

BOD testing – Comparative Table

Test	CheckLight PCB-BOD	Standard BOD5 (biochemical oxygen demand)	COD (chemical oxygen demand)	TOC (total organic carbon)
Feature				
Oxidant	Microbial luminescence as a respiratory by-product	Respiration by microbes	K ₂ Cr ₂ O ₇	O ₂ , KMnO ₄
Best use of method	Predicting sewage treatment plant operations and receiving stream loads	Predicting sewage treatment plant operations and receiving stream loads	Testing potentially toxic industrial wastes (gives a measure of the pollutant strength)	Total amount of carbon in organic pollutants
Possible interference by inorganics	No	No	Yes	Yes
Response time	3-4 hours	5 days (at least)	3-5 hours	Minutes to hours
Measures only waste that can be degraded	Yes	Yes	No	No
Test volume	Few milliliters	Hundreds of milliliters	Few milliliters	Few milliliters
Reagents generate toxic waste	No	No	Yes	No
Correlation with Standard	Yes	The Standard Method	Sometimes	Sometimes
Sensitivity to toxins	Low- due to high dilution	Medium- high (depends on dilution)	None	None
All organics are oxidized	Yes	Not always	Not always	Not always
Precision	Good	Poor	Good	Good

CheckLight Ltd.

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BOD testing – Comparative Table (cont.)

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Feature				
Accuracy	Good	Poor	Varies	Good (although knowledge of total C is of limited use)
Reliability	Good	Questionable	Good	Good
Sensitivity to nitrification	No	Yes	No	No
Detection Limit	About 0.01mg/L	About 3 mg/L	About 5 mg/L	About 1 mg/L

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