



## **Method Summary**

### **Determination of Total Gasoline Range Organic (GRO) Hydrocarbons in Soils by Headspace GCFID**

#### **Scope and Range**

This method describes a procedure for determining the concentration of gasoline range organic hydrocarbons (GRO) in the carbon range >C5 to C12.

This method is applicable to the analysis of soils.

The holding time for samples for the method is 14 days.

The concentration range is from a maximum of 36,000 µg/kg down to the reporting limits shown in the table below:

Component Name	Reporting Limit (µg/kg)
GRO >C5-C12	100
Aliphatic >C5-C6	10
Aliphatic >C6-C8	10
Aliphatic >C8-C10	10
Total Aliphatics >C5-C12	50
Aliphatic >C10-C12	10
Aromatic >EC5-EC7	10
Aromatic >EC7-EC8	10
Aromatic >EC8-EC10	10
Aromatic >EC10-EC12	10
Total Aromatics >EC5-EC12	50

GRO Total (>C5-C12) is ISO17025 and MCERTS accredited. This method does not carry accreditation for individual GRO banding.

#### **References**

National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) Schedule B3

#### **Principle**

An aliquot of the sample is transferred to a headspace vial and heated/agitated to drive organic analytes into the headspace of the vial. A portion of the headspace is transferred to a gas chromatograph where the compounds are separated and detected by flame ionisation detection

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#### **Interferences**

Flame ionisation detection (FID) is a non-selective form of detection that produces a signal for any component that is FID amenable, as such, solvents, reagent glassware and other sample processing hardware may yield artefacts and/or interferences to sample analysis. All these materials must be demonstrated to be free from interferences under the conditions of the analysis. This is undertaken by analysis of method blanks.