

METHOD STATEMENT

**Determinand:**

Biological Report

Matrix:

Activated sludge

Principle of Method:

The laboratory uses microscopy to give an overview of the quality of the activate sludge to the treatment plant. This allows the treatment plant to predict bulking and foaming based on what filamentous bacteria are identified. This method uses staining and microscopy to identify the filamentous bacteria and protozoa present and to identify the shape and form of floc structures.

Sampling and Sample Preparation:

Samples should be taken in 500ml wide necked PET bottles.

When there a delay between sampling and analysis the samples should be stored in the dark between 2-8°C for up to 72 hours.

Interferences:

None identified

Performance of Method:

The Limit of Detection has not been determined for this method.

References:

Microscopic examination for the operation & control of wastewater treatment plants - N.J Horan and L. Fletcher, ISBN-10: 1903958253, ISBN-13: 978-1903958254

<https://www.aquaenviro.co.uk/courses/microscopic-examination-for-the-operation-control-of-wastewater-treatment-plants/>

Free-Living Freshwater Protozoa: A Colour Guide - D.J Patterson, ISBN-10: 1555812759, ISBN-13: 978-1555812751

An illustrated key to the British freshwater ciliated protozoa commonly found in activated sludge - C.R Curds, ISBN-10: 0114700524, ISBN-13: 978-0114700522

MICROSCOPIC SLUDGE INVESTIGATION MANUAL - D.H. Eikelboom and H.J.J. MM Bui/sun - <https://repository.tudelft.nl/view/tno/uuid:c168bbc9-b5f7-4157-9369-fc5f5baeceb8/>

Process Control of Activated Sludge Plants by Microscopic Investigation - D.H. Eikelboom, ISBN-10: 1900222302, ISBN-13: 978-1900222303