

**Simultaneous analysis of conductivity and concentration of saline solutions and sea water at microwave frequencies from dielectric investigation.**

ABSTRACT

Prediction of conductivity and concentration of saline solutions and sea water are calculated from dielectric spectra at microwave frequencies of 2 GHz and 5 GHz respectively. The calculation is based on two different previously published empirical models relating to conductivity and concentration. An empirical relationship is established and is used to find corrected calculated conductivity and concentration. The expected results are verified with standard measurement where correlation coefficient of given is 0.98 and above. The data is useful as tools for quality indication of liquid samples.

**Keyword:** Dielectric; Microwave; Seawater.