



Potable Water Treatment: Best Time to Measure Turbidity

Hussein Janna and Nadhir Al-Ansari¹

Civil Engineering Department, University of Al-Qadisiyah, Iraq

¹*Department of Civil, Environmental and Natural Resources Engineering, Lulea University, Luleå, Sweden
E-mail: Hussein.janna@qu.edu.iq*

Abstract: The purpose of this study was to investigate the impact of time on the turbidity readings that and consequently guarantee the quality of the results in precision. Therefore, the methodology consists of creating three sets of river water turbidity levels (high, medium, and low). Jar-test was run for four times with the same concentrations of the added alum for each level. The optimum pH for the raw water followed by obtaining the optimum dose for the alum that were used to achieve the best turbidity removal in order to run the Jar-test to find the impact of time on turbidity readings. The high-level turbidity (200-250 NTU), was to measure the turbidity within the first 5 minutes of the sampling with an optimum dose = 38 mg/l and pH of 6.25. In terms of medium and low turbidity levels (100-130 NTU and 10-50 NTU), the best time to measure the turbidity is within the first 10 minutes of the sampling as there was no significant difference between the before and after the ten minutes with an optimum alum dose of 30 mg/l for medium level and alum dose of 15mg/l for the low level and both sets have an optimum pH equal to 7.5.

Keywords: Water quality, Turbidity, pH, Potable water, Alum dose
