

## **Comprehensive qualitative phytochemical estimation of *Euphorbia neriifolia* Linn.**

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**Abstract:** *Euphorbia neriifolia* Linn. is a restorative plant of Euphorbiaceae family, utilized as Indian conventional medication in bronchitis, tumors, leucoderma, heaps, irritation, spleen broadening, weakness, ulcers, and fever. In light of the phytochemical examination of *Euphorbia neriifolia* Linn. leaves and stem studied for different phytoconstituents, for example, carbohydrate, proteins, amino acids, steroids, terpenoids, glycosides, flavonoids, alkaloids, tannins, phenolic mixes, lipids and vitamins. Complete examination reported that leaves and stem demonstrate the presence of carbohydrate, proteins, terpenoids, glycosides, alkaloids, tannins, phenolic mixes and lipids were available in ethyl acetate, benzene and chloroform extract of leaves. Steroids and flavonoids were available in chloroform extract of leaves. Steroids were available in benzene extract of leaves. Flavonoids, vitamins were available in ethyl acetate extract of leaves. Proteins, amino acids, terpenoids, glycosides, alkaloids, tannins and phenolic mixes, lipids and vitamins were available in alcoholic extract and aqueous extract of leaves. Starch and steroids were available in alcoholic extract of leaves. Sugars were available in aqueous extract of leaves. Starch, terpenoids, alkaloids, tannins and phenolic mixes and lipids were available in pet. ether extract of leaves and aqueous extract of stem. Sugar, proteins, steroids, glycosides were available in pet. Ether extract of leaves. Proteins, glycosides, flavonoids, vitamins were available in aqueous extract of stem. The criticalness of the phytochemical constituents with the regard to the job of *euphorbia neriifolia* linn. In conventional prescription treatment is examined.

**Key words:** Medicinal Plant, Phytochemical Constituents, Qualitative analysis, *Euphorbia neriifolia* Linn.

### **Introduction**

The remedial plants are of inconceivable excitement to human prosperity. The remedial plants (Rasayana) are the plants whose parts (leaves, seeds, stems, roots, common items, foliage, etc.) expels, imbue, decoctions, powders have been extensively used in the Indian customary (Ayurveda) game plan of drug for the treatment of different infections of individuals. (Vadlapudi V *et al.*, 2010)

Plant based medications have been a bit of standard social protection in numerous parts of the world for a colossal number of years (Chariandy *et al.*, 1999; Newman *et al.*, 2000). Plants contain various organically dynamic mixes, huge numbers of these have been appeared to show restorative and antimicrobial properties and hence they were being used as antimicrobial medications in conventional drugs. Plants used in regular drug contain an enormous scope of substances that can be used to treat perpetual and even overpowering

afflictions. According to a report of World Health Organization, over 80% of world's masses depend upon customary medication for their fundamental social protection needs. Helpful properties of plants have in like manner been looked into in the light of later intelligent upgrades all through the world, due to their solid pharmacological activities, low noxious quality and financial reasonableness, when differentiated and built medications (Vadlapudi *et al.*, 2010). Information of the phytochemicals is attractive for the disclosure of human services items, as well as in revealing new wellsprings of financial materials like alkaloids, tannins, oils, gums and so on., (Fransworth, 1966). The efficient screening of plant concentrates or plant inferred substances still remains a fascinating procedure to discover new lead mixes in many plant species.

*Euphorbia neriifolia* Linn. has a place with the family Euphorbiaceae grows extravagantly around the

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dry, harsh, inclining regions of North, Central and South India. *Euphorbia neriifolia* Linn. is universally spotted in Baluchistan, Burma, India and Malaysian Islands. Inside India, it is visit in unpleasant ground all through Deccan Peninsula and Orissa. It is constantly developed for supports in towns all over India (Anonymous, 2003; Ved DK et al., 2016). The logical classification of plant include space: Eukaryota, kingdom: Plantae, sub-kingdom: Tracheobionta, division: Magnoliophyta, super-division: Spermatophyte, class: Magnoliopsida, sub-class: Rosidae, mastermind: Euphorbiales, sort: Euphorbia, family: Euphorbiaceae and species: neriifolia Linn. (Anonymous, 2017; Anonymous, 2013)

It is a herb stacked with spine, broadly known as Sehund, Thohar and Milk Hedge. The leaves are thick succulent, 6 to 12 creeps long, ovular perfectly healthy. Ayurveda depicts the plant as disagreeable, effective, laxative, carminative, upgrades hunger accommodating in stomach burdens, bronchitis, tumors, loss of mindfulness, incongruity, leucoderma, stacks, disturbance, widening of spleen, paleness, ulcers and fever. (Nadkarni AK, 1976; Kirtikar KR et al., 1996) The latex of *Euphorbia neriifolia* Linn. is a working component of various Ayurvedic definitions like Abhaya lavana, Avittoladi bhasma, Citrakadi taila, Jatyadi varti, Snuhidugdhadhi varti, Snuhi ghrta and Jalodarari ras. *Euphorbia neriifolia* Linn. has been generally appeared in Vatavyadhi, Gulma, Udara, Sula, Sotha, Arsas, Kusta and Medoroga. (Chunekar, 2005; The ayurvedic pharmacopeia of India, 2001)

*Euphorbia neriifolia* Linn. is utilized as sexual enhancer, diuretic, mitigating, pain relieving, (Kalpesh et al., 2009), CNS depressant, injury recuperating specialist, immunomodulatory operator (Bigoniya and Rana, 2005; Bigoniya and Rana, 2007, 2008) and furthermore utilized in stomach inconveniences, bronchitis, tumors, leucoderma, heaps, irritation, extension of spleen, pallor, ulcers, fever, perpetual respiratory inconveniences (Anonymous, 1994) bronchitis, draining heaps and in ano-rectal fistula (Kirtikar and Basu, 1996). Evaluation of drug suggests assertion of its character and confirmation of its quality and ideals and acknowledgment of nature of contamination. The appraisal of a grungy drug is imperative because of these central reasons I) biochemical assortment in the prescriptions ii)

deterioration in light of treatment and limit, and iii) substitution and polluted, an eventual outcome of neglect fullness, deadness or deception.

During the time the nature and dimension of appraisal of foul prescriptions has encountered a conscious change. At first, the grungy meds were recognized by examination just with the standard portrayal open. Due to movement in the compound learning of harsh prescriptions, at present, appraisal furthermore fuses procedure for assessing dynamic constituents present in the foul drug, despite its morphological and tiny examination. With the appearance of partition methods and instrumental examination, it is conceivable to perform compound assessment of an unrefined medication, which could be both of subjective and quantitative in nature (Kokate et al., 2007). Consequently, in the present investigation an endeavor has been made for subjective assessment of various concentrates (Petroleum ether, ethyl acetic acid derivation, benzene, chloroform, ethanol, and fluid) of *Euphorbia neriifolia* Linn. leaves and fluid concentrate of *Euphorbia neriifolia* Linn. stem. Additionally, phytochemical screenings of the concentrates were likewise completed with view survey the nearness of various phytochemicals in various concentrates.

## Material and Methods

### Plant material

The leaves and stem of *Euphorbia neriifolia* Linn. were gathered from the backwoods, a close-by place of Gangrar, Chittorgarh, Rajasthan. Their plant characters were resolved and confirmed by Scientist-in-Charge, Botanical Survey of India, Ministry of Environment and Forests, Govt. of India, Jodhpur-342008, Rajasthan, India. A few voucher example numbers were submitted to the specialist for future references (Voucher Specimen Number-BSI/AZRC/I/12012/2018-19/326). The leaves and stem were dried under shade for 15 days, coarsely powdered and put away in sealed shut holder for the further investigation.

### Reagent and Chemicals

All reagents and synthetic substances utilized for extraction and phytochemical evaluation were acquired from SRL Chemical, Rankem, Otto, Himedia Pvt Ltd. India.

### **Extraction**

Extraction of *Euphorbia neriiifolia* Linn. forgets and stem conveyed by Maceration and Soxhlation process with the utilization of different fluid and non watery solvents. (Kokate *et al.*, 2007)

### **Phytochemical analysis by chemical testing methods**

#### **Test for Carbohydrate**

Preparation of test arrangement: The test arrangement was set up by dissolving the test remove with water. At that point it was hydrolyzed with 1 volume of 2N HCl and exposed to following synthetic tests.

#### **Molish's test**

To 2-3 ml watery concentrate, included couple of drops of  $\alpha$ -naphthol arrangement in liquor, shaken and included concentrated  $H_2SO_4$  from sides of the test tube was watched for violet ring at the intersection of two fluids.

#### **Test for decreasing sugars (galactose, glucose, glyceraldehyde, fructose, ribose and xylose)**

##### **Fehling's test**

1 ml Fehling's A and 1ml Fehling's B arrangements was blended and bubbled for one moment. Measure up to volume of test arrangement was included. Warmed in bubbling water shower for 5-10 min was watched for yellow, at that point block red accelerate.

##### **Benedict's test**

Equal volume of Benedict's reagent and test arrangement in test tube were blended. Warmed in bubbling water shower for 5 min. Arrangement may seem green, yellow or red relying upon measure of decreasing sugar present in test arrangement.

#### **Test for Monosaccharide**

##### **Barfoed's test**

Equal volume of Barfoed's reagent and test arrangement were included. Warmed for 1-2 min, in bubbling water shower and cooled. Watched for red accelerate.

##### **Test for pentose sugar (Ribose and deoxyribose)**

Mix measure up to volume of test arrangement and HCl warm. Include a precious stone of phloroglucinol. Red shading shows up.

#### **Test for Hexose Sugars (glucose and fructose)**

##### **Cobalt-chloride test**

3 ml of test arrangement was blended with 2ml cobalt chloride, bubbled and cooled. Included  $FeCl_3$  drops NaOH arrangement. Arrangement watched for greenish blue (glucose), purplish (Fructose) or upper layer greenish blue and lower layer purplish (Mixture of glucose and fructose).

##### **Test for Non-Reducing Sugars (sucrose and trehalose)**

Test arrangement does not offer reaction to Fehling's and Benedict's test.

#### **Test for Non-Reducing polysaccharide**

##### **Iodine test**

4-5 drops of iodine arrangement are added to 1ml of the test arrangement and substance are blended tenderly. The blue-dark shading is because of the arrangement of starch-iodine complex.

#### **Tannic basic analysis**

With 20% tannic corrosive, test arrangement was watched for encourage. (Harborne JB, 1978; Parekh J *et al.*, 2009; Brain K R *et al.*, 1975)

#### **Test for Proteins**

The test arrangement was set up by dissolving the concentrate in water.

##### **Biuret test**

To 3 ml T.S included 4% NaOH and few drops of 1%  $CuSO_4$  arrangement watched for violet or pink shading.

##### **Millon's test**

Mixed 3 ml T.S. with 5 ml Million's reagent, white hasten got. Accelerate warmed turns block red or hasten breaks down giving red shading was watched.

##### **Xanthoproteic test (For protein containing tyrosine or tryptophan)**

Mixed 3ml T.S. with 1 ml concentrated  $H_2SO_4$  watched for white encourage.

#### **Test for proteins containing sulfur**

Sulfur containing amino acids after overflowing with sodium hydroxide (hot salt), yield sodium sulfide. This response is because of fractional change of the natural sulfur to inorganic sulfide, which can recognize by hastening it to lead sulfide, utilizing lead acetic acid derivation arrangement.

### **Precipitation test**

The test arrangement gave white colloidal accelerate with following reagents: Absolute liquor, 5% HgCl<sub>2</sub> arrangement, 5% CuSO<sub>4</sub> arrangement, 5% lead acetic acid derivation, 5% ammonium sulfate. (Pursue CR *et al.*, 1949; Harborne J B, 1993; Anonymous, 2003)

### **Test for Amino Acid**

#### **Ninhydrin test**

3 ml T.S. furthermore, 3 drops 5% Ninhydrin arrangement were warmed in bubbling water shower for 10 min. Watched for purple or somewhat blue shading.

#### **Test for tyrosin**

Heated 3 ml T.S. furthermore, 3 drops Million's reagent. Arrangement watched for dull red shading.

#### **Test for cysteine**

The nitroprusside test is explicit for cysteine, the main amino corrosive containing a sulfhydryl bunch (–SH). The gathering responds with nitroprusside in basic answer for yield a red complex. (Sharma V *et al.*, 2013; Nadkarni's KM *et al.*, 2007; Bigoniya P *et al.*, 2010)

#### **Test for Steroids**

Preparation of test extricates arrangement: The concentrates were refluxed independently with alcoholic arrangement of potassium hydroxide till total saponification. The saponified concentrate was weakened with water and unsaponifiable issue was extricated with diethyl ether. The ethereal concentrate was vanished and the buildup (unsaponifiable issue) was exposed to the accompanying test by dissolving the buildup in the Chloroform.

#### **Libermann-Burchard test**

Mixed 2ml concentrate with chloroform. Included 1-2 ml acidic anhydride and 2 drops fixation H<sub>2</sub>SO<sub>4</sub> from the side of test tube watched for first red, at that point blue lastly green shading.

#### **Salkowski response**

To 2 ml of concentrate, 2 ml chloroform and 2 ml concentrated H<sub>2</sub>SO<sub>4</sub> was included. Shook well, regardless of whether chloroform layer seemed red and corrosive layer demonstrated greenish yellow fluorescence was watched. (Bigoniya P *et al.*, 2017; Kumara SM *et al.*, 2011; Pracheta J *et al.*, 2011)

### **Test for Terpenoids**

#### **Salkowski test**

5 ml of concentrate was made blended in 2 ml CHCl<sub>3</sub> and H<sub>2</sub>SO<sub>4</sub> was cautiously added to frame a layer. A rosy dark colored shading of the interface was shaped to demonstrate positive outcome for nearness of terpenoids.

#### **Copper acetic acid derivation test**

Extricate were broken up in water and treated with 3-4 drops of copper acetic acid derivation arrangement. Arrangement of emerald green shows the nearness of terpenoids.

#### **Test for Glycosides**

Arrangement of test arrangement: The test arrangement was set up by dissolving extricate in the liquor or hydro-alcoholic arrangement.

#### **Test for Cardiac Glycoside**

##### **Baljet's test**

A test arrangement watched for yellow to orange shading with sodium picrate.

##### **Bromine water test**

Test arrangement broke down in bromine water giving yellow encourage.

#### **Legitimate's test (For cardenoloids)**

To fluid or alcoholic test arrangement, included 1ml pyridine and 1 ml sodium nitroprusside watched for pink to red shading.

#### **Test for deoxy sugars (Keller killani test)**

To 2 ml remove included frosty acidic corrosive, one drop of 5% FeCl<sub>3</sub> and concentrated H<sub>2</sub>SO<sub>4</sub> watched for ruddy darker shading at intersection of the two fluid and upper layers pale blue green.

#### **Test for Anthraquinone glycoside**

##### **Altered Borntrager's test**

C-glycosides of anthraquinones require progressively radical conditions for hydrolysis. Hydrolysis of the medication was done with 5 ml of weaken HCl and 5 ml of 5% arrangement of FeCl<sub>3</sub>. For hydrolyzed extricate strategy was completed as depicted under Borntrager's test.

##### **Borntrager's test**

Bubbled powdered medication with 5 ml of 10% sulphuric corrosive for 5 mins. Sifted while hot, cooled the filtrate shaken delicately with equivalent volume of benzene. Benzene layer was isolated and after that treated with half of its

volume arrangement of alkali (10%). Permitted to isolate it. The ammonical layer obtained rose pink shading because of the nearness of anthraquinones.

### **Test for Saponin Glycoside**

#### **Froth test**

The medication concentrated or dry powder was shaken vivaciously with water. Industrious froth was watched.

#### **Haemolytic test**

Added test answer for one drop of blood put on glass slide. Haemolytic zone whether showed up was watched.

### **Test for Coumarin Glycoside**

Test arrangement when made basic, watched for blue or green fluorescence.

### **Test for Flavonoids**

Arrangement of test arrangement: To a little measure of concentrate included equivalent volume of 2M HCl and warmed in a test tube for 30 to 40 min. at 100°C. The cooled concentrate was sifted, and separated with ethyl acetic acid derivation. The ethyl acetic acid derivation remove was concentrated to dryness, and used to test for flavonoids.

### **Ferric chloride test**

Test arrangement, included couple of drops of ferric chloride arrangement watched for extraordinary green shading.

### **Shinoda test**

To dried powder or concentrate, included 5 ml 95% ethanol, few drops concentrated HCl and 0.5 g magnesium turnings. Pink shading was watched.

### **Sodium hydroxide test**

Around 5 mg of the compound is broken down in water, warmed and sifted. 10% watery sodium hydroxide is added to 2 ml of this arrangement. This delivers a yellow hue. An adjustment in shading from yellow to dreary on expansion of weaken hydrochloric corrosive is a sign for the nearness of flavonoids.

### **Lead acetic acid derivation test**

To little amount of buildup, included lead acetic acid derivation arrangement watched for Yellow hued accelerate. Expansion of expanding measure of sodium hydroxide to the buildup whether indicated yellow colouration, which was

decolorized after expansion of corrosive was watched. (Bigoniya P *et al.*, 2010; Anjaneyulu V *et al.*, 1965; Anjeneyulu ASR *et al.*, 1973)

### **Test for alkaloids**

#### **Dragendorff's test**

To 2-3 ml filtrate included couple of drops Dragendorff's reagent watched for orange darker hasten.

#### **Mayer's test**

2-3 ml filtrate with few drops Mayer's reagent watched for encourage.

#### **Wagner's test**

2-3 ml filtrate with few drops of Wagner's reagent watched ruddy dark colored encourage.

### **Test for Tannins and Phenolic cpd.**

To 2-3 ml of alcoholic or watery concentrate, included couple of drops of 5% FeCl<sub>3</sub> arrangement gives Deep blue-dark shading.

To 2-3 ml of alcoholic or watery concentrate, included couple of drops of Lead acetic acid derivation arrangement gives White hasten.

To 2-3 ml of alcoholic or fluid concentrate, included couple of drops of Bromine water gives Discoloration of bromine water.

To 2-3 ml of alcoholic or fluid concentrate, included couple of drops of Acetic corrosive arrangement gives Red shading arrangement.

To 2-3 ml of alcoholic or fluid concentrate, included couple of drops of Dilute iodine arrangement gives Transient red shading. One drop NH<sub>4</sub>OH, overabundance 10% AgNO<sub>3</sub> arrangement warmed for 20 min in bubbling water shower. White accelerate was watched, at that point dull silver mirror stored on mass of test tube.

### **Test for Lipids**

#### **Oil spot test**

Take a little measure of oil on a bit of paper, an oily spot entering the paper will be framed. This happens on the grounds that lipid does not wet paper not at all like water.

### **Test with the expectation of complimentary unsaturated fats**

Take a couple of drops of phenolphthalein arrangement in a test cylinder and add to it a

couple of drops of exceptionally weaken soluble base arrangement, only adequate to give the arrangement a pink shading. Presently include a couple of drops of the oil and shake. The shading will vanish as the soluble base is killed by the free unsaturated fats present in the oil.

### Dichromate Test

Take in a dry test tube 3 or 4 ml of glycerol arrangement, to it include a couple of drops of 5% potassium dichromate arrangement and 5 ml of conc. HNO<sub>3</sub>, blend well and note that the darker shading is changed to blue. This test is given by the substances containing essential and auxiliary liquor gatherings. The chromic particles oxidize the glycerol and in this procedure they are diminished to chromous particles which give the blue shading.

This test is additionally given by decreasing sugars, so before affirming glycerol make sure that the diminishing sugars are absent.

### Test for Vitamins

#### Test for nutrient C (Ascorbic corrosive)

Weaken 1 ml of 2% w/v arrangement with 5 ml of water and included 1 drop of newly arranged 5% w/v arrangement of sodium nitroprusside and 2 ml weaken NaOH arrangement. Included 0.6 ml of hydrochloric corrosive drop savvy and mix, the yellow shading turns blue. (Bigoniya P *et al.*, 2009; Jun-Hua L *et al.*, 2012; Sharma V *et al.*, 2014; Sharma V *et al.*, 2013; Harborne JB, 2000)

### Results

**Table 1:** Preliminary phyto-profile of extracts of *E. neriifolia* leaves and stem in different solvents

Solvent	Polarity Index	Extraction	Colour	Consistency	Nature	% Yield±SD
PE (L)	0.0	Soxhletion	FlorescentGreen	Dry	Solid	3.03±0.13
EA (L)	4.3	Soxhletion	Green	Oily	Solid	0.42±0.09
B (L)	2.8	Soxhletion	Green	Sticky	Solid	2.73 ±0.05
C (L)	4.2	Soxhletion	Green	Sticky	Solid	0.31±0.18
E (L)	5.3	Soxhletion	Brownishgreen	Sticky	Semisolid	9.70±0.06
AQ (L)	9.1	Maceration	DarkBrown	Dry	Solid	17.91±0.49
AQ (S)	8.9	Maceration	ChocolateBrown	Sticky	Solid	21.01±0.23

PE: Petroleum-ether extract; E: Ethanolic extract; Aq: Aqueous extract;

(L)- Leave extract; (S)- Stem extract, EA: Ethyl-acetate extract, B: Benzene extract; C: Chloroform extract;

**Table 2:** Phytochemical analysis

S.N.	Chemical Test	PEE (L)	EAE (L)	BE (L)	CHE (L)	AE (L)	AQE (L)	AQE (S)
I: Test for Carbohydrate								
A.	Molish's test-	+	+	-	+	-	-	-
B.	Test for reducing sugars (Galactose, Glucose, Glyceraldehyde, Fructose, Ribose, and Xylose)							
i.	Fehling's test-	-	-	-	+	+	-	-
ii.	Benedict's test-	-	-	-	+	+	-	-
C.	Test for Monosaccharide							
i.	Barfoed's test-	-	-	-	+	-	-	-
D.	Test for pentose sugar- (Ribose and deoxyribose)	-	-	-	-	+	-	-
E.	Test for Hexose Sugars (glucose and fructose)							
i.	Cobalt-chloride test-	+	+	+	+	-	-	+
F.	Test for Non- Reducing Sugars- (sucrose and trehalose)	+	+	+	-	-	+	+
G.	Test for Non- Reducing polysaccharide							
i.	Iodine test	+	+	+	+	-	-	-
ii.	Tannic acid test	+	+	+	+	+	-	-
II: Test for Proteins								
A.	Biuret test-	+	+	+	+	+	-	-
B.	Millon's test-	+	+	-	+	-	+	+
C.	Xanthoproteic test (For protein containing tyrosine or tryptophan)-	-	+	+	-	+	+	+
D.	Test for proteins containing sulphur-	+	+	+	+	+	+	-

E. Precipitation test-	+	+	+	+	+	+	-
III: Test for Amino Acid							
A. Ninhydrin test-	-	-	-	-	+	+	+
B. Test for tyrosin-	-	-	-	-	+	+	-
C. Test for cysteine-	-	-	-	-	+	-	+
IV: Test for Steroids							
A. Libermann-Burchard test-	+	-	+	+	+	-	-
B. Salkowski reaction-	+	-	+	+	+	-	-
V: Test for Terpenoids							
A. Salkowski test-	+	+	+	+	+	-	-
B. Copper acetate test-	-	-	-	-	+	+	+
VI: Test for Glycosides							
A. Test for Cardiac Glycoside							
i. Baljet's test-	+	+	-	+	+	+	+
ii. Bromine water test-	-	-	-	-	+	-	-
iii. Legal's test (For cardenoloids)-	-	+	+	+	+	+	+
iv. Test for deoxy sugars (Keller killani test)-	+	+	+	+	+	+	+
B. Test for Anthraquinone glycoside							
i. Modified Borntrager's test-	-	+	-	+	+	+	+
ii. Borntrager's test-	-	+	-	+	+	+	+
C. Test for Saponin Glycoside							
i. Foam test-	-	-	+	-	+	+	+
ii. Haemolytic test-	-	-	-	-	+	+	-
D. Test for Coumarin Glycoside-	-	+	-	+	-	-	-
VII: Test For Flavonoids							
A. Ferric chloride test-	-	+	-	-	+	+	-
B. Shinoda test-	-	+	-	+	+	+	+
C. Sodium hydroxide test-	-	+	-	+	+	+	+
D. Lead acetate test-	-	+	-	+	+	+	+
VIII: Test for alkaloids							
A. Dragendorff's test-	+	+	+	+	+	+	+
B. Mayer's test-	+	-	+	+	+	-	-
C. Wagner's test-	+	+	-	+	+	-	-
IX: Test for Tannins & Phenolic cpd.							
A. FeCl <sub>3</sub> test	-	+	-	-	+	+	+
B. Lead acetate test	-	-	-	-	+	+	+
C. Bromine water test	+	+	+	+	-	-	-
D. Acetic acid test	-	-	-	-	+	-	-
E. Iodine test	-	-	-	-	-	-	-
X: Test For Lipids							
A. Grease spot test-	+	+	+	+	+	+	+
B. Test for fatty acids-	+	+	-	-	+	+	+
C. Dichromate Test-	+	+	+	+	-	+	-
XI: Test for Vitamins							
A. Test for vitamin C (Ascorbic acid)-	-	+	-	-	+	+	+

(+) -Present; (-) - Absent; PEE (L) - Pet. Ether Extract of leaves; EAE (L) - Ethyl Acetate Extract of leaves; BE (L) - Benzene Extract of leaves; CHE (L) - Chloroform Extract of leaves; AE (L) - Alcohol Extract of leaves; AQE (L) - Aqueous Extract of leaves; AQE (S) - Aqueous Extract of Stem.

## Discussion

*Euphorbia neriifolia* Linn. is a therapeutic plant of Euphorbiaceae family, utilized as Indian conventional drug in bronchitis, tumors, leucoderma, heaps, irritation, spleen augmentation, frailty, ulcers, and fever. In light of the Phytochemical Investigation or Qualitative

examination of *Euphorbia neriifolia* Linn. leaves and stem extricates, It contains different Phytoconstituents, for example, Carbohydrate (Reducing sugars, Monosaccharides, Hexose Sugars, Non-Reducing Sugars, Non-Reducing polysaccharides), (Proteins containing Tyrosine, Tryptophan, Sulfur), Amino Acids(Tyrosine, Cysteine), Steroids, Terpenoids, Glycosides

(Cardiac Glycoside, Anthraquinone glycoside, Saponin Glycoside), Flavonoids, alkaloids, Tannins and Phenolic mixes, Lipids and Vitamins (Vitamin C). Subjective investigation did on every concentrate of *Euphorbia neriifolia* Linn. leaves and stem demonstrate that Carbohydrate (Hexose Sugars, Non-Reducing Sugars, Non-Reducing polysaccharides), (Proteins containing Tyrosine, Tryptophan, Sulfur), Terpenoids, Glycosides (Cardiac Glycoside, Anthraquinone glycoside, Saponin Glycoside), alkaloids, Tannins and Phenolic mixes and Lipids were available in Ethyl Acetate Extract, Benzene Extract and Chloroform Extract of *Euphorbia neriifolia* Linn. leaves. Starch (Reducing sugars, Monosaccharides), Steroids and Flavonoids were available in Chloroform Extract of *Euphorbia neriifolia* Linn. leaves. Steroids were available in Benzene Extract of *Euphorbia neriifolia* Linn. leaves. Flavonoids, Vitamins (Vitamin C) were available in Ethyl Acetate Extract of *Euphorbia neriifolia* Linn. leaves.

Proteins containing Tyrosine, Tryptophan, Sulfur), Amino Acids (Tyrosine, Cysteine), Terpenoids, Glycosides (Cardiac Glycoside, Anthraquinone glycoside, Saponin Glycoside), alkaloids, Tannins and Phenolic mixes, Lipids and Vitamins (Vitamin C) were available in Alcoholic Extract and Aqueous Extract of *Euphorbia neriifolia* Linn. leaves. Starch (Reducing sugars, Monosaccharides, Non-Reducing polysaccharides) Steroids were available in Alcoholic Extract of *Euphorbia neriifolia* Linn. leaves. Starch (Non-Reducing Sugars) Aqueous Extract of *Euphorbia neriifolia* Linn. leaves.

Starch (Hexose Sugars, Non-Reducing Sugars), Terpenoids, alkaloids, Tannins and Phenolic mixes and Lipids were available in Pet. Ether Extract of *Euphorbia neriifolia* Linn. leaves and Aqueous Extract of *Euphorbia neriifolia* Linn. Stem. Sugar (Non-Reducing polysaccharides), (Proteins containing Sulfur), Steroids, Glycosides (Cardiac Glycoside) were available in Pet. Ether Extract of *Euphorbia neriifolia* Linn. leaves. (Proteins containing Tyrosine, Tryptophan), Glycosides (Cardiac Glycoside, Anthraquinone glycoside, Saponin Glycoside), Flavonoids, Vitamins (Vitamin C) were available in Aqueous Extract of *Euphorbia neriifolia* Linn. Stem.

The importance of the phytochemical constituents with the regard to the job of *Euphorbia neriifolia* Linn. in customary medication treatment is sexual

enhancer, diuretic and furthermore utilized in the treatment of bronchitis, draining heaps and in ano-rectal fistula, stomach inconveniences, bronchitis, tumors, leucoderma, heaps, aggravation, development of spleen, paleness, ulcers, fever and in perpetual respiratory inconveniences (Anonymous, 1994). The ancestral populace of Chattishgarh locale utilizes the smooth latex as an element of Spanish fly blend (Kirtikar and Basu, 1996; Anonymous, 1952). The fluid concentrate of the latex of *Euphorbia neriifolia* Linn. encouraged the injury mending process as confirm by increment in elasticity, DNA substance, epithelization and angiogenesis (Rasik *et al.*, 1996). *Euphorbia neriifolia* Linn. hydroalcoholic remove was found to contain sugar, tannins, flavonoids, alkaloids, triterpenoidal saponin on starter phytochemical investigation. A few triterpenoids like overabundance 5-en-3b-ol, excess 5(10)- en-1-one, taraxerol and b-amyrin has been disconnected from powdered plant, stem and leaves of *Euphorbia neriifolia* Linn. (Anjaneyulu and Ramachandra, 1965). Neriifolione, a triterpene and another tetracyclic triterpene named as nerifoliene alongside euphol were confined from the latex of *Euphorbia neriifolia* Linn. (Ilyas *et al.*, 1998; Mallavadhani *et al.*, 2004). Antiquorin have been segregated from ethanol extricate precedent is the event of solid shortcoming due to of new base of *Euphorbia neriifolia* Linn. (Ng, 1998). Mitigating and pain-relieving impact of *Euphorbia neriifolia* Linn. is accounted for by (Kalpesh *et al.*, 2009). There are provides details regarding the mellow CNS depressant, injury mending and immunomodulatory exercises of the hydroalcohol leaf remove (Bigoniya and Rana, 2005; Bigoniya and Rana, 2007, 502008).

In making countries in excess of 80 percent of the people relies upon traditional meds, generally plant drugs, for their basic social protection. The present examination was led to assess the institutionalizing parameter for subjective compound assessment of *Euphorbia neriifolia* Linn. as for Comprehensive subjective phytochemical estimation. The phytochemical parameters saw in present examination, adds to the current learning of *Euphorbia neriifolia* Linn. what's more, be very helpful for distinguishing proof, institutionalization, improvement and arrangement of rough medication's plan and incorporation in different pharmacopeias for treating different diseases. The present perception will likewise be useful in separating the leaves and



stem of this species from firmly related types of same class and family.

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