

# Deutsche Akkreditierungsstelle

## Annex to the Accreditation Certificate D-PL-14370-01-01 according to DIN EN ISO/IEC 17025:2018

**Valid from:** 25.08.2025

**Date of issue:** 25.08.2025

**This annex is part of the Accreditation Certificate D-PL-14370-01-00.**

Holder of the Accreditation Certificate:

**Agroisolab GmbH**  
**Prof.-Rehm-Straße 6, 52428 Jülich**

with the location

**Agroisolab GmbH**  
**Prof.-Rehm-Straße 6, 52428 Jülich**

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.

Tests in the fields:

**Determination of isotopes in solids, liquids and selected gases, for example in foodstuffs, feedstuffs, water, commodities, chemical products and flue gas**

*This annex to the certificate was issued by the Deutsche Akkreditierungsstelle GmbH (DAkkS) and is digitally sealed.  
This annex to the certificate 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 valid and surveyed accreditation can be found in the directory of accredited bodies maintained by Deutsche Akkreditierungsstelle GmbH ([www.dakks.de](http://www.dakks.de)).*

Abbreviations used: see last page

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**Flexible scope of Accreditation:**

**Within the indicated test areas marked with [Flex C] the testing laboratory is permitted to modify, develop or further develop test methods without being required to prior inform and obtain approval from DAkkS.**

**The test methods listed are examples. The testing laboratory has an up-to-date list of all test methods within the flexible scope of accreditation. The list is publicly available on the website of the testing laboratory**

**1 Isotope-ratio mass spectrometry (IRMS)**

**1.1 Determination of the isotope ratio for assessment of regionality/origin/identity using isotope-ratio mass spectrometry [Flex C]**

- |                     |  |
|---------------------|--|
| AIL-1.1a<br>2015-02 | $^{18}\text{O}/^{16}\text{O}$ in alcoholic beverages (< 40% alcohol by volume) using IRMS  |
| AIL-1.1b<br>2015-02 | $^{18}\text{O}/^{16}\text{O}$ and D/H in water/tissue fluid using IRMS   |
| AIL-1.1c<br>2015-02 | $^{18}\text{O}/^{16}\text{O}$ , D/H, $^{13}\text{C}/^{12}\text{C}$ , $^{15}\text{N}/^{14}\text{N}$ and $^{34}\text{S}/^{32}\text{S}$ in agricultural raw materials and products, anhydrous biomass, chemicals, foodstuffs, spices, luxury goods, pesticides, commodities and wood using IRMS |
| AIL-1.1d<br>2015-02 | $^{13}\text{C}/^{12}\text{C}$ in agricultural raw materials and products for assessment of plant species (photosynthesis) using IRMS   |

**1.2 Determination of the isotope ratio for assessment of nutrition/fertilisation using isotope-ratio mass spectrometry [Flex C]**

- |                     |   |
|---------------------|---|
| AIL-1.2a<br>2015-02 | $^{15}\text{N}/^{14}\text{N}$ in agricultural raw materials and fertilisers using IRMS                                    |
| AIL-1.2b<br>2015-02 | $^{13}\text{C}/^{12}\text{C}$ in agricultural commodities for the assessment of greenhouse cultivation using IRMS         |
| AIL-1.2c<br>2015-02 | $^{13}\text{C}/^{12}\text{C}$ and $^{15}\text{N}/^{14}\text{N}$ in feedstuffs and animal agricultural products using IRMS |

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**1.3 Determination of the isotope ratio for assessment of adulteration using isotope-ratio mass spectrometry [Flex C]**

AIL-1.3a 2015-02	$^{13}\text{C}/^{12}\text{C}$ for assessment of a C4 sugar additive in juice and honey using IRMS
AIL-1.3b 2015-02	$^{13}\text{C}/^{12}\text{C}$ and D/H(I) in ethanol of alcoholic beverages for assessment of sugar/fermentation basis using IRMS
AIL-1.3c 2015-02	$^{13}\text{C}/^{12}\text{C}$ in vanilla products for assessment of naturalness of vanilla flavours using IRMS
AIL-1.3d 2015-02	$^{13}\text{C}/^{12}\text{C}$ in carbon dioxide in sparkling wine, semi-sparkling wine and beer using IRMS
AIL-1.3e 2015-02	$^{13}\text{C}/^{12}\text{C}$ , D/H and $^{18}\text{O}/^{16}\text{O}$ in vinegar for assessment of fermentation basis using IRMS

**2 Liquid scintillation spectrometry (LSC)**

**2.1  $^{14}\text{C}$  activity determination in solids, liquids and gases using the low-level counter method of liquid scintillation spectrometry [Flex C]**

AIL-2.1a 2015-02	$^{14}\text{C}$ activity for determination of the recent proportion in commodities, fuels, flavourings, flue gas, chemicals, lubricants and plastics using LSC
AIL-2.1b 2020-09	$^{14}\text{C}$ activity for assessment of $\text{CO}_2$ from carbon dioxide using LSC
DIN EN ISO 21644 2021-07	Solid recovered fuels – Methods for the determination of biomass content (as per Annex A)
ISO 16620-2 2019-10	Plastics – Biobased content – Part 2: Determination of biobased carbon content (method A)
DIN EN 16640 2017-08	Bio-based products – Bio-based carbon content – Determination of the bio-based carbon content using the radiocarbon method (Restriction: <i>Here only as per Annex C</i> )

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**3 Cavity ring-down spectroscopy (CRDS)**

**3.1 Methods for assessment of regionality/origin/identity using laser technology**

AIL-3.1a D/H isotope measurement in water using CRDS  
2015-02

AIL-3.1b  $^{18}\text{O}/^{16}\text{O}$  isotope measurement in water using CRDS  
2021-08

**Abbreviations used:**

AIL-xx	In-house method of Agroisolab GmbH
DIN	Deutsches Institut für Normung (German Institute for Standardization)
EN	European Standard
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization

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