



Evidence(s)

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HEI: TRIDENT ACADEMY OF TECHNOLOGY

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66.3.2 PREVENTING WATER SYSTEM POLLUTION

6.3.2 PREVENTING WATER SYSTEM POLLUTION



Plate 1- Biological Oxygen Demand (BOD) and Chemical Oxygen Demand (COD) tests

TRIDENT ACADEMY OF TECHNOLOGY
LAB ANALYSIS REPORT

SAMPLE COLLECTION DATE	SAMPLE COLLECTION SOURCE [BH-1 (STP)]	TEMP IN °C	BOD (mg/l)	COD (mg/l)
18/03/24	(do)	25	3.52	6.4
15/04/24	(do)	26	3.4	4.08
23/04/24	(do)	25	3.6	4.32
29/04/24	(do)	26	3.5	4.24
7/5/2024	(do)	22	3.8	4.56
13/05/24	(do)	25	4.2	5.46
20/05/24	(do)	25	4.4	5.7
27/05/24	(do)	25	4.7	5.64
3/6/2024	(do)	26	4.5	5.4
26/09/24				
1/10/2024	BH-1 (STP)	25		8.4

Plate 2- BOD COD Lab Analysis Report

Plate 1- The Biological Oxygen Demand (BOD) and Chemical Oxygen Demand (COD) tests are critical evaluations of wastewater quality at the Sewage Treatment Plant (STP) in Trident College. These tests done weekly wise which determine the level of organic pollutants in water,



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helping ensure the treated water meets environmental standards before being discharged or reused. BOD measures the amount of dissolved oxygen required by microorganisms to break down organic matter, indicating the degree of organic pollution. COD, on the other hand, assesses the total quantity of oxygen needed to oxidize both organic and inorganic compounds. Regular monitoring of BOD and COD levels ensures that the STP operates effectively, maintaining water quality and supporting sustainability initiatives at Trident College.

Plate 2- The image is a lab analysis report from Trident Academy of Technology showing Biochemical Oxygen Demand (BOD) and Chemical Oxygen Demand (COD) measurements from the BH-1 (STP) sample collection source. The report lists sample collection dates, temperatures, and corresponding BOD and COD values across several dates in 2024.

Key observations:

- BOD values range from 3.2 to 4.7 mg/L.
- COD values range from 4.32 to 8.4 mg/L.
- Sampling took place roughly biweekly or monthly.

DESCRIPTION

To prevent water system pollution, Trident College's campus water supply is completely separate from the public supply, relying solely on groundwater. Wastewater quality at the campus's Sewage Treatment Plant (STP) is regularly assessed through Biological Oxygen Demand (BOD) and Chemical Oxygen Demand (COD) tests, conducted weekly to gauge organic pollutant levels. BOD measures the oxygen needed for microorganisms to decompose organic matter, indicating pollution levels, while COD assesses the oxygen required to oxidize all compounds. Regular monitoring helps maintain environmental standards. A lab report shows BOD values of 3.2 to 4.7 mg/L and COD values of 4.32 to 8.4 mg/L, with samples taken biweekly and monthly in 2024.