

Spectroscopical Analysis of *Tridax Procumbens* L.

/Prof.Vaishali.N.Agme

Abstract— This paper is in order to focus on various medicinal properties of *Tridax Procumbens* L. & on the investigation of active principle as well as several potential therapeutic activities present in *Tridax procumbens* L. (Asteraceae), Commonly Called as “Coat Button”. In this present work, we have isolated & determined various functional groups present in intermediate of various Compounds/drugs like Nimesulide, Celebrex, Xeloda, Omeprazol, Velade, Vidaza, Busulfex, Lomustine, istide, Diflucan, Daunoxome, Cytovene, Abelcet etc. By the Phytochemical & Spectroscopical analysis of present herbs, we have analyzed & found that it is the most important medicinal plants possessing various anti-bacterial, anti-viral, anti-dandruff, emollient, anti-healing, anti-AIDS, & can be used against various disorders. The leaf juice can be used to cure fresh wounds to stop bleeding as well as hair tonic.

Keywords: *Tridax Procumbens* L., Coat Button, Spectroscopical analysis, Phytochemical analysis, Hair tonic, anti healing, anti viral.

1 INTRODUCTION:

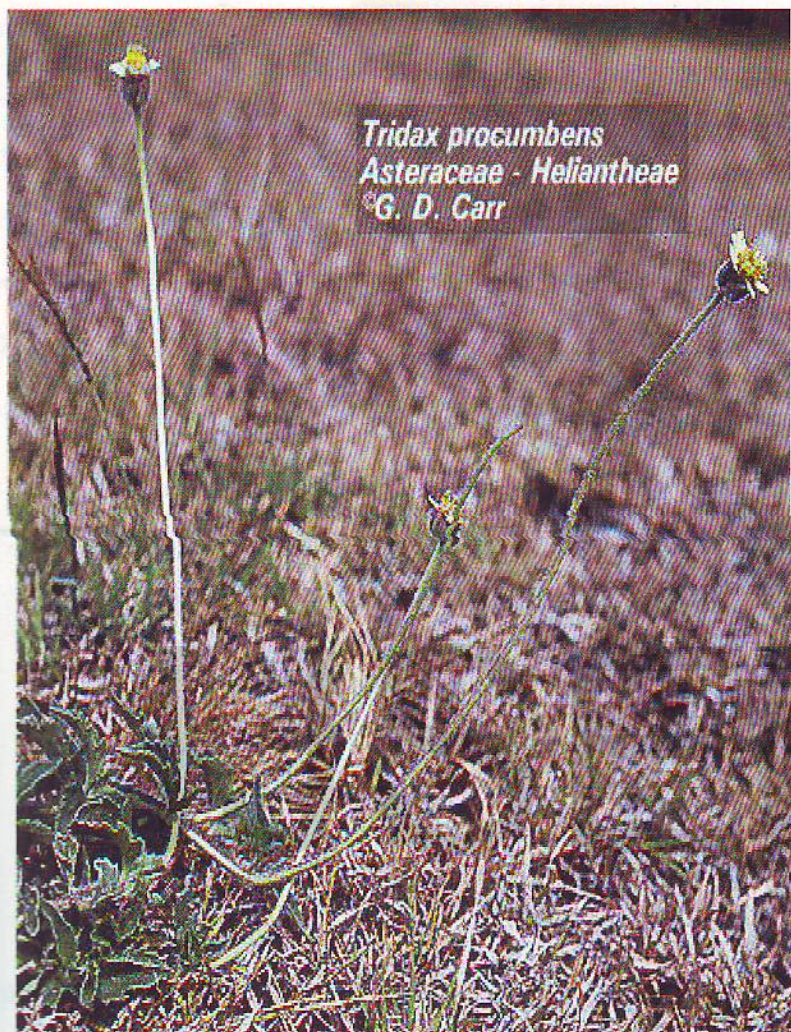
Tridax Procumbens L. is semi-prostrate or short lived perennial with stem up to 50cm long. It is weed of pastures & wide range of annual & perennial crop type. It is commonly called as “Kambarmodi” in Marathi & “Ghamara” in Hindi. It is Common grass found in tropical southern part of Nigeria,

growing primarily during rainy seasons. It is native of Central America. It has become completely naturalized in Bombay presidency, especially in Deccan, while it is very abundant. It has been found to have significant medicinal properties.

Habitat: Herb

Disseminule: Fruit

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Plant of *Tridax procumbens* L.



Leaf of *Tridax procumbens* L.



Flower of *Tridax procumbens* L.

2 Methods/Techniques:

Tridax Procumbens L. possess medicinal, pharmaceutical, Chemical & industrial properties, so it become necessary to carry out the chemical analysis of Tridax Procumbens L. Literature survey has shown that such type of analysis of Tridax Procumbens L. have not been studied. Hence, It is interesting to investigate chemical studies of Tridax Procumbens L. in different solvents like Ethanol, Benzene, distilled water, 1% HCl, 1% NaOH etc.

First of all, the isolation of extractive products of sample was done in ethanol & other solvents & the same procedure was adopted for stem, root & flower sample.

More modern structural elucidation & characterization of compounds present in plants was analyzed by spectroscopy NMR & IR.

3 OBSERVATIONS:

3.1 Isolation of extractive products of leaf sample in ethanol:-

NMR spectrum:-

The NMR spectroscopic analysis of extractive products in ethanol was carried out CDCl_3 & DMSO-d_6 & reproduced on fig NMR - 3.1. This spectrum distinctly displayed the signals due to Ar-H protons at δ 7.5953ppm, -NH protons at δ 5.5320ppm, -CH_3 protons at δ 2.0889- 2.6043ppm.

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BROKER II 400 NMR
Spectrometer
SAIF
Panjab University
Chandigarh

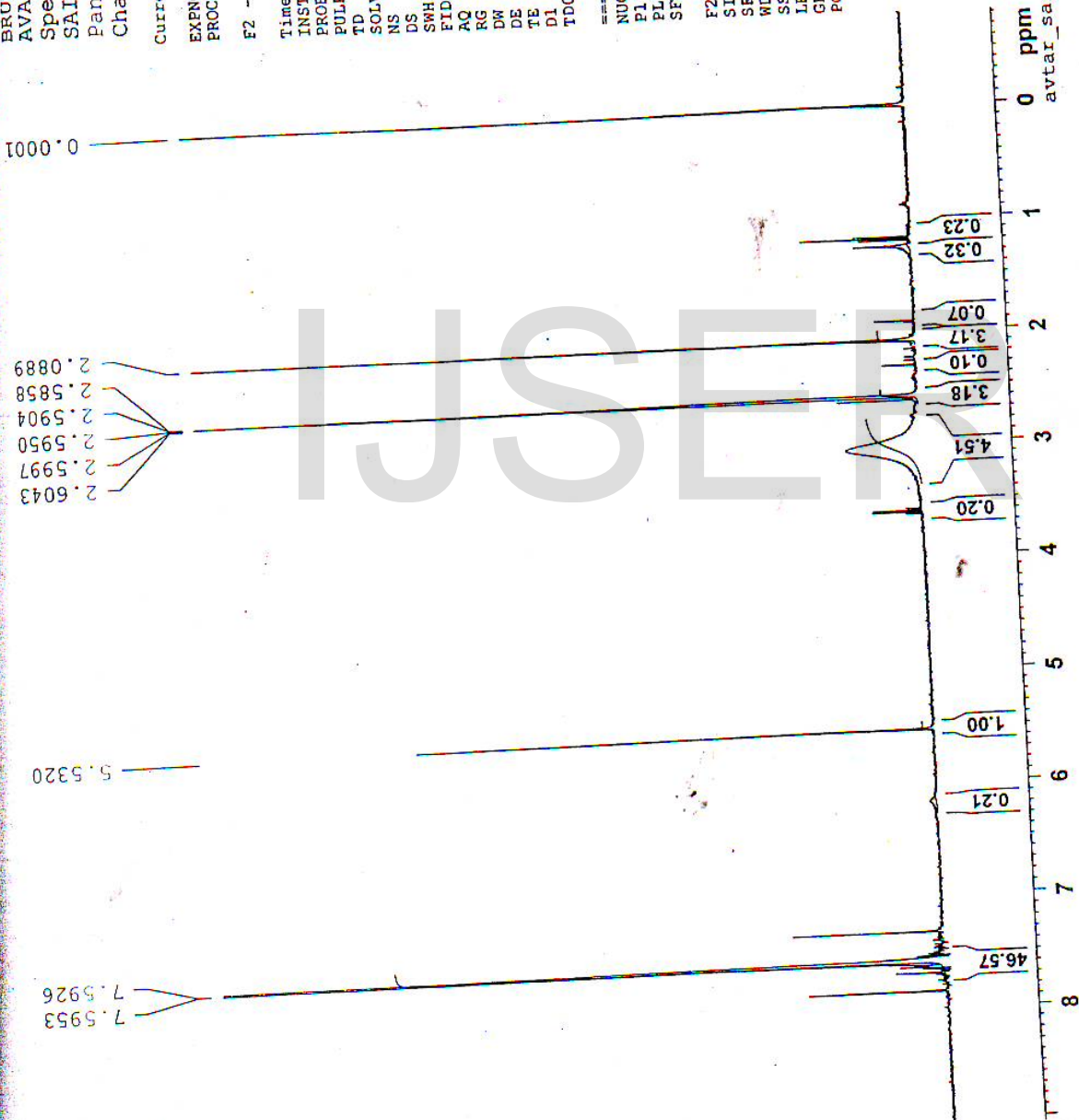
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PROCNO 1

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FIDRES 0.183399 Hz
AQ 2.7263477 sec
RG 406
DW 41.600 usec
DE 6.00 usec
TE 293.2 K
TD0 1.00000000 sec
D1 1

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PL2 -3.00 dB
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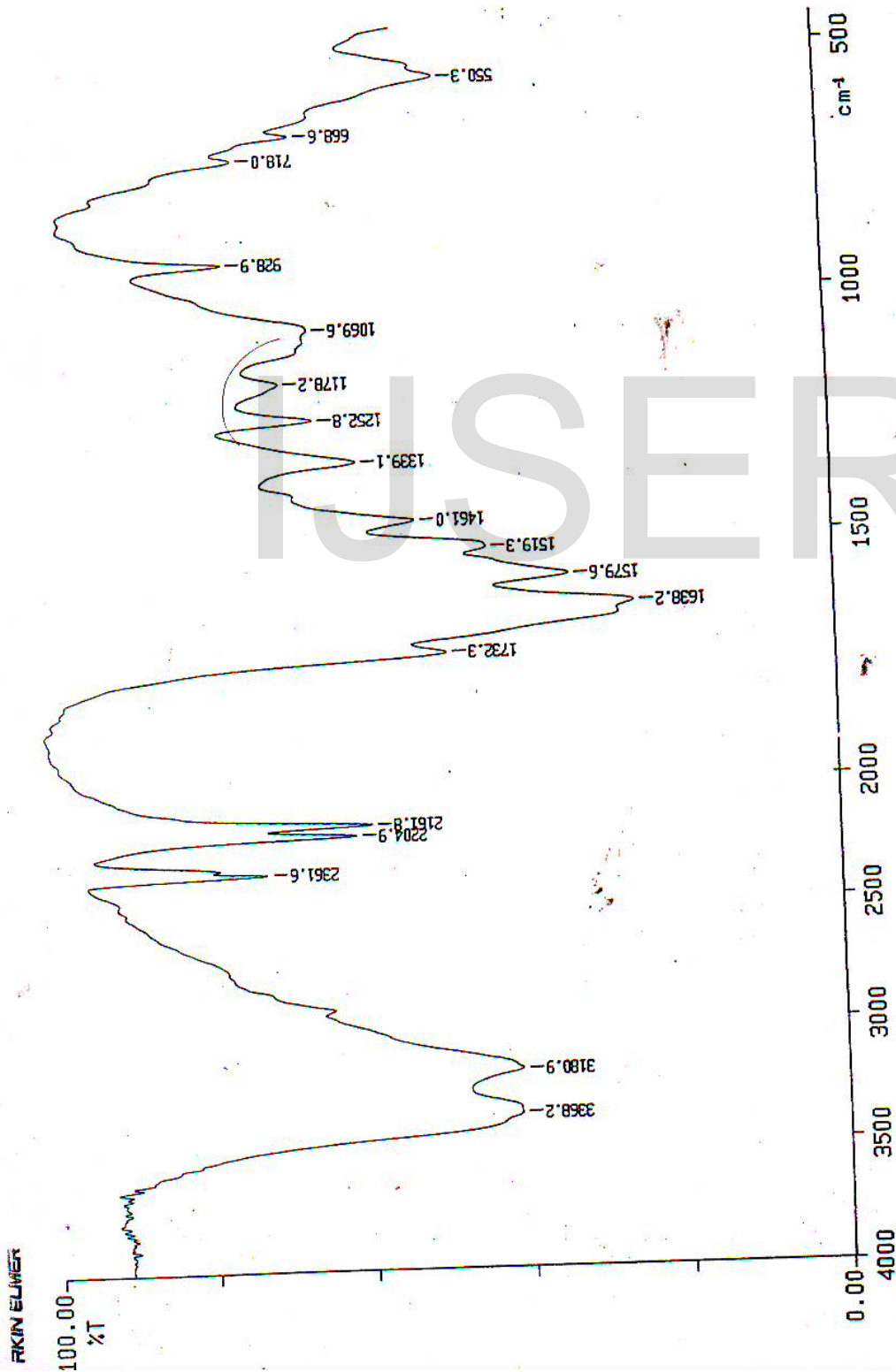
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LB 0
GB 0
PC 1.00



3.2 IR Spectrum:-

IR Spectrum of Compound was carried in KBVR pellets & reproduced on plate No. Fig IR 3.1. The important absorption can be correlated as follows.

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07/03/23 16:45 R.C. / SAIF . P.U. CHD.
X: 4 scans , 4. Ocm-1 , flat, smooth, abex
Spl.code : VA-1

IR SPECTRUM

IR spectrum of compound was carried in KBR pellets and reproduced on plate No. fig. IR-3.1. The important absorption can be correlated as follows.

Table No.3.9

S/N	Absorption observed(cm^{-1})	Assignment	Absorption Expected (cm^{-1})
1	3368.2	-OH (-H bonded)	3400-3200
		Aromatic -	
2	3180.9	CH(stretching)	3150-3050
3	2204.9	-C≡N(stretching)	2260-2240
4	2161.8	-C≡C	2250-2100
5	1732.3	>C=O	1600-1900
6	1579.6	-C=C	1400-1600
7	1339.1	-S = O	1375-1300
8	1252.8	-F	1400-1000
9	1069.6	Aryl or Vinyl ether -O-	1300-1000
10	718.0	-Cl	785-540
11	668.6	-Br/-I	<667

4 Results:

It has been found to have significant medicinal properties. Its leaves are used in the treatment of bronchial catarrh, dysentery & diarrhea & for preventing hair loss. The juice of leaves possess anti-septic, insecticidal & parasitical properties & used to cheque hemorrhage from Cuts, bruises & wounds. An aqueous extract of this plant has also marked depressant action on respiration.

The extracts of *Tridax Procumbens L.* have been reported to have various pharmacological effects, anti-microbial activity against both gram positive healing. Flavones, glycoside, Polysaccharides, monosaccharide & asteraceae have been isolated from the leaves of plants.

5 Conclusions:

From the Comparative study of *Tridax Procumbens L.*, it was found that the drugs which are prescribed by allopathic medicine practitioner for the treatment of healing, hypotension & also for anti-biotic, property contains particular type of functional groups & nucleus. Identical functional groups & nuclear structure is observed in IR spectroscopic analysis in the extractive product in Ethanol, *Tridax Procumbens L.* are used for the treatment of anti-biotic, anti-pyretic, anti-dandruff, emollient, anti-healing, anti-AIDS, analgesic properties. So for our Country, the researcher on traditional medicines has become even more urgent as follows out of WTO & little interest of multinational pharmaceutical Companies in our traditional system of medicine & uses of biodiversity there in.

The detail study of pharmaceutical herbal drug will make direct impact on the overall economic development of grower farmer & villagers, the phyto-pharmaceutical as medication & their derived economic impact on the population which become prime factor in the development of nation. So study in green or herbal Chemistry is a prime topic of researcher of 21st Century.

“Save nature Save Coming generation”

BECAUSE NATURE IS THE BEST MEDICINES WHICH IS A GREAT GIFT OF NATURE, HENCE SUCH TYPE OF WORK WAS DESIGNED TO EXPLORE THE GIFT OF NATURE.

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