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**CHEMICAL ASSESSMENT OF SAMBHAR SODA LAKE,
A RAMSAR SITE IN INDIA**

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The Sambhar Soda Lake situated in Rajasthan, is the largest inland salt lake. The chemical assessment of this lake water is studied with respect to its abiotic characters. Monsoon and winter water sample analyses revealed that the lake water is hypersaline and highly alkaline in nature. The average maximum pH is 9.5 and salinity 30%, which is one of the unique features of this lake. As compared to monsoon water sample the winter sample contains remarkable concentration of various ions like sodium (9930 mg/L), chloride (7356 mg/L), bicarbonates (6080 mg/L), sulphate (9152 mg/L). Various metals were recorded from this sample analysis. The considerable amount of lead (1359 µg/L), cadmium (1416 µg/L), copper (2099 µg/L), and cobalt (2453 µg/L) metals were found from winter 2010 sample. As compare to other saline lake and sea water the Sambhar lake water chemistry is different, and require continuous monitoring.

Keywords: abiotic characters, hypersaline, metals, Sambhar Soda Lake.

Introduction

The Sambhar Lake, one of the largest inland saline depression in western desert of India, is the largest and single salt source situated in Rajasthan state. It is saline alkaline lake located in Thar Desert of Rajasthan India (26° 52' - 27° 2' N, 74° 53' - 75° 13'E) [1 - 2].

It is an elliptical and shallow lake, with the maximum length of 22.5 km. The width of the lake ranges from 3.2 to 11.2 km. The total catchments area of the lake is 7560 km², most of which lies to the north and northeast. The lake occupies an area of about approximately 225 Sq. Km and average depth of water is about 1 m and the maximum depth is about 3 m [3 - 6]. The Sambhar lake has attracted a lot of attention over the past century and a number of

Conclusions

Being largest inland intermittent salt lake frequent analysis of Sambhar water chemistry is essential. Unavailability of comprehensive analysis in recent years stimulated us to study the various features of lake water. This water analysis will help to design suitable experiments for determination of community structure of Sambhar Lake. We also believe that this data will help to design suitable experiments for exploration of microbiota of this unique system.

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