

The Service



The suitability of wastewater for biological nutrient removal can be difficult to determine, however characterisation tests can provide a laboratory assessment. The performance of an existing biological plant can also be monitored.



The Solution



Characterisation tests are tailored analytical procedures that can provide an assessment of the wastewater. Parameters include seven COD fractions, with phosphate release and uptake tests, to determine if the wastewater is amenable to bio-P processes



The Support



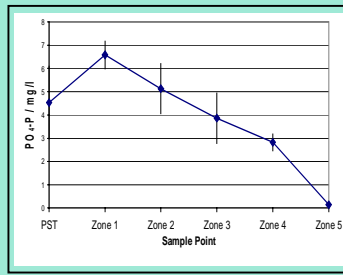
We provide independent, focused, and confidential support. WatStech offers 30 years combined water and wastewater experience and have regularly used wastewater characterisation for Water Industry clients.



COD fractionation & P-release or uptake

COD FRACTIONS

Total
Soluble inert
Soluble biodegradable
Particulate biodegradable
Particulate inert
Unbiodegradable



RATIOS

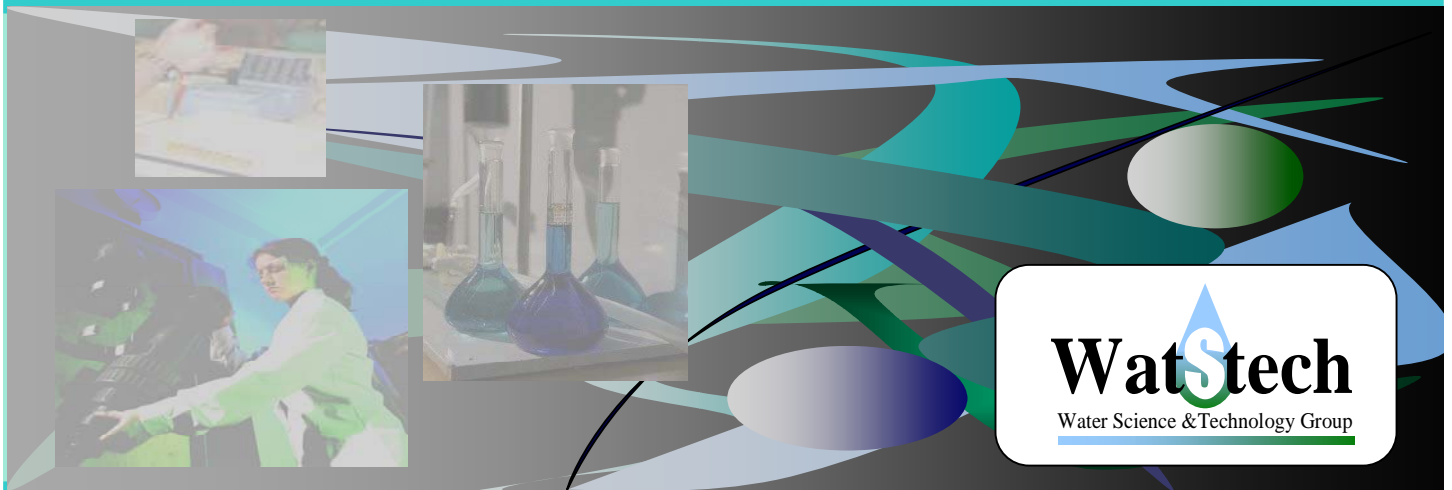
rbCOD to P
Total COD to P
Suitability to bio-P processes

FULL-SCALE PROCESS MONITORING

24 hour sampling service
Rapid turnaround of results
Performance optimisation

P-RELEASE OR UPTAKE

Substrate limited
Potential of wastewater for bio-P
Performance of installed bio-P



Analysing Wastewater

Wastewater Quality

COD, BOD,
Orthophosphate, Total P
Ammonia, Nitrate, Nitrite.



Bacterial Activity 1

Phosphate Release rates
Phosphate Uptake rates
Nitrification rates
Denitrification rates

Additional analysis

Total organic nitrogen
Total oxidisable nitrogen
Alkalinity & Hardness
Metal analysis

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Bacterial Activity 2

Influence of:
pH, DO & temperature
Nutrients organic & inorganic
Bacterial cell concentration