

ABSTRACT

Yahya Wiranatanegara, NIM : 1534002, 2019. Analysis Of Nitrite Rate Difference (NO₂-N) The TPA Well With Addition And Without Na₂EDTA Using Uv-Vis Spectrophotometer. Thesis. Study DIV Health Analysis of Catholic University Musi Charitas Palembang.

Background : The examination of nitrite in water should be noted for the existence of the factors of iron metal cation (Fe), In the water cation sample may affect the results of nitrite-test levels at the time of reading in the UV-Vis Spectrophotometer. The addition of Na₂EDTA works to bind the metal on the sample as well as chemical disorders such as the formation of chemical that can lead to not perfuse Association of substances to be analyzed affect the measurements at the time of reading in the spectrophotometer. The purpose of this research is to know the level of nitrite (NO₂-N) in water wells around TPA in Jl. Sukawinatan Kec. Sukarami Palembang.

Method : Nitrite rate assessment is measured using UV-Vis spectrophotometer method with 534 nm wavelength. Measurement rate range 0.01 mg/L to 1.00 mg/L. Test nitrite levels in samples were given two treatments with the addition of Na₂EDTA 0.13 M and without the addition Na₂EDTA 0.13 M. In addition of Solution N-(1-naphthyl) ethylene diamine dihydrochloride (NED dihydrochlorida) Will form a very purplish red azo compound that is left to 10 minutes and immediately perform measurements using UV-Vis spectrophotometers.

Result : The verification result indicates $(r) = 0.99852$. Limit detection (LOD) = 0.0001152 and limit quantity (LOQ) = 0.0003841. Precision = 0.14% and average accuracy = 91.87%. Result of analysis of nitrite rate (NO₂-N) based on test of normality on sample treatment with the addition of Na₂EDTA P (0,000) Samples without the addition of Na₂EDTA P (0,000) With a value of $\alpha = 0.05$ ($P < \alpha$) indicates that it is not a Normal distribution. Based on the test Wilcoxon Signed Ranks Test showed results in both samples treatment That is P (0,002) with a value of $\alpha = 0.05$ ($P < \alpha$).

Conclusion : There is a difference in the result of nitric-level inspection of water wells around the TPA with addition and without Na₂EDTA using Uv-vis spectrophotometry.

Keywords : Examination of nitrite (NO₂-N), Na₂EDTA, TPA