

ANALYST:		VPDES NO	
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Meter: _____

Parameter: Dissolved Oxygen
Method: Membrane Electrode
11/2014

METHOD OF ANALYSIS:

<input type="checkbox"/>	21 st Edition of Standard Methods (SM 21) – 4500-O G-2001 (SM 21 DO)
<input type="checkbox"/>	22 nd of Standard Methods, or Online Editions of Standard Methods (SM 22) – 4500-O G-2011 (SM 22 DO)

Dissolved Oxygen (D.O.) is a method-defined analyte so modifications are not allowed. [40 CFR Part 136.6]

	Y	N
1) Is a certificate of operator competence or initial demonstration of capability available for <u>each analyst/operator</u> performing this analysis? NOTE: Analyze 4 samples of air-saturated water. Recovery for each of the 4 samples must be +/- 4% of the calculated oxygen saturation for the altitude/barometric pressure and temperature of the samples. {Alternatively analyze 4 samples of water of known concentration (verified by iodometric titration procedure SM 21 or SM 22 4500-O C). Instrument measurements must agree within +/-0.1 mg/L of verified concentration.} [SM 21 or SM 22 1020 B.1 and 4020 B.1]		
2) Are calibration results (mg/L) within ± 4% of the barometric (or altitude) corrected oxygen saturated water value? [SM 21 B.2 or SM 22 1020 B.2.]		
3) If samples are collected, is collection carried out with a minimum of turbulence and air bubble formation and is the sample bottle allowed to overflow several times its volume? [SM 21 DO or SM 22 B 3.]		
4) Are meter and electrode operable and providing consistent readings? [SM 21 DO G 2. or SM 22 DO G 2.]		
5) Is membrane in good condition without trapped air bubbles? NOTE: No air bubbles ≥ 1/8 inch (total area of all bubbles). [SM 21 DO G 3.b. or SM 22 DO G 3.b.]		
6) Is correct filling solution used in electrode? [Mfr.]		
7) Are water droplets shaken off the membrane prior to calibration? [Mfr.]		
8) Is meter calibrated before use or at least daily? [Mfr. & SM 21 1020 B 10.a. or SM 22 1020 B 11.a]		
9) Is calibration procedure performed according to manufacturer's instructions? [Mfr.]		
10) Is sample stirred during analysis (or is there sufficient flow across probe's membrane surface)? [SM 21 DO or SM 22 DO G 3.b. and Mfr.]		
11) Is the sample analysis procedure performed according to manufacturer's instructions? [Mfr.]		
12) Is meter stabilized before reading D.O.? [Mfr.]		
13) Is electrode stored according to manufacturer's instructions? [Mfr.]		

PROBLEMS: