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Effect of Shodhana on Skin Irritation of *Semecarpaus anacardium*

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ABSTRACT

The present work was based on the study of the Effect of Shodhana on Skin Irritation of *Semecarpus anacardium*. The sections of the thalamus were cut off and cleansed (shodhit) by rubbing them on brick gravels and soaking them in Gomutra and Godugdha. The nuts are then either preserved in Godugdha for 7 days or in Gomutra for 7 days before being rinsed with water. The seeds are then transferred to a bag with brick gravels for three days, properly rubbed, and dried. Preshodhit and Shodhit nuts weighing 250 g were extracted for 18 hours in 250 ml of methanol, and the extracts were then dried off. to investigate *Semecarpus anacardium*'s toxic effects and allergic reactions Preshodhit and shodhit methanolic extract were applied to the Albino Wistar Rat's ear lobe for 14 days, and the skin irritation test was then observed. After 14 days, it was discovered that the shodhit medicine's irritancy impact was smaller than that of the preshodhit drug. Thus, I found that the harmful compounds that cause skin irritation may have been eliminated as a result of *Semecarpus anacardium*'s shodhana.

INTRODUCTION

Ayurveda is well-known around India for healing growth way of life, herbs, and remedies. Place-dependent curatives have a lot of historical pasts. People have typically been sick, and continue to be before the appearance of fashionable medicine. Day time period -to- day time period utilization of plant-based plant life will be the location whereby much healing organic vegetation might be discovered. Grow living and plant-based vegetation are incredibly extremely estimated for every one of the nutrition, vitamins, minerals, volatile oils, glycosides, alkaloids, alcohols, esters, and much more. Furthermore, they provide you therapeutics for age range assortment attached state as loss of mind, osteoporosis, immune state, etc. for which hardly any fashionable medicine is provided [1].

80 % of those makes use of grow-dependent medicines for primary well-being as well as health. Chemical substance material constituents appear to be components of natural options that come with the current flora and also consequently have far better compatibility combined with the male physique. These medicines will probably be reached by the planet's helpful telephone systems from inexhaustible energy sources of raw things which enable it to offer the monetary house to the masses rising the raw compound [2].

Grow living along with its secondary metabolites of theirs have extensively been employed in typical medicine how about western medicine. Utilization of growing dependent drugs to drop in developed areas has improved sharply inside the 2nd 1 one-half of the last 100 years [3]. Around 2 thirds of the 50,000 healing grow living being utilized remain being harvested from all-natural habitats, based mostly on Edwards [4]. Of these, several have a dangerous effect in addition to many have recovery results. Unsafe parts of specific vegetation are competent to result in illness or injury to people or animals. There is an essential overlap between growing ways of life that is detrimental also in addition people with psychotropic attributes, a number of that happen to be dangerous sufficient at pleasure helping to provide serious health and fitness effects. For instance, particular vegetation is deadly. How can they be harmful to individuals? Arum maculatum, Asparagus genus, Brugmansia genus, and so forth. There are some dangers grow daily life which in turn occur to get in addition to healing physical exercise as well as *Semecarpus anacardium* [5].

Semecarpus anacardium is well-known frequently as BHALLATAK. Inside Indian medicine (Ayurveda), it has been used for generations. It has a lot of healing house due to various

constituents that could be found in it like phenolic components, flavonoids, carbohydrates, alkaloids, steroids, and much more [6].

A process referred to as Shodhana purifies healing materials. It is an extremely simple process. Much better amounts of strong chemical compounds may harm the entire body, consequently, it is essential to undertake it. These strong chemical compounds must be neutralized with their usual pharmacological steps of theirs. The concept of shodhan is therefore very essential. Shodhan has 2 types, Samanya shodhana, and vishesh shodhana. Unsafe medications cannot be used with absolutely any shodhana. This particular shodhana inside Ayurvedic medicine is truly essential. The undesired characteristics to drop with the sorts of medications originate from the presence of invisible as well as obvious dangerous specks, hardness, and presence of heterogeneous issues in addition to the presence of lethal issues. [7]

Grow living are usually the primary key availability of medicine discovered by Ayurveda. Several components are remote from healing grow living along with made for that particular application of mankind; nevertheless, the vast majority of the medicines are withdrawn because of their toxicity of theirs or maybe perhaps side effects.[1,2,3] Traditionally, grow living has various classes of phytochemicals consistently being utilized perhaps within the crude type of theirs or maybe right after ideal processing. Even though the vast majority of veggie medications are protected, very few are unsafe for male well-being as well as health. This poisonous/toxic vegetation is categorized as viṣa (poison) together with upaviṣa (toxic, however, not deadly for male health) in Ayurvedic texts[4]. and also talked about in the routine E of Drugs and also Cosmetics Act 1940[5]. As a result, to market and also result in the usage of theirs for medicine, several develop medicines must be detoxified or maybe perhaps natural in front of their use.[6] The detoxification or purification process for almost any dangerous material used for healing applications is known as "Śodhana". Within Ayurveda, Śodhana could be within strategy following the areas over the Caraka Saṃhitā, although the usage of its broadened combined with the enhancement of Rasaśāstra since the 8th century CE. Śodhana treatment is particularly created for medications from the mineral origin; however, it is recommended for these types of drugs to get rid of their doṣās (toxic content) or perhaps harmful particles. It has been cited with the treatises of Ayurveda that thru the use of the appropriate method of processing, viṣa might be transformed into amṛta (nectar) or even in on different hands and wrists on the adoption of inappropriate remedies, nontoxic materials turn directly into a toxic.[7] The concept of Śodhana discovered Ayurveda

not just transfers above the process of purification/detoxification of physical as well as chemical substance chemical damaging specks but in addition transfers above the minimization of unwanted effects along with improving the potency/therapeutic efficiency of clean medicinal drugs.

Identified constituents of a good deal of produce medicines could devote severe dangerous effects during greater concentrations.[9-11] The air purification methods are supposed to lessen the toxicity volume to a body inexhaustible cap in addition to reducing the lethal constituents to a specific amount or maybe by potentiating their material transformation to nontoxic or maybe pretty a great deal much less lethal elements by enhancing the natural effectiveness of theirs. Ayurvedic classic timeless classics have emphasized several methods for Śodhana to overcome the undesired effects originating from various hazardous & amp; amp; nonpoisonous drugs,[12-14] associated with different media specific to components for instance Godugdha (milk of Bos indicus), Gomūtra (urine of Bos indicus), Triphalā (combination of three fresh fruit, Terminalia chebula, Emblica and also Terminalia bellarica Officinalis) in addition to new fresh lemon juice, etc.[15,16]. Several pharmacological, as well as toxicological scientific tests, are analyzed on the subject of the identified phytochemicals of a large amount of unsafe grow living immediately after their Śodhana. The objective of the current examination is to go over the expression of info about the Śodhana process for several hazardous grow existence. The current comment, in addition, identifies almost daytime information concerning the different processes for purifying (Śodhana) to drop with the Ayurvedic approach to medicines.

A reasonably large deciduous tree with large rigid leaves sticking to a level of twelve to fifteen meters. Ends of limbs packed with foliage, ranging in length from 20 to 60 centimeters, as well as in width from 10 to 30 centimeters, with visible secondary nervous feelings. The tree is bare during April and March. There are abnormal quadrangular plates divided by narrow longitudinal furrows in the bark, which are 2 to 5 cm thick. In older forests, the bark is the primary component with exfoliating scales. The bark's internal surface is covered in red-colored pigments, which exude liquid after being covered. In the hotter parts of India, this tree can be found all over. During the dry deciduous forests of central India, it is common. Khandesi, Marathwada, and Eastern Maharashtra's dried deciduous woodlands are typical examples.

Use of the 2.3 Part It is astringent, anti-inflammatory, and anti-tumourous. Fruits Rheumatoid osteoarthritis and malignant tumors & tumors are both treated with this medication. Using seeds, the bhilawa nut layer fluid is created. The bark is an astringent substance found in the natural world. The gum resin used to treat leprosy is expelled by her. Tapping on the stem releases an acrid, viscous liquid.

As an alternative to printer ink used by washermen to mark garments, Dhobi Nut is commonly referred to as a bitter and strong compound found in the nut. As a fixative, limewater should be mixed with the black color of cotton clothing before use.

Also used is a fruit dye made from fresh fruit. As an aphrodisiac, digestive aid, rheumatic pain reliever, and skin tonic in Ayurvedic medicine, these herbal plants can also be used as an astringent, hot-producing herb. As for those fleshy cups and nuts, they're all eaten up in one go.

Because of a lack of insects, a tree could grow to enormous proportions. The kernel engine oil must be used both as a lubricant and as a termite barrier. Seed Collection: How to collect seeds An oval-shaped fruit (drupe) with a diameter of more than one centimeter and 2.5 centimeters of fleshy hydnocarp containing attached peanuts or plant seeds. Tough-layer kernels are nontoxic, but they can cause cutaneous eruptions. Fruits in season Between December and March, seeds are gathered.

Sodhana, several pharmaceutical methods in Ayurveda that transform a dangerous medication into an extremely effective medication for a wide range of ailments are called Shodhana in Ayurveda. It's fascinating to see how modern medical technology is being used to process plant-based dangerous prescriptions uniquely. Before and after Shodhana (purification or processing), the press can be examined to reveal the rationale for selecting a specific press for the medication.

Shodhana employs a variety of media outlets. To use an example from Vatsnabha, Gomutra (cow urine) has its origins.

The seeds of the Gokshira - Eg. Kupilu tree are safe to use.

Fresh fruits from Bhallataka, such as Udaka Narikela (coconut water).

Kupilu seed products, such as Ghrita (cow's ghee), are non-toxic.

origins of Choornodakam (Limewater) - for example, Chitraka (Plumbago zeylanica Linn.)

Ardrakaswarasa (Eg. Laex of Ahiphena) (Ginger juice) (Papaversomniferum Linn.)

Eg. fresh fruits from Bhallataka in Ishtikachoorna (Brick powder)

Triphala decoction (triphalakwatha) Eg. Oleo-gum resin from Guggulu

In the language of Panchapallavakwatha, this term means

- For example, the rhizome of the Vacha plant (Acoruscalamus Linn.)

Bhallataka's fresh fruits in warm water (Ushna jala)

Vatsanabha's Ajakshira (goat's milk) can be traced back to Vatsanabha.

It is safe to consume Eg. Kupilu seed products, such as Eg. Kanji. Shodhanas of Various Types Aside from the Vishesh and Samanya varieties, there are several others. If you've got a bunch of different medications that come together, you'll most likely use the term Samanya (general) to refer to them all.

Some of the same kinds of harmful particles are found in several different classes of medications. Thus, Samanya shodhana can eliminate all of the fundamentally harmful particles. Examples include Dhatu Samanya Shodhana, for instance.

Vishesh (specific): The versions that benefit from this specific strategy are those that raise public awareness about medicines. Every medical team has a variety of dangerous particles. That's why Vishesh Shodhana [twelve] eliminates them because they differ from compound to material.

Shodhana from Bhallataka (*Semecarpus anacardium Linn.*): the press part: Brick powdered presses are the most common and primary pre-owned presses for Bhallataka Sodhana. The level of removing the oily portion of the nut is proportional to the nut's safety margin. *Semecarpus anacardium* peanuts have been viewed with brick powders (the traditional Ayurveda method), silica gel, and then hexane solvent to test the theory. Despite its blistering properties, the oily component of semecarpus peanuts has been established for its anti-cancer properties [13].

Bhallātaka

Anxiety, asthma, sciatica, epilepsy, rheumatism, and many other ailments can be treated with the berry of Bhalltaka (*Semecarpus anacardium* Linn.). This member of the Anacardiaceae family is a powerful anti-inflammatory. The berry's pericarp contains tarry engine oil that is 90% anacardic acid and 10% cardol. Bhilawanols (urushiols), semecarpol, and anacardol are other chemical constituents that have been isolated. Bhilawanol and anacardic acids are to blame for the skin irritation, blisters, toxicity, and communication dermatitis caused by the plant extracts. Fresh fruits are soaked in Gomutra, Godugdha, and massaged on brick gravels as part of the sodhana process in Bhalltaka. For seven days, fresh fruits are held in Gomutra (for seven days Godugdha or) (for seven days), which are then cleaned with clean water. A popcorn bag containing brick gravels (for three days) is used to transfer the seed products, which are rubbed extensively and then dried. Avocado engine oil is applied to the exposed body parts of the individuals involved in the processing to reduce the risk of dermatitis during the sodhana of Bhllataka. All of the fresh fruit's reduced engine oil content may be to blame for any weight loss that occurs after sodhana. It demonstrates that the polar constituents of vegetable substances disappear after sodhana. The inclusion of brick powdered with grow material may be the cause of the increased ash printer. Fresh sodhita fruits have a higher concentration of anacardol than raw fruit. The Rf values of phytoconstituents in sodhita samples of Bhalltaka have recently been shown to be altered compared to raw Bhalltaka. Engine oil undergoes decarboxylation, which converts anacardic acid to the much less toxic anacardol. Further processing catalyzes the decarboxylation process that can begin as soon as the fruit is cut. The Gomatra or Godugdha may reduce the amount of oil in the fruits by soaking them. It has adsorbent properties because it absorbs the irritant oils in the fruit. Although odhana does not affect the total amount of flavonoids or carbs, there was a significant drop in phenolic content after the sodhana process. S. anacardium's antioxidant activity decreases, but the medication's safety profile rises when the phenolic engine oil is removed during sodhana. Following sodhana, the vegetable displayed standard anti-artharitic exercise, which means that there appeared to be no outcome of sodhana in an appealing residence.

OBJECTIVES:

The present study was undertaken.

- To perform sodhana of nuts of *Semecarpus anacardium* Linn. Following the ayurvedic pharmacopeia procedure.
- To extract the nuts of *Semecarpus anacardium* Linn. (Presodhit and sodhit) by methanol.
- To evaluate skin irritation by both president and sodhit *Semecarpus anacardium* nuts in selected animals.

SL.NO	NAME	SUPPLIERS
1	Tween 40	Burgoyne Burbidge's& Co, Mumbai.
2	Distilled water	College laboratory
3	Methanol	Merck specialties Pvt. Ltd, Mumbai.
4	Ethanol	Changsha Yangquan Chemical, China.
5	Petroleum benzene	Merck Ltd, Mumbai
6	n-Hexane	Merck Ltd, Mumbai

MATERIALS AND METHODS

METHODOLOGY:

Collection

The nuts of *Semecarpus anacardium* were collected from the local market of Lucknow.

Sodhana

The Sodhana procedure of *Bhallataka* includes soaking the fruits in Gomūtra, Godugdha, and rubbing them on brick gravels. After removing the thalamus portions, the fruits are kept either in Gomūtra (for 7 days) or Godugdha (for 7 days), which are finally washed with water. The seeds are then shifted to a bag containing brick gravels (for 3 days), rubbed thoroughly, and dried[4]. During the process of Sodhana of *Bhāllataka*, coconut oil is applied to the exposed body parts of the persons involved in the processing to reduce the chances of dermatitis.

Extraction/Maceration

250 gm of presodhit and sodhit nuts will be subjected to extraction in 250 ml of methanol for 18 h and the extracts shall be evaporated to dryness. The dried extracts shall be weighed, and stored for further use.

SKIN IRRITATION

Animal Used: Wistar Albino Rats (200-250 g)

PROCEDURE:

- Initially, healthy Wistar Albino rats were removed from cages, weighed, and the weight was recorded.
- The Wistar Albino Rat's skin was then treated with 0.5 cc of the extract.
- After that, the extract was given for 14 days to see whether it had any effects, such as redness, swelling, ulceration, hemorrhage, or cloudiness.

SKIN IRRITATION TEST:

Study Design: Approximately 24 hours before the test, hair on the dorsal area of the trunk of the animals, will be removed by close clipping. The test sample will be applied in a single dose of 0.5g to the skin of an experimental animal, untreated skin areas of the test animal served as the control. The test sample will be applied to a small area of skin and covered with a gauze patch, which was held in place with non-irritating tape. The test sample will be first applied to the gauze patch, which is then applied to the skin. The patch will be loosely held in contact with the skin utilizing a suitable semi-occlusive dressing for the duration of the exposure period. The gauze patch has attached to the skin in such a manner that there was good contact and uniform distribution of the chemical on the skin.

In the initial test, up to three test patches were applied sequentially to the animal. The first patch will be removed after three minutes. A second patch was applied at a different site and removed after one hour and a third patch was applied and removed after four hours, and the response was graded. The results of the initial test will be confirmed using two additional animals, each with one patch, for an exposure period of four hours. At the end of the exposure period, which is normally 4 hours, the residual test sample will be removed, without altering the existing response or the integrity of the epidermis. To determine the reversibility

of effects, the animals will be observed up to 14 days after the removal of the patches. All animals will be examined for signs of erythema, Oedema, redness, ulceration, hemorrhage, or cloudiness, and the responses scored at 60 minutes, and then at 24, 48, and 72 hours respectively after patch removal. For the initial test in one animal, the test site will be examined immediately after the patch has been removed. After 14 days irritation effect of shodhit drug compared to pre-shodhit drug will be compared.

Grouping of animals:

S.No.	Groups	Treatment	Route	No. of Animals
1	Group-1	Pre-shodhit Drug (PSM)	Topical	6
2	Group-2	Shodhit Drug (SM)	Topical	6
				Total = 12

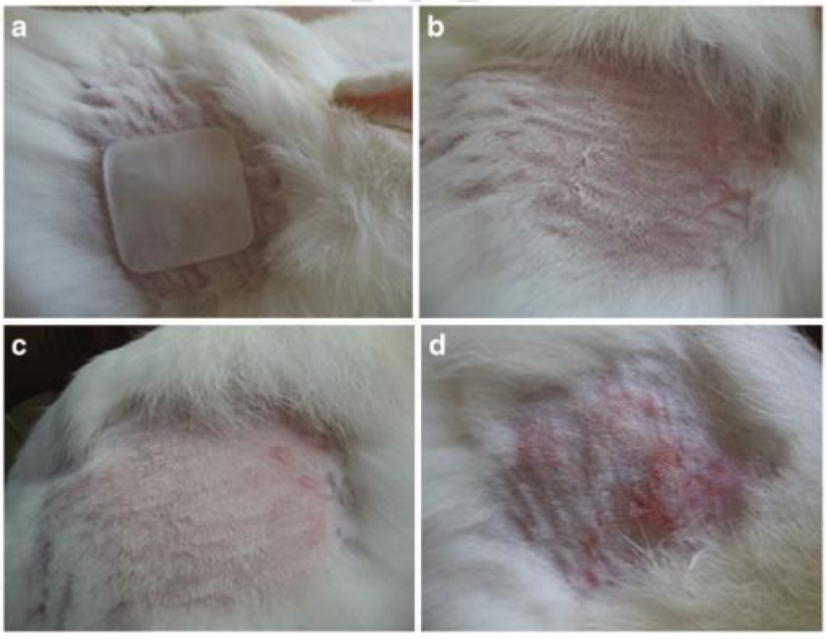

Figure: 1 (a) Test patches were applied sequentially to the animal skin

Figures (b), (c), (d), and observation of any effects, such as redness, swelling, ulceration, hemorrhage, or cloudiness on the animal skin.

RESULT AND DISCUSSION

Selection of Species:

As per OECD Guideline, 404 albino rabbits are the preferred animal species for dermal irritation/corrosion studies. As per the Guidelines document on integrated approaches to testing and assessment for skin corrosion and irritation, in vivo testing in rabbits, should not be undertaken until all available data relevant to the potential dermal Corrosivity/irritation of the chemical, based on any pre-existing test data, have been evaluated. The *Semecarpus anacardium* samples in the form of pre-shodhit and shodhit drugs have not been scientifically validated for their safety on the dermal application till now. Hence a new experiment has to be conducted in an experimental animal model other than rabbits, which are of a lower species grade like Wister Albino Rats.

No. of animal and sex: In each group 6 female nulliparous and non-pregnant rats having a Body weight range: of 200 – 250 g and Age at treatment: 8 to 12 weeks.

The effect of presodhit and sodhit *Semecarpus anacardium* on earlobe of Wistar Albino Rats is given in Table:1. The thickness, erythema score, and edema score were measured. They were an increase in Preshodhit as compared to shodhit drug. The decrease in skin irritation by shodhit drug is due to shodhana of *Semecarpus anacardium*; in which the toxic chemical was removed.

Table 1: The effect of presodhit and sodhit *Semecarpus anacardium* on earlobe of Albino Rat

The effect of presodhit and sodhit *Semecarpus anacardium* on earlobe of Albino Rat								
LEFT EARLOBE(PRESODHIT)					(RIGHT EARLOBE(SODHIT)			
TIME INTERVAL (in min)	**TIME**	**THICKNESS**	**SCORE**		**TIME**	**THICKNESS**	**SCORE**	
			Erythema	**Oedema**			**Erythema**	**Oedema**
0	10.40	1.0			10.43	1.0		
Apply drug	10.44				10.46			
5	10.49	1	0	0	10.51	1.0	0	0
15	10.59	1.5	0	1	11.01	1.0	0	0
25	11.09	1.8	0	1	11.11	1.1	0	0
35	11.19	2	0	2	11.21	1.1	0	0
45	11.29	2.1	1	2	11.31	1.1	0	0
55	11.39	2.1	1	2	11.41	1.3	0	0
65	11.49	2.3	1	2	11.51	1.3	0	0
80	12.04	2.3	1	2	12.06	1.5	0	1
95	12.19	2.3	1	3	12.21	1.6	0	1
110	12.34	2.3	1	3	12.36	1.6	0	1
125	12.49	2.6	1	3	12.54	1.8	1	1
155	11.19	2.7	1	3	1.21	1.8	1	1
185	1.49	2.9	1	3	1.51	1.8	1	1

CONCLUSION

Semecarpus anacardium nuts were procured from Lucknow's local market and verified for authenticity. This procedure was used to remove and purify (shodhit) the parts of the thalamus that had been soaked in Gomutra and Godugdha, as well as rub it on brick gravels. Before being cleaned, the nuts are either stored in Gomutra (for seven days) or Godugdha (for seven days). After three days in a bag of brick gravels, the seeds are thoroughly rubbed and dried. methanol was used to extract 250 grammes of preshodhit and shodhit nuts for 18 hours before the extracts were evaporated to dryness. To investigate *Semecarpus anacardium*'s allergenic and toxic properties. Preshodhit and shodhit extracts were used for 14 days to conduct a skin irritation test on Guinea pigs' ears, which was then observed. After 14 days, the shodhit drug had less of an irritating effect than the preshodhit drug. That may be because *Semecarpus anacardium* shodhana had removed the toxic chemicals that cause skin irritation.

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