



Removal of fluoride from drinking water with the help of *Sida acuta* Burm f.

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Abstract

Excess content of fluoride is lethal for human being. It's responsible for so many diseases like dental fluorosis, skeletal fluorosis. So many medicinal plants are useful in different manners. We have used various types of medicinal plants to remove fluoride content from water, among them *Sida acuta* Burm f. are very useful to remove fluoride content.

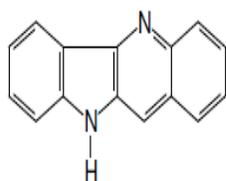
Key-Words: Fluoride content, Medicinal plants, *Sida acuta*

Introduction

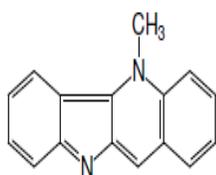
Sida acuta Burm f. (Malvaceae) is a shrub indigenous to pan tropical areas, widely distributed in tropic regions and widely used in traditional medicine (Photo plate-1). The aerial part of the plant is the most frequently used part. In Central America, India the plant is used to treat asthma, renal inflammation, colds, fever, headache, ulcers and worms [2, 3]. In Colombia the plant is known to treat snake bites. The plant is traditionally used in the treatment of malaria, diarrhea and many other diseases. Cryptolepine the major alkaloid of the plant, as its anti malarial agent and other is quindoline (see in figure-1) [1, 4].



Fig. 1: *Sida acuta* Burm f.



Quindoline



Cryptolepine

Fig. 1: Chemical structure of identified compounds from the *Sida acuta* alkaloid extract.

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Fig. 1: Leaves extract of *Sida acuta* Burm f.

Material and Methods

Ground water samples are located in Bhiloda taluka of sabarkantha district were collected in precleaned polythene bottles with necessary precautions. The samples were brought to the laboratory and fluoride concentration was determined by spands method [5]. Leaves are crushed in mixer and their extract is used for experiment.

Results and Discussion

In our experiment we have used the leaves of *Sida acuta* Burm f. The fluoride content in water sample of some villages of Bhiloda taluka was (about 1.55mg/l).with the help of extract (Fig. 2) fluoride content came down to (1.42mg/l). So it is concluded that the leaves of *Sida Acuta* Burm f. found useful to reduced fluoride content.

Conclusion

We have found that *Sida Acuta* Burm f. are useful to reduced fluoride content from water. This herb is easily found in our country, so people are used these plans to reduced fluoride content from water and protect their self from fluoride related disease.

References

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