IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 3, Issue 1, January 2023
Impact Factor: 6.252

To Perform Monograph Analysis of *Euphorbia neriifolia Linn*

Dhomase Omkar Bhaskar, Farde Jidnyasa Sakharam, Dhokale Manasvi Avinash, Dhokale Prathmesh Dinkar, Shelke D. S.
Samarth Institute of Pharmacy, Belhe, Pune, Maharashtra, India

Abstract: *Herbs have always been useful since they can be utilized as medicinal plants to cure a variety of diseases. Euphorbianeriifolia, which has dangerous Milky white latex, is one such plant. The herb Euphorbianeriifolia, a member of the Euphorbiaceae family of small deciduous trees, is widely utilized in Indian medicine. Like a tree with many branches like Neriifolia, which has a variety of applications. The plant is effective as a traditional medicine for chronic respiratory issues, anaemia, ulcers, bronchitis, tumors, leucoderma, piles, inflammation, and enlargement of the spleen. According to reports, the plant contains triterpenoidal saponin, sugar, tannins, flavonoids, and alkaloids. Analgesic, hepatoprotective, immunostimulant, anti-inflammatory, mild CNS depressant, and wound healing radio-protective properties have all been attributed to the plant. It is today regarded as a valuable source of distinctive natural materials for the creation of both industrial items and medications to treat a variety of ailments. This article provides a bird's-eye view of the plant Euphorbianeriifolia's pharmacognostic traits, traditional use, phytochemistry, and pharmacological effects.*

Keywords: Euphorbianeriifolia, pharmacological activities, phytochemistry

I. INTRODUCTION

Euphorbianeriifolia is a member of the *Euphorbiaceae* family. There are 317 genera, 800 species, 5 subfamilies, 49 tribes, and 800 genera. The names "snuk" and its synonyms refer to several*Euphorbia* genius species. Many Ayurvedic medicines, including Abhayalavana, Avittoladibhasma, Citrakditaila, Jatyadivarti, Snuhidugdhadivarti, Snuhighrta, and Jalodarariras, contain the latex of *E. nerifolia* as an active ingredient. The Euphorbia taketheir name from the Greek surgeon *Euphorbus*. He was the Romanized ruler of North African kingdoms known as Physians of Juba. Succulents make up a substantial portion, however they are primarily from Africa and Madagascar.

The therapeutic use of medicinal plants dates to the beginning of humankind. In India, there are over 45,000 different species of medicinal plants. Although there are more than 6000 plants used by traditional healers, only 3000 have been formally recognized as having therapeutic value. The Vedas, the holy writings of India, include reference to the use of medicinal herbs in the cure of disease. Due to the growing usage of herbal remedies in both human and animal healthcare systems, this idea has recently attracted considerable interest. Natural goods have played a significant role in medicine and wellness throughout human evolution. Natural remedies have been around since our earliest ancestors chewed on herbs to ease pain, squeezed the leaves to let the juice flow into wounds, or wrapped leaves around wounds to speed up healing and have often been the unshared means to treat diseases and injuries.

In fact, natural products have only recently begun to play a supporting role in drug discovery and development when the development of molecular biology and combinatorial chemistry made it possible to rationally construct chemical compounds that target molecules. The World Health Organization (WHO) lists 252 medications as basic and necessary, 11% of which are solely derived from plants, and many more are synthetic drugs made from natural sources. The spurge family, *Euphorbiaceae*, includes 7,500 species and 275 genera of flowering plants, most of which are found in tropical areas. With roughly 1600 species, Euphorbia is the family *Euphorbiaceae's* largest genus.

The Greek surgeon *Euphorbus* is honoured in the name of the *Euphorbias*. He is said to have employed their milky latex as an ingredient in his potions when serving as the physician to Juba II, the Romanized monarch of a North African country. One of the many varieties of the *Euphorbia* genus of plants, *Euphorbianeriifolia* (Indian Spurge tree, *HedgeEuphorbia*), has a variety of regional medical benefits in the regions where it is cultivated. They all have a

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 3, Issue 1, January 2023
Impact Factor: 6.252

unique floral structure and latex..Some They are synthesized synthetically, but about 121 (45 tropical and 76 subtropical) major herbal medicines were identified, Synthetic routes are now available

The kingdom Plantae, the sub-kingdom *Tracheobionta*, the division *Magnoliophyta*, the super-division Spermatophyte, the class Magnoliopsida, the sub-class *Rosidae*, the order *Euphorbiales*, the genus *Euphorbia*, the family *Euphorbiaceae*, and the species *neriifoliaLinn* make up the taxonomy of plants. The method used to gather the data for this review involved searching traditional Ayurvedic and Indian classical books, pharmacopoeias, journals by online and offline databases with no specific timeline using the keywords "*E. neriifolia*," "*Thuar*," "Indian spurge tree," "*Snuhi*," and "Common milk hedge." Since 1963 through 2016, the gathered data on plants has been manually set and chronologically scheduled. The current review will summarize current knowledge on botany, ethno - medicinal applications, phytochemistry, and biological activities.

PLANT PROFILE

In ancient Ayurvedic medicine the plant *Euphorbianerrifolia*is known as "swetaArka"

GEOGRAPHICAL STUDY

Euphorbianeriifolia grows widely on dry rocky and rocky grounds.Hills of northern, central and southern India, mainly DeccanPeninsula and Orissa. A plant native to South Asia,Now locally grown and naturalized in Sri Lanka, India and Burma(Myanmar), Bangladesh, Thailand, all over MalaysiaAreas excluding Borneo. Also occasionally cultivatedcurrent region. Also, in East Asia - South China, Vietnam,New Guinea. *Euphorbia* is an herb that is deciduous. parts ofGround-growing plants are used to make medicines

ORGANOLEPTIC STUDY

Type: branched with proper node and internodes, succulent. Branches upward with tubercles in five irregular rows; **size**: 14–21 mm; **shape**: cylindrical; **fracture**: elastic, fibrous; **texture**: smooth; **color**: green; **odour**: slightly pungent; **spines**: pairs of sharp stipular spines arising from thick tubercles.

HISTORY: -

Euphorbia neriifolia is native to Asia, including Iran, India, Bangladesh, Myanmar, Pakistan and Vietnam. It has been introduced and can be found in cultivation and naturalized in Southern Asia, Indonesia, Malaysia, China, Japan, Central America and the Caribbean. *Euphorbia neriifolia* can be found growing in dry thickets, woodlands, lowlands and rocky grounds. It is often planted in gardens, hedges and along walls in warmer dry climate.

***Euphorbia nerrifolia* -**

- Synonym –Sehund, Dandathukar , Common milk hedge, Holy Milk Hedge.
- Biological Source - *Euphorbia nerrifolia*
- Domain- *Eukaryota*
- Family – *Euphorbiacea*e
- Subfamily - *Euphorbioideae*
- Division - *Magnoliophyta*(Flowering plants)
- Order – *Euphorbiales*
- Genus-*Euphorbia*
- Species – *NerrifoliaLinn*
- Class - *Magnoliopsida*
- Kingdom – *Plantae*
- Subkingdom – *Tracheobiota*
- Super division – *Spermatophyta*

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 3, Issue 1, January 2023
Impact Factor: 6.252

Figure 2: *E. nerrifolia L*

Taxonomy

1. Kingdom: *Plantae*
2. Subkingdom: *Tracheobionta* (Vascular plants)
3. Superdivision: *Spermatophyta* (Seed plants)
4. Division: *Magnoliophyta* (Flowering plants)
5. Subfamily: *Euphorbioideae*
6. Tribe: *Euphorbieae*
7. Class: *Magnoliopsida* (Dicotyledons)
8. Subclass: *Rosidae*
9. Order: *Malpighiales*

Vernacular Names of The Plant

1. English name - Common milk hedge, Holy Milk Hedge, Dog's Tongue
2. Arabic name - Jakum
3. Kannada name - Male kalli
4. Marathi name - Thor, TridharaNivdunga
5. Malayalam name - Illa kalli
6. Punjabi name - Thor
7. Telugu name - Akujemuddu
8. Tamil name - Ilaikalli
9. Sanskrit - Snuhi
10. Latin - Euphorbia Neriifolia
11. Ayurveda - Sthavaravishavarga, Upavisha

II. MICROSCOPICAL CHARACTERISTICS

2.1 Microscopic Study

T.S. of stem Diagrammatic section of the stem is circular with an outer epidermis, a middle cortex region followed by a vascular bundle and a centrally located large pith.

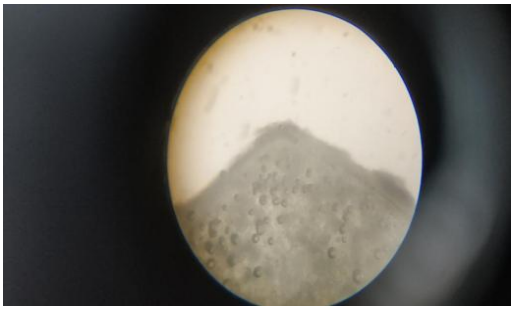
2.2 Epidermis

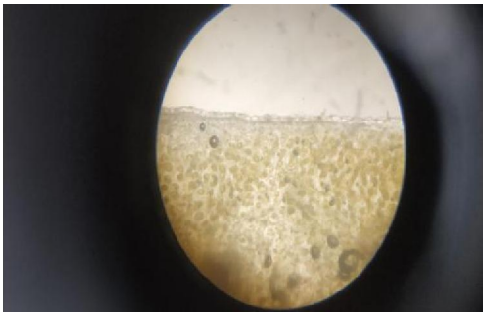
Single-layered epidermis composed of thick-walled, barrel-shaped cells covered externally by a thick cuticle. The epidermal layer is filled with yellow and brown content and interrupted by sunken stomata. An innermost sub-epidermal layer is formed with quadrangular and rectangular cells.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 3, Issue 1, January 2023
Impact Factor: 6.252

Cortex

After the sub-epidermal layer, the cortical region forms chlorophyllous palisade-like tissue and ground parenchyma





tissue with numerous intercellular spaces. Eight to ten layers of chlorophyllous palisade layers that are formed by parenchyma cells, perpendicularly to the surface, are loaded with chlorophyll pigments.

Vascular Bundle

Collateral, radial forming a ring in which the xylem is innermost, abundant and the phloem is outermost and formed by distinctive large cells. The xylem is made up of xylem parenchyma and its fiber and phloem are made up of phloem parenchyma and sieve elements.

Pith

Centrally located pith comprises irregular-shaped, network-like, and loosely arranged thin-walled oval to rounded-shaped parenchyma cells and is filled with a few starch grains.

Laticiferous Cell/Latex Ducts

Laticiferous cells comprise a bicollateral to vascular bundle and are made up of round to oval parenchyma cells; these are filled with latex and are mostly observed around the vascular bundle

Detailed T.S. of Stem Epidermis and Cortex

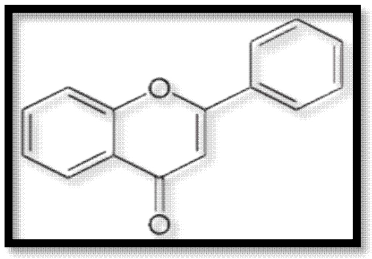
Chemical Constituent

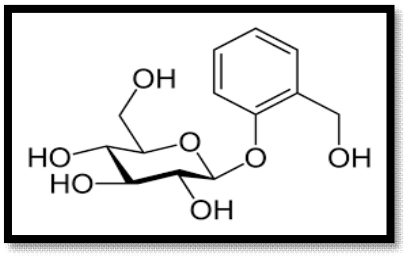
E.neriifolia was found to contain sugar, tannins, flavonoids, alkaloids, triterpenoidal saponins on preliminary phytochemical analysis. Several triterpenoids like Glut-5-en-3-ol, Glut 5(10)-en-1-one, taraxerol and amyrin have been isolated from the powdered plant, stem and leaves of *E. neriifolia*. Antiquorin has been isolated from ethanoilc extract of fresh roots of *E.nerifolia*. Neriifolione, a triterpene and a new tetracyclic triterpene named as nerifoliene along with euphol were isolated from the latex of *E. neriifolia*. Latex portion was found to contain Euphol, neriifoliol, neriifolene, Euphorbon, Resin, gum, caoutchouc, malate of calcium, etc. Euphol, monohydroxy triterpene, neriifoliol, taraxerol, beta- amyrion, glut-5-(10)-en-1-one, neriifolione, cycloartenol. Phytochemical investigations on *Euphorbia neriifolia* yielded in the isolation of several classes of secondary metabolites, many of which expressed biological activities such as triterpenes (neriifolione) flavonoids and steroidal saponins. *E.neriifolia* predominantly contains sugar, tannins, flavanoids, alkaloids and triterpenoidal saponin. 9,9 cylolanost-20-ene-24-ol; 8,24- euphadien-3-beta-ol-3-one(neriifolione), Fresh latex yields 10.95% solid with 18.32% total resinous matter, and 24.50% and 16.23% of total diterpene and triterpene respectively.

Medicinal properties of *Euphorbia neriifoliaLinn*: -

Anaesthetic Activity	Wound healing	Anti-inflammatory
Anti-Diarrhea	Antioxidant	Analgesic
Anti-anxiety	anti-convulsant	anti-psychotic
Anti-arthritis	Anti-carcinogenic	Antimicrobial
Antiulcer	Diuretic	Immunomodulatory

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 3, Issue 1, January 2023
Impact Factor: 6.252





Traditionaluses

The vaidhyas from ancient times used to use the milky juice exuded from the injured stems as drastic cathartic and to relieve earache.

It has been found beneficial for Asthma.

It is also used as a purgative, rubefacient, carminative, expectorant, whooping cough, gonorrhoea, dropsy, leprosy, asthma, dyspepsia, jaundice, enlargement of the spleen, colic and stone in the bladder

In India, it is also used for treating worms, severe diarrhea (dysentery), gonorrhea, and digestive problems.

Euphorbia neriifolia Plant used in different Ayurvedic medicines, some of them are listed here –

- AgnivranaTaila (for burns, boils, etc),
- Ayaskirti (for anemia, weight loss therapy, skin diseases, etc),
- Vishatindukataila (for gout, numbness, skin diseases)
- Abhayalavana (for liver and spleen disorder)
- Shankadravaka (for ascites, indigestion, liver and spleen diseases), etc

Literature review of selected plant:

AIM & OBJECTIVES

Ethnomedicinal Literature Review

Euphorbia neriifolia L.: Review on botany, ethnomedicinal uses, phytochemistry and biological activities Prashant Y mali 1, Shital S Panchal 2. Reported that latex of E. neriifolia is used as laxative, purgative, rubefacient, carminative and expectorant as well as in treatment of whooping cough, gonorrhoea, leprosy, asthma, dyspepsia, jaundice, enlargement of the spleen, tumours.

Pharmacognostic Literature Review

Pharmacognosy & phytochemistry volume 1, Third edition by Dr. Vinod D. Rangari published by career publication Reported that Preliminary phytochemical analysis showed EUPHORBIA NERRIFOLIA LINNpresence of carbohydrates, Glycosides, Flavonoids, tannins, phenolic compounds.

Phytochemical Literature Review

Shaikh Arshad A, Sayyed N, Shaikh siraj, Patel M. Siddik, Chavda Ab. wahid.Euphorbianeriifolialinn, A phytopharmacological review. IRJP. 2011;2(5):41-48 reported that E. neriifolia predominantly contains sugar, tannins, flavanoids, alkaloids and triterpenoidal saponin. 9,9-cylolanost-20(21) ene-24-ol; 8,24- euphadien-3 beta-ol-3-one(neriifolione).

Pharmacological Literature Review

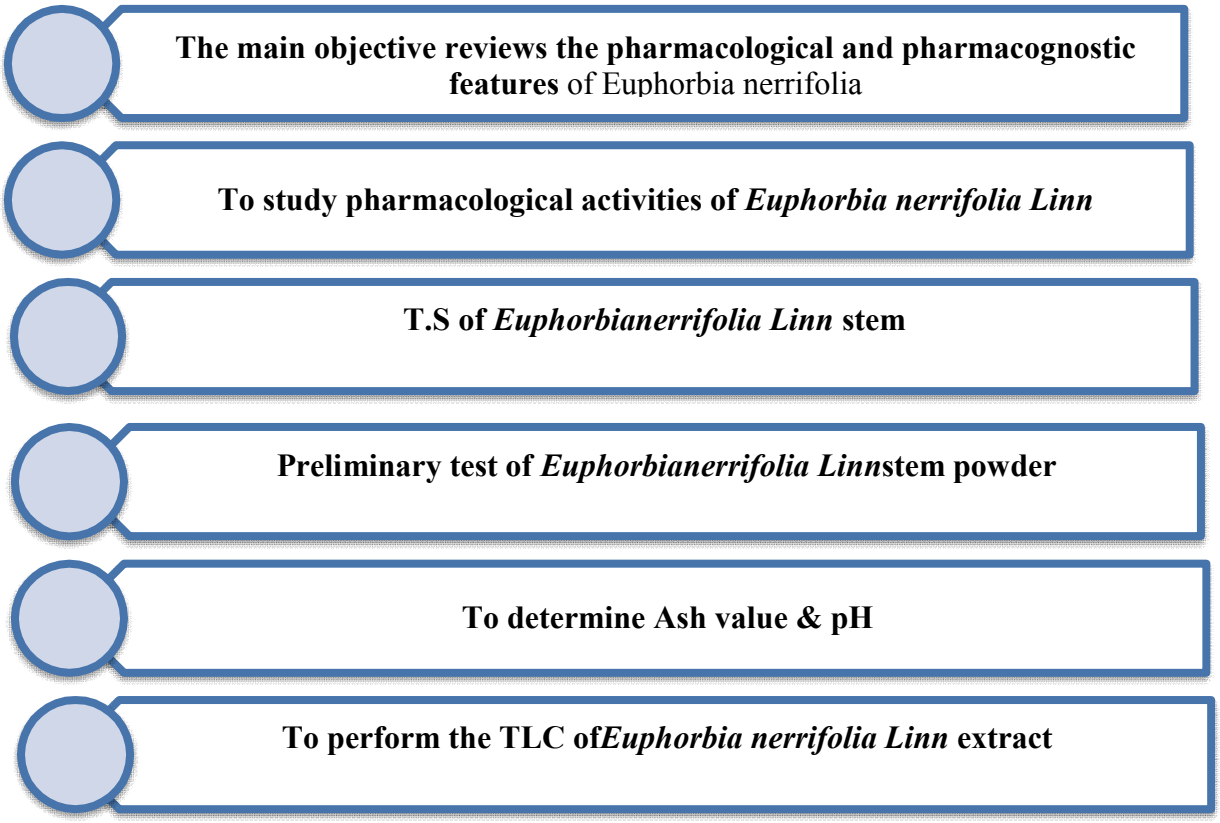
Rasik A.M, Shukla A, Patnaik B.N, Dhawan D.K, Srivastava K.S. Wound healing activity of latex of Euphorbia neriifolia. Indian Journal of Pharmacology. 1996; 28: 107-109 reported that E. nerrifolia improves appetite, useful in abdominal troubles, bronchitis, tumors, Leucoderma, piles, inflammation, Enlargement of spleen, anemia, ulcers, Fever and in chronic respiratory troubles.

AIM

To Perform identification and phytochemical screening of *Euphorbianerrifolia Linn*.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 3, Issue 1, January 2023
Impact Factor: 6.252

OBJECTIVES



PLAN OF WORK

CONTENT:

1. Selection of plant
2. collection of plant material
3. Authentication of plant
4. T.s of *Euphorbia nerrifolia*
5. Preparation of powder
6. Extraction
7. Preliminary phytochemical test
8. Ashvalue
9. pH
10. TLC of extract.

II. MATERIALS & METHODS:

1. **Selection of plant**- In the present study, I have selected the plants Euphorbia nerrifoliastem
2. **Collection of plant material**-The stems of Euphorbia nerrifolia are collected from Forest.
3. **Preparation of Herbarium**-We have prepared herbarium of Euphorbianerrifolia stems for the herbarium, the plant specimen is properly dried pressed and mounted on sheet.
4. **Preparation of powder**- Euphorbianerrifolia leaves are dried under shade for about four weeks, powdered from using mortar and pestle and thensieved.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 3, Issue 1, January 2023
Impact Factor: 6.252

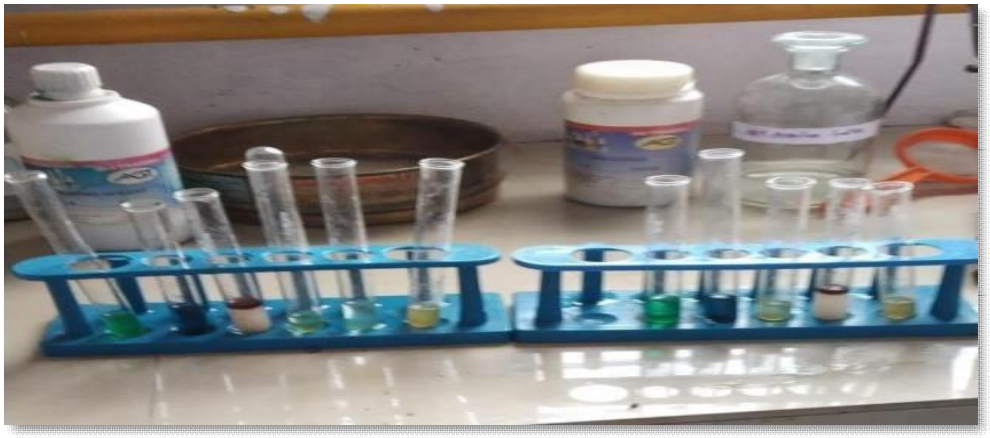


Figure 9: Preliminary test

Preliminary phytochemical test

By Performing the preliminary phytochemical analysis on various fraction. Detect presence of various chemical constitute by performing chemical, organic confirmatory test for alkaloids, glycosides, tannins and phenolic compound, flavonoids, proteins, steroid, and terpenoids was carried out using standard procedure.

Test for Glycosides

Keller-KillianiTest:

To 2 ml extract, glacial acetic acid, one drop 5% FeCl3 and conc. H2SO4 were added.Reddish brown appears at junction of the two liquid layers and upper layer appearbluish green indicates the presence of glycosides.

Test for Tannins

Ferric chloride test:

To 2 ml of test solution, a few drops of 5% ferric chloride solution was added. Formation of blue color indicated the presence of hydrolysable tannins

Acetic Acids Solution:

To 5ml extract, a few drops of Acetic Acid solution was added. Formation of Redcolor

Acetic Dilute Iodine Solution:

To 5 ml extract of few drops of dilute iodine solution was added. Formation of transient red color.

Test for alkaloids

Mayer's Test

To about 3 ml. of extract, a few drops of Mayer's reagent are added. Cream Colour ppt formed.

Dragendorff Test

To about 3 ml of extract, a few drops of Dragendorff's reagent are added. Orange red ppt Formed.

Test for Reducing Sugar

Fehlings Test

Mix 1 ml fehlings A and 1 ml fehlings B solutions, boil for one minute add equal volume of test solution. Heat in boiling water bath for 5 – 10min first yellow, then brick red ppt observed.

Benedict's Test

Mix equal volume of Benedict's reagent and test solutions in test tube heat in boiling water bath for 5 min. solution appear green, yellow or red depending on amount of reducing sugar present in test solution.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 3, Issue 1, January 2023
Impact Factor: 6.252

Test for Carbohydrates

Molischs test

To 2-3 ml aqueous extract, add few drops of alpha- napthol solution in alcohol, shake and add conc.H2SO4 from side of the test tube. violet ring is formed at junction of two liquids.

Test for protein-

Ninhydrin test

Heat 3 ml T.S. add 3 drops 5 percent Ninhydrin solution in a boiling water bath for 10 min. purple or bluish colour appear.

Test for steroids-

1. Salkowski test-

To 2 ml of extract, add 2 ml chloroform and 2 ml conc. H2SO4. shake well. chloroform layers appear red and acid layer shows greenish yellow fluorescence.

ASH VALUE

DETERMINATION OF ASH VALUE OF A CRUDE DRUG-

1. Used to determine quality and purity of a crude drug and to establish to identify.
2. Ash contains inorganic variables like phosphates, carbonates and silicates and sodium, potassium, magnesium, calcium etc.
3. These are present definite amount in a particular crude drug hence, quantitative determination in terms of various ash values helps in their standardization.
4. Used to determine foreign inorganic matter present as an impurity.

PROCEDURE

1. Weigh and ignite flat, thin, porcelain dish or a tared silicacrucible.
2. weigh about 2 g of the powdered drug into the dish/ crucible.
3. Support the dish on the pipe - clay triangle placed on a ring of retort stand.
4. Heat with the burner, using a flame about 2 cm high and supporting the dish about 7 cm above the flame, heat till vapors almost cease to be evolved then lower the dish and heat more strongly until all the carbon is burnt off.
5. Cool in a desiccator.
6. Weigh the ash and calculate the percentage of total ash with reference to the air-dried sample of the crude drug. if a carbon free ash cannot be obtained in this way, then any one of the following methods can be used.
7. Exhaust the charred mass with hot water, collect the residue on a cashless filter paper, add the filtrate, evaporate to drynessand ignite at a temperature not exceeding 450-degree celcius.
8. Cool the crucible; add 15 ml of alcohol, break up the ash with glass rod burn off the alcohol and again heat the whole to a dull red heat. Cool the ash.

Fig no 10: Ash value

Fig no 11:Ash

Fig. no. 12 Desicator

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 3, Issue 1, January 2023
Impact Factor: 6.252

pH Determination
PROCEDURE:

Carefully remove electrode from storage solution (3.8 M KCl):

- rinse with deionized water and very carefully pat dry with a Kimwipeslide black
- rubber sleeve up or down to expose fillholeclear previous calibration by pressing setup then press enter

Dip the Electrode in solution or sample to be measured

- Place the electrode in sample as shown in figure, measure the pH of sample(s)

When finished:

- rinse and dry electrode
- slide rubber sleeve to cover fillhole
- return electrode to storage solution
- turn off stir plate and clean up any mess

Thin layer chromatography (TLC):
Thin layer chromatography (TLC) is mainly used qualitatively for screening different plant extracts, which serves as a very important tool in the overall phytochemical research studied

Step I: Plate preparation

- Cleaning – Glass plates must be carefully cleaned with detergent to remove adhering particles rinsed thoroughly with distilled water, placed in a metal rack and dried in an oven.
- The plate should be handled by the edges or by the under-surface which is not to be coated with the adsorbent.
- Failure to take the precaution and grease contamination on the glass surface may result in the formation of poor quality mechanically unstable layer, which is liable
- to be flaking.

Step II: Adsorbent selection:

- Commonly used adsorbents are silica gel.

Step III: Slurry preparation:

- Slurry is prepared by the slow addition with stirring of adsorbent, e.g., silica gel or alumina, to a suitable solvent like water, dichloromethane in a wide mothed capped bottle.
- Too thick or too thin slurries should be avoided.

Step IV: Coating of the TLC plate

- The supporting plate (glass, metal etc.) should fulfill the following requirements:

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 3, Issue 1, January 2023
Impact Factor: 6.252

- Uniform thickness.
- Inert to solvent, solute, stationary phase, identification reagents,procedures
- Sufficient strength to allow vertical development.
- Thin layer may be prepared by pouring, dipping, spraying or spreading the adsorbent slurry over the plate.
- Generally, the best procedure for the preparation of uniform layers or films is the use of the commercial spreader.
- However, the best source of uniform plates may be pre-coated plates that are available from manufacturers and suppliers.

Step V: Activation of TLC plate:

- After the slurry has been spread out evenly the plates are placed horizontally to set for approximately 10 minutes in a fume cupboard.
- The surplus adsorbent is removed from the glass edged by means of razor blade or glass rod.
- The plate is then activated by heating at 110oC for 1 hour in an oven.
- The drying conditions may vary with the nature of the adsorbent, binder and the solvent.
- After they are dry, the plates should be cooled to room temperature and stored in desiccators until used.
- Cellulose and polyamide plates are allowed to dry at room temperature and are not normally heated, then stored in a dust free cabinet.

After drying, normal layer thickness is in the range of 150m for analytical and 2mm for preparative TLC system.

Step VI: Sample preparation:

- The mixture (e.g., a mixture of amino acids) to be analysed is dissolved in a suitable solvent (0.5-3%).
- Reference compounds are similarly prepared and applied to the adsorbent on the same plate alongside the mixture spot, this helps more ready interpretation of the chromatogram.

Step VII: Sample application on the TLC plate:

- Wipe any excess adsorbent from the back and edges of the plate.
- Sample should normally be applied about 5mm (for small plates) to 10mm (larger plates) from the edge of the plate.
- However, care should be taken not to immerse the spot in the solvent pool in the development chamber
- The spots should be separated from each other by at least 10mm for larger plates.
- Sample application is performed by spotting or streaking the thin layer.
- Analytical plates are usually spotted while preparative plates are streaked.

Step VIII: Spotting

- Done with a melting point capillary tube or micropipette or microliter syringe.
- The applicator is charged by dipping the capillary end into the solution.
- The solution is then transferred by touching the tip of the capillary onto the adsorbent layer.
- The sample volume is usually in the range of 1-10 ul.
- The spot must be as small as possible for better separation and minimum tailing.

Step IX: Preparation of saturated chamber

- The solvent system used as a mobile phase is selected, depending upon the nature of the phytoconstituents.
- The selected solvent of the mobile phase is Toluene: Ethyl Acetate:Formic Acid as **5:4.5:0.5** proportional.
- Plates are kept in saturated glass chamber and care is taken that the solvent level remains below the spots.
- The plates kept for elution until the solvent front ascends approximately 10 cm.

The plates are generally observed under UV radiation and colour and fluorescence are noted.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 3, Issue 1, January 2023
Impact Factor: 6.252

- The plates are developed in the oven at 105° C for 10 minutes for visualisation.
- The total number of spots, their colour and intensity, size and shape are observed.
- TLC plates are sometimes traced on the tracing paper and the R, value is calculated as follows

Thin layer chromatography of extract of *E. nerrifolia Linn*

III. RESULT& DISCUSSION

TESTS	TESTSOLUTION	OBSERVATION	INFERENCE
Reducing sugar	Fehling solution A and B	Presence of brickred ppt.	+ve
	Benedict test	Green colour observed	+ve
Carbohydrate	Molisch test	Violet ring present	+ve
Alkaloids	Mayer's test	Creamcolourppt	+ve
	Dragondrofs test	Orangered ppt	+ve
Amino acid	Ninhydrin test solution	Blue coloured ppt observed	-ve
Glycoside s	Killer killani test	Reddish brown layer present	+ve
Testfor phenols	Ferric chloride test	Red, green ppt observed	+ve
Testfor tannins and phenols comp.	Lead Acetate test	Redcolour present	+ve
Testforsteroid	Libermann Burchard test	Red & Violet colour junction	+ve
	Salkawoskitest	Redbrownppt	+ve

Several studies provide evidence of theirAnaesthetic Activity, Wound healing Activity, Anti-inflammatory Activity, Anti-Diarrhea Activity, Antioxidant Activity, Analgesic Activity, Anti-anxiety, anti-convulsant, anti-psychotic, Anti-arthritis, Anti-carcinogenic / renal carcinogenesis / hepatocarcinogenes, Antimicrobial, Antiulcer, Diuretic, Immuno modulatory Activity.

Preliminary phytochemical analysis showed *EUPHORBIA NERRIFOLIA LINN* presence of carbohydrates, Glycosides, Flavonoids, tannins, phenolic compounds.

Total ash value, pH & Rf value has been determined also.and it was found to be,

ASH VALUE:

Calculation of Ash Value:

Weight of empty dish = 56.9 gm

Weight of the dish + drug taken = 58.9gm

Weight of the dish + Ash (after complete incineration) = 58.7 gm

Weight of the ash = 0.2 gm

% Ash

= (Weight of the dish with Ash - Weight of empty dish)100 / weight of drug

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 3, Issue 1, January 2023
Impact Factor: 6.252

= (58.7 - 56.9)100 / 2
= **9%**

T.L.C.:

Rf = Distance travelled by compound from origin (x)/ Distance travelled by solvent from origin (y)

Rf Value = 2.88/8 = 0.36

PARAMETER	E. NERRIFOLIA
Totalashvalue	9%
pH	6.42
Rf Value	0.36

IV. CONCLUSION

In the present review we have congregated information pertaining to botanical, ethnopharmacological, phytochemicaland pharmacological claims and scientific studies. This planthas immense potential and have broad spectrum of activity onseveral ailments. Various parts of this plant are used as laxative, carminative, diuretic and aphrodisiac, useful in abdominal troubles, bronchitis, tumors, loss of consciousness,delirium, leucoderma, piles, inflammation, enlargement ofspleen, anemia, ulcers, fever, bleeding piles, ano-rectalfistula and in cough & cold. It is reported to contain saponin,steroid, terpenoids, flavonoids and alkaloids. Literaturesearch revels the isolation and identification of triterpenes,diterpenes and anthocyanins in different parts of this plant.

Review of literature also pinpoints that although number ofdiseases for which E. neriifolia finds its uses in traditionalsystem is large, though its therapeutic efficacy hasbeen assessed in few plausible medicinal applications.Literature search reveals presence of number of diterpenesand triterpenes from latex, bark, root, whole plant and leaf.Most of the isolated compounds of E. neriifolia lack thereportedpharmacological activities, which provide scope forfurther pharmacological studies. Very little pharmacologicalwork has been done on medicinal application of the isolatedcompounds so imperative that more pharmacological andclinical studies should be conducted to investigateunexploited potential of this plant. Exploration of chemicalconstituents and further pharmacological evaluation willgive us basis for its therapeutic use. Very less information isavailable regarding the chemical's constituents of this plantlike flavonoids and alkaloids. There is lack of phyto-analyticaland phyto-pharmacological studies. Depending on the primaryinformationavailable further studies can be carried out likephytopharmacological standardization of extracts, isolationand identification of active constituents, pharmacological
studies on isolated compounds, mode of action, toxicitystudy. These studies may be followed by development ofactive molecules and clinical trial as a tool for modern drugdevelopment and serve the purpose of Ayurvedic formulationdevelopment.

Plant has immense potential as antidote and in symptomatictreatment of snake bite orscorpion sting. There aretraditional claims for usefulness of E.neriifolia in snake bite or scorpion bite, but these claims has not been scientificallyproved if these claims are scientifically evaluated it mayprove to be a good remedy against the same.The medicinal applications of this plant have countlesspossibilities for investigation in relatively new areas of itsfunction to explore its therapeutic efficacy. The globalchanging scenario is showing a tendency towards use ofnontoxic plant products having good traditional medicinalbackground. This review will help the researcherand traditional healers in scientific standardization of thisplant. E. neriifolia is easily available in large quantity in thedry hilly areas of North and Central India. These plants can beused as a cheap source of active therapeutics. The Thura isused as living fence, as its allelopathic effect suppress thegrowth of many herbs also has pesticide properties. Herbaluses of Thura in the form of medicine, natural pesticide, livefance, allelopathic herb etc. emphasize that it is a plant ofhigh potential. The present review showed the plantseffectiveness and can be used for long duration for alleviation of commonly occurring ailments like ulcer, arthritis,immunodeficiency and in pain relief.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 3, Issue 1, January 2023
Impact Factor: 6.252

REFERENCES

[1]. Pharmacognosy & phytochemistry volume 1, Third edition by Dr. Vinod D. Rangari published by career publication.
[2]. Textbook of Pharmacognosy 56th edition by Dr. C. K. Kokate, A. P. Purohit, S. B. Gokhale.
[3]. Webster GL (1994) Classification of the Euphorbiaceae. Ann Mo Bot Gard 81(1): 03-32
[4]. Shaikh A Ahmed, Sayyed Nazim, Shaikh Siraj, Patel M Saddik, Chavda Ab Wahid (2011) Euphorbia neriifolia Linn
[5]. Shaikh A Ahmed, Sayyed Nazim, Shaikh Siraj, Patel M Saddik, Chavda Ab Wahid (2011) Euphorbia neriifolia Linn
[6]. Ilyas M, Mehtab Parveen, Kunwar Mohmmad Yusuf Amin (1998) Neriifolione, a triterpene form Euphorbia nerrifolia. Phytochemistry 489(3): 561-56
[7]. Yadav RP, Patel AK, Jagannadham MV, Neriifolin S (2012) A dimeric serine protease from Euphorbia neriifolia Linn: purification and biochemical characterization. Food Chem 132(3): 1296-1304.
[8]. Mallavadhani UV, Satyanarayana KVS, Mahapatra A, Sudhakar AVS Narasimhan K, et al. (2006) Development of diagnostic microscopic and chemical markers of some Euphorbia latexes. J Integr Plant Biol 48(9)
[9]. Kalpesh Gaur, Rana AC, Nema RK, Kori ML, Sharma CS (2009) Analgesic activity of hydroalcoholic leaves extract of Euphorbia neriifolia Linn; Asian Journal of Pharmaceutical and clinical Research 2(1): 26-28
[10]. R.E. Schultes, T. Swain, The Plant Kingdom: Avirgin field for new biodynamic constituents. In: N.J. Fina, eds. The Recent Chemistry of Natural Products, Including Tobaco. New York, Proceeding of the second Philip Morris Science Symposium.133-171 (1976).
[11]. K.R. Kirtikar, B.D. Basu, Indian Medicinal Plants, (2nd eds. International Book Distributors, Dehradun, 1996) pp. 1581.
[12]. M. Oommachan, The Flora of Bhopal (Angiosperms), (J.K Jain Brothers, Bhopal, 1976) pp. 335-43.
[13]. The Wealth of India: Raw Material, (Vol III. D-E, CSIR Publication, New Delhi, 1952) pp. 226.
[14]. G.S. Pandey, Bhavaprakasa Nighantu. In: B. Mishra, eds. Indian Materia Medica. Varanashi, PA: Chaukhambha Bharti Academy; 308 and 76-77 (1992).
[15]. The Useful Plants of India, (Council of Scientific and Industrial Research, New Delhi, 1994) pp. 213 and 270.
[16]. ICMR report. Multicentric randomized controlled clinical trial of Kshaarasootra (Ayurvedic medicated thread) in the management of fistula-in-ano. Indian J. Med. Res.(B) 94: 177-85 (1991).
[17]. P. Oudhia. Medicinal herbs of Chhattisgarh. India having less known traditional uses, VII. Thura (Euphorbia neriilofia, family: Euphorbiaceae). botanical.com. Research note.
[18]. A.K. Nadkarni. Indian Materia Medica, (Vol. 1, Popular prakashan, Bombay, 1976) pp. 424-26.
[19]. K. Seshagirirao and M.N. Prasad. Purification and partial characterization of a lectin from Euphorbia neriifolia latex. Biochem. Mol. Biol. Int. 35(6): 1199-204 (1995).
[20]. M. Ilyas, M. Praveen and K.M.Y. Amin. Nerifolione, a triterpene from Euphorbia neriifolia. Phytochemistry 48: 561-63 (1998).