

Method Number: TM 132

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Method Summary**Determination of Total Carbon, Total Organic Carbon and Total Sulphur by ELTRA****Scope and Range**

This method can be used to determine; total carbon, total sulphur and total organic carbon, in soils using high temperature combustion.

The working range of the method is from the detection limits to 100%, although in practical terms the usable range is up to 70% for the typical sample mass used as beyond this level the sample is prone to incomplete combustion, and the detector to saturation.

Detection Limits:	Total Carbon	0.20%
	Total Organic Carbon	0.20%
	Total Sulphur	0.02%

The method is accredited to ISO: 17025 for Total Organic Carbon and Total Carbon and has been accredited for sand, clay, sludge and loam matrices.

The method is accredited to ISO: 17025 for Total Sulphur and has been accredited for Sand, Loam and Clay

Total Organic Carbon is also accredited to the MCERTS standard and has been accredited on sand, clay, loam, and silt matrices.

References

none

Principle

All samples are dried at 37°C and crushed prior to analysis. This can potentially reduce the recovery of volatile components due to the drying process.

For Total Organic Carbon the sample is treated with hydrochloric acid to remove the inorganic carbon prior to analysis.

Analysis is carried out using a combustion instrument that heats the sample in a stream of oxygen. The carbon and sulphur are converted to their respective oxides, detected by IR and the percentage content of each element calculated with respect to the original sample.

Interferences

Total sulphur: Steel wool will act as a Sulphur trap.

Total Carbon: None known.

Total Organic Carbon: None known.