

# Chromatographic analysis and medico-ethno botany of *Capparis decidua* forsk (Edgew). from western melghat region. (MS) India *Heteropneustes fossilis* after exposure to flubendiamide

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## Abstract

History of plant medicine clearly showed that the use of plant as an exemplary source of medicine. India is very much rich with biodiversity. The flora of India is consisting of about 45,000 plant species of which most of the medicinally important. The uses of medicinal plant are since from ancient times. The knowledge of medicinal uses of plants from local region is essential because most of the plants from these are unknown and are not used in any practice. So as far as the ethno-botany and ethno-medicine concerning the botany and medicinal uses of these plants is essential.

**Keywords:** Chromatography (HPLC), Medico-ethno botany, *Capparis decidua* Forsk

## 1. Introduction

In India, almost 95% of the prescriptions are plant-based in the traditional systems of Unani, Ayurveda, Homoeopathy and Siddha [1]. And after collecting the sufficient information of *Capparis decidua* Forsk (Edgew) analyses with chromatographic techniques (HPLC) [2, 3]. *Capparis decidua* Forsk (Edgew) is the dominating genus of the family Capparaceae. *Capparis decidua* Forsk (Edgew) is xerophytic plant species found in the dry and semi dry regions in India the species *Capparis decidua* Forsk (Edgew) showing xerophytic characters like absence of leaves, development of thorn on branches [4-6].

*Capparis decidua* Forsk Edgew. Showing the Anti-inflammatory activity i.e. used for enlarged cervical glands, sciatica, rheumatoid arthritis; externally on swellings, skin eruptions, ringworms. Fruits and seeds used for urinary purulent discharges and dysentery. The fruits are used in making of pickle. Pickled fruits are used for destroying intestinal worms [7].

Various species of family Capparaceae are having medicinally important and are used by the local medicine men and tribals. Due to their abundance availability *Capparis decidua* Forsk (Edgew) can collect from the nearby forest and identified with the help of flora of Marathwada [8]. Not only the use of Capparaceae species are medicinally important but also species are used in making pickle, curry etc. by the local people in the villages [9, 10]. So as the plant species of Capparaceae have great potential the plant species is analyzed further by Chromatographic techniques.

## 2. Material Methods

### 2.1 HPLC analysis of Stem Powder Sample

The HPLC analysis of the Stem powdered sample was done on Bruker Daltonic GmbH, Bremen, Germany make HPLC

unit equipped with C18 column and Diode Array Detector. The analysis was done at 254 nm and chromatogram was analyzed on HyStar version software of HPLC. The results obtained for the HPLC analysis are presented below in the form of chromatograms and their tables containing peak numbers, retention time and peak area. The chromatograms were correlated with the available data to identify the components present in the given sample.

## 3. Result and Discussion

### 3.1 HPLC analysis of *C. decidua* stem powder

The HPLC chromatogram showed presence of 08 peaks in the methanolic extracts. The peak numbers, retention time (min) and peak height is presented in table. For the same analysis, as no standard was taken, the results were compared with available data. On the basis of retention time and peak height, it was found that, the plant contain rutin (RT-5.82) and Caffeic acid (RT-10.46).

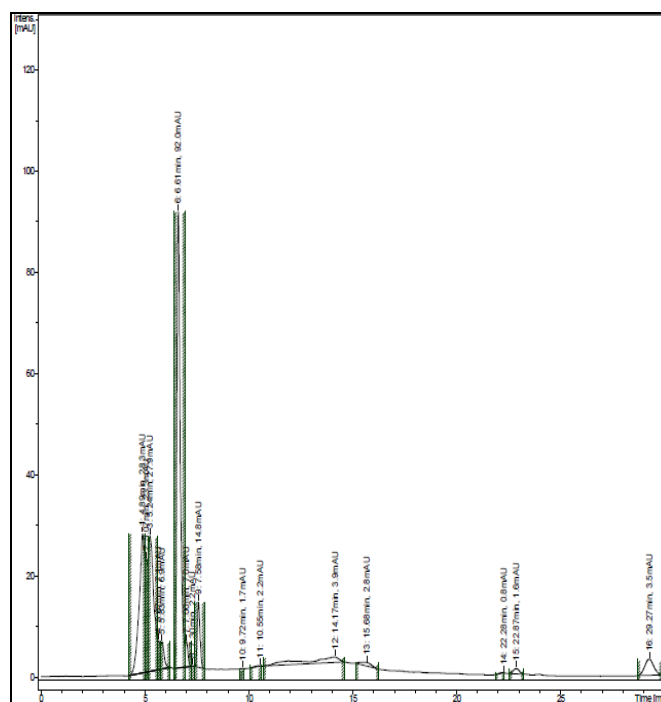


Fig 1: HPLC chromatogram of *C. decidua* sample

**Table 1:** HPLC results for the *C. decidua* sample

Peak No.	RT (Min)	Peak Height (mAU)	Identification
1	5.24	16.16	ND
2	5.40	38.37	ND
3	5.82	4.28	Rutin
4	7.27	1.01	ND
5	10.46	0.93	Caffeic acid
6	11.79	1.04	ND
7	14.25	1.44	ND
8	28.94	1.12	ND

#### 4. Conclusion

The HPLC chromatogram of *C. decidua* (Forsk.) Edgew methanolic extracts showed presence of 08 peaks. The results were compared with available data. On the basis of retention time and peak height, it was found that, the plant contain rutin (RT-5.82) and Caffeic acid (RT-10.46). From the results of the present investigation it can be concluded that *Capparis decidua* Forsk (Edgew) is having ethnomedicinal potential and is being used by various tribal and local communities to treat various ailments.

#### 5. References

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