DAkkS
Deutsche
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Annex to the Partial Accreditation Certificate D-PL-14082-01-02 according to DIN EN ISO/IEC 17025:2018

Valid from: **02.06.2023**

Date of issue: 06.07.2023

This annex is a part of the accreditation certificate D- PL-14082-01-00.

Holder of partial accreditation certificate:

AGROLAB LUFA GmbH
Dr.-Hell-Straße 6, 24107 Kiel, Germany

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 confirm generally with the principles of DIN EN ISO 9001.

Tests in the fields:

Physical, physico-chemical and chemical analysis of fertilisers

Within the given testing field marked with *, the testing laboratory is permitted, without being required to inform and obtain prior approval from DAkkS, the free choice of standard or equivalent testing methods. The listed testing 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 testing methods within the flexible scope of accreditation.

Table of contents

1	**Analysis of fertilisers**	3
1.1	**Sample preparation by extraction for physico-chemical analysis of fertilisers ***	3
1.2	**Determination of physico-chemical parameters, nitrogen, elements and inorganic-chemical parameters in fertilisers**	3
1.2.1	**Determination of physico-chemical parameters and inorganic-chemical parameters by gravimetry in fertilisers ***	3
1.2.2	**Determination of physico-chemical parameters and inorganic-chemical parameters by titrimetry in fertilisers ***	4
1.2.3	**Determination of physico-chemical parameters by electrode measurement**	4
1.2.4	**Determination of physico-chemical parameters by sieve analysis in fertilisers ***	5
1.2.5	**Determination of elements by inductively coupled plasma atomic emission spectrometry (ICP-OES)**	5
1.2.6	**Determination of elements by inductively coupled plasma mass spectrometry (ICP-MS)**	5
1.2.7	**Determination of elements by atomic absorption spectrometry (CV-AAS)**	5
1.2.8	**Determination of nitrogen by combustion**	5
1.2.9	**Determination of nitrogen by photometry**	5

1 Analysis of fertilisers

1.1 Sample preparation by extraction for physico-chemical analysis of fertilisers *

Regulation (EC) 2003/2003, IV, 3.1.1 2003-10	Extraction of phosphorus soluble in mineral acids
Regulation (EC) 2003/2003, IV, 3.1.2 2003-10	Extraction of phosphorus soluble in 2% formic acid
Regulation (EC) 2003/2003, IV, 3.1.3 2003-10	Extraction of phosphorus soluble in 2% citric acid
Regulation (EC) 2003/2003, IV, 3.1.4 2003-10	Extraction of phosphorus soluble in neutral ammonium citrate
Regulation (EC) 2003/2003, IV, 3.1.5.2 2003-10	Extraction of phosphorus soluble at room temperature according to Petermann
Regulation (EC) 2003/2003, IV, 3.1.6 2003-10	Extraction of phosphorus soluble in water
Regulation (EC) 2003/2003, IV, 8.3 2003-10	Extraction of water-soluble calcium, magnesium, sodium and sulphur (in the form of sulphates)
VDLUFA II.1, 9.5.1 2004	Digestion with aqua regia

1.2 Determination of physico-chemical parameters, nitrogen, elements and inorganic-chemical parameters in fertilisers

1.2.1 Determination of physico-chemical parameters and inorganic-chemical parameters by gravimetry in fertilisers *

DIN EN 12880 2001-02	Characterisation of sludges – Determination of dry residue and water content (Modification: *Here matrix fertiliser*)

VDLUFA II, 10.1 1999	Determination of loss on ignition
Regulation (EC) 2003/2003, IV, 3.2 2003-10	Determination of phosphorus in extracts (gravimetric as quinolinium molybdophosphate)
Regulation (EC) 2003/2003, IV, 4.1 2003-10	Determination of water-soluble potassium

1.2.2 Determination of physico-chemical parameters and inorganic-chemical parameters by titrimetry in fertilisers *

VDLUFA II.1, 3.5.2.4 1995	Determination of total nitrogen in the presence of nitrate nitrogen, reduction of the nitrate content with chromium powder
VDLUFA II.1, 6.3.1 2008	Determination of alkaline agents in lime fertilisers
VDLUFA II.1, 6.3.2 2008	Determination of the alkaline agents in lime, converter lime, residual lime and secondary raw material fertilisers
VDLUFA II.1, 6.4 1995	Determination of the reactivity of carbonic acid fertiliser limes
Regulation (EC) 2003/2003, IV, 2.1 2003-10	Determination of ammonium nitrogen
Regulation (EC) 2003/2003, IV, 2.3.2 2003-10	Determination of total nitrogen in calcium cyanamide containing nitrate

1.2.3 Determination of physico-chemical parameters by electrode measurement

DIN EN 12176 1998-06	Characterisation of sludge – Determination of the pH value (Modification: *Here matrix fertiliser*)

1.2.4 Determination of physico-chemical parameters by sieve analysis in fertilisers *

VDLUFA II.1, 6.5.1 2008	Determination of the through fraction of fertilisers, dry method
VDLUFA II.1, 6.5.2 1995	Determination of the through fraction of moist or agglutinated fertilisers, wet method

1.2.5 Determination of elements by inductively coupled plasma atomic emission spectrometry (ICP-OES)

DIN EN ISO 11885 2009-09	Water quality – Determination of selected elements by inductively coupled plasma atomic emission spectroscopy (ICP-OES) (Modification: *Determination in matrix-specific extraction solutions*)

1.2.6 Determination of elements by inductively coupled plasma mass spectrometry (ICP-MS)

DIN EN ISO 17294-2 2017-01	Water quality – Application of inductively coupled plasma mass spectrometry (ICP-MS) – Part 2: Determination of selected elements including uranium isotopes (Modification: *Determination in matrix-specific extraction solutions*)

1.2.7 Determination of elements by atomic absorption spectrometry (CV-AAS)

DIN EN 16320 2017-05	Fertilizers and liming materials – Determination of mercury by vapour generation (VG) after aqua regia dissolution

1.2.8 Determination of nitrogen by combustion

VDLUFA II.1, 3.5.2.7 2019	Determination of total nitrogen – Combustion method

1.2.9 Determination of nitrogen by photometry

VDLUFA II.1, 3.8.4 1995	Determination of urea nitrogen – Photometric method with 4-(dimethylamino)-benzaldehyde

Abbreviations used:

DIN	Deutsches Institut für Normung (German Institute for Standardization)
EN	European standard
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization
VDLUFA	Verband Deutscher Landwirtschaftlicher Untersuchungs- und Forschungsanstalten (Association of German Agricultural Testing and Research Institutions)