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Title: **WatStech Limited's COD fractionation service;** influent wastewater characterisation to assess the biological treatability of wastewaters.

Abstract: WatStech Ltd. have provided COD fractionation to Water Utilities for a number of years to assist with process modeling, but also to determine future wastewater asset investment needs, especially for Biological Nutrient Removal (BNR).

To develop an understanding of a wastewater and to accurately model the potential of a treatment works for Phosphorus removal, influent characterization is an essential tool. Process simulation using modeling packages often require the use of reliable and accurate influent characterization data.

COD fractionation is used when developing these models to assess the treatability of wastewaters. The readily biodegradable fraction of COD (rbCOD) is a key parameter used in these models, but requires unconventional methods.

The Readily Biodegradable substrate is presumed to consist of relatively small molecules (such as volatile fatty acids) and can therefore be used as an indirect measure of the substrate available for biological phosphorus removal. WatStech Ltd. have successfully developed the facilities, skills and experience to conduct these tests.

WatStech have recently been awarded an AMP5 framework contract to provide the COD fractionation service on a regular basis to a Water Utility.

WatStech Limited will outline this service and will describe how its application can provide Process Engineers with key data for design and feasibility of future investment needs at wastewater treatment sites.

Category: Wastewater Treatment, Analysis

Key words: Wastewater Treatment, COD fractionation, influent characterization, biological phosphorus removal