



**INTERNATIONAL JOURNAL OF
PHARMACEUTICAL SCIENCES**
[ISSN: 0975-4725; CODEN(USA): IJPS00]
Journal Homepage: <https://www.ijpsjournal.com>



Research Article

Phytochemical Screening & Evaluation of Antimicrobial Activity of Ethanolic Extract of Flower and Leaves of *Lantana Camara* L.

Asmita Gupta*, Shalini Singh

Department of Pharmacognosy, Institution of Pharmaceutical Science & Research, Lucknow.

ARTICLE INFO

Published: 18 Aug. 2025

Keywords:

Lantana camara,
Antimicrobial, Cup plate,
 λ_{max} .

DOI:

10.5281/zenodo.16892073

ABSTRACT

Multi-drug resistance patterns in bacteria are difficult to treat. The search for a new alternative antibiotic drug that may help to control drug-resistant pathogenic bacteria is necessary. The flower and leaves of *Lantana camara* possessed wide range of pharmaceutical and biological activities like anti-microbial, anti-tubercular, anti-malarial, anti-convulsant, anti-tumor, anti-inflammatory, anti-pyretic, analgesic, insecticidal, hypoglycaemic, and diuretic. The present study was aimed at developing some antimicrobial agents embracing *lantana camara* flowers & leaves. The aim of the current work was to develop a non-irritant & stable of *lantana camara* flowers & leaves extracts with improved residence time on the skin. The extract acquired a dark brown, aromatic, semisolid mass. The raw ethanolic extracts of *lantana camara* flowers & leaves was subjected to different test separately, for the identification of active phytoconstituents. Antimicrobial activity is due to the presence of alkaloids, steroids, glycosides, phenols, saponin, terpenoids, & flavonoids. The λ_{max} of *Lantana camara* flowers & leaves was found to be 292.0 nm on a UV-Vis spectrophotometer. Extracts were evaluated for their antimicrobial activity by cup plate method. Finally, minimum inhibitory concentration (MIC) values were also determined. The ethanolic extract of *Lantana camara* leaves exhibited good antimicrobial activity against bacterial strains.

INTRODUCTION

Medicinal plants have been used to relieve illness for over 60,000 years ago, maybe even older. Scripts about medicinal plants from ancient civilizations like Egypt and China show people always sought to use nature to cure their diseases. According to WHO, most of the population

worldwide (80%) utilize herbal substances to cure diseases. Plants contain phytochemicals that are helpful in the defense against herbivores. These phytochemicals have medicinal properties that are used by humans¹. *Lantana camara* (Umuhengeri), an ornamental weed garden plant that belongs to the Verbenaceae family, is a low erect, rugged hairy, evergreen shrub native to tropical America.

***Corresponding Author:** Asmita Gupta

Address: Department of Pharmacognosy, Institution of Pharmaceutical Science & Research, Lucknow.

Email : asmitagupta9988@gmail.com

Relevant conflicts of interest/financial disclosures: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.



It is considered as a valuable plant for traditional healers worldwide (Manish et al., 2011). *L. camara* extract has been shown to exhibit antimicrobial, insecticidal, and nematocidal activities. Besides, it exhibits immunosuppressive and antitumor activities². Throughout history, bacterial infections have plagued men. Antibiotics have changed the world in the past 70 years, saving and improving lives and making them the cornerstones of modern health systems. The therapeutic capacity for treating patients with bacterial infections is being depleted by antimicrobial resistance. Physicians encounter infections that are susceptible to few or even none of the available antibiotics³. Drug-resistant pathogens have made widespread infections more challenging to treat or even incurable in some cases, with catastrophic implications for patients. This was due to antibiotic misuse, incorrect dosage, etc⁴. In time, as many bacteria are developing antibiotic resistance to conventional antibiotics, natural products from plants are as alternative new antibiotics to cure diseases⁵. Plant-based medicines, which were previously only available in the form of crude medicines (teas, poultices, powders), are now used to develop new drug discoveries. Since plants contain various bioactive compounds such as alkaloids, flavonoids, and saponins, they can serve as antimicrobial agents⁶. Bacteria like *P. aeruginosa*, *S. pneumonia*, *S. aureus*, *S. typhi* and *E. coli* are the most problematic in Rwanda⁷. The development of antimicrobial resistance in patients to available antimicrobials is high and worries some. It is necessary to search for new antimicrobial agents. In search of a new alternative antibiotic drug that may help control drug-resistant pathogenic bacteria, this research focused on the effect of *L. camara* extracts on clinically isolated bacteria (*S. typhi*, *S. aureus*, *S. pneumonia*, *E. coli*

Collection, Identification & Authentication of Plant material

The flower and leaves of *Lantana camara* collected from a local market of Lucknow, U.P India. The plant materials, flowers & leaves of *Lantana camara* linn identified and authentication by Prof. N. K Dubey, scientist, plant diversity, Systemic and Herbarium division, Lucknow B.H.U (Banaras Hindu University) the plant specimens were authenticated in Herbarium with Ref. no. of Lat/CamL /2025/01.

Preparation of extract

The flower and leaves are dried in shade at room temperature. The dried flower and leaves of *Lantana camara* were pulverized into coarse powder and sieved through number 23 and stored in to a container⁸. Conventional hot Soxhlet extraction method was used for extraction of flower 200 gm of powder flower were extract with 500 ml of ethanol at the temperature range 60-70°C successively 3-4 day the isolated extract was filtered and the solvent was removed using a vacuum rotary evaporator after a complete extraction, & the obtained residue was kept in a desiccators⁹. The percentage yield of extract was found to be 54.40 gm.

RESULT & DISCUSSION

Phytochemical Analysis of Extracts

The ethanolic extract of Leaves & flower of *Lantana camara* subjected for preliminary phytochemical analysis for detection of various phytoconstituent like Alkaloids, Glycoside, Tannins, Triterpenoids, Carbohydrates & proteins¹⁰. The detail result was given in table 1.

MATERIAL & METHODS

Table 1: Phytochemical screening of flower and leaves extract of *L. camara* extract

S. NO	Phytochemical Constituent	Name of test	Observation	Leaves	Flower
1.	Alkaloids	Hager test	Few ml of extract & then added Hager reagent the obtained creamy white precipitate	+	+



S. NO	Phytochemical Constituent	Name of test	Observation	Leaves	Flower
		Mayers test	Few ml of extract & then added the Myers reagent then obtained creamy white /yellow precipitate	+	+
		agers test	Few ml of extract & then added the Myers reagent then obtained creamy white /yellow precipitate	+	+
2.	Steroids	Salkowski test	Test solution was treated with 1ml of chloroform, then added 1ml conn. sulfuric acid carefully shakes than obtained the brown colour lower layer indicated the present of steroids	+	+
3.	Glycosides	Legal test	One millilitre of test solution was dissolved in pyridine and sodium nitroprusside solution to make it alkaline, which produced a pink to scarlet hue that indicated the presence of glycosides..	+	+
		Baljet test	When picric acid was added to the test solution, an orange colour formed, signifying the presence of glycosides.	+	-
4.	Phenol	Phenolic test	Test solution treated with ferric chloride solution then formation of blue or green colour	+	+
5.	Saponin	Foam test	Five millilitres of distilled water were added to the test solution in a test tube, and after a vigorous shake, a foam formed, signifying the presence of saponin.	+	+
6.	Protein & amino acid	Biuret test	1 ml of test solution One drop of 2% copper sulphate solution and 1ml of 95% ethanol, KOH Pellets turn pink, signifying the presence of amino acids and proteins.	-	-
7.	Terpenoid		5ml of test solution and add in the few ml of chloroform and concentrated sulfuric acid than show the reddish-brown colour so it indicate the present of terpenoids.	+	+
8.	Flavonoids		Test solution was mixed with 20% sodium hydroxide solution than its show the yellow colour it's indicate the presents of flavonoids	+	+



a.

b.

Fig. 1: Phytochemical screening of flower extracts (a) and leaves extract (b) of *L. camara linn.*

U.V spectroscopy of the *L. camara* flower and leaves extract:

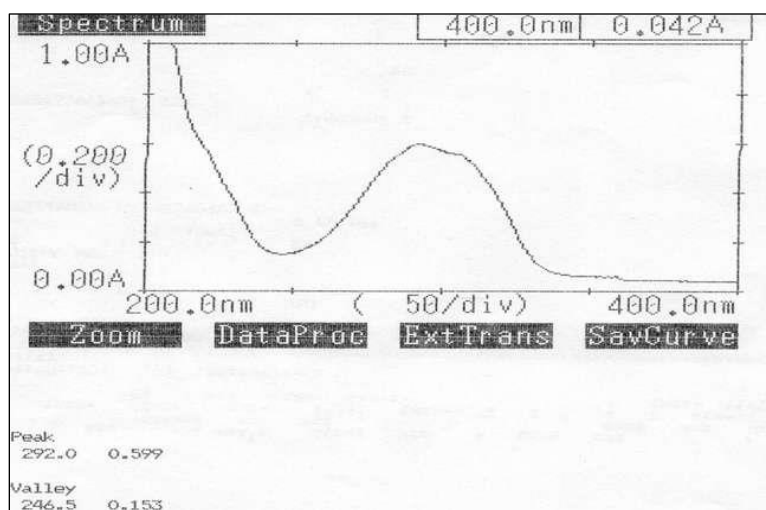


Fig. 2: U. V visible spectroscopy of *L. camara linn.* flower extract

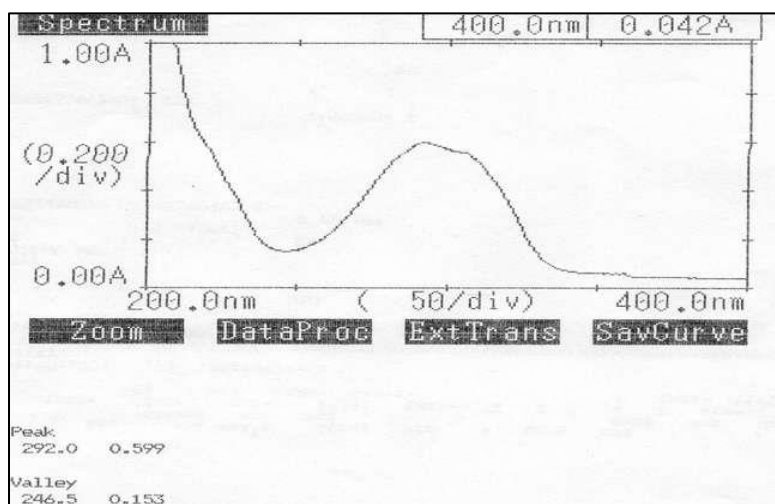


Fig. 3: U. V visible spectroscopy of *L. camara linn.* leaves extract

Functional group analysis by IR Spectroscopy**FTIR Spectra of *L. camara linn* flower extract:**

The FTIR spectra of ethanolic extract of *L. camara linn* flower analyses by FTIR (PerkinElmer spectrum version) spectrophotometer, CSIR-CDRI, Lucknow (U.P) India.

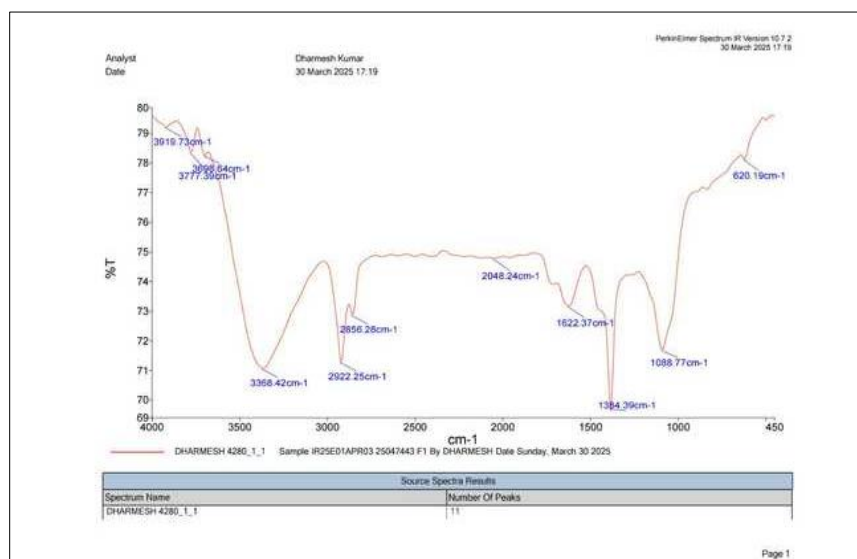


Fig. 4: FTIR Spectrum peaks of *L. camara linn* flower extract

Table 2 FTIR Spectrum peaks of *L. camara linn* flower extract

Groups	Reported peaks (cm ⁻¹) wave no. range	Observed peaks (cm ⁻¹) wave no. range
C-H Stretch	4200-5000	3919.73
= C-H Stretch	3080-3140	3777.39
O-H Stretch	3000-3700	3698.64
N-H Stretch	3000-3700	3368.42
C-H Stretch	2700-3300	2922.25
C-H	2900-2880	2856.28
C=N Stretch	1600-1700	1622.36
C-H Bend	1300-1500	1384.39
C-C Stretch	800-1200	1088.77
C-Cl Stretch	600-800	620.19

FTIR Spectrum peaks of *L. camara linn* leaves extract

The FTIR spectra of ethanolic extract of *L. camara linn* leaves linn analyse by FTIR (PerkinElmer spectrum version) spectrophotometer, CSIR-CDRI, Lucknow (U.P) India.

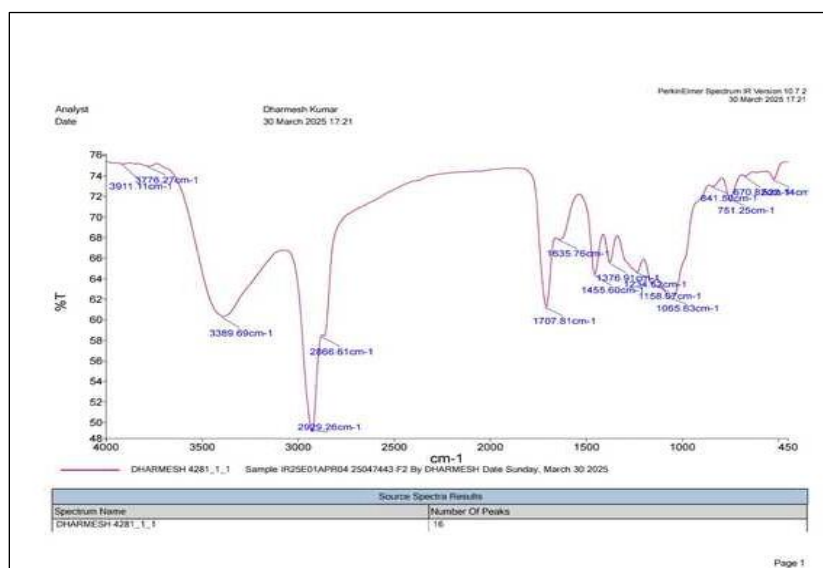


Fig. 5: FTIR Spectrum of *L. camara* linn leaves extract

Table 3 FTIR Spectrum peaks of *L. camara* linn leaves extract

Groups	Reported peaks (cm ⁻¹) wave no. range	Observed peaks (cm ⁻¹) wave no. range
C-H Stretch	4200-5000	3911.11
O-H Stretch	3000-3700	3776.27
C=O Stretch	3300-3600	3389.69
C-H Strech	2700-3300	2929.26
C-H	2900-2880	2866.61
C=O Stretch	1600-1900	1707.81
C-C Stretch	1600-1700	1635.35
C-H Bend	1300-1500	1455.60
O-H Bend	1200-1500	1376.91
O-H Bend	1200-1500	1234.52
C-C Stretch	800-1200	1158.07
C-F Stretch	1000-1400	1065.63
C-C Stretching	1200-800	841.50
N-H rocking	700-900	751.25
C-Cl Stretch	600-800	670.82
C-Br Stretch	500-600	522.14

LC-MS (liquid chromatography & mass spectroscopy) *Lantana camara* linn flower extract

The LC-MS (liquid chromatography & mass spectroscopy) spectra of *L. camara* flower linn analyse by LC-MS, CSIR-CDRI, Lucknow (U.P) India.

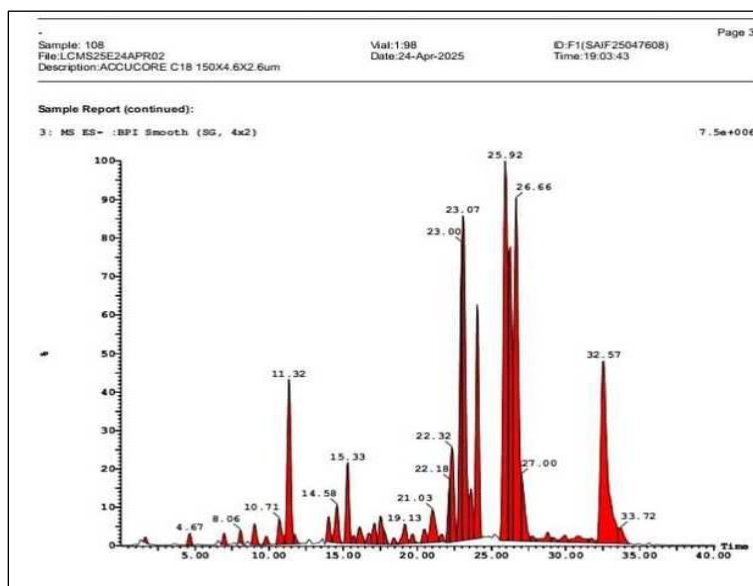
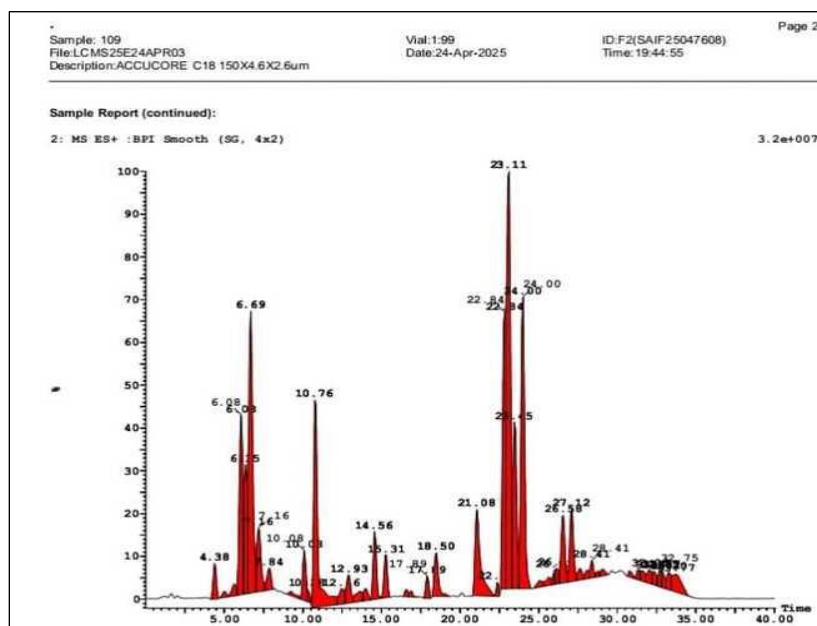
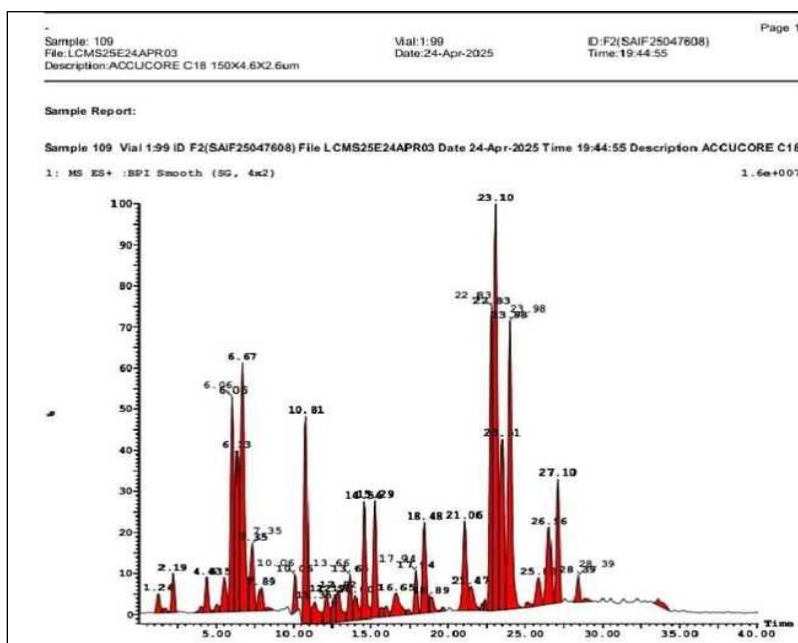


Fig 6: LC-MS of the *L. camara* linn flower extract (F1)

LC-MS (liquid chromatography & mass spectroscopy) *Lantana camara* linn leaves extract

The LC-MS (liquid chromatography & mass spectroscopy) spectra of *L. camara* leaves linn analyse by LC-MS, CSIR-CDRI, Lucknow (U.P) India.



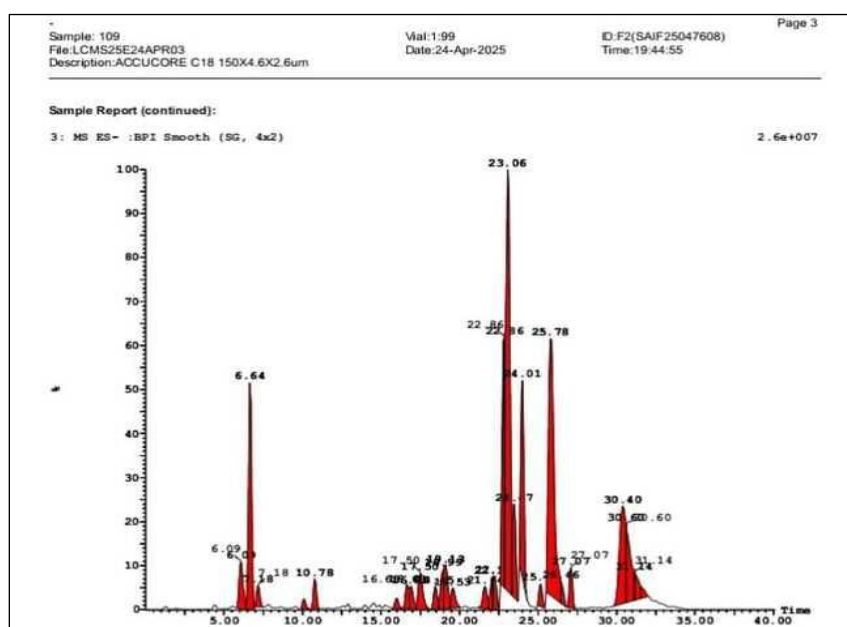


Fig. 7: LC-MS of the *L. camara* linn leaves extract (F2)

LC-MS (liquid chromatography & mass spectroscopy) *Lantana camara* linn flower and leaves extract

An incredibly sensitive and specific analytical method, liquid chromatography mass spectrometry (LC-MS/MS) can accurately identify the substances in your sample and their concentrations.

Table 4: LC-MS of the of *L. camara* linn leaves & flower extract

S. No.	Spectra	Constituent	Molecular Weight (g/mol)	Adduct
1	331.1	Ursolic acid	456.7 → Fragmentation	[M - H ₂ O - COOH] ⁺
2	341.3	Lantadene A	470.7 → Fragment	[Fragment]
3	342.3	Lantadene B	472.7 → Fragment	[Fragment]
4	343.2–343.8	Atisine derivatives	343.8	[M+H] ⁺
5	376.1	Camarcic acid derivative	375–380	[M+H] ⁺
6	433.1	Oleanolic acid (Fragment)	456.7	[M-H ₂ O] ⁺
7	447.1	Heterophylline A/B	447.1	[M+H] ⁺
8	469.2–471.4	Lycacanitine	469.2	[M+H] ⁺
9	491.1	Dihydro-Lantadene B	491	[M+H] ⁺
10	519.1	Lantadene C or oxidized triterpene	519	[M+H] ⁺
11	595.3	Luteolin-7-O-glucoside	595	[M+H] ⁺
12	684.3	Apigenin dimer or glycoside	684	[M+H] ⁺
13	958.8–959.8	Saponin dimer	958–960	[M+Na] ⁺ or [2M+H] ⁺
14	1039.7	Triterpene glycoside dimer	1039	[M+Na] ⁺
15	1429.9–1431.8	Polyphenolic conjugates	1430	[M+Na] ⁺
16	1981.3	Complex glycoside or dimeric form	1980	[2M+H] ⁺

HPLC study of the *Lantana camara* flower extract

The HPLC method of the *Lantana Camara* flower extract analyzed by HPLC at CSIR-CDRI, Lucknow (U.P) India.

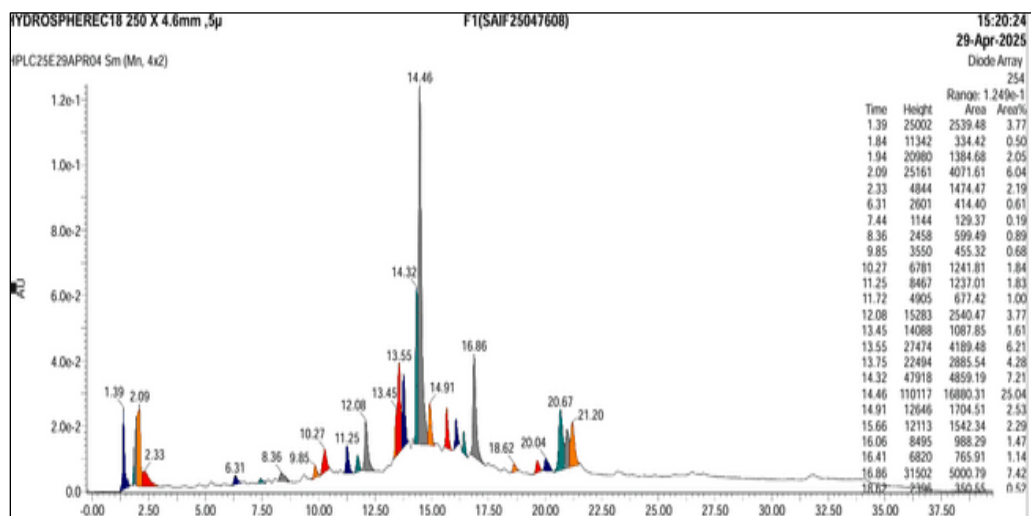


Fig. 8: HPLC chromatogram of the ethanolic extract of *Lantana camara linn* flower

HPLC study of the *Lantana camara* leaves extract

The HP-LC method of the *Lantana Camara* leaves extract analyzed by HPLC at CSIR-CDRI, Lucknow (U.P) India.

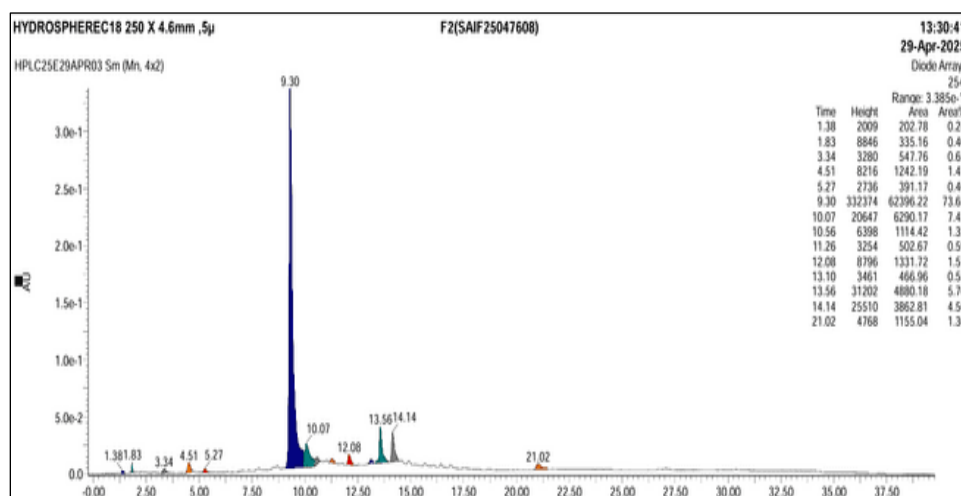


Fig. 9: HPLC of the ethanolic extract of *Lantana camara linn* leaves

In phytochemical and analytical chemistry, HPLC is a chromatographic technique that can separate a mixture of compounds and is used to identify, quantify, and purify the individual components of the mixture. It is a flexible, reliable, and popular method for the isolation of natural products¹¹. This method is currently becoming more and more well-liked among other analytical techniques as

the main choice for fingerprinting studies for herbal plant quality control.

Evaluation of Antimicrobial Activity

The *Lantana camara linn.* flowers & leaves were evaluated for antimicrobial activity against bacterial strains by and cup plate method¹². The microbes were procured from the Institute of Microbial Technology (IMTECH), Chandigarh, India. Ofloxacin were used as standard.

Cup plate method

Test organism: Microorganism staphylococcus aureus (MTCC1430), and candida albicans (MTCC 227) were procured from the institute of microbial technology (MTECH) Chandigarh India.

Preparation of inoculums: the bacterial cultures were kept in refrigerator with nutritional agar slats, and they were transferred every month. A loopful of organisms from 24- hour-old cultures of nutrient agar slants growth at 37°C were inoculated in to the sterile saline to create the inoculum for the test organisms¹³. To achieve a

culture density of roughly 107 CFU/ml, one millilitre using sterile saline.

Preparation of test sample & standard drugs:

To prepare the 1000µg/ ml stock solution of the lantana camara leaves and flower extract, 10 mg of the synthesized chemical was dissolved in DMSO. After transferring 1 ml of the stock solution in to the volumetric flask, the same solvent was used to further dilute in up to 10 ml. Likewise, various concentration were generated, including 20,40, 60, 80, 100, µg/ml¹⁴. Fluconazole and norfloxacin were utilized and usual.

Table 5: Growth media, incubation temperature and pH for microbial strains.

Sr.No.	Strain	Growth media composition		Incubation temperature	pH
		Ingredient	Quantity(g)		
1	S. Aureus	Beef extracts	1	37°C	6.8-7.0
		Peptone	1		
		Nacl	0.5		
		Agar	2.0		
		Distilled water	100ml		
2.	C. Albicans	Peptone	1	37°C	5.6
		Dextrose	2		
		Agar	2.0		
		Distilled water	100 ml		

Determination of zone of inhibition of the lantana camara leaves and flowers extract using cup plate method

The cup plate method was determined to the minimum zone of inhibition of lantana camara leaves and flower extract against the microbial stains using nutrition agar and sabouraud dextrose agar media¹⁵. A measured volume of the microbial inoculums was added to the sterilized agar media, which had been cooled to between 40 and 50 degrees Celsius, and it was thoroughly spun under

the laminar air flow bench in an aseptic setting. After sterilizing the petri plates, 25ml of inoculum was aseptically add and set aside to solidify¹⁶. Using sterile steel cork borer on solidified media, the cavities were created. The, using different micropipettes, the test chemical and references solution was added to each cavity. To allow for diffusion, inoculated plates were left at room temperature for two hours before being incubated for seventy two hours at 37°C. After measuring the zone of inhibition, the MIC value was determined¹⁷.

Table 6: Zone of inhibition (diameter) of Lantana camara leaves and flower extract against bacterial trains by cup plate method

S.no.	Compounds code	Diameter of zone of inhibition (mm)		
		Conc. (µg/mL)	<i>Staphylococcus aureus</i>	<i>Candida Albicans</i>



1	<i>Lantana camara</i> leaves	20	08	09
		40	09	10
		60	11	11
		80	12	14
		100	14	16
2	<i>Lantana camara</i> flower	20	07	08
		40	10	09
		60	11	12
		80	12	13
		100	14	15
3	Ofloxacin	20	11	08
		40	16	10
		60	20	11
		80	21	13
		100	15	14
5	Control (DMSO)	-	-	09

The *Lantana camara* leaves were found to be more effective against bacterial strains.

CONCLUSION

In current study, a novel antimicrobial activity of *Lantana camara* linn flowers & leaves extracts for topical application. This approach provides more efficient therapy with low adverse effect as compared to synthetic drug. The present research work established the potential of *Lantana camara* flower & leaf extracts for the environment and human safety. From the antimicrobial study of *Lantana camara* flowers & leaves it can be concluded that, showed good antimicrobial activity against bacterial strains. The *Lantana camara* leaves exhibited good activity against bacterial strains.

REFERENCES

- Girish C.S. Negi & Subrat & Subash C.R. Vishvakarma & Sher S. Samant & Rakesh K. Maikhuril & Ram C. Prasad & Lok M.S. Palni, "Ecology and use of *Lantana camara* in India" springer(2019),109-130.
- E.L Ghisalberti "Lantana camara L. Verbenaceae" Elsevier Science (2000) 456-468.
- Muzammil Shah, Hesham F. Alhar by Khalid Rehman Hakeem, "Lantana camara: A comprehensive review on Phytochemical, Ethnopharmacology and Essential oil Composition" nano bioscience, 2020, 1199-1207.
- Lalita Battase, Daksha Attarde, Phytochemical and medicinal study of *lantana camara* linn. (Verbenaceae) -a review, Asian J Pharma clin Res, Vol. 14 Issue 9, 2021, 20-27.
- Neeraj Tandon, Madhu Sharma, "Treads and Evan", pharmacognosy Elsevier LTD 16th Edition (2003):172.
- Neeraj Tandon Madhu Sharma, Review on "Indian Medicinal Plant" Published by Indian council of medical research volume 9. (2009) 204-212.
- Narayan das Prajapati, S,S Purohit Arun K. Sharma, Tarun Kumar, "Handbook of Medicinal Plant" Published By Updesh Purohit For Agrobiosis, 1st Edition,(2004) 32-34.
- N.M Reddy "Lantana camara Linn. Chemical Constituent and medicinal Properties" Scholer (2013) 445-448.
- Neena Priyanka, P.K. Joshi "A review of *Lantana camara* study in India" International



- journal of scientific and research publication (2013) 2250-3153.
10. Tanim Jabid Hossain “method for screening and evaluation of antimicrobial activity: A review protocols, advantage and limitation” *European journal of microbiology and Immunology* (2024) 97- 115.
 11. Shakoh Parham, Anousheh Zargar Kharazi, Hamid Reza Bakhsheshi-rad et.al. “antioxidant, antimicrobial and antiviral properties of herbal materials” *MDPI* (2020). 1309.
 12. Mounyr Balouiri, Moulay Sadiki, Saad Koraichi Ibensouda “Method for in vitro evaluating antimicrobial activity” *ELSEVIER* (2015).
 13. Ashish Saraf, Sadaf Quereshi et. al “Antimicrobial activity of lantana camara” *Experimental sciences* (2011) 50-54.
 14. Barreto FS, Sousa EO, Campos AR, et.al “Antibacterial activity of Lantana camara linn and lantana Montevidentis brig extract from Cariri- Ceara Brazil” (2010) 42-44.
 15. Don Goldmann, M.D., Sowmya Rajan and Krishna Udayakumar “Prevention and controlling global antimicrobial resistance” (2024) 681-685.
 16. Khandare Sakshi, Khandare Priti, Khandare Shivraj, Sumit S. Bodkhe review on phaytochemical and pharmacological investigation of lantana camara extract. (2024) 42-48.
 17. Nandkishori M. Bhoys, Dr. Dinesh P. “Hase review on morphological feature, phytochemical and pharmacological study of lantana camara” (2022) 2349-5138.
 18. Aadil Mansoori, Nitesh Singh, sharad kumar Dubey Tarun K. Thakur, Noam Alkan Subha Narayn das, and Anirudh Kumar “Phytochemical Characterization and assesment of crude extract from Lantana Camara L. for antioxidant and antimicrobial activity” (2020) 582268.
 19. Jo- Ann T. Salada Lotis M. Balala Erlinada A.vasquez, “Phaytochemical and antibacterial studies of Lantana Camara L. Leaf fraction and essential oil.”
 20. Swetha Kappala, Ashok Gorja, Swathi Mukurala, Nameera Jabeen, Jahnvi Bandla “Phytochemical Screening and In-vitro Antibacterial Activity Evaluation of Lantana Camara Linn. Leaf Extract” (2023) 2231-5039
 21. Junaid R Shaikh and MK Patil “Qualitative tests for preliminary phytochemical screening” (2020) 2349–8528
 22. Arumugam Vignesh, Subramaniam Selvakumar b, Krishnan VasanthComparative LC-MS analysis of bioactive compounds, antioxidants and antibacterial activity from leaf and callus extracts of Saraca asoca (2022)2667-0313
 23. S. Murugesan, N. Senthilkumar, D. Suresh Babu and D. RajasugunasekarChemical constituents and toxicity assessment of the leaf oil of Lantana camara Linn from Tamilnadan regions (2016) 42-34
 24. Rakesh Kumar, Rahul Katiyar, Surender Kumar, Tarun Kumar and Vijay SinghLantana camara: an alien weed, its impact on animal health and strategies to control (2016) 2320 – 8694
 25. Joy, J.M.; Vamsi, S.; Satish, C.; Nagaveni, K. Lantana camara Linn: a review. *International Journal of Phytotherapy* 2012, 2, 66–73.
 26. Fatope, M.O.; Salihu, L.; Asante, S.K.; Takeda, Y. Larvicidal activity of extracts and triterpenoids from Lantana camara. *Pharmaceutical biology* (2002) 564–567
 27. Abeynayake, S. W., Panter, S., Chapman, R., Webster, T., Rochfort, S., Mouradov, A., et al. (2012). Biosynthesis of proanthocyanidins in white clover flowers: cross talk within the

- flavonoid pathway. *Plant Physiol.* 158, 666–678.
28. Yaradua, S.S.; Shah, M. The complete chloroplast genome of *Lantana camara* L.(Verbenaceae). *Mitochondrial DNA Part B* (2020) 918–919,
 29. Verma, R.K.; Verma, S.K. Phytochemical and termiticidal study of *Lantana camara* var. *aculeata* leaves. *Fitoterapia* (2006) 466–468,
 30. Ouamba, J.M.; Ouabonzi, A.; Ekouya, A.; Bessière, J.-M.; Menut, C.; Abena, A.A.; Banzouzi, J.T. Volatile constituents of the essential oil leaf of *Lantana salvifolia* Jacq.(Verbenaceae). *Flavour and fragrance journal* (2006) 158–161.
 31. Passos, J.L.; Barbosa, L.C.A.; Demuner, A.J.; Alvarenga, E.S.; Silva, C.M. da; Barreto, R.W. Chemical characterization of volatile compounds of *Lantana camara* L. and *L. radula* Sw. and their antifungal activity. *Molecules* (2012) 11447–11455,
 32. Rajan, D.S.; Varghese, T.A. An evaluation on the larvicidal efficacies of aqueous leaf extracts of *Lantana camara* and *Catharanthus roseus* against mosquito larvae.
 33. Abu-Shanab B, Adwan G, Jarrar N, Abu-Hijleh A, Adwan K. Antibacterial activity of four plant extracts used in Palestine in folkloric medicine against Methicillin-resistant *Staphylococcus aureus*. *Turk. J. Biol* 2006; 30: 195-4
 34. Sharma OP, Makkar HPS, Dawra RK. A review of the noxious plant *Lantana camara*. *Toxicon* 1988; 26: 975-13.
 35. Ates DA, Erdogrul OT. Antimicrobial activities of various medicinal and commercial plant extracts. *Turk. J. Biol* 2003; 27:157-5.
 36. Barre, JT, Bowden BF, Coll JC, Jesus JDe, De La Fuente VE, Janairo GC, Ragasa CY. A bioactive triterpene from *Lantana camara*. *Phytochem* (1997) 321.
 37. Wuthi-udomlert M, Prathanturarug S, Soonthornchareonnon N. Antifungal activities of *Senna alata* extracts using different methods of extraction. *International conference on Medicinal and Aromatic plants.* 1998; 26:1-61.
 38. Al-Snafi AE. Chemical constituents and pharmacological activities of milfoil (*Achillea santolina*). A review. *Int J Pharm Tech Res* (2013)137-377.
 39. Dharmagada VS, Tandonb M, Vasudevan P. Biocidal activity of the essential oils of *Lantana camara*, *Ocimum sanctum* and, *Tagetes patula*. *J Sci Ind Res* 2005;64:53-6.
 40. Salada JT, Balala LM, Vasquez EA. Phytochemical and antibacterial studies of *Lantana camara* L. leaf fraction and essential oil. *Int J Sci Res Publ* (2015)1-5.

HOW TO CITE: Asmita Gupta*, Shalini Singh, Phytochemical Screening & Evaluation of Antimicrobial Activity of Ethanolic Extract of Flower and Leaves of *Lantana Camara* L., *Int. J. of Pharm. Sci.*, 2025, Vol 3, Issue 8, 1854-1867
<https://doi.org/10.5281/zenodo.16892073>

