



## **TECHNIQUES IN ADVANCING THE CAPABILITIES OF VARIOUS NITRATE DETECTION METHODS: A REVIEW**

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*Abstract- Strategies to facilitate detection enhancement in various methods of nitrate detection are presented in this paper. The main nitrate detection methods for the past 10 years will be reviewed according to their advantages and disadvantages, followed by a focus on the techniques on increasing detection capabilities. For each detection method, an investigation of the technique of improvement is carried out. The utilisation of advance material such as membranes, reduction agents etc. is also identified as the key aspect for system improvement. Many researchers in the field of potentiometry, electrochemical, and biosensors have focused on miniaturising their detection systems to enhance the capability of nitrate in-situ measurement. The performance of miniaturised sensor systems is comparable to that of conventional systems.*

**Index terms:** Nitrate; Selective Membrane; Planar Electromagnetic Sensor; Review and Detection