

Landfill Gas Analysis

The generation of landfill gas is a natural process, which takes place during the degradation of organic materials in a landfill site

In an actively degrading landfill sites, Methane concentrations can be found to be approximately 65% by volume and Carbon Dioxide 35% by volume. However the exact composition does varies according to the type of waste and the time that has elapsed since deposition within the site. In addition, trace levels of other gas compositions can also be detected.

Landfill gas poses a threat to the local environment: it can cause fires, explosions and asphyxiations if allowed to migrate to surrounding property. There is therefore a legal requirement on landfill operators to monitor and control landfill gas on their site during the life of the site and for a period after closing. ALS Environmental can help you with this process.

SAMPLING

Please note that samples should be sent either pressurised - in a Gresham tube or at atmospheric pressure, in a Tedlar bag. However if Hydrogen Sulphide analysis is required it must only be sampled into a Tedlar bag.

COMPOUNDS

Compounds can be analysed individually, or as part of a suite. We offer three Landfill gas suites. The range of analysis, detection limits and suites that we offer are illustrated in the accompanying table.

QUALITY ASSURANCE

As with all our methods, ALS Environmental have stringent Quality procedures in place in line with our ISO/IEC 17025 accredited methods, which give confidence in the results obtained whilst we we apply for formal accreditation.

Compound	Detection Limit	Landfill Gas Suite		
		1	2	3
Methane (CH ₄)	0.01%	✓	✓	✓
Oxygen (O ₂)	0.01%	✓	✓	✓
Carbon Dioxide (CO ₂)	0.01%	✓	✓	✓
Nitrogen (N ₂)/ inert gases	0.01%	✓	✓	✓
Ethane (C ₂ H ₆)	0.01%		✓	✓
Propane (C ₃ H ₈)	0.01%		✓	✓
Butane (C ₄ H ₁₀)	0.01%		✓	✓
Hydrogen (H ₂)	0.05%		✓	✓
Carbon Monoxide (CO)	5ppm			✓
Hydrogen Sulphide (H ₂ S)	5ppm			✓
Hydrogen Cyanide (HCN)	5ppm			✓