



Geosmin and MIB: Odourant Testing for Drinking Water Quality

Geosmin and 2-Methylisoborneol (MIB) are organic compounds produced by cyanobacteria and actinomycetes in surface water. Though non-toxic, they emit strong earthy odors detectable at low concentrations. Their presence is often associated with algal blooms and changes in water quality due to temperature and nutrient levels. These compounds can survive conventional water treatment, leading to taste-and-odor issues and public concerns regarding drinking water quality.



Headspace-GCMS

Water authorities face challenges from odour issues caused by Geosmin and MIB, which complicate early detection and often result in reactive management. Proactive monitoring enhances regulatory compliance, boosts consumer confidence, and allows for data-driven interventions. ALS Malaysia offers specialized analytical methods for Geosmin and MIB, providing reliable data for effective odour management and protection of drinking water quality.

ANALYTICAL REQUIREMENT

Target Compounds:

Geosmin & 2-Methylisoborneol (MIB)

Method:

Headspace Gas Chromatography–Mass Spectrometry (HS-GC/MS)

Reporting Limits: 10 ng/L

Sample Requirement:

- 40 mL in amber glass vial with Teflon cap
- Zero headspace, tight-seal cap
- Chill at $\leq 6^{\circ}\text{C}$

Applications:

- Reservoir and Water Treatment Plants
- Algal Bloom Management
- Taste–Odour Complaint Investigation



SAMM 147

