

Deutsche Akkreditierungsstelle

Annex to the Partial Accreditation Certificate

D-PL-14292-01-03

according to DIN EN ISO/IEC 17025:2018

Valid from: 20.02.2024

Valid to: 19.02.2029

Date of issue: 20.02.2024

This annex is a part of the accreditation certificate D-PL-14292-01-00.

Holder of partial accreditation certificate:

Eurofins Technology Service (Suzhou) Company Limited

No. 101 Jialingjiang Road

Suzhou New District

SUZHOU CITY, JIANGSU PROVINCE 215163, JIANGSU PROVINCE, P.R. CHINA

with the location

Eurofins Technology Service (Suzhou) Company Limited

No. 101 Jialingjiang Road

Suzhou New District

SUZHOU CITY, JIANGSU PROVINCE 215163, JIANGSU PROVINCE, P. R. CHINA

The testing laboratory meets the requirements of DIN EN ISO/IEC 17025:2018 to carry out the conformity assessment activities listed in this annex. The testing laboratory meets additional legal and normative requirements, if applicable, including those in relevant sectoral schemes, provided that these are explicitly confirmed below.

The management system requirements of DIN EN ISO/IEC 17025 are written in the language relevant to the operations of testing laboratories and they conform to the principles of DIN EN ISO 9001.

Testing in the field of:

physical, physico-chemical and chemical analysis of soil and biological parameters for the analysis of Soil

This certificate annex is only valid together with the written accreditation certificate and reflects the status as indicated by the date of issue. The current status of any given scope of accreditation can be found in the directory of accredited bodies maintained by Deutsche Akkreditierungsstelle GmbH at <https://www.dakks.de>.

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Within the given testing field marked with **, the testing laboratory is permitted without being required to inform and obtain prior approval from DAkkS, the modification, development and refinement of test methods.

The listed test methods are exemplary.

The testing laboratory is permitted, without being required to inform and obtain prior approval from DAkkS, to use standards or equivalent testing methods listed here with different issue dates. The testing laboratory maintains a current list of all test methods in a flexible scope of accreditation.

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1 Physico-chemical analysis of soil and biological parameters for the analysis of Soil

1.1 Determination of Physical, Chemical and Biological Parameters in field soil by Near Infrared Spectrometry (NIRS)

ESS-TP-6269 V3
2023-11

Standard Operation Procedure for NIRS Screening of Physical, Chemical and Biological Parameters in field soil Samples
(N-total soil stock, C/N – ratio, N-supplying capacity, S-total soil stock, C/S-ratio, S-supplying capacity, S-Plant available, P-total soil stock, P-soil stock, P-Plant available, K-soil stock, K-plant available, Ca-soil stock, Ca-plant available, Mg-soil stock, Mg-plant available, Na-soil stock, pH, Soil organic carbon (SOC), Soil organic matter(SOM), C/OS-ratio, Clay/carbon ratio, Carbonate lime, Soil texture (Clay/silt/sand), Clay-humus (CEC), CEC-saturation, Ca-Saturation, Mg-Saturation, K-Saturation, Na-Saturation, H-Saturation, Al-Saturation, Electric Conductivity (EC), Fine Sand (M50), Soil crumbling, Soil slaking, Moisture retention cap., Soil life=microbial activity, Microbial biomass, Fungal/bacterial ratio)

1.2 Determination of trace elements in soil Inductively Coupled Plasma - Mass Spectrometry (ICP-MS)

ISO/TS 16965
2013-09

Soil quality - Determination of trace elements using inductively coupled plasma mass spectrometry (ICP-MS)

1.3 Determination of pH in soil by Electro-chemical test methods **

NY/T 1121.2-2006
2006-10

Method for Determination of Soil pH

ESS-TP-8709 V2
2023-11

Determination of pH in potting soil (water extraction 1:1.5)

1.4 Determination of anions and cations in soil by spectrophotometric detection **

ISO 14255:1998(E)
1998-05

Soil Quality - Determination of Nitrate Nitrogen, Ammonium Nitrogen and Total Soluble Nitrogen in Air-dry Soils using Calcium Chloride Solution as Extractant

ESS-TP-11915 V2
2023-11

Determination of chloride, bicarbonate, nitrate, ammonia in potting soil by continuous flow analysis (CFA) (water extraction 1:1.5)

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1.5 Determination of total nitrogen content in soil by Elementary analysis

ISO 13878 1998-03	Soil quality - Determination of total nitrogen content by dry combustion ("elemental analysis")
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1.6 Determination of multi-element in soil by Inductively Coupled Plasma Optical Emission Spectroscopy (ICP-OES)

ESS-TP-11916 V1 2023-11	Determination of boron, copper, iron, manganese, zinc, calcium, phosphorus, potassium, magnesium, sodium, sulphur, molybdenum, silicium in potting soil using Inductively Coupled Plasma-Optical Emission Spectrometry (ICP-OES) (water extraction 1:1.5)
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1.7 Determination of organic matter in soil using Titration method

NY/T 1121.6-2006 2006-07	Soil Testing Part 6: Method for determination of soil organic matter
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Abbreviations used:

DIN	Deutsches Institut für Normung e. V. (German Institute for Standardization)
EN	European standard
ESS-TP	In house method of the Eurofins Technology Service (Suzhou) Company Limited
GB/T	Chinese national GB standards (Voluntary National Standards)
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization
TS	Technical Specification
NY/T	Recommended standard of China Ministry of Agriculture