HYDROCHEMICAL CHARACTERISTICS OF WATER IN DALVOY LAKE, MYSORE CITY

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INTRODUCTION

- Aquatic ecosystem performs numerous functions.
- Lakes form an important fresh water ecosystem.
- Anthropogenic activities have altered the ecosystem.
- Dynamics of Lake ecosystems.
- Aims to evaluate chemical parameters of a lake.
STUDY AREA

- Dalvoy Lake in Mysore City.
- Area is 359 acres, length 2.2 Km.
- It is in the southwest direction.
- Latitude 12° 14’N and 12° 16’N.
- Longitude of 76° 38’E and 76° 39’E.
- An elevation of 707.1 above mean sea level.
Fig. 1 Dalvoy Lake in Mysore
**METHODOLOGY**

- Samples were collected from the lake.

- To find out depthwise variation of quality, some samples were collected from depth varying 4-12 feet.

- Samples were analysed following the standard procedures.

- The chemical analysis results were processed using the computer programme HYCH.
RESULT

- TDS ranges between 773 and 837mg/L (500mg/L).
- Ca & Mg 98 and 75mg/L, against 75 and 30 mg/L.
- Cl 179 mg/L (250mg/L).
- Na 129 mg/L (200mg/L), NO₃ 28mg/L (45mg/L) and SO₄ 27 mg/L (200mg/L), within the permissible limit as per ISI standards.
RESULT

- Handa’s Classification-both permanent and temporary hardness.

- Cu 0.192 ppm (0.05ppm), Ni 0.376 ppm (0.02ppm) and Mn 0.144ppm (0.1ppm) are above ISI prescribed standard limits.
Map 3 Dalvoy Lake - Total Dissolved Solids

TDS Contour (ppm)
CONCLUSION

- Water pollution is not only an aesthetic problem.
- Ca, Mg, Cu, Ni & Mn concentration are more.
- Cu-seepage of effluent paper industry, agricultural activities. Municipal waste and sewage.
- Ni & Mn might be entering through the waste waters exhaused from automobile workshops, service station, etc.
- Lake water seems to be suitable for agriculture.
- Encroachment along the sides should be checked.
Thank you