ABSTRACT

Kesatria Bayu Kencana , NIM: 1534009, 2019. Differences in Sulfate Examination used Reagent Conditioning and Buffer by Turbidimetry with Spectrophotometry Uv-Vis. Essay. Diploma IV Health Analyst Program at Universitas Katolik Musi Charitas Palembang.

Background : Sulfates in the waters are derived from chemicals containing such as ZA fertilizers, pesticides, etc. Sulfates is soluble in water and carried by domestic wastewater and surface water. Examination of Sulfate usually using Reagent Buffer, but there are another reagent used turbidimetric conditioner using Spectrophotometry UV-Vis. The first aims of this study is determine the results of verification of the Buffer and Conditioning Reagents. The second aims of this study is to analyze differences results of sulfate ion examination using Buffer and Conditioning reagents.

Method : The type of research used is the Comparative Study worked at the Palembang Industrial Baristand Laboratory. The water sample used of peoples grounds wells at RT 68 Jl. Sukawinatan Kel. Sukajaya Kec. Sukarame, Palembang. This study used 2 reagents, Buffer and Conditioning Reagents to analyzed sulfate ion with turbidimetric used Spectrophotometry UV-Vis.

Results : The verification method results showed Reagent Buffer (r) = 0.99819, Precision = 0.18%, accuracy = 102% and detection limit (LOD) = 0.0468 and quantity limit (LOQ) = 0.156. While Conditioning Reagent (r) = 0.9977, Precision = 1.118% average accuracy = 96% and detection limit (LOD) = 0.01813 and quantity limit (LOQ) = 0.06043 Results of analysis of Sulfate content (SO_4) based on test for normality of Reagent Buffer p (0.001) and Conditioning Reagent p (0.001) with value of $\alpha = 0.05$ ($p < \alpha$). This results showed data is not normally distributed. Based on the Wilcoxon Signed Ranks Test, the results showed no difference in the two Reagents, with probability (0.225).

Conclusion : the result confirms there is a no difference investigation of sulphate concentration in ground well water used Buffer and Conditioning reagents with turbidimetric used Spectrophotometry UV-Vis.

Keywords : Buffer Reagent, Conditioning Reagent, Sulfate (SO_4)