

## Reference Methods Soil Carbon Check

Purpose of research	Description on report	Reference
C-inorganic	Soil inorganic carbon (SIC)	NEN-EN 15936. Sludge, Treated Biowaste, Soil and Waste—Determination of Total Organic Carbon (TOC) by Dry Combustion. 2012. Available online: <a href="https://www.nen.nl/">https://www.nen.nl/</a>
C-organic	Soil organic carbon (SOC), %	ISO-10694. Soil Quality—Determination of Organic and Total Carbon after Dry Combustion (Elementary Analysis). 1995. Available online: <a href="https://www.iso.org/standard/18782.html">https://www.iso.org/standard/18782.html</a>
Clay(<2 µm)	Clay, % and Clay/SOC ratio	NEN-EN 5753. Soil—Determination of Clay Content and Particle Size Distribution in Soil and Sediment by Sieve and Pipet. 2018. Available online: <a href="https://www.nen.nl/">https://www.nen.nl/</a>
N-total	Part of C/N ratio	NEN 6966. Environment—Analyses of Selected Elements in Water, Eluates and Destruates—Atomic Emission Spectrometry with Inductively Coupled Plasma. 2005. ISO-13878. Soil Quality—Determination of Total Nitrogen Content by Dry Combustion (“Elemental Analysis”). 1998. Available online: <a href="https://www.iso.org/standard/23117.html">https://www.iso.org/standard/23117.html</a> NTT4 +6 (CNE3), Determination of total N content in dried and ground soil.
Soil organic matter	Soil organic matter (SOM). %	NEN 5754. Soil—Calculation of Organic Matter Content on A Mass Basis as Loss-on-Ignition. 2014. Available online: <a href="https://www.nen.nl/">https://www.nen.nl/</a>
S-total	Part of C/S ratio	NEN 6966. Environment—Analyses of Selected Elements in Water, Eluates and Destruates—Atomic Emission Spectrometry with Inductively Coupled Plasma. 2005 NEN 15587-2. Water Quality—Digestion for the Determination of Selected Elements in Water—Part 2: Nitric Acid Digestion. 2002. Available online: <a href="https://www.nen.nl/">https://www.nen.nl/</a> STT6, Determination of total Sulfur in soil. Reprocessing; Microwave digestion of dried and ground soil with nitric acid.

Active Carbon	Active carbon And Active carbon percentage of SOC	Blair, G. J., Lefroy, R., & Lisle, L. (1995). Soil carbon fractions based on their degree of oxidation and the development of a carbon management index for agricultural systems. <i>Australian Journal of Agricultural Research</i> , 46, 1459–1466. <a href="https://doi.org/10.1071/AR99514">https://doi.org/10.1071/AR99514</a> Weil, R. R., Islam, K. R., Stine, M. A., Gruver, J. B., & Samson-Liebig, S. E. (2003). Estimating active carbon for soil quality assessment: A Determination of the oxidizability of soil with potassium permanganate (POXC) Oxidation of soils with potassium permanganate (KMnO <sub>4</sub> ) to quantify labile soil carbon (C) for the determination of biologically active soil C
Soil bulk density	Density	Hollis, J.M., Hannam, J. and Bellamy P.H. 2011. Empirically-derived pedotransfer functions for predicting bulk density in European soil. <i>European Journal of Soil Science</i> <a href="https://bsssjournals.onlinelibrary.wiley.com/doi/abs/10.1111/j.1365-2389.2011.01412.x">https://bsssjournals.onlinelibrary.wiley.com/doi/abs/10.1111/j.1365-2389.2011.01412.x</a>