Journal of Neonatal Surgery
ISSN(Online): 2226-0439
Vol. 14, Issue 9s (2025)
https://www.jneonatalsurg.com

OPEN ACCESS

A Preliminary Evaluation of Tinospora Cordifolia, Tephrosia Perpura and Boheravia Diffusia

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Cite this paper as: Mr. Mirza Nazish Baig1, Dr. Ramdas Dolas2, (2025) A Preliminary Evaluation of Tinospora Cordifolia, Tephrosia Perpura and Boheravia Diffusia. *Journal of Neonatal Surgery*, 14 (9s), 928-937.

ABSTRACT
Nanotechnology means nano: small Technology means the application of techniques. This field in development of such formulation which can easily target the site of action and maximum drug to site of action. The herbal formulation can help in less side effect to no side effect formulation. This formulation is for various pharmacological action such as the hepatoprotective, immunobosstor, etc.The collection and authentic. Extraction was performed by cold and hot maceration. Then various permilanary evaluation was performed such as ash value, foreign matters, colour, extractive value, etc. And photochemical evaluation was performed such alkaloid, glycoside, tannin, etc and this conformed by TLC.

Keywords: *Nanotechnology, Preliminary, Hepatoportective.*

1. INTRODUCTION

Scientist Norio Taniguchi, of Tokyo College of Science, describes “nanotechnology in the design, synthesis and reversal of problems with the amount of one atom or one element” for the term “nanotechnology”. In his discussion, he presented the reasons for the use of corn or sedatives. Nanotechnology is a logical breakthrough in the 21st century, with a focus on the subatomic and subatomic levels as well as expanding to a larger scale. Nanotechnology, unique developments to date have provided new facilities and amenities in new areas of research, particularly science and design, such as Raman media (SERS), nanobiotechnology, quantum deserts, and sustainable microbial science. Nanotechnology plays an important role in many important innovations ranging from the provision of nanoscale (nanoparticles) to optics, instrumentation, biomedical science, instrumentation, pharmacy, planning, optoelectronic applications, remote devices, optical cables, and high -energy vehicle science. And the application of nanoparticles are important areas because of their large, bulk and small (nm) sizes that cause tissue changes and their structural properties differ from a large number of similar synthetic compounds[16]. Nanotechnology is associated with nano-meter sized objects. Living organisms are made up of cells. These cell parts, however, are nano sized. Nanotechnology basically deals with design, production and characterization on nano sized particles. Nano sized particles are basically small objects that act as a whole unit in accordance with their transport and properties. Fine particles have the range of 100-2500nm and ultrafine particles have the size of 1- 100nm. They can also be designed to improve the pharmacological and therapeutic effects of the drugs. **Types of nanoparticle:Inorganic nanoparticle:** In the field of Modern material science Inorganic nanoparticle has been developed the role based upon their unique physical properties and particularly in biotechnology. Based upon these two factors of inorganic nanoparticles they have certain physical properties that mainly include size dependent optical, magnetic, electronic, and catalytic properties. Bio related application are involved for the preparation of these interesting nanoparticles like iron oxides, gold, silver, silica, quantum dots etc. Novel physical properties mainly related because of their size approaches nanometer scale dimension.**Polymeric nanoparticles**: Polymeric nanoparticle it is also a type of nanoparticle. In the recent year polymeric nanoparticle has a tremendous development in the field of research. The dispersion of preformed polymers and the polymerization of monomers are two strong strategies mainly involved for preparation. 10 1000nm it is the range of size involved with solid particles. **Solid lipid nanoparticles**: For controlling the drug delivery in 1990 s Solid lipid nanoparticles played a dominant role. There are certain alternate carrier systems to emulsions, liposomes and polymeric nanoparticles as a colloidal Carrier system. **Liposomes:** Liposomes are one of the methods based upon the different types of nanoparticles. Structure of liposomes consists of one or more phospholipid bilayers and they are sphere-shaped vesicles to carry compound of interest. Today liposomes have been useful in the field of reagent and tool in various scientific disciplines. Since many features involved in liposome they made their own way in the market. Cosmetic and pharmaceutical industries numerous molecules act as a carrier, and in the field of Food and farming industries liposomes involved in encapsulation to grow delivery system that can entrap unstable compounds. **Nanocrystal** A nanocrystal is a type based upon material particle having at least one dimension smaller than 100 nanometres and mainly

composed of atoms in either a single or poly-crystalline arrangement. Nanocrystals are aggregates of around hundreds or thousands of molecules that combine in a crystalline form, composed of pure drug with only a thin coating comprised of surfactant or combination of surfactants. **Nanotube:** A nanotube is a nanometer scale tube like structure. Nanotubes are members of the fullerene structural family. Their name is derived from their long, hollow structure with the walls formed by one-atom-thick sheets of carbon called graphene. These sheets are rolled at specific and discrete ("chiral") angles and the combination of the rolling angle and radius decides the nanotube properties; for example, whether the individual nanotube shell is a metal or semiconductor. Nanotubes are categorized as single-walled nanotubes (SWNTs) and multi-walled nanotubes. **Dendrimers:** Dendrimers arise from two Greek words: Dendron meaning tree and Meros meaning part. Structure of dendrimers has a well-defined size, shape and defined molecular weight and also Dendrimers are hyperbranched, globular, monodisperse, three dimensional nanoscales synthetic Polymers. Molecular chemistry and polymer chemistry both exhibit well-defined characteristics features of Dendrites. **Advantages:** Some of the advantages of using nanoparticles as a drug delivery system are as follows; **1.** Ease of manipulation of the particle size and surface characteristics of nanoparticles so as to achieve both passive and active drug targeting after parenteral administration. **2.** The nanoparticle surface can be modified to alter biodistribution of drugs with subsequent clearance of the drug so as to achieve maximum therapeutic efficacy with minimal side effects of the drug. **3.** Controlled release and particle degradation characteristics can be readily modulated by the choice of matrix constituents. **4.** Drug loading is relatively high and drugs can be incorporated into the systems without any chemical reaction; this is an important factor for preserving the drug activity. **5.** Site-specific targeting can be achieved by attaching targeting ligands to surface of particles or use of magnetic guidance.**6.** Liposomes and polymer based nanoparticulates are generally biodegradable, do not accumulate in the body and so are possibly risk free. **7.** Small sized nanoparticles can penetrate through smaller capillaries, which could allow efficient drug accumulation at the target sites. **8.** Various routes of administration are available including oral, nasal, parenteral, intra-ocular etc.

Limitations: In spite of these advantages nanoparticles do have limitations like, 1. Altered physical properties which lead to particle-particle aggregation, making physical handling of nanoparticles difficult in liquid and dry forms due to smaller size and larger surface area. 2. Smaller the particles size greater the surface area and this property makes nanoparticles very reactive in the cellular environment. 3. Small particles size results in limited drug loading and burst release. These practical problems have to be sorted out before nanoparticles can be used clinically or made commercially available. **Green synthesis of nanoparticles[15,16] :** Three melting states of nanoparticles have been selected for green or environmental conditions, which is a reduction in efficiency, similar to that of painless. For the synthesis of nanoparticle particles, various synthetic materials have been used where tissue, synthetics and materials are present. As a system, combined strategies are as expensive as the use of hazardous and potentially synthetic chemicals for various hazards in the climate. The utilisation of plants and microbes for biomedical applications protects biosynthesis, which is biocompatible and safe in environmental technologies for the integration of nanoparticles. Growth, green growth, bacteria, plants, and other factors can all be used to make this link. Because of the existence and nature of phytochemicals that function as stimulants and decrease movement, several plant components such as leaves, natural products, roots, and fruits have been utilised to add various nanoparticles[16]. **Bottom up**: The upward process involves the formation of nanoparticles by small particles such as molecules and atoms or by the formation of their own atoms in a new space, which also grows into particles of nanoscale size and uses chemical pathways different lives[16]. **Top down:** In this cycle, the nanoparticles are filled with particles indicating that the object is descending to the bedrock using lithographic assembly techniques, such as pressing, casting and drilling. Controlling the temperature, pH, yield, and salt concentration of the reaction, as well as the reaction duration, may change the reliability, shape, and size of the nanoparticles. Scientists looked at palladium and platinum nanoflakes and presented a full system of nanoparticle-like uses for experiments, biosensors[15.] **Tinospora Cordifolia[32] : Tinospora Cordifolia FAMILY:** Menispermaceae**. SYNONYMS: Sanskrit:** Amtavallc, Amt, Madhupar, Gucik, Chinnobhav, Giloe, Gurcha, Gulvel, Gilo. Leaves are simple, alternate, exstipulate, cordate (heart shaped), long petioles up to 15 cm long, roundish, pulvinate. Stem are rather succulent with long filiform fleshy aerial roots arising from the branches.Flowers are yellow or greenish yellow on axillary and terminal racemes, unisexual, small on separate plants and appearing when plant is leafless. Male flower clustered and female usually solitary. Flowers grow during summer. Fruits are aggregates of 1-3 ovoid smooth druplete on thick stalk with sub terminal style scars, Scarlet or orange red color. Fruits grow during winter.Seeds are white, bean shaped, curved. Bark are creamy white to grey brown, warty, deeply left spirally, the space in between being spotted with large rosette like lenticels. **Pharmacological Activities:** Adaptogenic activity, Immunomodulatory Activity, Anticancer Activity, Anti-Inflammatory Activity, Antimalarial Activity, Anti-Allergic Rhinitis Activity, Wound Healing Activity, Antioxidant Activity, Hepatoprotective Activity, Anti-Diabetic Activity, Anti-Osteoporotic Activity, Radio-Protective Activity, Cardio-Protective Activity. **Tephrosia Perpurea[33] :**Tephrosia purpurea **Family:** Fabaceae, **SYNONYMS:** Fish poison, Wild indigo, Sarphonk, Sarpunkha**,** Unnali, Untoali. Tephrosia purpurea is a small shrub that grows up to 1.5 meters tall. It has bi-pinnate leaves with 7 to 15 leaflets, the leaflets are 10 to 32 mm long and 5 to 11 mm wide. The peas like flowers are white to purple and arranged in inflorescences that are up to 25 cm long. The individual flowers have corolla parts that are between 2 to 3 mm long. The pods are straight and somewhat up curved at the terminal end and may range from 20 to 45 mm in length and 3 to 5 mm breadth. When dry, the pods split along two valves to reveal 2 to 9 black rectangular seeds 2.5 to 5 mm long and 1.8 to 3 mm wide. **Pharmacological Activities:** Hepatoprotective activity, Ant allergic activity, Analgesic activity, Antacid activity, Nephroprotective activity, Antidote activity**. Boerhavia Diffusa[34] :** Boerhavia diffusa **FAMILY:** Nyctaginaceae**,**

SYNONYMS: Punarnava**,** Lal Punarnava, Beshakapore, Santh**,** Spreading Hogweed, Red Hogweed. **Stem:** Greenish purple, stiff, slender, cylindrical, swollen at nodes, minutely pubescent or nearly glabrous, prostrate divaricately branched, branches from common stalk, often more than a meter long. **Root:** Well developed, fairly long, somewhat tortuous, cylindrical, 0.2-1.5 cm in diameter, yellowish brown to brown colored, surface soft to touch but rough due to minute longitudinal striations and root scars, fracture, short, no distinct odor, taste, slightly bitter, sweet, pungent . **Leaves:** Opposite in unequal pairs, larger ones 25-37 mm long and smaller ones 12-18 mm long ovate-oblong or sub orbicular, apex rounded or slightly pointed, base subcordate or rounded, green and glabrous above, whitish below, margin entire or subundulate, **Flowers:** Very small, pink colored, nearly sessile or shortly stalked, 10-25 cm, in small umbells, arranged on slender long stalks, 4-10 corymbs, axillary and in terminal panicles, bracteoles, small, acute, perianth tube constricted above the ovary, lower part greenish, ovoid, ribbed, upper part pink, funnel-shaped, 3 mm long, tube 5 lobed, stamen 2-3. **Pharmacological Activities:** Ant diabetic Activity, Antibacterial Activity, Antistress Adaptogenic / Immunomodulatory Activity, Hepatoprotective Activity, Analgesic, Anti-Inflammatory Activity, Antitumor Activity, Anti-Convulsant Activity, Cytological Activity, Bronchial Asthma, Anti Fibrinolytic Activity,Antioxidant, Antiviral Activity.

Collection and authentication of crude drugs: The plant tinospora cordifolia, tephrosia purpurea, borhavia diffusa were use as an active ingredients. The tinospora cordifolia (stem) was purchased from local market shop of Jawahar chowk, Najafgarth, New Delhi. The tephrosia purpurea (whole plant) was collected from University area, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad. The Boerhavia diffusa was collected Rauza bagh area, Aurangabad.

2. MATHODS AND MATERIALS

Extraction: Materials: All the glasswares (Borsile) were washed with distilled water, Corsely Powered Curde drugs of Stem of Tinospora Cordifolia and entire Plant of Tephrosia Perpura and Borhavia Diffusa, Round Bottom Flask, Beakers, etc. **Chemical reagents:** Ethanol (80%), Double distilled water. **Instruments Required:** Soxhlet Appratus, Heating mentle, Rotary Shaker, Vaccum Evaporator **Methods: Tinospora Cordifolia: Collection of the Stem:** Healthy plant stem of Tinospora Cordifolia were collected and cleaned properly in running tap water. **Stem drying and pulverizing:** The stem was collected and shade dried. It was powdered in a mixer. The powder was sieved in a No.60 sieve and kept in a well closed container in a dry place. **Preparation of Hydroalcoholic stem extracts of *Tinospora Cordifolia* (TC):** About 50g of the dried powdered stem of Tinospora Cordifolia defatted with 500ml Hydroalcoholic extractive solvent (Water: Ethanol 50:50) at Room Temperature by maceration. The Filtrate was removed by filtration and was used to formulate the silver nanoparticle. **2. Tephrosia Perpurea: Collection of the Plant:** Healthy Entire Plant of Tephrosia Perpurea were collected and cleaned properly in running tap water. **Entire Plant drying and pulverizing:** The Entire Plant was collected and shade dried. It was powdered in a mixer. The powder was sieved in a No.60 sieve and kept in a well closed container in a dry place.**Preparation of Alcoholic Plant extracts of Tephrosia Perpure (TP):** About 50g of the dried powdered of Entire plant of Tephrosia Perpurea defatted with 500ml 80% extractive solvent (80% Ethanol) (60-80°C) by maceration. The Filtrate was removed by filtration and was used to formulate the silver nanoparticle. **Boerhavia Diffusa: Collection of the Plant:** Healthy Entire Plant of Boerhavia diffusa were collected and cleaned properly in running tap water. **Entire Plant drying and pulverizing:** The Entire Plant was collected and shade dried. It was powdered in a mixer. The powder was sieved in a No.60 sieve and kept in a well closed container in a dry place. **Preparation of Alcoholic Plant extracts of Boerhavia Diffusa (BD):** About 50g of the dried powdered plant of Boerhavia Diffusa defatted with 500ml 80% extractive solvent (80% Ethanol) (60-80°C) by maceration. The Filtrate was removed by filtration and was used to formulate the silver nanoparticles.

Characterization of Crude Drug:[32,33,34]: Determination of Ash Value: Take 2-3g Crude drug place in crucible and weight it. And take weight of empty crucible. Heat the crucible to 450^{0}C. Remove the crucible. Cool it. And reweight it. **Determination of Acid- Insoluble ash Value:** Take 2-3 g crude drug place in crucible and weight it. And take weight of empty crucible. Heat the crucible to 450^{0}C. Remove the crucible. Cool it. Soluble the ash in HCL. Filter the acid solution. And place residue containing filter paper and heat it. Reweight it. **Determination of Water- soluble extractive Value:** Weight 4g of drug in 250ml conical flash. Add 100ml of water and shake for 15 min. allow to stand for 24 hours for maceration. Then filter and allow 25ml of extract to evaporate on water bath. Take weight of empty dish and reweight after evaporation. **Determination of Alcohol- soluble extractive Value:** Weight 4g of drug in 250ml conical flash. Add 100ml of alcohol and shake for 15 min. allow to stand for 24 hours for maceration. Then filter and allow 25ml of extract to evaporate on water bath. Take weight of empty dish and reweight after evaporation. **Determination of PH:** The pH of different formulations in 1% w/v and 10% w/v of water soluble portions was determined using standard PH meter. **Phytochemical Analysis: Alkaloids: i) Dragendroff's test:** Take 2-3 drops of extract. Add few drops of Dragendroff reagent . The Orange brown precipitate is obtained. **ii) Mayer's test:** Take2-3 drops of extract. Add few drops of Mayer's reagent The precipitate is obtain. **2) Tannins and Phenolic Compound: i) 5% $FeCl_3$ solution:** Take extract. Add 5% $FeCl_3$. The deep blue – black colur is obtain. **ii) Lead acetate solution:** Take extract. Add lead acetate. White precipitate is obtained. **3) Flavonoids: i) Sulphuric acid test:** On addition of sulphuric acid to extract it dissolve. The bluish or red or deep yellow or orange to red colour. **ii)** To small quantity of residue add lead acetate. The yellow colour precipitate formed. **4) Steroid: i) Salkowskireaction:** To 2ml extract. Add 2ml of chloroform. Add 2ml sulphuric acid , Shake well. The Chloroform layer show red colour and acid layer show greenish yellow fluorescence. **5) Glycoside: i) Borntrager's test:** To 3ml extract. Add

dilute sulphuric acid, Boil and filter, cool. Add to filtrate equal volume of chloroform. Shake well, separate the organic layer. Add ammonia. The Ammoniacal layer show pinkish red colour. **Thin layer chromatography (T.L.C.):** Aluminum plate pre-coated with silica gel 60 F254 TLC plates (10 × 5 cm) (Merck) was used as a stationary phase. A glass capillary tube was used to apply samples and standards onto the TLC plate. The extracts of T. Cordifolia solutions were applied 1.5 cm away from the lower edge of the plate with the help of capillary tube. The various solvent system used under laboratory conditions (25 – 30°C and 40 – 50% relative humidity). The loaded plates were then placed vertically in the chamber previously saturated with solvent system for 30 min. After the solvent front moved up to a distance of about 90% of length, the plate was taken out, solvent front was marked and the plate was dried at room temperature. Developed plates were air dried and then immersed visualizing agent for derivatizing. After drying, the plates were heated at 110°C for 5 min to develop the colour of the spots. The Rf values were calculated using formula:

Rf = Distance travelled by solute / Distance travelled by solvent.

3. RESULTS

Table no.1 Evaluation of Physiochemical Parameters of Crude Drug:

Sr.No.	Parameters	Standard Value	Tinospora Cordifolia	Tephrosia Purpurea	Boerhavia Diffusa
1)	Colour	-	Light brown	Green and Light brown	Dark Green
2)	Odour	-	Charactertic	Charactertic	Charactertic
3)	Ash Value (%)	Not more than 16, 7,10	10	2	1
4)	Acid- Insoluble ash value(%)	Not more than 0.8,1.2,1.0	0.5	0.5	0.5
5)	Water- soluble extractive value(%)	Not more than 13,12,11	1	4	7
6)	Alcohol- soluble extractive value(%)	Not more than 6,7,7	1	2	1
7)	Foreign matter	Not more thanNIL,2,2	Nil	Nil	Nil
8)	PH	-	7	7	7

All the crude drugs were evaluated for various phyiso- chemical parameters. All the obtained values are compared standard values. All the values of ash value, acid-soluble ash value, water-soluble extractive value, acid-soluble extractive value and foreign matter are in range of standard value. Thus, indicates lower contamination, authentic crude drugs use for preparation of tablets and indicates absents of moulds, insects, animal fatal matters and others contaminations. Whereas, the colour, odour and Ph is as per observation

Table no.2 Evaluation of Phytoconstituents of Extracted Drugs:

Sr.No.	Paramseters	Tinospora Cordifolia	Tephrosia Purpurea	Boerhavia Diffusa
1)	Alkaloids	+	+	+
2)	Favanoids	+	+	+
3)	Steroids	+	+	+

4)	**Glycosides**	+	-	-
5)	**Tannins and phenol compounds**	+	+	+
6)	**Carbohydrates**	+	+	+
7)	**Proteins**	+	+	+

(+) sign indicate presence.

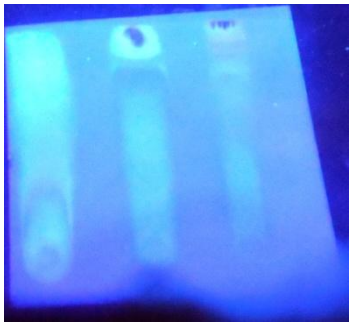
(-) sign indicate absent.

The phytoconstituents evaluation was performed and its indicates the presence of alkaloids, favanoids, steroids, tannins and phenol compounds, carbohydrates and proteins. Whereas, glycosides shows the presence in Tinospora Cordifolia and absent in Tephrosia purpurea and boerhavia diffusa. This evaluation indicates that the parts of plant and whole plant contains the following constituent.

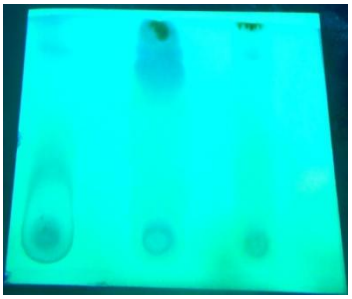
Thin Layer Chromatography:

I) T.L.C. of Tinospora Cordifolia Stem, Teporsia Perpurea, And Borhavia Diffusa Extracts:

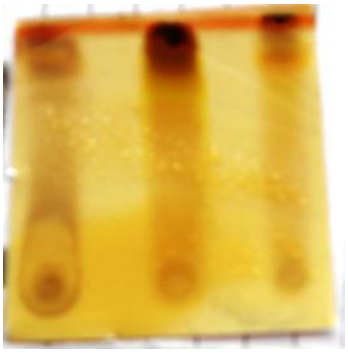
i) At Long wavelength. ii) At Short wavelength. iii)Visualizing Agent



T.C T.P B.D



T.C T.P B.D



T.C T.P B.D

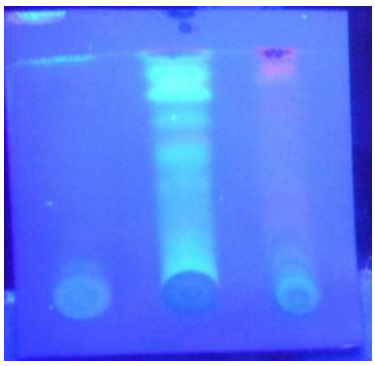
Solvent System: Chloroform and Methanol (5:5)

Stationary phase: Readymade aluminum silica gel F254 coated plate

Detection: 1% Vanillin sulphuric acid

II) T.L.C. of Tinospora Cordifolia Stem, Teporsia Perpurea, And Borhavia Diffusa Extracts:

T.C T.P B.D T.C T.P B.D T.C T.P B.D



At Long Wavelength.

At short Wavelength.

1% Vanillin Sulphuric acid

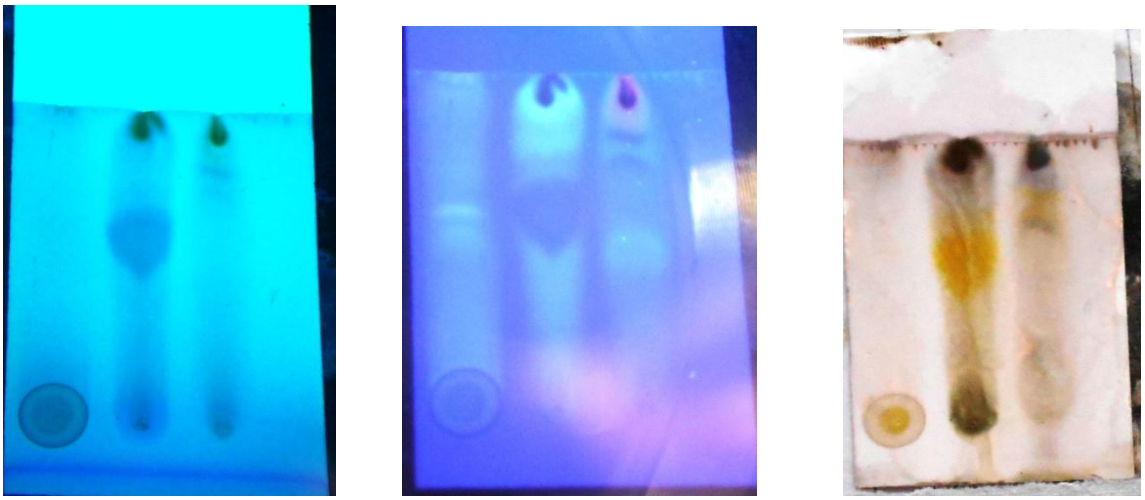
Solvent System: Chloroform and Methanol **(**9:1)

Stationary phase: Readymade aluminum silica gel F254 coated plate

Detection: 1% Vanillin sulphuric acid

III) T.L.C. of Tinospora Cordifolia Stem, Teporsia Perpurea, And Borhavia Diffusa Extracts:

T.C T.P B.D T.C T.P B.D T.C T.P B.D



At short wavelength **At long wavelength** **Anisaldehyde sulphuric acid**

Solvent System: Ethyl Acetate: n- butanol: Formic acid: Water (**5:3:1:1**)

Stationary phase: Readymade aluminum silica gel F254 coated plate

Detection: 1% vanillin sulphuric acid, Anisaldehyde sulphuric acid

IV) T.L.C. of Tinospora Cordifolia Stem, Teporsia Perpurea, And Borhavia Diffusa Extracts: And Rutin:

T.C T.P B.D R **T.C T.P B.D R**

Anisaldehyde sulphuric acid. **1% Vanillin sulphuric acid.**

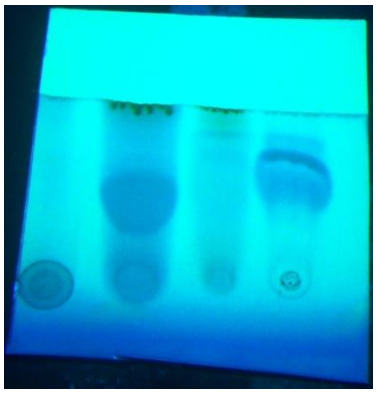
Solvent System: Ethyl Acetate: n-butanol: Formic acid: Water **(**5:3:1:1)

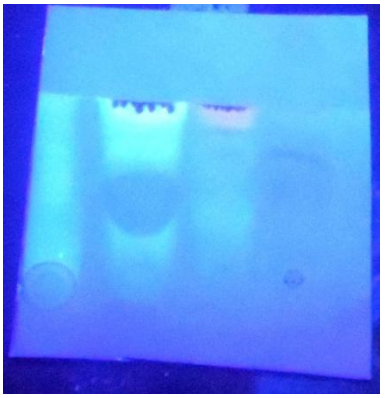
Stationary phase: Readymade aluminum silica gel F254 coated plate

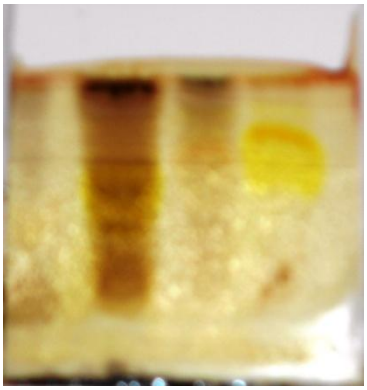
Detection: Anisaldehyde sulphuric acid, 1% Vanillin sulphuric acid. **Standard:** Rutin

V) T.L.C. of Tinospora Cordifolia Stem, Teporsia Perpurea, And Borhavia Diffusa Extracts:And Rutin:

Short Wavelength Long Wavelength







1% Vanillin sulphuric Acid

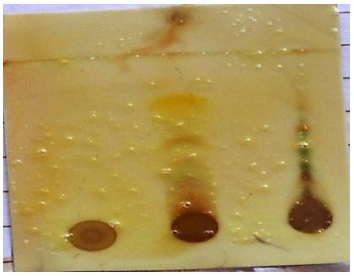
Solvent System: Ethyl Acetate: Acetic acid: Formic acid: Water **(**10: 1.1: 1.1: 2.6)

Stationary phase: Readymade aluminum silica gel F254 coated plate

Detection: 1% Vanillin sulphuric acid **Standard:** Rutin

VI) T.L.C. of Tinospora Cordifolia Stem, Teporsia Perpurea, And Borhavia Diffusa Extracts:

T.C T.P B.D



1% Vanillin sulphuric acid

Solvent System: Ethyl Acetate: Methanol: Formic acid **(**5: 0.5: 0.5)

Stationary phase: Readymade aluminum silica gel F254 coated plate

Detection: 1% Vanillin sulphuric acid

The following T.L.C. shown above is of tinosporia cordifolia, tephrosia perpurea, and boerhavia diffusa extracts solution. The stationary phase use is the readymade T.L.C plate of silica gel F 254. And various combination of solvent system is used. The spots are detected by two visualizing agent such as anisaldehyde sulphuric acid and 1% vanillin sulphuric acid.

The chloroform and methanol are use in two ratios i) 5:5 – which show the run of all three samples whereas the ii) 9:1- which show the run of two samples but not of tinosporia cordifolia. The T.L.C. IV and V show a comparative run of tephrosia perpurea and rutin which is use as standard. The T.L.C VI- Ethyl acetate: Methanol: Formic acid shows the run and separation of boerhavia diffusa.

Table no.3 Percentage Yield of Plants by Cold and Hot Maceration Extraction Methed

Name of Plant	*% Yield Obtained*
Tinospora Cordifolia	**10%**
Tephrosia Perpurea	**10%**
Boerhavia Diffuisa	**20%**

The combination of three plants was use as active ingredients. These are Tinospora cordifolia, Teprosia perpurea, and Boerhavia diffuisa which were extracted by using cold maceration and hot maceration. This gives a yield of 10%, 10%, and 20% respectively. As tinospora cordifolia is a thermo liable. So, cold maceration is use for extraction.

4. DISCUSION

In this research work the various evalution was performed. Firstly, the Physiochemical evalution was performed in which colour, odur, extractive value, ash value , Ph and forgein matter was within the standard value as given in Table no1.Then Phytochemical evalution was performed and founed that all the phytochemical were present in Tinospora Cordifolia and teprosia perpuria but Glycoside was absent in teprosia perpurea and borhevia diffusia.(Table no. 2) Thirdly, Thin layer chromatography was performed using different mobile phase.Lastly, the percent yield was calculated and found to be 10%, 10% and 20% for Tinospora Cordifolia , teprosia perpurea and borehiva diffusia respectively.(Table no.3)

Conclusion: The research work entitled “Preliminary Evaluation of Tinospora Cordifolia,Tephrosia Perpura and Boheravia Diffusia” was performed and the result conclude as the all three plants were collected and authenticated. The extraction was by cold and hot continous maceration method and the % yield was calculated as 10%, 10% and 20% for Tinosopra Cordifolia, Teprosia Perpura and Borehvia Diffusia respectively.Then Preliminay evalution was performed and all the values for the respective extracts was founded. TLC confirmed the presence of phytochemical constituents.

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