METHOD STATEMENT

Determinand:
Pseudomonas Spp

Matrix:
Sample Type: Waters.

Principle of Method:
A known volume of the water sample is filtered through a membrane filter with 0.45µm pores upon which the bacteria are entrapped. The filter is then placed on selective growth medium *Pseudomonas* agar supplemented with C-F-C and incubated at 30°C for 48 hours after which colonies characteristic of *Pseudomonas* spp. are counted to give a preliminary result. A positive Oxidase reaction determines the final presumptive result.

Definitions:
The term "*Pseudomonas* species" in the context of food and environmental analysis methods encompasses a wide range of bacteria. This may include bacteria not currently classified in the genus *Pseudomonas*. This is due to historical classifications which have been revised over several decades. The term "Pseudomonads" is also used synonymously. This method is therefore not limited to the detection of bacterial species within the genus *Pseudomonas* but is a consistent application of a well-established method and is consistent with published standards.

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.
Where an exceedance has occurred the customer should be informed or a statement reflecting this should be included with the report (except where the customer has been already made aware that this is occurring on a regular basis and requests this not to be applied).

Interferences
Chlorine and chloramines. Neutralise by adding sodium thiosulphate which at a concentration of 18 mg/L should counteract up to 5 mg/L of free and combined residual chlorine.

Performance of Method:

Range of Application:
0 - 100 cfu/100ml without dilution
Normal Reporting Level: 0 cfu/100ml = Not Detected

Limit of Detection:
1 cfu/100ml

Uncertainty of measurement:
The Uncertainty of Measurement for this method is calculated on an ongoing basis as detailed in internal Procedure.

References:

BS EN ISO 13720:2010 Meat and meat products - Enumeration of presumptive Pseudomonas spp.
The Microbiology of Drinking Water (2002) - Part 1 – Water Quality and Public Health.
BSRIA Guide BG 29/2021, Pre-commission Cleaning of Pipework systems, Amended 6th Edition, Chris Parsloe, Martin Roncerey.
BSRIA Guide BG 50/2021, Water Treatment for Closed Heating and cooling systems, 2nd Edition, Dr Pamela Simpson.
J.D. McPhee, M.W. Griffiths, Psychrotrophic Bacteria | Pseudomonas spp., Editor(s): John W. Fuquay, Encyclopedia of Dairy Sciences (Second Edition), Academic Press, 2011.
R.L. Beverly, Safety of Food and Beverages: Cereals and Derived Products, Editor(s): Yasmine Motarjemi, Encyclopedia of Food Safety, Academic Press, 2014.
Stanier, R. Y., A Palleroni, N. J., A Doudoroff, M., The Aerobic Pseudomonads a taxonomic Study,1966, Microbiology, Volume 43, Issue 2.
Brock Biology of Microorganisms. Madigan, Martinko, Parker. Eighth Edition 1997.
Collins and Lyne's Microbiological Methods. Sixth Edition 1989.