

Review Paper

Determination Of Nitrite In Water By Spectrophotometric Method Sonu Yadav

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Nitrite when correlated with other forms of Nitrogen in water can provide an index of organic pollution. Presence of Nitrite in water is harmful as it causes Methemoglobinemia and it acts as a precursor in the formation of N-nitrosamines, many of which are shown to be potent carcinogens. It also affects the dissolved oxygen content of water. Many analytical methods have been proposed for the Spectrophotometric determination of Nitrite. Most of the methods are based on Griess reaction i.e. Formation of azo dye by diazotisation of an aromatic amine with Nitrite and then coupling of the diazonium cation with an aromatic amine or phenol. This process has good selectivity and sensitivity but requires close control of pH and temperature. Recently based on considerations of simplicity, rapidity, colour stability, adherence to Beer's law and sensitivity scientists proposed a method using p-aminophenylmercaptoacetic acid as a diazotisable amine together with 8-hydroxyquinoline as a coupling agent in the micro determination of Nitrite. Other coupling agent can be used like resorcinol, catechol etc. But 8-hydroxyquinoline gives the most useful results. This method is superior to the most of the modifications of the Griess method owing to its rapidity, simplicity, freedom from pH effects, temperature independence, broad range of Nitrite determination, stability of azo dye and avoidance of lengthy extraction steps.