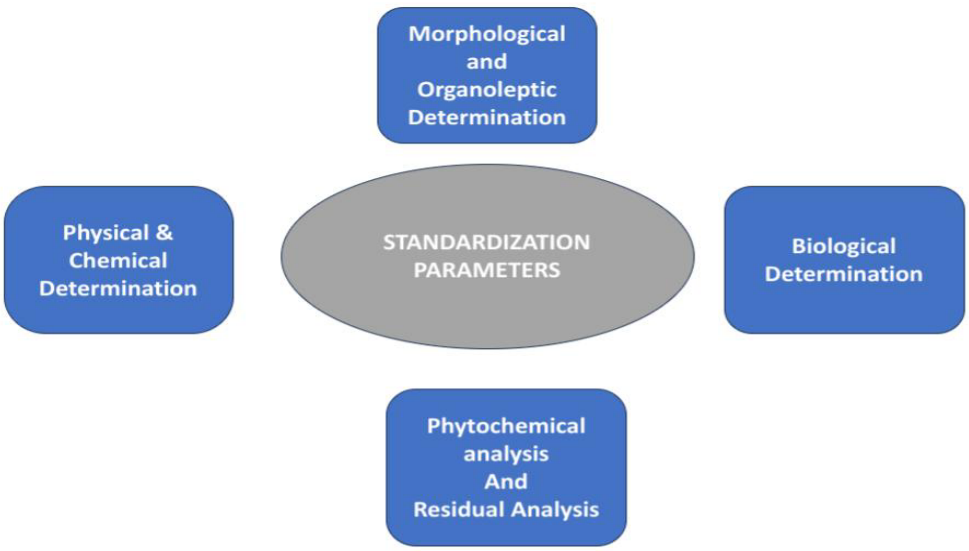
CLOVE	Bud.
MYRRH	Bark.
EUCALYPTUS	Leaves.
MARIGOLD	Flowers .

• **PROCESS INVOLVED IN STANDARDIZATION:-**

- Specified for Topical Antiseptics the Dermatological study to be performed for conceptual understanding the role topical application of drug.
- Study of topical dosage form of medicament as well as conventional method of preparation.
- Some of the factors related to skin considered before formulating the formulation & standardization are as below :

1)Skin Hydration.
2) Age factor.
3)Permeation of drug through skin i.e mechanism of permeation.
4) Solubility Profile

- **<u>Standardization of Herb involving evaluation of Herb involving following steps</u>**
- Topical dosage form of medicament refers to " external application of drug on the skin surface " superficially effect against the infection leading for pus formation.
- While formulating these form solubility enhancer are been added to enhance the rate of release of drug.
- These are primarily prepared by simple solution as it is homogenous mixture of drug to form an medicament.



I) ORGANOLEPTIC & MORPHOLOGICAL CHARACTERIZATION :-

•<u>MORPHOLOGICAL EVALUATION</u>

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- In this step of standardization the herb is been identified & characterized based on the morphological features of herb including different parts of plant like leaves,stem ,bark ,flower, fruits, stem termed to be " Morphological evaluation".

• ORGANOLEPTIC EVALUATION

- Herb is been identified on based of its , Colour, Odour,Taste, Size,Shape , Texture etc.

II) PHYSICAL CHARACTERIZATION

- It includes, Moisture content,Ash value, Extractive value, Viscosity,Density,Solubility, Foaming Index,Specific gravity.
- But considering for Topical dosage form of Solution involving

√ Viscosity.
√Density.
√Solubility.
√Foaming Index.
√Specific Gravity.

- Selectively some parameters includes :

i) pH:- Range for topical cleanser should be between 4 to 6.
ii) Spreadability :- On application of drug it must be easily spreadable & should avoid the greater friction over the skin surface over the site of infection.
iii) Drug content :- The Drug content in formulation should be in adequate concentration.
iv) Irritancy Test:- The test is performed to determine either producing any skin irritation on administration of drug.
iv) Homogenicity. :-Preparation should be homogenous mixture of components.
v) Solubility :- As per the solubility profile & compatibility rate the solubility of drug is an essential component as more will solubility more will rate of absorbtion.

III) CHEMICAL CHARACTERIZATION

- Depending on the chemical nature the chemical evaluation of herb is performed.
- It includes,

. i) Qualitative & Quantitative Determination:-

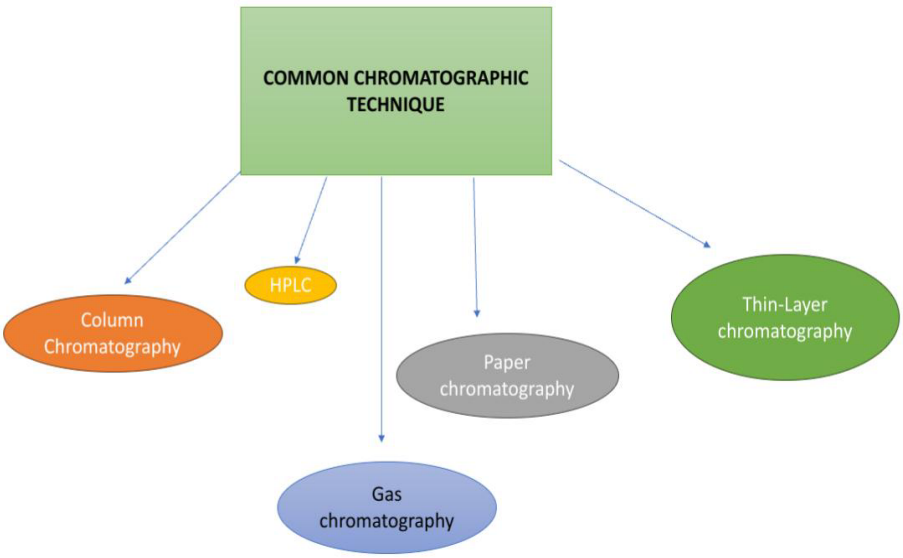
- The analysis of given sample is been performed in order to identify the presence of active phytoconstituent in given sampletermed to be "Qualitative determination of sample ".

Includes Limit test, melting point, boiling point, change reaction.

- Determination of amount or concentration of phytoconstituent present in sample is termed as "Quantitative determination of sample ". Includes chromatographic analysis HPLC, Gas chromatographyetc

ii) Chromatographic analysis :-

- It refers to an separation technique by which there is separation of active phytoconstituentdepending upon its affinity towards phases.i.estationary phase , mobile phase.



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III) BIOLOGICAL CHARACTERIZATION

- It refers to determination of drug on base of its effect over the Biological membrane.
- It includes following parameters :-

ii)Pharmacologicaleffect :-

- The characterization of pharmacological response produce by herbis been determined by standardization process.
- Require effect for the treatment of particular disease is been produced by pharmacological properties of drug.
- Desire action is been produced by action on membrane, or denaturation of protein.

ii) Toxicological effect:-

- Study of rate of toxicity produce is termed as " Toxicology ".
- Toxicological study refers to management of " Therapeutic index ".
- Lethal Dose &Effective Dose of drug is been calculated & by which the ratio gives " Therapeutic effect " of drug.

Bioavailability is determined after the administration of drug.The rate of drug absorb into the . systemic circulation is been evaluated by Biological Determination.

IV) PHYTOCHEMICAL ANALYSIS

- The phytochemical determination is an process by which their the plant is identified.
- Here the identification of active phytoconstituent required is been evaluated by performing various phytochemical screening test.
- For Example Below are some of those :-

PHYTOCONSTITUENT	PHYTOCHEMICAL TEST
Alkaloids	Mayer's Test Dragendroff Test Hager's Test Wager's Test.
Carbohydrates	Molish Test
Reducing Sugar	Fehling's Test Benedict Test
Saponins	Foam Test
Steroids	Salkowski Test Libermann Burchand Test
Flavonoids	Lead Acetate test. Alkaline reagent test.
Glucosides	Anthraquinone Test. Shinoda Test.

V) RESIDUAL CHARACTERIZATION

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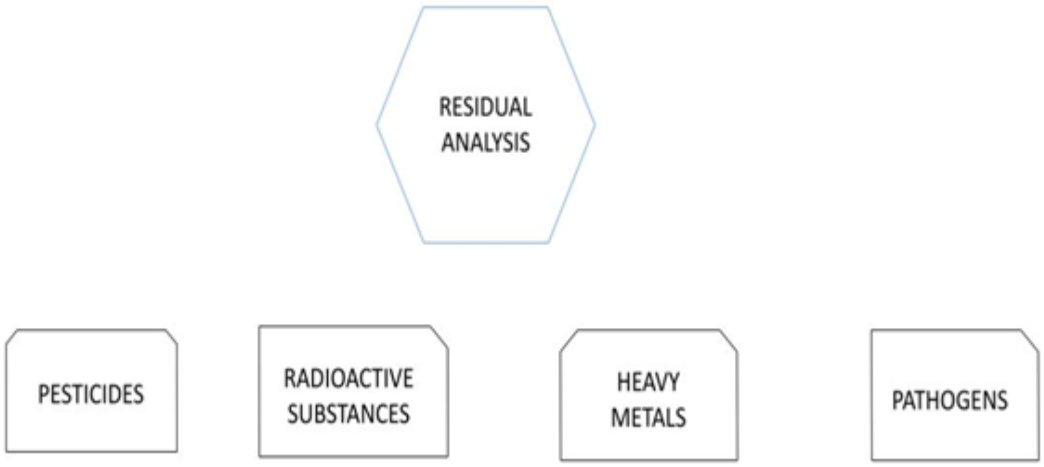

II. CONCLUSION :-

From the above scientific information I conclude that the specifications confine for standardizationare adequate to consider for quality control section for securing uniformity of final product from group to group is conserved.

REFERENCES

[1]. A Systemic Review on Standardization of Poly-Herbal Churna ,Amith Kumar B*, Dr. Kiran Kumar Hullatti, Tanmoy Ghosh, PrabhaHullatti.

[2]. Gopala Simha KR, Laxminarayana V, Standardization of a polyherbal formulation, NyagrodhadiChurna, Indian Journal of Traditional Knowledge. 2007;6(4):648-52.

[3]. Khandelwal KR. Practical Pharmacognosy Techniques and Experiments, 9thed; NiraliPrakashan: Pune; 2002: 41-4.

[4]. Kokate CK. Practical Pharmacognosy; 1991; 3rd ed. VPBN. New Delhi.

[5]. Anonymous, the Ayurvedic Formulary of India, Part II, (Department of Indian System of Medicinal and Homoeopathy, New Delhi), 2000

[6]. Yadav N P & Dixit V K, Recent Approaches in Herbal Drug Standardization, Int J Integr Bio, 2 (2008) 195-203.

[7]. Review on Standardization of AyurvedicMedicineJanmejay Pant aandRipudhaman.

[8]. Need for comprehensive standardization strategies for marketed Ayurveda formulationsVishvanathNarhariVaidya,a A.U. Tatiya,aAshwiniElango,bSubrahmanya Kumar Kukkupuni,b and Chethala N. Vishnuprasadb,*

[9]. Marker based standardization of polyherbal formulation (SJT-DI-02) by high performance thin layer chromatography method Bhakti J. Ladva, Vijay M. Mahida,1 Urmi D. Kantaria, and Rina H. Gokani

[10]. Research Article Standardization of a Polyherbal Formulation P. Mohapatra, Annie Shirwaikar*and H. N. Aswatha Ram