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CONCEPT OF SHODHANA OF MAHARASA, UPRASA AND SADHARANA RASA IN AYURVEDIC PHARMACEUTICS AND THEIR SIGNIFICANCE

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Abstract

Ayurveda employs a diverse spectrum of raw materials, including botanical drugs, minerals, animal-derived substances, and certain synthetic compounds, for the preparation of medicinal and pharmaceutical formulations. In Ayurvedic pharmaceutics, Shodhana (purification or detoxification) constitutes an essential pre-pharmaceutical process. This procedure is undertaken either to eliminate or mitigate the toxic properties of the raw materials or to potentiate their therapeutic efficacy. Both herbal and mineral substances may exhibit inherent toxicity owing to their intrinsic chemical composition or variations arising at specific stages of their phytochemical or physicochemical profiles. Consequently, it is imperative to subject such materials to systematic purification procedures to render them safe, pharmacologically active, and therapeutically efficacious, while simultaneously minimizing or nullifying their undesirable or adverse effects.

Keywords:- Pharmaceutical, Purification, Shodhana

Introduction

Shodhana is defined as the process of elimination of Dosha (impurities, toxicity, or defects) from a substance. The term Dosha encompasses not only physical impurities but also any factor that renders the drug unsuitable for subsequent pharmaceutical processing or therapeutic application. In the context of metals and minerals, Shodhana involves a series of physicochemical and therapeutic transformations that convert the raw material into a form suitable either for further processing, such as Marana, or for direct therapeutic use. This procedure is considered mandatory for metals and minerals, as it facilitates the exposure of a maximum surface area of the drug for subsequent chemical reactions. Additionally, it enables the impregnation of organic materials and their properties into the substance. As a result of these processes, the mineral becomes more brittle, thereby aiding in effective particle size reduction and enhancing its

suitability for pharmaceutical applications.Shodhana can be broadly classified into two principal categories: Samanya Shodhana and Vishesha Shodhana[1].Samanya Shodhana is a standard purificatory procedure applied to a group of substances, including Maharasa, Uparasa, Ratna, and Dhatu. For example, the Samanya Shodhana of Parada involves Bhavana (levigation) with garlic paste and Saindhava Lavana until the material attains a black coloration, followed by thorough washing with water[2].

Vishesha Shodhana, on the other hand, is a specific purification process designed for individual substances, tailored to their unique properties and requirements.

Both Samanya and Vishesha Shodhana procedures are further categorized into Sagni and Niragni methods. Sagni Shodhana involves the use of heat or fire, examples of which include Nirvapa, Dhalana, Bharjana, Puta, Swedana, and Patana. In contrast, Niragni Shodhana is conducted without the application of heat or fire, with examples such as Bhavana, Prakshalana, Shoshana, Sinchana, Nimajjana, and Gharshana.

Aim of Shodhana

Shodhana is a multi-faceted process designed not only to eliminate physical and chemical impurities from raw drugs but also to enhance their bioavailability and therapeutic efficacy.

Objectives of Shodhana

Classical Ayurvedic texts prescribe specific Shodhana methods tailored to the nature of each raw drug. The primary objectives of Shodhana include: eliminating physical and chemical impurities, neutralizing inherent toxins, enhancing therapeutic qualities, rendering the drug suitable for administration, and facilitating subsequent pharmaceutical processes such as Marana (incineration).

1. Elimination of Physical and Chemical Impurities: Raw drugs, being of natural origin, frequently contain extraneous materials such as sand, plant debris, or unwanted minerals. These impurities can be effectively removed through Shodhana. For instance, Shilajatu (Asphaltum punjabinum) is purified by washing in alkaline, acidic, or sour media to separate impurities. Similarly, Mercury is subjected to sublimation and condensation processes to remove traces of Tin and Lead.
2. Neutralization of Toxins: Certain drugs, including Kupilu (Strychnus nux-vomica), Tamra (Copper), and Haratala (Arsenic trisulphide), possess intrinsic toxicity. Seeds of Strychnus nux-vomica, for example, are purified by frying in ghee, followed by removal

of the external coat and plumule. This process inactivates strychnine, converts it into a non-toxic form, and slows its absorption to levels within the therapeutic range.

3. Enhancement of Bioavailability and Therapeutic Qualities: Shodhana enhances the bioavailability of drugs by converting them into aqueous-soluble forms or lipid-soluble forms capable of crossing physiological barriers, thereby improving their therapeutic efficacy.
4. Facilitation of Subsequent Pharmaceutical Processes: The process of Shodhana increases particle porosity and surface area, which is crucial for further procedures such as incineration, trituration, or levigation. For metals like Iron and Copper, purification involves heating to red-hot temperatures followed by immersion in specific liquids. This treatment renders the metals brittle, facilitating size reduction and further processing.
5. Imparting Thermal Stability: Repeated purification of substances such as Sulphur induces modifications in their crystalline structure, thereby enhancing thermal stability. Crystalline size and structure are altered during Shodhana, producing a thermally stable form suitable for subsequent pharmaceutical applications.

Different Shodhana Method:

Table 1: Shodhana methods[3]

Sl. No.	Name of the process	methodology	Significance
1.	Swedana	Boiling of raw material in selected liquid medium	Removal of volatile impurities or conversion to nontoxic form.
2.	Mardanam	Trituration without liquid ingredients	To segregate homogenous ingredient followed by separation.
3.	Bhavana	Trituration with liquid media	Particle size reduces along with conversion to other form
4.	Patana	Distillation and condensation	Separation of volatile/ingredients from non-volatile matter
5.	Dhalana	Melted slag or metals are dipping in cold liquid medium	Separation of adulterants and reducing brittleness
6.	Prakshalanam	Washing in a current of water	Removes dust /light particles and other foreign bodies
7.	Nimnjanam	Dipping raw drug in selected liquid medium	Either to nullify toxins or to convert to non-toxic form
8.	Bharjanam	Frying	Heating Kanshi (Alum) removes water of crystallization

Table 2: Shodhana of Maharasa[4,5]

Name	Method	Ingredients and Procedure (Reference)
Abhraka	Nirvapa	In Kanji/Gomutra/Triphala decoction/Milk for 7 times (RRS)
Vaikranta	Swedana	Amla dravyas (Kanji)/ Urine/ Kulatha decoction/kodrava/Kadali Kanda Swarasa) along with Panchalavana, Yavakshara, and Tankana for 3 days (RRS)
Makshika	Nirvapa	Nirvapa with Triphala decoction 7 times (RRS)
Vimala	Swedana	With Jambira Swarasa (RRS)
Shilajatu	Dhouta	Washing with Kshara/Amla (RRS)
	Nimajjana	Soaking in Milk/Triphala Kwatha/Bringaraja Swarasa (RRS)
	Swedana	Swedana in Swedani Yantra with Yava Kshara and Guggulu, Kanji as liquid media for 3 hours (RRS)
Sasayaka	Bhavana and Pachana	With Rakta Varga Dravyas 7 times and boiling with Sneha Varga drugs. (RRS)
	Swedana	Swedana with Go/Mahisha/Aja Mutra for 3hrs (RRS)
	Bhavana	Nimbu swarasa bhavana for 6 hours
Chapala	Bhavana	With Jambira Nimbu Swarasa/Ardraka Swarasa 3 times (RRS)

Abhraka: The Nirvapa technique, which involves heating the material to a red-hot state followed by immediate quenching in a liquid medium, is commonly employed in the purification of Abhraka (Biotite). During heating, the elements present in the biotite are oxidized on the surface of the Abhraka flakes through interaction with atmospheric oxygen. Immediate quenching is critical, as rapid cooling after heating disrupts the compression–tension equilibrium of the material, leading to the formation of cracks on the flake surface and promoting fragmentation, thereby reducing particle size. With each cycle of Nirvapa, the dense structure of Abhraka is progressively broken down into smaller fragments due to increased brittleness. In the initial stages of Shodhana, cracks appear on the surface of the flakes, which gradually disintegrate into coarse powder. In the final stages, finely divided Abhraka particles become airborne and travel greater distances, reflecting significant size reduction. Various liquid media are employed for quenching, including Kanji, Triphala Kwatha, Cow's milk, and Cow's urine. Kanji facilitates the removal of acid-soluble impurities, Cow's urine eliminates base-soluble impurities, and Cow's milk dissolves lipid-soluble contaminants. Additionally, Cow's milk and

Triphala act as Vishaghna Dravya, contributing detoxifying effects during the purification process.

Vaikranta: Kulatha Kwatha has been reported to effectively reduce the hardness of Vaikranta due to its intrinsic Bhedhana (softening and disintegrating) property.

Makshika: Following heating, the material is immediately quenched in Triphala Kwatha. This rapid quenching facilitates the penetration of the medium into the substance, allowing residual impurities to be separated or dissolved while simultaneously imparting the therapeutic properties of Triphala Kwatha into Swarna Makshik. Immediate quenching is essential, as repeated rapid cooling after heating can result in undesirable fragmentation of the material. During the Shodhana process, the yellowish and golden luster of Swarna Makshik is completely lost, transforming it into a dark black coarse powder.

Sasyaka: Copper sulphate is triturated with lemon juice, leading to the formation of copper citrate. Consequently, the bright blue color of the crude substance is converted into a green or bluish-green crystalline powder, reflecting the completion of the purification process.

Table 3: Shodhana of Uparasa[6,7,8]

Name	Procedure	Ingredients and Procedure (Reference)
Gandhaka	Dhalana and Swedana	Gandhaka is melted with ghee and poured into milk (3-7 Times). (RRS)
	Urdhvapatana	Damaru Yantra (RT)
Gairika	Bhavana	Bhavana with Milk (RRS)
Kasisa	Nimajjana	With Bringaraja Swarasa (RRS)
	Swedana	Dola Yantra Swedana with Bringaraja Swarasa (AP)
Sphatika	Nimajjana	With Kanji for 3 days (RRS)
	Bharjana	Bharjana (AP)
Haratala	Swedana	With Kushmanda Swarasa/ Tila Kshara Jala/ Churnodaka/ Aranala (RRS)
Manashila	Bhavana	With Ardraka Swarasa (RRS)
	Swedana	With Jayanti/Bringaraja - 3 hours and washed with Kanji. (RRS)
	Nimajjana	Nimajjana with Lime water (RT)
	Swedana	Dola Yantra Swedana with Jayanti/Bringaraja Swarasa (RT)
Anjana	Bhavana	With Bringaraja Swarasa
		Bhavana with Triphala Kwatha/Bringaraja Swarasa (RT)
		Jambiri Swarasa Bhavana for 1 day (AP)
	Swedana	Dola yantra Swedana with Triphala Kwatha (AP)
Kankushta	Bhavana	With Nimbu Swarasa (RRS)

Gandhaka (Sulphur): Gandhaka is intrinsically hot in potency, and its ingestion in the unprocessed form may cause adverse effects such as burning micturition. Cow's ghee and cow's milk, which possess cooling properties, are therefore employed during Gandhaka purification to moderate its inherent heat. Milk contains proteins that act as chelating agents for metal cations, while cow's ghee contains free fatty acids capable of forming sodium, potassium, and calcium salts, facilitating the removal of these elements from Gandhaka.

Gairika (Ochre): Raw Gairika contains water and oxygen molecules, which increase the likelihood of free ferrous ions (Fe^{2+}) that are highly reactive and can generate free radicals, posing toxicity risks. During Shodhana, roasting Gairika with ghee converts ferrous ions into ferric ions (Fe^{3+}), which are more readily absorbed and transported in plasma via transferrin. This process enhances the bioavailability and therapeutic efficacy of Gairika.

Kasisa (Iron Sulphate): Purification of Kasisa is achieved by trituration with lemon juice, which is rich in vitamin C and B-complex vitamins. These act as intrinsic factors that enhance iron absorption, producing a synergistic effect. The resulting Shodhita Kasisa is pale green, finely powdered, and possesses a smooth texture.

Sphatika (Alum): Shodhana of Sphatika can be performed using two methods: the closed method, involving Gajaputa, and the open method, involving heating in an iron pan. The product obtained via the Gajaputa method is white, while the open-heated Sphatika appears dull white. These differences are attributable to variations in heat exposure and oxidation during processing. Both forms are devoid of any characteristic odor or taste.

Hartala: The major constituents of Kushmanda fruit include volatile oils, flavonoids, glycosides, sugars, mannitol, cucurbitin, histidine-like amino acids, carotenes, vitamins, minerals, ß-sitosterol, and uronic acid. Flavonoids facilitate the removal of arsenic from the body, while sugars and mannitol may assist in urinary excretion of Arsenic. Histidine, an α-amino acid containing an imidazole functional group, exhibits antifungal activity and contributes to therapeutic properties.

Manahshila: Shodhana of Manahshila using Ardraka Swarasa employs several detoxification mechanisms:

1. Phytochelation: Sulfur-containing amino acids in ginger, such as cysteine and methionine, act as phytochelatins, binding arsenic and reducing its toxicity.
2. Methylation: Cysteine functions as a methyl donor, facilitating the conversion of arsenic into non-toxic methylated forms, which are subsequently excreted via the liver.

3. Preservation of Glutathione: Glutathione, a natural antioxidant and detoxifying enzyme, combines with arsenic for biliary excretion. Ginger supports glutathione levels, mitigating depletion caused by arsenic exposure.
4. Neutralization of Alkalinity: Ginger, with a pH of 3.6, neutralizes the alkaline nature of Manahshila (pH 8.15), rendering it safer for therapeutic application.

Table 4: Shodhana of Sadarana rasa[9,10]

Name	Method	Ingredients and Procedure (Reference)
Kampillaka	Plavana	It is immersed in water, and pure Kampillaka floats[11]
Gouripashana	Swedana	The bigger size of Karavallaka is taken, and Gouripashana is kept inside it. Dola Yantra Swedana is done for one Yama. (RRS)
		Dola yantra Swedana with Tankana jala or Milk. (RT)
Navasadara		It is placed on a steel vessel with 3 parts of water and stirred well. The filtrate is now taken out and boiled to evaporate the water. (RT)
Varatika	Swedana	With Kanji (RRS)
	Swedana	With Amla Dravya like Nimbu Rasa /Kanji/Kulatha Kwatha. (RT)
Hingula	Bhavana	With Ardraka Swarasa/Lakucha/Amla Varga/Mesha sringi dugda. (RRS)
		With Ardraka Swarasa/Nimbu Swarasa. (RT)
Mrudara Sringa	Bhavana	With Shudha Jala for 15 days (RT)

Kampillaka: The purification of Kampillaka is performed by immersing the material in water. During this process, impurities settle at the bottom while the floating particles of Kampillaka are collected. These floating portions are subsequently dried and preserved for further use.

Gauripashana: Karvellaka Swarasa is considered the most suitable medium for the Shodhana of Mala. The phytochemical constituents of Karvellaka Swarasa, including charantin, polypeptides, calcium, phosphorus, iron, and magnesium, are believed to contribute to the reduction of Mala toxicity, potentially through chemical detoxification mechanisms.

Navsadara: Impure Navasadara is first dissolved in water, and the solution is filtered to remove insoluble impurities. The filtrate is then spread in a flat pan and allowed to evaporate on gentle

heating. Following complete evaporation, white crystalline Navasadara is obtained, effectively eliminating physical impurities.

Kapardika: Shodhana of Kapardika is carried out by Swedana (steaming) in Nimbu Swarasa using a Dola Yantra, in accordance with specifications described in Rasatarangini. The acidic nature of Nimbu Swarasa likely facilitates the reduction of hardness and particle size of the material, enhancing its suitability for subsequent pharmaceutical processing.

Hingula: Shodhana Using Nimbu Swarasa: Hingula is purified through repeated Bhavana (levigation) with Nimbu Swarasa for seven cycles. Natural impurities in Hingula, including zinc, copper, and antimony, are removed through chelation. Citric acid, malic acid, retinol, and amino acids present in Nimbu Swarasa act as natural chelating agents. Citric acid promotes disintegration of HgS, while organic acids weaken interatomic bonds, facilitating dissociation of mercury and rendering the metal ions inactive.

Shodhana Using Ardraka Swarasa: When Hingula is triturated with Ardraka Swarasa, active constituents such as gingerols, shogaols, and gingerdiols may form various coordinate complexes with the metal ions, contributing to detoxification and enhancing the suitability of Hingula for therapeutic use.

Discussion

The primary significance of the Shodhana process lies in its ability to reduce or eliminate toxicity while enhancing the bioactivity of the material. This is achieved either by chemically or structurally converting toxic components into non-toxic forms or by removing the harmful constituents altogether. Additionally, Shodhana alters the physical state of the substance, thereby increasing its surface area—a critical factor that facilitates subsequent pharmaceutical processes such as calcination and other related procedures.

Conclusion

Acharyas have described a variety of media for the Shodhana of different categories of substances, including Maharasa, Uparasa, Sadharana Rasa. Various studies have demonstrated that these media not only facilitate the removal of impurities but also contribute to the enhancement of the therapeutic properties of the substances.

Multiple media are often prescribed for the purification of a single substance, and the selection of an appropriate medium is determined by the intended therapeutic application. The present study incorporates various media as selected by different scholars, based on the specific objectives and requirements of their respective investigations.

List Of References

[1]. Umrethia Bharti, Kalsariya Bharat. A Textbook of Rasa shastra, 2019, Chaukhamba prakashak, Varanasi. p 30

[2]. Amandeep Sharma, Amit Kapila, Rajni Bhardwaj, Critical review on Parada Shodhana, Jarana, and Marana processes, journal of Ayurveda and integrated medical sciences, 2020;5(6):205-210

[3]. Morbale Mangal Sunil, Herwade Ajitkumar Shantinath. Concept of Shodhan (Purification process), International Ayurvedic Medical journal, 2015;3(9):2725-2728

[4]. Satpute. A.D (trans.), Rasa Vagbhata's Rasa Ratna Samucchaya, reprint 2019 Chaukhamba Sanskrit pratishthan, Delhi p 21,30,34,37,41,44,48,49

[5]. Kashinatha Shastri, Rasa Tarangini 2005, Motilal Banarasi Das Publications, Varanasi, p 225,584,209,532,555

[6]. Satpute A.D (trans.), Rasa Vagbhata's Rasa Ratna Samucchaya, reprint 2019 Chaukhamba Sanskrit pratishthan, Delhi p 56,57,62,63,65,67,71,74,75

[7]. Kashinatha Shastri, Rasa Tarangini 2005, Motilal Banarasi Das Publications, Varanasi, p 177,176,178,566,261,578

[8]. Gulrajsharma Mishra, Ayurveda Prakasha,1999, Chaukhamba Bharati Academy, Varanasi, p 646,578

[9]. Satpute A.D (trans.), Rasa Vagbhata's Rasa Ratna Samucchaya, reprint 2019 Chaukhamba Sanskrit pratishthan, Delhi, p 78,80,82

[10]. Kashinatha Shastri, Rasa Tarangini 2005, Motilal Banarasi Das Publications, Varanasi, p 246,24,326,300,201,551

[11]. Ravindra Angadi, Textbook of Rasa shastra, 2022, Chaukhamba Surbharati Prakashan, Varanasi, p 275