METHOD STATEMENT

Determinand:
Mycobacterium spp

Matrix:
Water

Principle of Method:
200ml of sample are filtered through a 0.45µm membrane filter upon which the bacteria are retained. The filter is placed onto a selective growth medium Middlebrook 7H10 agar. The plates are examined after 28 days incubation. Any growth on the agar plates should be confirmed by MALDI ToF and the confirmed colonies counted.

Sampling and Sample Preparation:
Once taken, microbiological samples should be transferred immediately to dark storage conditions and kept at a temperature between 2 - 8°C for transport to the laboratory. If samples are not analysed immediately on receipt in the laboratory, they should be kept at a temperature between 2 - 8°C, in dark conditions until analysis commences.

Samples should be analysed as soon as practicable on the day of collection. In exceptional circumstances, if there is a delay, storage under the above conditions should not exceed 24 hours before the commencement of analysis.

Interferences:
Chlorine and chloramines. Neutralise by adding sodium thiosulphate, which at a concentration of 18mgl-1 should counteract up to 5mgl-1 of free and combined residual chlorine.

Plasticisers can interfere in the mass spectrometry analysis. Only certified, non-plasticising plastic materials should be used.

Reporting of Results:
The number of *Mycobacterium species* is reported as colony forming units (cfu) per 200ml as the analysis is done in duplicate.

References:
In-House Method

World Health Organisation (WHO) Guidelines for Drinking-water Quality, Fourth Edition 2011

Public Health England