

Date of Field Test: December 16, 2015
Test Designation: Analysis of TITUS® Twister™ Mixing Aerator dissolved oxygen (DO) delivery
Location: Clarence, New York
Site: Residential
Structure Description: Influent lift station 72" inside diameter
Weather Condition: Cloudy **Temperature:** 9.8°C

Sampling Purpose:

Gauge the ability of the TITUS® Twister™ Mixing Aerator in generating dissolve oxygen (DO) in a septic wastewater atmosphere. The target sampling point is a lift station upstream of a 125,000 gpd residential WWTP. Readings were to be taken at 15 minute intervals for a period of 90 minutes and recorded.



Sampling Method:

"The 18th Edition of Standard Methods for the Examination of Water and Wastewater" includes two methods for the determination of DO in wastewater, including the Winkler method (azide modification) and the electrometric method using membrane electrodes and a DO meter." The meter used in this field sampling exercise to determine the DO content in this field sampling exercise is a calibrated YSI model "Po 20" membrane unit which is pictured above.

Site Pictures:

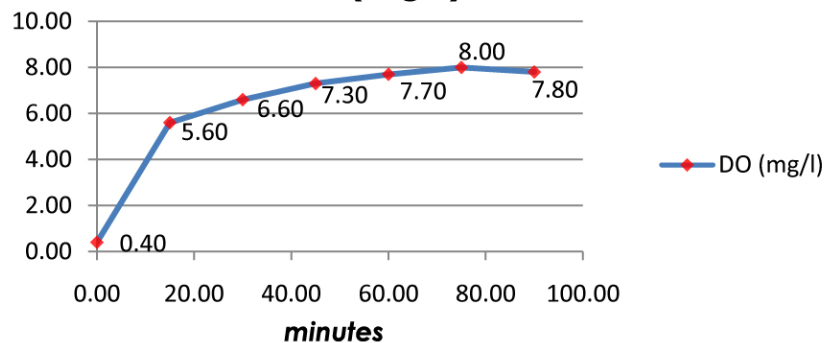


Empirical Data / Graph:

Starting Time: 11:50am

Time (min)	DO (mg/l)
0.00	0.40
15.00	5.60
30.00	6.60
45.00	7.30
60.00	7.70
75.00	8.00
90.00	7.80

DO (mg/l)



Results:

The data from the aerator testing is that in a 90 minute period the existing DO was increased by a multiple of 19.5 times that of the initial measurement of 0.4 mg/l and finished at a DO content of 7.8 mg/l, with the highest reading of 8.0 mg/l at the 75 minute sample.

Sampling Technician: Wells Tudor, Senior Project Engineer, John Stark

Attested By: NYSDEC Grade 4A Operator, Timothy Garrison, Lic. No. 10215