



Statement of Accuracy
CHEMetrics® COD Test Kits

For COD NPDES reporting purposes, a spectrophotometer is the preferred method of measurement.
LED photometers do not produce equivalent accuracy, precision and sensitivity.

Accuracy, expressed as mg/L (ppm) at concentrations across the test range, using a Spectrophotometer								
These accuracy expectations are statistically derived and are based on laboratory tests using a spectrophotometer under ideal testing conditions (COD standards of potassium hydrogen phthalate prepared in distilled water vs the median of 7 reagent blanks).								
Test Kit Range	Std Conc. (mg/L)	Precision / Accuracy (95% CI)	Std Conc. (mg/L)	Precision / Accuracy (95% CI)	Std Conc. (mg/L)	Precision / Accuracy (95% CI)	Allowable Result for 0 mg/L Standard	Sensitivity (concentration change per 0.01 Abs)
0-150 mg/L (LR)	10	6 - 14	50	46 - 54	125	121-129	+/- 6	3 mg/L
0-1500 mg/L (HR)	30	22.5 - 37.5	500	480 - 520	1000	960 - 1040	+/- 12	23 mg/L
0-15,000 mg/L (HR+)	300	225-375	5000	4800 - 5200	10,000	9600 - 10,400	+/- 120	230 mg/L

Accuracy, expressed as mg/L (ppm) at concentrations across the test range, using an LED Photometer							
These accuracy expectations are statistically derived and are based on laboratory tests using CHEMetrics LED photometers with current calibrations under ideal testing conditions.							
Test Kit Range	Std Conc. (mg/L)	Precision / Accuracy (95% CI)	Std Conc. (mg/L)	Precision / Accuracy (95% CI)	Std Conc. (mg/L)	Precision / Accuracy (95% CI)	Allowable Result for 0 mg/L Standard
0-150 mg/L (LR)	30	21 - 39	50	42 - 58	125	117 - 133	+/- 7 mg/L
0-1500 mg/L (HR)	100	75 - 125	500	462 - 538	1000	960 - 1040	+/- 20 mg/L
0-15,000 mg/L (HR+)	1000	750 - 1250	5000	4620 - 5380	10,000	9600 - 10,400	+/- 200 mg/L