Method Summary

Determination of C12-C14 Fatty Alcohols in Aqueous Matrices by GC-MS

Scope and Range

This method is used to determine selected fatty alcohols and their associated ethoxylates.
The target compound list and limits of detection (LODs) are detailed in the table below.
This method is currently unaccredited.

References

none

Principle

Preparation and Extraction:

Samples are extracted using a liquid/liquid approach.

Extracted samples may contain interferences from other compounds contained within the sample matrix. Using the principles of MS/MS, many of these interferences will be eliminated. However, there may be occasions when interferences from non-target compounds arise from similar precursor and product ions. In these cases, reported limits of detection may be raised.

Analysis:

A portion of extract is injected onto a GC-MS system and analysed for the target alcohol components using selective ion monitoring.
A portion of extract is also derivitised before injection onto a GC-MS system and analysed for the tage alcohol ethoxylates. These are quantified against the N=1 ethoxylate.

Detection limits quoted are based on 80ml of sample used.

Dodecanol	0.5µg/l
Tridecanol	0.5µg/l
Tetradecanol	0.5µg/l
Dodecanol Ethoxylates	0.5µg/l
Tridecanol Ethoxylates	0.5µg/l
Tetradecanol Ethoxylates	0.5µg/l