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STANDARDIZATION OF AYURVEDIC PREPARATION: A REVIEW

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ABSTRACT

In recent years a lot of folks throughout world square measure turning to use medicative plant merchandise in care system. Worldwide want of different medication has resulted in growth of natural product markets and interest in ancient systems of drugs. Proper integration of contemporary scientific techniques and content is very important. The identification of purely active moiety is an important requirement for Quality control and dose determination of plant related dugs. Standardization of seasoning medication suggests that confirmation of its identity, Quality and purity. The present summary covers the standardization parameters with their standards worth of the some seasoning medication. There is a growing focus on the importance of medicinal plants in the traditional health care system and #40; viz. Ayurveda, Unani, Homoeopathy, Yoga and #41; in solving health care problems. Systematic approach and well-designed methodologies for the standardization of seasoning raw materials and seasoning formulations square measure developed.

KEYWORDS

Standardization, Ayurveda, Herbal drugs and Medicinal plants.

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INTRODUCTION

Standardization

The process of evaluating the quality and purity of crude drug by implies that of varied parameter like morphological, microscopical, chemical, Physical and biological observation is termed standardisation. Standardisation of flavorer drug could be a scrupulous downside collectively prescription may involve the mixture of the many medication in correct proportions[1]. Standardization of flavorer formulation is crucial so as to take care of the standard of product, which ends up in

uniform effectuality by a specific dose. The activity of material doesn't rely upon single substance however believed to be influenced by an oversized variety of different parts within the flavorer medicines. A top quality Ayurvedic formulation should make sure the check for identity, potency, purity, safety and effectuality. Notwithstanding we tend to think about of these and the other attainable thought standardization of Ayurvedic botanicals drugs square measure needed. Standardization expression encompasses the complete field of study from birth of a plant to its clinical application. It conjointly means that adjusting the flavorer drug preparation to an outlined content of a constituent or a bunch of substance with famed therapeutic activity severally by adding excipient or by combination flavorer medication or flavorer drug preparation[2]. Standardization downside arises from the advanced position of drug that is employed within the style of whole plant structure and plant extracts. Standardization of the plausible active compounds of medicine generally doesn't replicate quality. Solely in an exceedingly few cases will drug activity rely upon one element usually it's the results of conjunctive activity of many active compounds yet as of inert incidental to substance[3]. The chemical assays square measure essential yet as fascinating within the 1st place to standardize the staple at the time of formulating Associate in Nursing Ayurvedic preparation and conjointly for observation the standard management of the finished product. Once their chemical assay is on the market with acceptable limits of sensitivity and procedure, they may be useful within the developing biological assay[2]. Research is vital tool to spot the microstructure of the assorted elements of healthful plants. Every plant has totally different| the various} microstructure that facilitate in differentiating plant that appearance alike however square measure if different species. The skinny Layer natural process helps find the chemical constituent gift within the healthful plant that is chargeable for therapeutic activity of the plant. Besides these HPLC, HPTLC, GC, IR, NMR, MS and different instruments reveal the exhaustive data regarding the chemical constituents of healthful plant[4]. Several studies during this field have shown that the herbs extract is simpler once extracted with in organic solvent like alcohol, Ether, chloroform etc. as a result of the majority the chemical constituent like organic compound, glycosides, Saponins square measure being extract with the solvent or mixture of solvent. As each plant contain bound chemical constituents in definite compositions starting from micromilligram to gram. These compounds act either in natural process or antagonist with one another and there exhibit a specific therapeutic result[5].

WHO Guidelines for quality standardized herbal formulations

Botanical Parameter

1. Sensory evaluation: Includes visual microscopy/Touch/Odour/Taste.
2. Foreign matter: Includes foreign animal, foreign plants, foreign minerals, etc.
3. Microscopy: Includes histological observation and measurements.

Physico-Chemical Parameter

1. TLC/HPTLC finger printing.
2. Ash values: Total, acid-insoluble, water-soluble.
3. Extractive values: In hot water, cold water, and ethanol.
4. Moisture content and volatile matter: loss on drying, azeotropic distillation.
5. Volatile oils: By steam distillation.

Pharmacological Parameters

1. Bitterness value: Unit equivalent bitterness of standard solution of quinine hydrochloride.
2. Hemolytic property: On ox blood by comparison with standard reference solution of saponins.
3. Astringent property: Tannins that bind to std. Freiberg hide powder.
4. Swelling index: In water.
5. Foaming index: Foam height produced by 1 gm material under specific condition.

Toxicological Parameter

1. Arsenic: Stains produced on $HgBr_2$ paper comparison to standard stain.
2. Heavy metal: Like Ca and lead.
3. Pesticide residue: Includes total organic chloride and total organic phosphorous.
4. Microbial contamination: Total viable aerobic count of pathogens: *Enterobacteriaceae*, *E.coli, Salmonella, P.aeruginosa, S.aureous*.
5. Aflatoxins: By TLC using Aflatoxins (B_1, B2, G_1 and G_2)
6. Radioactive contamination[1].

Botanical Parameter

Sensory Evaluation

Sensory evaluation of drugs refers to the evaluation of a drug by colour, odour, taste etc. This evaluating procedure provides the simple and quickest means to establish the identity and purity and thereby ensure quality of a particular sample.

Colour

The colour indicating the general origin of the drug, e.g. material derived from the aerial part of the plant is usually green and the underground plant material is usually devoid of green colour. For proper examination, the untreated samples are examined under diffused sunlight or artificial light source with wavelength similar to that of daylight may be used.

Odour and Taste

Odour and taste of a crude material are extremely sensitive criteria based on individual's perceptions. Therefore, the description of this feature may sometime cause some difficulties. If the material is expected to be innocuous, a small portion of the sample can be examined by slow and repeated inhalation of the air over the material. For those samples where no distinct odour is perceptible, it is crushed using gentle pressure or if the material is known to be dangerous, by other suitable means such as pouring a small quantity of boiling water on to the crushed sample placed in beaker. The strength of the odour like, weak, distinct, strong is first determined. A small portion of the sample placed in the hand slowly and repeatedly the tongue taste over the material[6].

Determination of Foreign Matter

Drug should be free from mould, insect, animal, and other contamination, like dust, soil, stone, and extraneous matter. Foreign matter sometime also consists of parts of the organ of the plant than that required for the drug by definition or beyond limit set by the WHO guidelines. The amount of foreign matter should not be more than prescribed limit. 100-500g of the drug sample should be weighed, or quantity prescribed by the WHO guidelines may be used. Foreign matter may be detected by inspection with the unaided eye or by the use of a lens of 6X power. Separate the foreign matter and calculate the percentage present[1].

Microscopy

Histological studies are made from very thin section of drugs. The characteristic of cell walls, cell contents, starch grains, calcium oxalate crystals, trichomes, fibers, vessels, etc can be studied in details. Other important histological aspect is the quantitative microscopy and linear measurements. The various parameter studied here are stomatal number and index, palisade ratio, vein-islet number, size of starch grains, length of fibers, Microscopic evaluation also covers study or to histological section of the drug . A drop of phloroglucinol and concentrated hydrochloric acid red stain with lignin. Mucilage is stained pink with ruthenium red[7].

Physico-Chemical Parameter

TLC/HPTLC Finger Printing

TLC is at present an important analytical tool for qualitative and quantitative analysis of a number of natural products. The adsorbent such as silica gel G or C is coated to a thickness of 0.3mm on clean TLC plate using commercial spreader, the plate activated at 105˚C for 30 minutes and used The selection of mobile phase depend upon type of constituent to be analyzed. After the event of recording by ascending technique, the resolved spots ar disclosed by spraying with appropriate sleuthing agent. The TLC technique is useful in analysis of alkaloids, glycosides, isoprenoids, lipid components, sugar and its derivative and practically all bioconstituents. The Rf values may vary depending upon purity of solvent, nature of

substance to be resolved, composition of solvent, Present of impurities, adsorbent used, polarity of the solvent, substance and adsorbent etc. HPTLC technique help in detection of very low concentration of ingredient to be level of ppm new diode based photo detector enable the analytical chemist to get a chromatogram where each peak represent an isolated component[1,7].

Ash Value

The quality of a drug can also be determined by ash left after ignition. There are four different methods which measure the ash.

1. Total ash
2. Acid-insoluble ash
3. Water-soluble ash
4. Sulphated ash

Total Ash

The ground drug (2g) is incinerated in a silica crucible at a temperature not exceeding 450ºC until free from carbon. It is then cooled and weighed to get the total ash content.

Acid-Insoluble Ash

Ash is boiled with 25 ml dilute HCL for 5 min. The insoluble matter collected on an ash less filter paper, washed with hot water and ignited at a temperature not exceeding 450˚C to a constant weight.

Water Soluble Ash

Ash is dissolved in distilled water and the insoluble part collected on an ash less filter paper and ignited at 450˚C to a constant weight. By subtracting the weight of insoluble part form that of the ash, the weight of soluble part of ash is obtained.

Sulphated Ash

Sulphated ash is the residue obtain when total ash is boiled with sulphuric acid and washed the insoluble matter left on the filter paper is ignited[8].

Extractive Value

The amount of an extract that a drug yields in a particular solvent is often an approximate measure of the amount of certain constituent that the drug contains. The drug should be extracted with different solvent in order of their increasing polarity to get the correct and dependable value.

Alcohol–Soluble Extractive Value

The air dried coarse drug powder (5g) is macerated with 100ml of alcohol (95%) in a closed flask for 24 hr, shaking frequently during 6 hr and allowed to stand for 24 hr. It is filtered rapidly, taking precaution against loss of solvent, the filtrate evaporated to dryness in a tarred flat bottom dish and dried at 105˚C, to constant weight and weighed.

Water -Soluble Extractive Value

The air dried coarse drug powder (5g) is macerated with 100ml of distilled water in a closed flask for 24 hr, shaking frequently during 6hr and allowed to stand for 24 hr. It is filtered rapidly, taking precaution against loss of solvent, the filtrate evaporated to dryness in a tarred flat bottom dish and dried at 105˚C, to constant weight and weighed[8].

Viscosity

Viscosity of a liquid is constant at a given temperature and is an index of composition. Hence it can be used as a mean of standardizing liquid drugs[7].

Melting Point

It is one of the parameter to judge the purity of the crude drugs. In case of pure chemical or phytochemical, melting point are very sharp and constant. Since the crude medication from animal or plant origin contain the mixed chemicals, they are described with certain range of melting point.

Solubility

The present of adulterant in a drug could be indicating by solubility studies. Alkaloidal bases soluble in chloroform, while alkaloidal salt are soluble in polar solvent. The glycosides are extractable with alcohol and water, while their aglycone moieties are soluble in non polar solvent like benzene or solvent ether.

Optical Rotation

Certain substances are found to have the property of rotating the plane of polarized light in pure state or in the solution. Thus, they are described to optically active and this property is known as optical rotation. Plane of polarized light may be rotating toward right (dextro rotator) or toward left (Levo rotator).

Normally the optical rotation is determined at 25˚C using sodium lamp as source of light[7].

Refractive Index

Determination of refractive index is a significant parameter for the evaluation of the essential oil and fixed oils. The refractive index changes if an oil contain some adulteration by other oils. It is a ratio between the velocity of light in air and velocity in the oil or substance.

Determination of Moisture Content

Determination of moisture content in the estimation of the volatile matter i.e. the water that dries off from the drug. This procedure is more appropriate for substance which appears to contain water as the only volatile constituent.

About 10g of drug, (without preliminary drying), is weighed accurately (within 0.01 gm) and placed in a tarred evaporating dish drying should be carried out at 105˚C for 5 hr. The sample is then weighed[1].

Determination of Volatile Oils

Volatile oils area unit characterized by their odour, oil like appearance and ability to volatilize at room temperature. Chemically they are usually composed of mixtures of monoterpenes, sesquiterpenes and their oxygenated derivative. Aromatic compounds predominate in certain volatile oils, because they are considered to be the "essence" of the plant material and a often biologically active, they are also known as "essential oils". Then term "volatile oil" is preferred because it is more specific and describes the physical properties. In order to determine the volume of oil, the plant material is distilled with water and the distillate is collected in a graduated tube. The binary compound portion separates mechanically and is came to the distillation flask.

If the volatile oil posses a higher mass density than or near to that of water, are difficult to separate from the aqueous phase owing to the formation of emulsions, a solvent with a low mass density then the dissolve volatile oils will then float on top of the aqueous phase.

Pharmacological Parameter

Determination of Bitterness Value

Medicinal plant materials that have a robust bitter style square measure utilized therapeutically, principally as savoury agents. Their bitterness stimulates secretions in the gastrointestinal tract; especially of gastric juice. Bitter substances can be determined chemically. However, since they are mostly.

Composed of two or more constituents with various degrees of bitterness, it is first necessary to measure total bitterness by taste. The bitter properties of material square measure determined by comparison the edge bitter concentration of associate degree extract of the materials thereupon of a dilute answer of antimalarial drug coordination compound R.

The bitterness value is expressed in units' equivalent to the bitterness of a solution containing 1 gm of quinine hydrochloride R in 2000 ml. Safe drinking water should be used as a vehicle for the extraction of plant materials and for the mouth wash after each tasting. Taste buds boring quickly if water is employed. The hardness of water rarely has any significant influence on bitterness.

Determination of Hemolytic Activity

The term saponin is derived from the Latin word Sapo meaning soap. Plant material containing saponin has long been used for their detergent property. They are mostly characterized by their frothing property and also the most characteristic property of their ability to cause haemolysis when added to a suspension of blood, saponin produce changes in erythrocyte membrane, causing hemoglobin to diffuse into the surrounding medium. Many medicinal plant materials, especially those derived from the families Araliceae, Primulaceae, Caryophyllaceae, Dioscoreaceae contain saponin[6].

Determination of Tannin

Tannins are widely distributed in plant and occur in solution in cell sap, often in the vacuoles. They are chemically substance that can be detected by the tanning (the gold beater's test).

Tannins are substance capable of turning animals hide into leather by binding protein to form water insoluble substance that are resistant to photolytic

enzyme. This process when applied to living tissues known as an 'Astringent' action and is the reason for the therapeutic application of tannins[6].

Determination of Swelling Index

The swelling index is that the volume in metric capacity unit obsessed by the swelling of one metric weight unit of material underneath specified conditions. Its determination is based on the addition of water or a swelling agent as specified in the test procedure for each individual plant material. Using a glass closed measure cylinder, the material is shaken repeatedly for 1 hour and then allowed to stand for a required period of time. The volume of the mixture is then read. The mixing of whole material with the swelling agent is simple to realize, however cut or powdered material needs vigorous shaking at specified intervals to confirm even distribution of the material in the swelling agent.

Determination of Foaming Index

The saponins are high molecular weight containing phytoconstituent having the detergent activity. Saponins are mostly characterized based on their frothing property. Medicinal plants of different groups, especially those derived from the families Caryophyllaceae, Araliaceae, Sapondaceae, Primulaceae, and Dioscoreaceae, contain saponins. Many medicative plant materials contain saponins that may cause persistent foam once AN binary compound stewing is agitated. The foaming ability of an aqueous decoction of plant material and their extract is measured in term of foaming index[6].

Toxicological Parameter

Determination of Arsenic and Heavy Metals

Contamination of medicinal plant materials with arsenic and heavy metals can be attributed to many causes including environment pollution and traces of pesticides.

The amount of arsenic in the medicinal plant material is estimation by matching the depth of colour with that of a standard stain.

Determination of Pesticide Residues

Medicinal plant materials ar prone to contain chemical residues that accumulate from agricultural practices, such as spraying, treatment of soils during cultivation, and administration of fumigants during storage. Pesticide residues produce toxic effects like irritation of the eye, lacrimation, salivation, sweating, blurring of vision, breathlessness, colic; the systemic effects includes hypotension, tachycardia, cardiac arrhythmias, vascular collapse, respiratory paralysis, excitement, ataxia, convulsions. Hence the presence of these contaminants in medicinal plants must be avoided[1].

Determination of Microbial Contamination

Normally a large number of bacteria and moulds are present in medicinal plant materials because of the contamination from the soil and environment. Amongst those, the aerobic spore forming bacteria play role. The practices of harvesting, handling and production may cause further contamination. The main organisms to contaminate are E. coil and other moulds. The determination of Escherichia coil and moulds may indicate the quality of production and harvesting practices.

Determination of Radioactive Contamination

A certain amount of exposure to ionizing radiation cannot be avoided since there are many sources, including radionuclide's occurring naturally in the ground and the atmosphere. The vary of radionuclide which will be free into the setting because the results of a nuclear accident would possibly embrace long-lasting and transient fission, product, actinides, and activation products. The nature and therefore the intensity of radionuclides free might dissent markedly and rely upon the supply. (Reactor, reprocessing plant, fuel fabrication plant, isotope production unit, etc.)[6].

Ayurveda

The name Ayurveda is derived from two words Ayur meaning life and Veda meaning knowledge or 'science' i.e. the science of life Ayurveda evolved oven 5000 year ago, in the far reaches of Himalaya presumably from the deep wisdom of spiritually enlightened prophets or Rishi[1].

Ayurveda is very ancient system of medicine. It was perceived by Brahma, and he thought this science to Daksha Prajapati who thought it to the Aswani Kumar who taught to India and soon. Ayurveda is considered as the UPVEDA of ATHARVAVEDA which deals with different

type of herbs, plant, anatomy and physiology of different organs of the body and the principle of disease[8].

Ayurvedic medicine as defined in drug and cosmetic Act 1940, includes all medicines intended for internal or external use, for or in the diagnosis, treatment, mitigation or prevention of the disease or disorder in soul or animals and made completely in accordance with formula delineate within the authoritative books of Ayurvedic system of medication laid out in the primary schedule of act[7].

Ayurveda was established by some great seers and sages as a part of "Vedic science" which includes yoga, meditation and astrology. Ayurveda include herbal medical, dietetics, body work, surgery, psychology and spirituality. According to Ayurveda concept the human being consists of following.

Sharira	-	Body
Indriya	-	Perceptory organ
Satwa	-	Mind
Atma	-	Soul

This system believes the existence sour in the body and the unity of the body and mind. Mental disorder effect the physical function[8]. According to Ayurveda, health is defined as the balanced state of tridoshas i.e. vata, pitta and amp; kapha in the body, which is responsible for normal physiology of the body and the healthy condition of the mind.

Theory and Basic Concept

Ayurveda is based on three fundamental principles

1. Panchamahabuta Siddhanta
2. Tridosha theory
3. Guna-Rasa-Virya-Vipaka-Prabhava Siddhanta
4. Pancha-Mahabhuta Siddhanta:-

According to Ayurveda these are five basic element or mahabhutas which are prithvi (earth), Apa (water), Teja (fire), Vayu (air), and Akash (void). Ayurveda believes that every substance is a combination of these five mahabhutas. Each mahabhuta has its own characteristic feature, properties, effect and means of identification. It states that the body takes these elements from nature and again releases it. The body is balanced with perfect balance of these elements and when it is disturbed a healthy condition is developed which is called as illness. The basic role of 'Prithvi' in the body is a form and shape. 'Apa' maintains moisture, liquidity and lubrication. 'Agni' produces heat and energy. 'Vayu' considered as 'Prana' a vital force which control respiration 'Akasha' is considered as vacuoles and pores responsible for transportation of nutritional elements[9].

Tridosha Theory

There are three basic constituent of the physiological system known as "Doshas", which are responsible for governing and maintaining the proper health. This concept is known as "Tridoshic concept". The 'Dosha' are.

Vata

Vata dosha is constituted from vaya and Akasha. It is dry, cold and light. Balanced vata brings about respiration and animation. It is responsible for all physical process in general. It is located in colons, thighs, hips, ear, bones and touch organs. When aggregated vata (Air) cause emaciation debility linking of warmth, tremors, distention, constipation, insomnia etc. Vata is treated by gentle application of oils, gentle sweating and purification ways.

Pitta

Pitta dosha is originated from Agni (Fire). It is responsible for all chemical and metabolic transformation in the body. It is present in the acid form. Primarily it is hot, moist, light, Balanced pitta condition help in digestion, metabolism and energy production pitta in excess causes yellow colour of stool, urine, eyes, skin, burning sensation, loss of appetite, difficulty in sleeping and fever with inflammation and infections. It is located in stomach, sebaceous gland and blood lymph. Pitta is treated with ingestion of ghee, purgation by applying cool delightful and fragrant, volatile oils, camphors and sandal wood.

Kapha

Kapha dosha is made up of prithivi and Apa i.e. earth and water. It is responsible for making the bulk of our body tissues. It is also governs the emotional traits (love, compassion, modesty, patience etc) provide stability, lubrication and holding together of joints. Excessive Kapha cause depression of digestive fire, nausea, lethargy, heaviness, cough, difficulty breathing, excessive sleeping and accumulation of weight and gravity in the body.

Kapha is treated by strong emetic and purgation by all kinds of excessive & physical hardship etc[8].

3-Rasa-Guna-Virya-Vipaka-Prabhava Siddhanta

This is very important hypothesis of Ayurvedic therapeutics. The five important pharmacological principles of Dravya (drug substance) are rasa (therapeutically active agent), Guna (quality). Virya (an active principle by which potency is characterized),

Vipaka (the end product of digestion) and prabhava (The actual therapeutical activity of the drug in the individual). These five principles are the 'Panchsheel' or five pillars of the Ayurvedic therapeutics which covers the entire range of disease both of internal characters and external origin. These five principal have their foundation on the tridosha theory of Ayurvedic Pathophysiology[9].

Diagnosis

The diagnosis of disease was considered more important than treatment. The principles of treatment may be briefly summarized thus.

1. Remove the cause
2. Eliminate the toxin
3. Soothe the injury

Charaka is the principle exponent in the ayurvedic system of medicine. He had been regarded as the wandering physician. Charaka says that a physician who cannot enter into the intermost sour (Antaratma) of the patient with bright of his own intelligence cannot successfully treat his disease. The superiority of Ayurveda lie in the studying carefully the factors of constitution and personality and treating man as whole i.e. the integrated body mind and soul[8]. Charaka samhita describe the 'Nidana stana' which is concerned with the diagnosis of disease. It gives details of an etiology, Pathology and also sign and symptoms of disease. Critical observation and study of the patient for tridosha and its imbalance give information about the prakruti of the patient. Observation of the skin, eyes, hair, nails and tongue is carried out and the general history of the patient is noted. Pulse reading is important in Ayurvedic diagnosis. The ayurvedic practitioners look for the dominance of any dosha principal on the basis of pulse characters. Investigation of 'mala' also helps in the proper diagnosis of the diseases. It's after diagnosis of the doshas prakruit of the patients, the practitioner get idea of the predominating dosha of tridosha. The streatments generally aim towards bringing that dosha to the balance position[9].

Treatment

Charaka Samhita describes the 'Chikitsa stana' as the most important part of therapeutic which deals with the treatment. Astanga Ayurveda deals with eight branches of treatment are given in Table No.1.

The classifications of medicine uses for treatment depend upon the consistency of drugs. [(9)]

Scope of Ayurveda

The scope of ayurveda is vast. The object of the study of Ayurveda is the satisfactory attainment of the four aspiration of life Dharma's, Artha, Kama and moksha. Moksha is state of perfect peace, free all from desire with complete destruction of happiness and pain. The attainment of this state is the ultimate object of the teaching of Ayurveda. The modern scientist cannot understand the Samadhi state, because the delicate instruments of science cannot measure the supersensory state a yogi. It is beyond the perception of the five senses (Ateendriya). It is a subjective condition which is known to the yogi by direct perception (Pratyaksha Avirodha). It is

admitted that these is no room for such supersensory matter in modern medicine if western medical science and Bhagavad Geeta were combined the result might be comparable to Ayurveda. The spreading of its principle throughout the world means the disappearance not only of the fear of disease, but also of the fear of poverty old age and death[8]. The aim of Ayurveda is to integrate and balance the body, mind, spirit. This is believed to help prevent illness and promote wellness. Ayurveda is based on ideas from Hinduism, One of the world's oldest and largest religions. It has some basic beliefs about the body's constitution. "Constitution" refers to a person's general health, how likely he is to become out of balance and his ability to resist and recover from disease or other health problem[8].

Ayurvedic Dosages Forms

Ayurvedic drugs are obtained from the natural source that is from animal, plant and minerals. Ayurvedic dosages forms are classified into four groups depending upon their physical forms.

1. Soil dosage forms- Pills, Gutika, Vatika, Bhasma, satva, mandura, pisti, parpati, lavana, kshara, churna.
2. Semi-solid dosage forms- Avleha, Paka, Lepa, and Ghrita.
3. Liquid dosage forms- Asava, Arista, Arka, Taila, Dravaka, Kwath.

Arista

These are weak alcoholic preparation prepared by the making a decoction of the drug and then allowing them to undergo fermentation by the help of raw sugar or honey. The fermentation is done for a period of 7-10 days in hot weather for 15-30 days in cold weather. E.g. Ashokarista etc[10].

Asavas

These are medicated alcoholic liquors prepared by the fermentation of raw vegetable juices with honey or jaggery or treacle. The various parts of the plant such as roots, leaves and barks etc. are cut into pieces and infusion is prepared in water in air-tight earthen jars. Honey or treacle is mixed in it. The fermentation is done for at least six months. The asavas are prepared by the fermentation of infusion of the drugs, whereas aristas are prepared by the fermentation of decoction of the drugs. Asavas are used as stomachic, stimulants, tonics and astringent etc. E.g. Kankasava, Ashokasava etc[10].

Arka

It is the liquid preparation obtained by distillation of fresh flower and soft part of plant containing volatile constituents. If the arka is to be prepared from hard part of plant, the drug is first powered and moised with water (or other suitable liquid) for a sufficient amount of time until it softens. A boiling chamber made of copper or brass is used for the purpose. E.g. Ajamoda Arka, Tulasi Arka etc.

Avleha

Avalehas are basically sugar based semisolid preparation for oral use. The preparation of avaleha involves, evaporating the kwath (decoction) to semi-solid consistency and then adding medicaments, sweetening and flavouring agent to it. The medicament can also be mixed in syrup and evaporated to get a product of highly viscous or semi-solid consistency. E.g. Chyawanprash etc[1].

Lepa

Lepas are external preparation used in the form of a paste. The method of preparation involves powering the drugs and mixing with a liquid medium like water, ghee, cow's urine etc to make a soft paste

E.g. Dasaga lepa, pathyadi lepa etc[1].

Kwath

It is also decoction and is generally prepared by boiling one part of vegetable substance in coarse powder with 8 or 16 parts of water in earthen pot till the whole is reduced to $1/4^{th}$ or $1/8^{th}$ or $1/16^{th}$ quantity of water. Kwath should be prepared a fresh every day.

E.g. Dasmula kwath, Rasanadi kwath etc[10].

Churna

Churna are powdered preparation of drugs used for oral administration. There are two types-

simple and compound churnas. Simple churna contain only one medicament, and compound churnas contain more than one medicament.

Preperation

The herb is thoroughly cleaned, properly dried and reduced to fine powder. The powder is sieved through a 80 mesh sieve. If the churna drug containing more than two components each one separately powdered, sieved, weighed accurately and mixed together. The churnas must be stored in air-tight containers. They are usually taken as such or mixed with sugar, honey, milk, water. E.g. Sitopaladi churna, Ashwagandha churna, Sudarshan churna etc[1].

Satva

These are extract of herbs. A fresh herb is crushed into coarse mass and allowed to remain in contact with water for about 12 hours. Then it is churned thoroughly and strained through muslin. The strained liquid is allowed to stand for a few hours. The upper clear is siphoned off and the sediment which contain active ingredient is dried into fine powder. E.g. gulvel satva etc[10].

Ksaras

Drugs are cut into small pieces and burnt to get ash. Ash is dissolved in water, stained again evaporated to get rid of water while salty solid is known as ksaras. E.g. Yavksara, Palsaksara etc.

Vati or Gutika

These are preparation in which plant extract concentrate in the form of tablet or pill are known as vati or gutika. They are preparaed by compression with the help of a tablet making machine or hand. E.g. Chandroday Vati, Chitrakadi Vati etc.

Netrabindu and Anjan

Netrabindu is made by dissolving the specified drug in water or kasaya used as eye drops. Anjan are very fine powders or medicaments to be applied with netrasalaka. E.g. Miktadi, Mahanjana etc.

Pakas

These are jelly soft preparation of drugs for internal use, made into paste or solid mass with sugar, milk or honey. The thin paste is also called Avaleha and the semi-solid mass is called Paka[10.]

Pisti

These are obtained by triturating the drug with the specified liquid and exposing to sun light. E.g. Praval Pisti, Mukta Pisti etc.

Ghrita

These are preparation in which ghee boiled with the prescribed quantity of the decoction and fine paste of drug as specified in the formula. E.g. Triplala Ghrita, Vasa Ghrita, Gudchi Ghrita etc.

Tails (Oils)

These are preparation in which drug substance is dissolved in Tails. E.g. Bhrangaraja taila, Maha narayan tail etc.

Bhasma

The powdered form of the substances obtained by calcination of metals, minerals or animal product by a special process in closed crucibles in pits covered with cow dung cake (puta) is known as bhasma.

E.g. Lauha Bhasma etc.

Pisti

It is preparaed by mixing various stone with the rose ark or kavera ark till it is converted into a fine powder. It is considered to be better than bhasms of stones.

Kwath

Definition of kwath :- It is decoction and is generally prepared by boiling one part of vegetable substance in coarse power with 8 or 16 parts of water in earthen pot till the whole is reduced to $1/4^{th}$ or $1/8^{th}$ or $1/16^{th}$ quantity of water. Kwath should be prepared a fresh every day. It meant either for oral administration or external use is called Kwath. E.g. Dasmula Kwath, Rasanadi Kwath, Varunadi Kwath etc[1,10].

Table No.1: Type of Chikitsa and Treatment

S.No	Type of Chikitsa	Treatment
1	Kayachikitas	General medicine
2	Shalakyatantra	Treatment of disease above clavicular region by shalaka
3	Shalyatantra	Acute and chronic disease caused due to foreign bodies
4	Vishagaravairodhika Chikitsa	Toxic substances
5	Rasayan Chikitsa	Promotional health
6	Vajeekaranam	Diseases of genital organ
7	Koumaryabhryatya Tantra	For pediatric diseases
8	Bhutavidya	For disease which have no logical causative factor

CONCLUSION

The quality of seasoning medicine is that the add of all factors that contribute directly or indirectly to the security, effectiveness and satisfactoriness of the merchandise. Now a day the field of herbal drugs and formulation is very fast and there is still lot to explore on the subject of standardization of these. So, whereas developing associate degree seasoning formulation it's should to possess all the connected information of that specific drug as well as all its organoleptic characters to phytoconstituents to medicine action to its standardization in reference to varied parameters via varied techniques. The problems of quality assurance of seasoning medicines are solved to nice extent with the assistance of action identity verification analysis. Plant materials square measure used throughout the developed and developing world as home remedies, in over the-counter drug product, and as raw material for the pharmaceutical industry, and they represent a substantial proportion of the global drug market. The stability testing of seasoning product check the standard of seasoning product that varies with the time beneath the influence of environmental factors, like temperature, humidity, light, oxygen, moisture, different ingredient or excipient within the dose kind, particle size of drug, microbial contamination, trace metal contamination, leaching from the container, etc. and conjointly offer statistics for the determination of shelf lives. Therefore analysis of the parameters primarily based upon chemical, physical, microbiological, therapeutic and materia medica studies will function a very important tool in stability studies.

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CONFLICT OF INTEREST

We declare that we have no conflict of interest.

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