Open Call for Tender

for Laboratories realizing the analyses in the framework of the inter-laboratory study for the development of

12 standardized method within the scope of Working Group CEN/TC 260/WG 7 “Inorganic fertilizers and inhibitors” and Working Group CEN/TC 260/WG 3 “Liming materials” supporting Regulation (EU) 2019/1009 on fertilizing products

Starting date: *2024-06-12* Deadline for tenders: *2024-07-28*

I Introduction

I.1 General

12 projects of CEN/TC 260/WG 7 “Inorganic fertilizers” and CEN/TC 260/WG 3 “Liming materials” are subject to this call for tender. A detailed overview of the projects is presented in Annex B. These projects require the development and validation of standardized test methods. These methods will form the basis for the drafting of European Standards (EN). A draft method of each of these 12 projects is available in Annex D.

For this project, laboratories realizing the analyses in the framework of the inter-laboratory study will be contracted to test the method. It is planned to select 10 to 13 laboratories.

I.2 Context

With Standardization Request (SReq) M/564 of February 2020, its first amendment of January 2022 and the second amendment of December 2023, the European Commission (EC) charged the European Committee for Standardization (CEN) to elaborate harmonized European Standards and European standardization deliverables in the framework of the Regulation (EU) 2019/1009 on fertilising products.

The new Regulation creates a level playing field for all fertilizing products. At the same time, new common requirements for quality, safety and labelling will allow European farmers to make informed choices, contributing to making food production more cost and resource effective. The harmonized standards will help economic operators and competent authorities to verify the compliance of CE-marked fertilizing products against the legal requirements.

The aim of the SReq is to develop methods on sampling and analysis of fertilizing products. The establishment of standardized methods of analysis is of utmost importance to guarantee a uniform application and control of the European legislation in all Member States. Standardized methods of analysis are an indispensable element in increasing the quality and safety for fertilizing products for the benefit of farmers. In this perspective, validated modern analytical methods are a prerequisite for reliable analytical results.

In accordance with Article 13(2) of Regulation (EU) 2019/1009, tests for verifying the conformity of EU fertilizing products with the requirements set out in Annexes I, II and III to that Regulation which are in conformity with harmonized standards or parts thereof, the references of which have been published in the Official Journal of the European Union, are to be presumed to be reliable and reproducible to the extent that the tests are covered by those standards or parts thereof.

Harmonized standards help ensuring a high level of protection of human, animal and plant health and of the environment throughout the European Union and contribute to the free movement of quality EU fertilizing products in the Union. Given that such standards are technology-neutral and performance-based, they also contribute to ensuring equal conditions of competition among relevant economic operators dealing with EU fertilizing products, in particular small and medium-sized enterprises. Harmonized standards help manufacturers in proving the conformity of their products with the relevant requirements set out in Union harmonization legislation.

II Objectives

The objective of CEN/TC 260 “Fertilizers and liming materials” is the elaboration of harmonized standardized methods for sampling and analysis of fertilizers and liming materials. The secretariat is held by the German Institute for Standardization (DIN). Since 1995, about 100 European Standards, 8 Technical Specifications and 6 CEN-Reports were adopted by CEN/TC 260 in the frame of three EU Mandates as M/335, M/418 and M/455.

The elaboration of the elements requested in SReq M/564 and its amendments will be realized within CEN/TC 260 and its 5 Working Groups:
CEN/TC 260/WG 1 “Sampling” (Secretariat held by DIN, Germany);
CEN/TC 260/WG 3 “Liming materials” (Secretariat held by DIN, Germany);
CEN/TC 260/WG 5 “Chelating and complexing agents” (Secretariat held by UNE, Spain);
CEN/TC 260/WG 7 “Inorganic fertilizers and inhibitors” (Secretariat held by DIN, Germany);
CEN/TC 260/WG 8 “Organic and organo-mineral fertilizers” (Secretariat held by BN FERTI on behalf of AFNOR, France).

According to the Standardization Request M/564 and its amendments, the resulting work programme for CEN/TC 260 comprises the drafting of about 78 European Standards of which 45 will be preceded by a CEN Technical Specification published in 2022.

These standardization deliverables will cover fertilizing products under the following Product Function Categories:
PFC 1 Fertilizers
PFC1/A Organic fertilizers
PFC 1/B Organo-mineral fertilizers
PFC 1/C Inorganic fertilizers
PFC 2 Liming materials
PFC 5 Inhibitors
PFC 7 Fertilizing product blends,
and the following Component Material Categories (CMCs):

CMC 1 Virgin material substances and mixtures

CMC 8 Nutrient Polymers.

Furthermore, other CMCs will be addressed in the standardization deliverables if relevant for the fertilizing products of CEN/TC 260.

The work is carefully coordinated together with CEN/TC 223 'Soil improvers and growing media' (internal liaison) and CEN/TC 455 'Plant biostimulants' (internal liaison). Where possible, work will be coordinated with ISO/TC 134 'Fertilizers, growing media and beneficial substances'.

11 projects subject to this call (see Annex B) are allocated to CEN/TC 260/WG 7 “Inorganic fertilizers and inhibitors” and fall mainly within the categories in Regulation (EU) 2019/1009 deginated PFC 1/C (Inorganic fertilizers) and PFC 5 (inhibitors).
1 project subject to this call (see Annex B) is allocated to CEN/TC 260/WG 3 “Liming materials” and falls mainly within the categories in Regulation (EU) 2019/1009 deginated PFC 1 (organic, organo-mineral and inorganic fertilizers), PFC 2 (liming materials) and PFC 5 (inhibitors).

III Execution

III.1 General tasks of laboratories realizing the analyses in the framework of the inter-laboratory study

The laboratories will realize the analyses by applying the test method, which involves the following tasks:

- participate in the inter-laboratory study by applying the provided test protocol to test the provided samples (up to a maximum of 7 products and up to a maximum of 5 repetitions per product);
- organize necessary facilities, equipment and supplies for the testing;
- organize the analysis of the samples according to the agreed protocol;
- provide the test results including all data and comments to the project leader and/or Statistician in the manner required by them;
- be available for queries of the project leader and/or Statistician.

III.2 Timeframe

The service contract shall enter into force on the date on which it is signed by the last contracting party. The contracts with the selected laboratories will be signed following the signature of the contract between CEN and EC/EFTA. The timeframe for the inter-laboratoy study is embedded in the general timeframe for the project, which is in the responsibility of CEN/TC 260/WG 7 and CEN/TC 260/WG 3. The below target dates and timeframe are a realistic estimation but may still change as they have not yet been approved by the EC.

Step 1: Receipt of the samples to be tested and start of inter-laboratory study	see Annex B for estimated timing*
Step 2: Submission of test results including all data to the project leader and/or Statistician	Step 1 + maximum 4 months

* - An earlier or later start of the inter-laboratory study is possible, which depends on the progress on the method in responsibility of the project leader and the Working Group.

The laboratories shall respect the deadlines of the deliverables. If deadlines are not kept, EC is entitled to withhold payment.

The foreseen maximum target dates for the projects are as follows:

For project 1, 2, 3 and 5 in Annex B:

Step 1: Approval of work programme, protocol and draft test method by CEN/TC 260/WG 7	1 March 2024
Step 2: Circulation of 1st Working Draft (stage 20.60)	1 March 2024
Step 3: Start of validation (inter-laboratory study)	August/September 2024 (see Annex B)
Step 4: Report on final results of validation	1 April 2025
Step 5: Interim report on the status of the project	1 July 2025
Step 6: prEN Enquiry Draft (stage code 30.99)	1 July 2025
Step 7: FprEN Formal Vote Draft (stage code 45.99)	1 July 2026
Step 8: Final report	1 January 2027

For projects 5, 6, 7, 8, 9, 10 and 11 in Annex B:

Step 1: Approval of work programme, protocol and draft test method by CEN/TC 260/WG 7	1 March 2024
Step 2: Circulation of a working document for the standard	1 June 2024
Step 3: Circulation of 1st Working Draft (stage 20.60)	1 September 2024
Step 4: Start of validation (inter-laboratory study)	January/February 2025 (see Annex B)
Step 5: Interim report on the status of the project	1 July 2025
Step 5: Report on final results of validation	1 October 2025
Step 6: prEN Enquiry Draft (stage code 30.99)	1 January 2026
Step 7: FprEN Formal Vote Draft (stage code 45.99)	1 January 2027
Step 8: Final report	1 July 2027

For project 12 in Annex B:

Step 1: Approval of work programme, protocol and draft test method by CEN/TC 260/WG 3	1 January 2024
Step 2: Circulation of a working document for the standard	1 June 2024
Step 3: Circulation of 1st Working Draft (stage 20.60)	1 September 2024
Step 4: Start of validation (inter-laboratory study)	February 2025 (see Annex B)
Step 5: Interim report on the status of the project	1 July 2025
Step 5: Report on final results of validation	1 October 2025
Step 6: prEN Enquiry Draft (stage code 30.99)	1 January 2026
Step 7: FprEN Formal Vote Draft (stage code 45.99)	1 January 2027
Step 8: Final report	1 July 2027

IV Financial support

The European Commission and EFTA have decided to provide financial support to the test method development, the test method validation and the standardization work. The financial support from the European Commission and EFTA is based on the SMP 'Single Market Programme Regulation' (including its Financing Decision) and the MGA (Multi or mono beneficiary(ies) Grant Agreement). Unless specified otherwise, costs of external subcontractors are generally funded at 100%, with approx. 95% being borne by EC and 5% by EFTA. Costs have to qualify as eligible as defined in MGA N°2021-04 and also in compliance with EC Financial Regulation, and be justified. The payment is usually divided into several instalments after completion of defined milestones and approval of the interim/final reports and the justification of costs. The subcontractors shall fulfil the conditions of the MGA N°2021-04, including those relating to liability, ownership of results, confidentiality, conflict of interests, publicity, evaluation, assignment, checks and audits.

The subcontractors' costs shall be justified with copies of the relevant invoices. All relevant evidence shall be kept in view of future payments (reports, work, drafts and deliverables, contracts & invoices, time sheets, tickets, boarding cards, hotel invoices, attendance lists with signatures, meeting agendas & reports, invoices for any consumables, purchase orders, etc…).

Costs incurred before the Grant Agreement is signed (unless, exceptionally differently agreed with the EC) and before the selection procedure is finalized, will not be considered as eligible for EU financial support.

V Selection criteria

Technical and professional capacity

- access to a laboratory including the necessary equipment to effectively carry out the inter-laboratory study in the field of chemical analysis of the relevant product group, i.e. inorganic, organic, organo-mineral fertilizers, liming materials and/or inhibitors and with an established analytical quality system (preferably ISO/IEC 17025 accredited);
- at least 3 years of experience in performing analyses of the relevant substances in fertilizers /liming materials / inhibitors;
- experience with comparable projects in the validation of test methods;
- participation in at least 1 inter-laboratory study on the chemical analysis of fertilizers / liming material / inhibitors with satisfactory results during the last 3 years;
- sound educational qualifications, and further qualifications / significant experience in the area of analytical techniques of fertilizers / liming materials /inhibitors (of the relevant personnel involved);
- communication skills and proficiency in English of the contact person as the test method is provided in English only and in order to effectively participate in (web-)meetings in English.

VI Award criteria

The selection of the most suitable candidate will be made on the basis of the following criteria.

a) Documented experience (maximum ***40 points***):

- number of years performing relevant activity;
- (typical) annual activity / number of relevant activities;
- experience with comparable projects on the validation of test methods;
- industrial and academic background of the relevant personnel involved;
- communication skills and English proficiency of the contact person.

b) Organisation (demonstration of the ability to carry out the project, maximum ***30 points)***:

- infrastructure (equipment, description of the laboratory, etc.);
- sufficient personnel to carry out the test within the given timeframe;
- planning/organisation of the required laboratory tests;
- established analytical quality system;
- ability to submit agreed deliverables at or before specified dates and detailed cost estimations.

c) Price (maximum ***30 points***)

The laboratories who will reach the highest scores according to the below formula will be considered as the best value for money offer and hence should be selected to perform the expected activities (unless force majeure).

Score for tender X = (points awarded for documented experience)+(points for organisation) + $30(\frac{\text{cheapest price}}{\text{price of tender X}})$

Scores from 0 to x are possible. Tenders scoring less than 65 % of the overall sum of points from criterion a) and b) or less than 50 % of the points awarded for a single criterion (criterion a) and b), respectively) will be excluded from the remaining assessment procedure. Criterion c) will be taken into account afterwards.

VII Eligibility criteria

The following candidates will be excluded:

- Candidates who were the subject of a non-likely judgment of recourse for a professional infringement
- Candidates who are in an irregular tax situation or in an irregular special taxation situation
- Candidates who provide incomplete or erroneous information.
- Candidates who submit their application after the submission deadline.
- Candidates with any conflict of interest.

VIII Tenders

Tenders shall be submitted at the latest by 2024-07-28 exclusively to CallforTender@din.de.

The tender shall be in English and contain:

- Application form in Annex C inlcuding a signed declaration, by which the candidate(s) certifies not to be subject to one of the exclusion criteria as described in Clause “Eligibility criteria” and the veracity of the adjoining documents;
- An overview demonstrating the necessary expertise of the laboratory participating in the inter-laboratory study;
- Any required accreditation certificates;
- A schedule and a description of the execution of the tasks which will be carried out in the project as such;
- A table in the format given in Annex A with detailed information on the costs (table to be completed separately for each project);
- Any further documents to prove the qualification required in the above Clauses on Selection and Award criteria.

Please note that, to ensure equal treatment of all tenders, it is not possible to modify offers after their submission in relation to the technical and financial proposals. Therefore, incompleteness in this section can only result in negative impact for the evaluation of award criteria. Please note also that proposals deviating from the technical specifications may be rejected for non-conformity.

Candidates may apply for the participation in the inter-laboratory study of more than one project. In case of multiple applications candidates shall submit a separate table on detailed information on the costs (see Annex A) for each project.

Tenders should be sent by legal representative, i.e. to be considered, any possible association has to be formalized according to the local legislation before submitting the tender. Working teams, partnerships and other groups of people, particularly under the aegis of an institute qualify as contractors for the service contracts awarded in the course of this CfT (Call for Tender). Partnerships or joint ventures and other legally binding co-operations regardless of their organizational form qualify as well, provided they are recognized entities under the applicable national laws. Potential candidates may come from the public sector as well as from the private industry. It is essential however that the qualifications and experience of the individual fulfilling the tasks are properly described.

It is possible to apply for a work package as a consortium. If a consortium is formed, one institute needs to be identified as the leader of the consortium and the division of labour between the consortium members should be clearly described and justified. In this case, only the leader of the consortium would sign the contract with the contractor and ensure that all tasks are fulfilled and is responsible for the justifications and expenses of the consortium members. It is essential however that all members of the consortium are properly identified within the offer.

Regarding questions concerning the information provided in this call for tenders or in case of need for clarification or additional information please contact Dr. Sophie Dithmer by electronical mail to Sophie.Dithmer@din.de.

If due to queries or other reasons supplementary information to this call for tender is required, this will be published on the website of DIN: https://www.din.de/de/mitwirken/ausschreibungen and https://www.din.de/en/getting-involved/calls-for-tender, respectively.

Your application shall be sent exclusively to CallforTender@din.de by 2024-07-28 at the latest.

Only for questions, please use the following email address:
E-Mail: Sophie.Dithmer@din.de

Annex A
Table with detailed information on the costs

The following table shall be used in the tender to give detailed information on the costs regarding the work of 'Advertised position'. In case of multiple applications, candidates shall submit a separate table on detailed information on the costs for each project.

Table 1: Detailed costs for project No [please add project number]

Organisation / Staff level	Daily rate in €	Number of person-days	**Total in €**	Others (such as supplies, consumables – **to be specified in the tender**) in €	**Total cost in €**
	0,00	0	**0,00**	0,00	**0,00**
	0,00	0	**0,00**	0,00	**0,00**
	0,00	0	**0,00**	0,00	**0,00**

Table 2: Detailed costs for project No [please add project number]

Organisation / Staff level	Daily rate in €	Number of person-days	**Total in €**	Others (such as supplies, consumables – **to be specified in the tender**) in €	**Total cost in €**
	0,00	0	**0,00**	0,00	**0,00**
	0,00	0	**0,00**	0,00	**0,00**
	0,00	0	**0,00**	0,00	**0,00**

If more than two projects are applied for, the Table 1 and Table 2 may be duplicated accordingly.

This annex is also provided as separate WORD file to be used by the applicant to provide the necessary information.

Annex B
Further details of the projects (as of June 2024)

1.	***Organo-mineral fertilizers — Determination of the N-(nbutyl)thiophosphoric triamide (NBPT) urease inhibitor content***
	Scope: This document specifies a method for the determination of the urease inhibitor N-(nbutyl)thiophosphoric triamide (NBPT) and its oxidate form NBPTO in urea based organo-mineral fertilizers, using the liquid chromatography coupled with triple quadrupole mass spectrometry (LC-MSQQQ). It is applicable to organo-mineral fertilizers, NOTE: It is possible to apply this method to inorganic fertilizers; in this case a validation is carried out by the laboratory for the procedure and data generated.
	Principle: This analytical method is based on the principles of liquid chromatography coupled with triple quadrupole mass spectrometry (LC-MSQQQ) for determination of the separated inhibiting compounds NBPT and NBPTO.
	Proposed samples for the inter-laboratory study: NBPT in 2 samples of urea + organomineral fertilizers at different concentration of organic nitrogen, 1 sample of urea + organo-mineral fertilizer + KCl
	Planned start of inter-laboratory study: September 2024 (A later start of the inter-laboratory study is possible, which depends on the progress on the method in responsibility of the project leader and the Working Group.)
	A draft protocol of the method including required equipment is available as separate file (Annex D.1).
2.	***Inorganic fertilizers – Determination of total nitrogen in methylene urea and urea formaldehyde* (revision of EN 15478:2009)**
	Scope: This document specifies a method for the determination of the content of total nitrogen from methylene-urea and urea formaldehyde in their pure form in inorganic fertilizers.
	Principle: The nitrogen is transformed quantitatively into ammoniacal salt by boiling in the presence of sulfuric acid. The ammoniacal solution thus obtained is distilled through an alkaline medium, the distillate being collected in an excess of standard sulfuric acid. The excess acid is titrated by means of a standard alkaline solution.
	Proposed samples for the inter-laboratory study: 2 samples: one liquid methylene urea, one solid methylene urea
	Planned start of inter-laboratory study: August 2024 (A later start of the inter-laboratory study is possible, which depends on the progress on the method in responsibility of the project leader and the Working Group.)
	A draft protocol of the method including required equipment is available as separate file (Annex D.2).
3.	***Inorganic fertilizers - Determination of cold water insoluble nitrogen and hot water insoluble nitrogen in solid urea formaldehyde and methylene urea slow-release fertilizers and determination of the solubility of nutrient polymers in phosphate buffer solution with a pH of 7,5 at 100 °C* (revision of CEN/TS 17403:2021)**
	Scope: This document specifies a method for the determination of the cold and hot water insoluble nitrogen content in solid urea formaldehyde and methylene urea slow release fertilizers and for the determination of the solubility of nutrient polymers in a phosphate buffer solution with a pH of 7,5 at 100 °C. It is not applicable to the following nutrient polymers: liquid methylene urea, IBDU (isobutylidendiurea) and CDU (crotonylidendiurea) as they are almost completely soluble in hot water due to their chemical nature.
	Principle for the determination of the mass fraction of cold water insoluble nitrogen: Extraction of the test portion in phosphate buffer solution (pH 7,5) or distilled water at 25 °C. Filtration of the insoluble residue, washing and determination of the nitrogen content in the insoluble residue. Principle for the determination of the mass fraction of hot water insoluble nitrogen:

	Extraction of the test portion in phosphate buffer solution (pH 7,5) at 100 °C. Filtration of the insoluble residue, washing and determination of the nitrogen content in the insoluble residue.
	Proposed samples for the inter-laboratory study: 2 samples: one liquid methylene urea, one solid methylene urea
	Planned start of inter-laboratory study: August 2024 (A later start of the inter-laboratory study is possible, which depends on the progress on the method in responsibility of the project leader and the Working Group.)
	A draft protocol of the method including required equipment is available as separate file (Annex D.3).
4.	***Inorganic fertilizers — Determination of the free formaldehyde content in nutrient polymers***
	Scope: This document specifies methods for the determination of the free formaldehyde content in solid nutrient polymers (method A) and in liquid nutrient polymers (method B).
	Principle: Reaction of the free formaldehyde with sodium sulphite, in the presence of a measured excess of acid, in accordance with the reaction: $HCHO + Na_2SO_3 + H_2O \rightarrow CH_2(OH)SO_3Na + NaOH$ and alkaline titration of the unreacted excess acid. The acid-sulphite mixture provides an essentially neutral buffered system which prevents hydrolysis of condensed formaldehyde. A reaction temperature close to 0 °C (lower than 4 °C) ensure the absence of side reactions.
	Proposed samples for the inter-laboratory study: 2 samples (one solid nutrient polymer, one liquid nutrient polymer)
	Planned start of inter-laboratory study: August 2024 (A later start of the inter-laboratory study is possible, which depends on the progress on the method in responsibility of the project leader and the Working Group.)
	A draft protocol of the method including required equipment is available as separate file (Annex D.4).
5.	***Inorganic fertilizers – Determination of the total K_2O content***
	Scope: This document specifies two different methods (Method A and B) for the determination of the content of potassium (expressed as K2O) in inorganic fertilizers. Method A specifies a gravimetric method. Method B specifies the method using inductively coupled plasma optical emission spectrometry (ICP-OES).
	Note: Project includes 2 methods (gravimetric and ICP-OES method).
	Principle Method A Gravimetric method: The potassium in the homogenized sample to be analysed is dissolved in diluted hydrochloric acid solution. After eliminating or fixing the substances that might interfere with the quantitative determination, the potassium is precipitated in a slightly alkaline medium in the form of potassium tetraphenylborate (KTPB).
	Principle Method B ICP-OES method: The potassium in the homogenized sample to be analysed is dissolved in diluted hydrochloric acid solution. If undissolved material remains, filtering is needed. The mass concentration of potassium is determined by optical emission spectrometry with inductively coupled plasma (ICP-OES). ICP-OES instruments using sequential or simultaneous optical systems and axial, radial or dual viewing of the plasma may be used. The quantification of potassium is achieved by using linear calibration functions.
	Proposed samples for the inter-laboratory study: 3 fertilizer (3 solid (NPK, MOP, SOP) and 1 liquid)
	Planned start of inter-laboratory study: February 2025 (An earlier or later start of the inter-laboratory study is possible, which depends on the progress on the method in responsibility of the project leader and the Working Group.)
	A draft protocol of the method including required equipment is available as separate file (Annex D.5).
6.	***Inorganic fertilizers - Determination of the organic carbon content in ammonium nitrate fertilizers of high nitrogen content***
	Scope: This document specifies a method for the determination of total organic carbon (TOC) by elemental analysis using dry combustion. The method is applicable for ammonium nitrate (AN) with high N-content (N higher 31,5 %). In Regulation (EU) 2019/1009 [1] the mass of

	combustible material in PFC 1(C)(I)(a)(i-ii)(A) type products must not exceed 0.4 % if N content is between 27,8 % and 31,5 %, and 0,2 % if N content is 31,5 % or higher.
	Principle: The samples are crushed into a powder, weighed into the measuring vessel. In the vessel a constant amount of acid will be added to react with the crushed sample. The sample will react with the acid causing it to release CO2 because of the dissociation of the inorganic carbons (carbonates) leaving behind the organic carbon. The sample which is dissolved in the acid solution is then dried at 80 °C and when it has recrystallised and is completely dry again the sample can be measured on the carbon analysing apparatus. The organic carbon will be released as CO2 in the apparatus and measured by means of CO2 detector (e.g. Non dispersive infrared detector (NDIR) or infrared detector (IR)).
	Proposed samples for the inter-laboratory study: Solid samples: AN 33,5 % N and 31,5 N + $5SO_3$
	Planned start of inter-laboratory study: January 2025 (An earlier or later start of the inter-laboratory study is possible, which depends on the progress on the method in responsibility of the project leader and the Working Group.)
	A draft protocol of the method including required equipment is available as separate file (Annex D.6).
7.	***Inorganic fertilizers - Determination of pH of a solution of ammonium nitrate fertilizer of high nitrogen content*** **(revision of CEN/TS 17759:2022)**
	Scope: This document specifies a method for the determination of pH of a solution of ammonium nitrate fertilizer of high nitrogen content.
	Principle: The measurement of the pH of an 10% ammonium nitrate solution is carried out by means of a pH meter.
	Proposed samples for the inter-laboratory study: Solid samples: AN 33,5 % N and 31,5 N + $5SO_3$
	Planned start of inter-laboratory study: January 2025 (An earlier or later start of the inter-laboratory study is possible, which depends on the progress on the method in responsibility of the project leader and the Working Group.)
	A draft protocol of the method including required equipment is available as separate file (Annex D.7).
8.	***Inorganic fertilizers - Determination of the chloride content in ammonium nitrate fertilizers of high nitrogen content*** **(revision of CEN/TS 17761:2022)**
	Scope: This document specifies a method for the determination of the chloride content in ammonium nitrate fertilizers of high nitrogen content.
	Principle: Chloride ions dissolved in water are determined by potentiometric titration with silver nitrate in an acidic medium.
	Proposed samples for the inter-laboratory study: Solid samples: AN 33,5 % N and 31,5 N + $5SO_3$
	Planned start of inter-laboratory study: January 2025 (An earlier or later start of the inter-laboratory study is possible, which depends on the progress on the method in responsibility of the project leader and the Working Group.)
	A draft protocol of the method including required equipment is available as separate file (Annex D.8).
9.	***Inorganic fertilizers - Determination of the copper content in ammonium nitrate fertilizers of high nitrogen content*** **(revision of CEN/TS 17762:2022)**
	Scope: This document specifies a method for the determination of the copper content in ammonium nitrate fertilizers of high nitrogen content.
	Principle: The sample is dissolved in dilute hydrochloric acid and the copper is determined by atomic absorption spectrophotometry (AAS) or by inductive coupled plasma - optical emission spectroscopy (ICP-OES).
	Proposed samples for the inter-laboratory study: Solid samples: AN 33,5 % N and 31,5 N + $5SO_3$

	Planned start of inter-laboratory study: January 2025 (An earlier or later start of the inter-laboratory study is possible, which depends on the progress on the method in responsibility of the project leader and the Working Group.)
	A draft protocol of the method including required equipment is available as separate file (Annex D.9).
10.	***Fertilizers and liming materials – Determination of the chloride content by potentiometric titration* (revision of CEN/TS 17758:2022)**
	Scope: This document specifies a method for the determination of the chloride content in organic fertilizers, organo-mineral fertilizers, inorganic fertilizers and liming materials by potentiometric titration.
	Principle: The chlorides, dissolved in water, are precipitated in an acidified medium by an excess of standard solution of silver nitrate. The chloride concentration in the samples is quantified by potentiometric determination. To detect the end point, the voltage between a reference electrode on the one hand and the silver electrode or an ion selective electrode on the other hand, is tracked. This voltage depends on the logarithm of the chloride ion activity. If it is plotted, in mV, on the ordinate and the silver nitrate solution, in ml, on the abscissa, the point of inflection of the curve obtained in this manner is the equivalence point. Equivalent methods of evaluation are permitted.
	Proposed samples for the inter-laboratory study: at least 5 (OF, OMF, IF, liming material, liquid fertilizer)
	Planned start of inter-laboratory study: February 2025 (An earlier or later start of the inter-laboratory study is possible, which depends on the progress on the method in responsibility of the project leader and the Working Group.)
	A draft protocol of the method including required equipment is available as separate file (Annex D.10).
11.	***Inhibitors — Determination of the chloride content by ion chromatography and conductivity detection (IC-CD)***
	Scope: This document specifies a method for the determination of the chloride content in inhibitors by ion chromatography.
	Principle: The inhibitor sample is diluted in water. The content of chloride is determined in diluted aqueous solution by ion chromatography using a conductivity detector.
	Proposed samples for the inter-laboratory study: nitrification inhibiting compound (e.g. DMPP substance), urease inhibiting compound (e.g. NBPT substance), urease inhibiting compound spiked (e.g. NBPT substance + chloride), Nitrification inhibitor (DMPP liquid), urease inhibitor (NBPT+NPPT liquid)
	Planned start of inter-laboratory study: January 2025 (An earlier or later start of the inter-laboratory study is possible, which depends on the progress on the method in responsibility of the project leader and the Working Group.)
	A draft protocol of the method including required equipment is available as separate file (Annex D.11).
12.	***Fertilizers, liming materials and inhibitors —Determination of the phosphonates content***
	Scope: This document specifies a method for the extraction and determination of phosphonates (P-PO3) in organic, organo-mineral, mineral fertilizers, liming materials and inhibitors using ion chromatography and conductivity detection (IC-CD).
	Principle: A representative test portion of the sample is extracted with water. Phosphonate in the extract is selectively separated from other compounds using ion chromatography (IC) and determined by a conductivity detection (CD). External calibration is used for quantification of the amount of the phosphonate.
	Proposed samples for the inter-laboratory study: Approximate number of samples: one sample for each of the following product groups: inorganic fertilizer, organic fertilizer, organo-mineral fertilizer, liming material, inhibitor and polymer).
	Planned start of inter-laboratory study: February 2025 (An earlier or later start of the inter-laboratory study is possible, which depends on the progress on the method in responsibility of the project leader and the Working Group.)

	A draft protocol of the method including required equipment is available as separate file (Annex D.12.)

Annex C

Application to a Call for Tender process in compliance with SMP Single Market Programme Regulation (and its financing decision) & MGA (Mono or Multi beneficiary(ies) Grant Agreement)

This annex is also provided as separate WORD file to be used by the applicant to provide the necessary information.

A- Contact details of the Expert

Name: **Position:** **Phone:** **Email address:** **Personal website (if any)**

B- Information about the organisation/s the expert is working (name, website, contact person, phone, email)

C- Information on qualification of the personnel involved (e.g. by providing a brief Curriculum vitae)

D- Please specify for which position/project you are applying:
(please mark the relevant projects in the table)

Project No (see Annex B)	**Method (see Annex B)**	**Application yes or no**
1	Organo-mineral fertilizers — Determination of the N (nbutyl)thiophosphoric triamide (NBPT) urease inhibitor content	
2	Inorganic fertilizers – Determination of total nitrogen in methylene urea and urea formaldehyde (revision of EN 15478:2009)	
3	Inorganic fertilizers - Determination of cold water insoluble nitrogen and hot water insoluble nitrogen in solid urea formaldehyde and methylene urea slow-	

	release fertilizers and determination of the solubility of nutrient polymers in phosphate buffer solution with a pH of 7,5 at 100 °C (revision of CEN/TS 17403:2021)	
4	Inorganic fertilizers — Determination of the free formaldehyde content in nutrient polymers	
5	Method A (gravimetric method) Inorganic fertilizers — Determination of the total K2O content	
5	Method B (ICP-OES method) Inorganic fertilizers — Determination of the total K2O content	
6	Inorganic fertilizers – Determination of the organic carbon content in ammonium nitrate fertilizers of high nitrogen content	
7	Inorganic fertilizers - Determination of pH of a solution of ammonium nitrate fertilizer of high nitrogen content (revision of CEN/TS 17759:2022)	
8	Inorganic fertilizers - Determination of the chloride content in ammonium nitrate fertilizers of high nitrogen content (revision of CEN/TS 17761:2022)	
9	Inorganic fertilizers - Determination of the copper content in ammonium nitrate fertilizers of high nitrogen content (revision of CEN/TS 17762:2022)	
10	Fertilizers and liming materials – Determination of the chloride content by potentiometric titration (revision of CEN/TS 17758:2022)	
11	Inhibitors — Determination of the chloride content by ion chromatography and conductivity detection (IC-CD)	
12	Fertilizers, liming materials and inhibitors - Determination of the phosphonates content	

E- Please describe and show evidence of the required skills and expertise for the role you are applying for

Yes	No	Skills and expertise	Short description of the evidence of the required skills and expertise for the role you are applying for
Technical and professional capacity			
		access to a laboratory including the necessary equipment to effectively carry out the method in the field of chemical analysis of the relevant product group, i.e. inorganic, organic, organo-mineral fertilizers,	

		liming materials and/or inhibitors that has all the necessary equipment to carry out the inter-laboratory study and with an established analytical quality system (preferably ISO/IEC 17025 accredited)	
		at least 3 years of experience in performing analyses of the relevant substances in fertilizers /liming materials / inhibitors	
		experience with comparable projects in the validation of test methods	
		participation in at least 1 inter-laboratory study on the chemical analysis of fertilizers / liming material / inhibitors with satisfactory results during the last 3 years	
		sound educational qualifications, and further qualifications / significant experience in the area of analytical techniques of fertilizers / liming materials /inhibitors (of the relevant personnel involved)	
		communication skills and proficiency in English of the contact person as the test method is provided in English only and in order to effectively participate in (web-)meetings in English	

F- Information on the costs of the experts in €

- Daily rates in €:
- Number of person-days:
- Other costs (**please specify**): in €

Total costs in €:

G- Description of the offer (answer to the call for tender)

I certify that all documents provided are veracious and in conformity with reality and certify not to be in any situation described below:

a) subject of a non-likely judgment of recourse for a professional infringement
b) to be in an irregular tax situation or in an irregular special taxation situation
c) to provide with incomplete or erroneous information

I also certify that I had no conflict of interest by submitting the present offer.

Signed:

On behalf of :(print name here)

Date:

Annex D

Draft methods

Project number (see Annex B)	Short title of project	Annex D
1	NBPT urease inhibitor content in organo-mineral fertilizers	Annex D.1
2	Total nitrogen in methylene urease and urea formaldehyde in inorganic fertilizers (revision of EN 15478:2009)	Annex D.2
3	Determination of cold water insoluble nitrogen and hot water insoluble nitrogen in solid urea formaldehyde and methylene urea slow-release fertilizers (revision of CEN/TS 17403:2021)	Annex D.3
4	Determination of the free formaldehyde content in nutrient polymers in inorganic fertilizers	Annex D.4
5	Total K2O in inorganic fertilizers	Annex D.5
6	Organic carbon content in ammonium nitrate fertilizers of high nitrogen content	Annex D.6
7	pH of a solution of ammonium nitrate fertilizer of high nitrogen content (revision of CEN/TS 17759:2022)	Annex D.7
8	chloride content in ammonium nitrate fertilizers of high nitrogen content (revision of CEN/TS 17761:2022)	Annex D.8
9	copper content in ammonium nitrate fertilizers of high nitrogen content (revision of CEN/TS 17762:2022)	Annex D.9
10	chloride content by potentiometric titration in inorganic fertilizers, organic fertilizers, organo-mineral fertilizers und liming materials (revision of CEN/TS 17758:2022)	Annex D.10
11	chloride content by ion chromatography and conductivity detection (IC-CD) in inhibitors	Annex D.11
12	phosphonates content in organic, organo-mineral, mineral fertilizers, liming materials and inhibitors	Annex D.12

Annex E

Draft Service Contract

Draft Service contract

Between

DIN Deutsches Institut für Normung e. V.
Am DIN-Platz
Burggrafenstraße 6
10787 Berlin
Germany
hereinafter referred to as "DIN"

and

<<Subcontractor>>
<<Address>>
…….
hereinafter referred to as the "CONTRACTOR"

Introduction
The European Commission/EFTA has decided to fund SA/CEN/2021-04 "Fertilizers and liming materials". This project is dealt with by CEN/TC 260/WG 7 "Inorganic fertilizers and inhibitors", the secretariat of which is held by DIN. DIN assures the organizational coordination work on behalf of CEN/TC 260/WG 7.

1. Object of the Service contract
The CONTRACTOR agrees that it will participate as a <<laboratory to participate in the inter-laboratory study >> for a cumulative amount of <<xx person-days starting from the signature of this contract and finishing by 20xx-xx-xx>> to deliver the result of analyses for the following deliverable(s) of CEN/TC 260/WG 7:

1. Organo-mineral fertilizers — Determination of the N-(nbutyl)thiophosphoric triamide (NBPT) urease inhibitor content

and/or

2. Inorganic fertilizers – Determination of total nitrogen in methylene urea and urea formaldehyde (revision of EN 15478:2009)

and/or

3. Fertilizers - Determination of cold water insoluble nitrogen and hot water insoluble nitrogen in solid urea formaldehyde and methylene urea slow-release fertilizers and determination of the solubility of nutrient polymers in phosphate buffer solution with a pH of 7,5 at 100 °C (revision of CEN/TS 17403:2021)

and/or

4. Inorganic fertilizers — Determination of the free formaldehyde content in nutrient polymers

and/or

5. Inorganic fertilizers – Determination of the total K_2O content

and/or

6. Inorganic fertilizers - Determination of the organic carbon content in ammonium nitrate fertilizers of high nitrogen content

and/or

7. Inorganic fertilizers - Determination of pH of a solution of ammonium nitrate fertilizer of high nitrogen content (revision of CEN/TS 17759:2022)

and/or

8. Inorganic fertilizers - Determination of the chloride content in ammonium nitrate fertilizers of high nitrogen content (revision of CEN/TS 17761:2022)

and/or

9. Inorganic fertilizers - Determination of the copper content in ammonium nitrate fertilizers of high nitrogen content (revision of CEN/TS 17762:2022)

and/or

10. Fertilizers and liming materials – Determination of the chloride content by potentiometric titration (revision of CEN/TS 17758:2022)

and/or

11. Inhibitors — Determination of the chloride content by ion chromatography and conductivity detection (IC-CD)

and/or

12. Fertilizers, liming materials and inhibitors – Determination of the phosphonates content

2. Duties of the CONTRACTOR

The CONTRACTOR's duties will include:

1. participate in the inter-laboratory study by applying the provided test protocol to test the provided samples (up to a maximum of 7 products and up to a maximum of 5 repetitions per product);
2. organize necessary facilities, equipment and supplies for the testing;
3. organize the analysis of the samples according to the agreed protocol;
4. provide the test results including all data and comments to the project leader and/or Statistician in the manner required by them;
5. be available for queries of the project leader and/or Statistician.

The CONTRACTOR undertakes to perform its duties with reasonable care and skill applying recognized practices. The CONTRACTOR is not entitled to subcontract any rights and obligations of this Service contract without the prior written consent of DIN.

The selection procedure documented in the open call for tender, sections V, VI and VII selected the CONTRACTOR on the basis of its personal qualification and experience. All man days under this Service contract must therefore be performed by the CONTRACTOR in person. Any deviations from this must be justified in writing and authorized by the European Commission before any related funds can be disbursed.
In particular, the following target dates for each step shall be adhered to. In case of non-adherence to the target dates, the Commission/EFTA is entitled to cancel the funding.

Step 1: Receipt of the samples to be tested and start of inter-laboratory study	see Annex 2 for estimated timing*
Step 2: Submission of test results including all data to the project leader and/or Statistician	Step 1 + maximum 4 months

* - An earlier or later start of the inter-laboratory study is possible, which depends on the progress on the method in responsibility of the project leader and Working Group.

The project leader shall respect the deadlines of the deliverables. If deadlines are not kept, EC is entitled to withhold payment. If documents pass through one or more stages earlier than indicated, the Secretariat of CEN/TC 260 aims to implement subsequent target dates earlier as well, the project leader is obliged to start the work accordingly earlier. This will involve consultation with the project leader. The minimum intervals between target dates will be respected. After activation of the respective deliverable, the target dates specified in the CEN/CENELEC Internal Regulations must also be respected by the project leader (see https://boss.cen.eu/developingdeliverables/pages/en/pages/).

The CONTRACTOR has to record the expenses for material and human resources (including exact date and hours). These records have to be kept for 10 years for possible inspection by DIN or a charged legal institution. Upon request, DIN or a charged legal institution shall have unhindered access to the accounts and documents which may be required for auditing purposes.

<<in case the CONTRACTOR is from a non-EEA country, the following paragraph will be included: DIN and the CONTRACTOR aim to fulfil their duties in a way that takes into account their social and environmental responsibilities, including the delivery of sustainable livelihoods and development opportunities to people. The CONTRACTOR undertakes to meet the relevant social and environmental standards. In particular, the CONTRACTOR commits itself not to use child labour and adheres to the UN Convention on the Rights of the Child, and national / local law on the employment of children. The CONTRACTOR ensures that there is no forced labour in its workforce. The CONTRACTOR provides a safe and healthy working environment for employees. It complies, at a minimum, with national and local laws and ILO conventions on health and safety. Working hours and conditions for employees comply with conditions established by national and local laws and ILO conventions. If the CONTRACTOR is engaged in production, it undertakes to maximize the use of raw materials from sustainably managed sources in their

ranges, buying locally when possible. It uses production technologies that seek to reduce energy consumption and where possible use renewable energy technologies that minimize greenhouse gas emissions. It seeks to minimize the impact of its waste stream on the environment.>>

3. Obligations of DIN
DIN will send the CONTRACTOR on its request the final report of the project the CONTRACTOR participated in.

4. Invoicing and Payment
In consideration of the work carried out according to this Service contract, the CONTRACTOR shall invoice to DIN <<a maximum daily rate of XXX € per person-day up to a maximum of xx person-daysand other costs (to be specified) totalling a maximum sum of XX € >>>>. Invoicing shall be done as follows:

Step A: upon signature of this service contract: 15 % of above sum;
Step B: provision of interim report provided acceptance by the Commission of the interim report: up to 25 % of above sum;
Step C: provision of final report provided acceptance by the Commission of the final report: the remaining balance of above sum.

The information is subject to changes in the Grant Agreement.

The invoice shall state the following VAT numbers:
DIN: UST-ID-Nr: DE 136 622 143
DIN: UST-Nr: 27/640/50470
CONTRACTOR VAT identification number: ……

The aforesaid sum shall be understood to cover all expenditure incurred by the CONTRACTOR in the performance of this contract.

The payments are due only if the CONTRACTOR has fulfilled the tasks within the given time schedule, DIN has approved the results and the CONTRACTOR has sent a detailed invoice (material, cost for staff, travel etc.) that fulfils the requirements described below. All items shall be based on real costs as actually incurred. Estimated costs shall not be invoiced.

DIN has the right to demand invoices and documentation of work done before paying.

Payments will be made to the CONTRACTOR with the following Bank details:

[Name of the Bank]
[Full address of Bank]

IBAN (International Bank Account Number): …

BIC or SWIFT CODE (Business Identifier Code): …

Each invoice shall comply with the requirements listed in the annexed document from EC, and be accompanied by a declaration of the real costs incurred, clearly stating the number of days worked and the period within which the days were worked.

The declaration:

- must be signed;
- must specify that 'working days' means 'full working days'
- must specify the period within which the tasks were performed.

The signed declaration shall be in the following format:
"I the undersigned declare that I worked the following number of days (full working days) within the framework of my Service contract with DIN [reference of this Service contract]:

- in the reporting period [from …..to …..] [number] days."

The total amount that the CONTRACTOR will in fact receive depends on whether the defined tasks of the CONTRACTOR have been completed (the number of days actually spent by the CONTRACTOR in the context of this service contract, or the extent of tasks fulfilled if the number of man days was not specified).

Payment by DIN does not constitute acceptance of performance and is subject to the complete and due performance of the contract.

5. Provisions relating to fiscal charges
The CONTRACTOR will remain responsible for all taxes imposed on it and other related obligations that arise as a result of this Service contract.

6. Responsibility and Liability
DIN shall in no case, and under no circumstances, be held responsible for claims arising out of the present Service contract and relating to damages caused by the CONTRACTOR, its employees or a third party. No request of indemnity or re-instatement relating to such claims may be addressed to DIN.
The CONTRACTOR shall, in respect of the staff designated for the performance of this Service contract, observe all regulations of labour law, in particular the regulations of social security and fiscal law.

7. Confidentiality
The CONTRACTOR undertakes to maintain confidentiality as regards all actions necessary to fulfil the contracted duties. Both parties commit themselves to mutual loyalty.

8. Copyright
The CONTRACTOR undertakes to assign to DIN (or as DIN may direct) its patrimonial rights of exploitation and all and any intellectual property rights in the works developed by it under the scope of this Service contract.

Such assigned rights include reproduction rights including the publication, distribution, adjustment, translation, renting, loan, the remuneration rights for duplication and loan, as well as the rights of communication to the public of the works, in total or in part, in summary or with comments, and including the right to transfer all exploitation licences and to authorise all sub-licences.

The transfer of rights covers all languages and covers all forms of exploitation known at present and non-restrictively; publication by all means and via all graphical support systems, by print, press, photocopy, microfilms and via all magnetic, computerised and numerical support systems, memory cards, CD-ROMs, films, photographs, slides, teledistribution, cable, satellite, disks and online document servers.

For all and each of the assigned exploitation modes, the transfer is granted free of charge, for all countries and for the total duration of the intellectual property rights.

9. Termination
Regardless of other claims, in the case of serious disrespect of the terms of the Service contract by the CONTRACTOR (inter alia where the work is not provided in accordance with the terms of this Service contract, or not completed within the time limits according to this Service contract), DIN may cancel the contract at any time without notice.

Should the performance of the project as a whole be obstructed or jeopardized by circumstances beyond the control of the parties, DIN may cancel the Service contract giving six weeks' notice.

10. Withdrawal
DIN is entitled to withdraw from this Service contract if the European Commission/EFTA does not pay the funds to DIN or retroactively reclaims funds already paid to DIN under the Specific Grant Agreement, as any such payment is dependent on EC’s acceptance of the interim and final reports defined in the Specific Grant Agreement.

11. Administrative provisions
With the exception of invoices, all correspondence with DIN concerning the performance of this Service contract shall be addressed as follows:

Dr. Sophie Dithmer, Secretary CEN/TC 260, Phone: +49 30 2601-2647
email: sophie.dithmer@din.de

All invoices to DIN shall be addressed as follows:

DIN Deutsches Institut für Normung e. V.
Buchhaltung
Am DIN-Platz
Burggrafenstraße 6
10787 Berlin
Germany

All correspondence with the CONTRACTOR shall be addressed as follows:
<<Mr/Ms NN Phone: , email>>

12. Assignment
The CONTRACTOR shall not assign, transfer, subcontract or in any other manner make over to any third party the benefit and/or burden of this Service contract without the prior written consent of DIN.

13. Alterations to the Service contract
Subsidiary agreements and modifications to this Service contract are only legally binding when in written form and signed by both parties. This applies also to any agreement by which such written form requirement is to be contracted out.

14. Validity
If any of the provisions of this Service contract shall become or be held invalid or unenforceable, this shall not affect any part of the remaining contract.

15. Place of jurisdiction
Place of jurisdiction for all disputes arising out of or in connection with this Service contract shall be Berlin.

16. Applicable Law
This Service contract shall be governed by and interpreted in accordance with German Law.

For DIN Deutsches Institut für Normung e. V.

……
Christoph Winterhalter
Chairman of the Executive Board
(Stamp)

(Date)

……
i. V. Matthias Kritzler-Picht
Head of G Food, Packaging, Plastics

(Date)

For the CONTRACTOR

……
<<Name, Position>>

(Stamp)

(Date)

Annex 1

EC Mandatory Content of an Invoice

Supplier information

Compulsory information for an invoice for all or majority of member states	Compulsory information for an invoice for certain member states only
Full name of the supplier	
Full address of the supplier	
The VAT identification number of the supplier in accordance with ISO Standard under which he supplied the goods and services (for all member states **except Bulgaria**)	**For Bulgaria, Cyprus, Germany, Greece, Romania, Slovakia**: **Tax reference number of the supplier**, in other cases, where your country refrains from allocating a VAT identification number in accordance with ISO Standard for certain cases
	For Belgium, Cyprus, Denmark, Estonia, France, Germany, Greece, Hungary, Italy, Latvia, Lithuania, Netherlands, Poland Portugal, Romania, Slovenia: • **Full name of tax representative (if any) of the supplier** where the person liable to pay VAT is the tax representative, • **Full address of the tax representative** (if any) of the supplier where the person liable to pay VAT is the tax representative, • **VAT identification number of the fiscal representative** in accordance with ISO Standard (if any) of the supplier where the person liable to pay the VAT is the tax representative.

Customer information

Compulsory information for an invoice for all or majority of member states	Compulsory information for an invoice for certain member states only
Full name of the customer	
Full address of the customer	
The VAT identification number of the customer in accordance with ISO Standard where the customer is liable to pay the VAT or in case of intra-Community supplies (**except for Bulgaria**)	**For Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Germany, Greece, Latvia, Lithuania, Malta, Poland, Portugal, Romania, Slovak Republic, Spain**: **The VAT identification number of the customer in other cases than general rule**.
	For Belgium, Cyprus, Estonia, Greece, Hungary, Italy, Latvia, Lithuania, Netherlands, Poland, Portugal, Romania, Slovenia: • **Full name of the tax representative** (if any) of the customer where the person liable to pay VAT is the tax representative • **Full address of the tax representative** (if any) of the customer where the person liable to pay VAT is the tax representative • **VAT identification number of the fiscal representative** (if any) the customer where the person liable to pay the VAT is the tax representative

Content information

Compulsory information for an invoice for all or majority of member states	Compulsory information for an invoice for certain member states only
• **Sequential number based on one or more series, which uniquely indentifies the invoice** • **Date of issue of the invoice** • **Date on which the supply of goods or services was made or completed or the date on which the payment on account was made before any supply**, insofar as that a date can be determined and differs from the date of issue of the invoice (**except for Bulgaria**) • **Description/nature of the goods or services** • **Quantity of the goods supplied or the extent and nature of the services rendered** • **Price per unit (excluding VAT)** (**except for Germany**) • **Any discounts or rebates, not included in the unit price** (**except for Austria**) • **Taxable amount per VAT rate or exemption** • **VAT rate(s) applied** • **Total VAT amount**	**Where an exemption is involved or where the customer is liable to pay the tax** further information should be given accordingly : • **Reference to the appropriate provision of the Sixth directive** for: **Austria, Belgium, Cyprus, Denmark, Estonia, Finland, France Germany, Ireland Lithuania Luxembourg, Netherlands, Poland, Portugal, Sweden, Spain, UK** **OR** • **Reference to the corresponding national provision** for: **Czech Republic, Greece, Hungary, Italy, Latvia, Malta, Slovak Republic, Slovenia, Austria, Belgium, Cyprus, Denmark, Estonia, Finland, France Germany, Ireland Lithuania Luxembourg, Netherlands, Poland, Portugal, Sweden, Spain, UK** **OR** • **Any indication that the supply is exempt or subject to the reverse charge procedure** for: **Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Finland, France Germany, Greece, Hungary, Ireland, Luxembourg, Malta, Portugal, Romania, Netherlands, Poland, Sweden, Spain, UK**
	For Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France Greece, Hungary, Ireland, Italy, Malta, Netherlands, Latvia, Lithuania, Luxembourg, Poland, Portugal, Romania, Slovak Republic, Slovenia, Sweden, Spain, UK: **Obligation to mention the amounts on the invoice in the local currency**
	For Bulgaria, Greece, Hungary, Lithuania, Poland, Romania, UK: **Obligation to issue the invoice in one of the official languages**

WARNING: ***the issuer of the invoice should follow the VAT legislation in force at the time the invoice is issued***

Annex 2

Further details of the projects (as of June 2024)

1.	***Organo-mineral fertilizers — Determination of the N (nbutyl)thiophosphoric triamide (NBPT) urease inhibitor content***
	Scope: This document specifies a method for the determination of the urease inhibitor N(nbutyl)thiophosphoric triamide (NBPT) and its oxidate form NBPTO in urea based organo-mineral fertilizers, using the liquid chromatography coupled with triple quadrupole mass spectrometry (LC-MSQQQ). It is applicable to organo-mineral fertilizers, NOTE: It is possible to apply this method to inorganic fertilizers; in this case a validation is carried out by the laboratory for the procedure and data generated.
	Principle: This analytical method is based on the principles of liquid chromatography coupled with triple quadrupole mass spectrometry (LC-MSQQQ) for determination of the separated inhibiting compounds NBPT and NBPTO.
	Proposed samples for the inter-laboratory study: NBPT in 2 samples of urea + organomineral fertilizers at different concentration of organic nitrogen, 1 sample of urea + organomineral fertilizer + KCl
	Planned start of inter-laboratory study: September 2024 (A later start of the inter-laboratory study is possible, which depends on the progress on the method in responsibility of the project leader and Working Group.)
2.	***Inorganic fertilizers – Determination of total nitrogen in methylene urea and urea formaldehyde* (revision of EN 15478:2009)**
	Scope: This document specifies a method for the determination of the content of total nitrogen from methylene-urea and urea formaldehyde in their pure form in inorganic fertilizers.
	Principle: The nitrogen is transformed quantitatively into ammoniacal salt by boiling in the presence of sulfuric acid. The ammoniacal solution thus obtained is distilled through an alkaline medium, the distillate being collected in an excess of standard sulfuric acid. The excess acid is titrated by means of a standard alkaline solution.
	Proposed samples for the inter-laboratory study: 2 samples: one liquid methylene urea, one solid methylene urea
	Planned start of inter-laboratory study: August 2024 (A later start of the inter-laboratory study is possible, which depends on the progress on the method in responsibility of the project leader and Working Group.)
3.	***Inorganic fertilizers - Determination of cold water insoluble nitrogen and hot water insoluble nitrogen in solid urea formaldehyde and methylene urea slow-release fertilizers and determination of the solubility of nutrient polymers in phosphate buffer solution with a pH of 7,5 at 100 °C* (revision of CEN/TS 17403:2021)**
	Scope: This document specifies a method for the determination of the cold and hot water insoluble nitrogen content in solid urea formaldehyde and methylene urea slow release fertilizers and for the determination of the solubility of nutrient polymers in a phosphate buffer solution with a pH of 7,5 at 100 °C. It is not applicable to the following nutrient polymers: liquid methylene urea, IBDU (isobutylidendiurea) and CDU (crotonylidendiurea) as they are almost completely soluble in hot water due to their chemical nature.
	Principle for the determination of the mass fraction of cold water insoluble nitrogen: Extraction of the test portion in phosphate buffer solution (pH 7,5) or distilled water at 25 °C. Filtration of the insoluble residue, washing and determination of the nitrogen content in the insoluble residue. Principle for the determination of the mass fraction of hot water insoluble nitrogen: Extraction of the test portion in phosphate buffer solution (pH 7,5) at 100 °C. Filtration of the insoluble residue, washing and determination of the nitrogen content in the insoluble residue.
	Proposed samples for the inter-laboratory study:

	2 samples: one liquid methylene urea, one solid methylene urea
	Planned start of inter-laboratory study: August 2024 (A later start of the inter-laboratory study is possible, which depends on the progress on the method in responsibility of the project leader and Working Group.)
4.	***Inorganic fertilizers — Determination of the free formaldehyde content in nutrient polymers***
	Scope: This document specifies methods for the determination of the free formaldehyde content in solid nutrient polymers (method A) and in liquid nutrient polymers (method B).
	Principle: Reaction of the free formaldehyde with sodium sulphite, in the presence of a measured excess of acid, in accordance with the reaction: $HCHO + Na_2SO_3 + H_2O \rightarrow CH_2(OH)SO_3Na + NaOH$ and alkaline titration of the unreacted excess acid. The acid-sulphite mixture provides an essentially neutral buffered system which prevents hydrolysis of condensed formaldehyde. A reaction temperature close to 0 °C (lower than 4 °C) ensure the absence of side reactions.
	Proposed samples for the inter-laboratory study: 2 samples (one solid nutrient polymer, one liquid nutrient polymer)
	Planned start of inter-laboratory study: August 2024 (A later start of the inter-laboratory study is possible, which depends on the progress on the method in responsibility of the project leader and Working Group.)
5.	***Inorganic fertilizers – Determination of the total K_2O content***
	Scope: This document specifies two different methods (Method A and B) for the determination of the content of potassium (expressed as K2O) in inorganic fertilizers. Method A specifies a gravimetric method. Method B specifies the method using inductively coupled plasma optical emission spectrometry (ICP-OES).
	Note: Project includes 2 methods (gravimetric and ICP-OES method).
	Principle Method A Gravimetric method: The potassium in the homogenized sample to be analysed is dissolved in diluted hydrochloric acid solution. After eliminating or fixing the substances that might interfere with the quantitative determination, the potassium is precipitated in a slightly alkaline medium in the form of potassium tetraphenylborate (KTPB).
	Principle Method B ICP-OES method: The potassium in the homogenized sample to be analysed is dissolved in diluted hydrochloric acid solution. If undissolved material remains, filtering is needed. The mass concentration of potassium is determined by optical emission spectrometry with inductively coupled plasma (ICP-OES). ICP-OES instruments using sequential or simultaneous optical systems and axial, radial or dual viewing of the plasma may be used. The quantification of potassium is achieved by using linear calibration functions.
	Proposed samples for the inter-laboratory study: 3 fertilizer (3 solid (NPK, MOP, SOP) and 1 liquid)
	Planned start of inter-laboratory study: February 2025 (An earlier or later start of the inter-laboratory study is possible, which depends on the progress on the method in responsibility of the project leader and Working Group.)
6.	***Inorganic fertilizers – Determination of the organic carbon content in ammonium nitrate fertilizers of high nitrogen content***
	Scope: This document specifies a method for the determination of total organic carbon (TOC) by elemental analysis using dry combustion. The method is applicable for ammonium nitrate (AN) with high N-content (N higher 31,5 %). In Regulation (EU) 2019/1009 [1] the mass of combustible material in PFC 1(C)(I)(a)(i-ii)(A) type products must not exceed 0.4 % if N content is between 27,8 % and 31,5 %, and 0,2 % if N content is 31,5 % or higher.
	Principle: The samples are crushed into a powder, weighed into the measuring vessel. In the vessel a constant amount of acid will be added to react with the crushed sample. The sample will react with the acid causing it to release CO2 because of the dissociation of the inorganic carbons (carbonates) leaving behind the organic carbon. The sample which is dissolved in the acid solution is then dried at 80 °C and when it has recrystallised and is completely dry again the sample can be measured on the carbon analysing apparatus. The organic carbon will be re-

	leased as CO2 in the apparatus and measured by means of CO2 detector (e.g. Non dispersive infrared detector (NDIR) or infrared detector (IR)).
	Proposed samples for the inter-laboratory study: Solid samples: AN 33,5 % N and 31,5 N + 5SO_3
	Planned start of inter-laboratory study: January 2025 (An earlier or later start of the inter-laboratory study is possible, which depends on the progress on the method in responsibility of the project leader and Working Group.)
7.	***Inorganic fertilizers - Determination of pH of a solution of ammonium nitrate fertilizer of high nitrogen content*** **(revision of CEN/TS 17759:2022)**
	Scope: This document specifies a method for the determination of pH of a solution of ammonium nitrate fertilizer of high nitrogen content.
	Principle: The measurement of the pH of an 10% ammonium nitrate solution is carried out by means of a pH meter.
	Proposed samples for the inter-laboratory study: Solid samples: AN 33,5 % N and 31,5 N + 5SO_3
	Planned start of inter-laboratory study: January 2025 (An earlier or later start of the inter-laboratory study is possible, which depends on the progress on the method in responsibility of the project leader and Working Group.)
8.	***Inorganic fertilizers - Determination of the chloride content in ammonium nitrate fertilizers of high nitrogen content*** **(revision of CEN/TS 17761:2022)**
	Scope: This document specifies a method for the determination of the chloride content in ammonium nitrate fertilizers of high nitrogen content.
	Principle: Chloride ions dissolved in water are determined by potentiometric titration with silver nitrate in an acidic medium.
	Proposed samples for the inter-laboratory study: Solid samples: AN 33,5 % N and 31,5 N + 5SO_3
	Planned start of inter-laboratory study: January 2025 (An earlier or later start of the inter-laboratory study is possible, which depends on the progress on the method in responsibility of the project leader and Working Group.)
9.	***Inorganic fertilizers - Determination of the copper content in ammonium nitrate fertilizers of high nitrogen content*** **(revision of CEN/TS 17762:2022)**
	Scope: This document specifies a method for the determination of the copper content in ammonium nitrate fertilizers of high nitrogen content.
	Principle: The sample is dissolved in dilute hydrochloric acid and the copper is determined by atomic absorption spectrophotometry (AAS) or by inductive coupled plasma - optical emission spectroscopy (ICP-OES).
	Proposed samples for the inter-laboratory study: Solid samples: AN 33,5 % N and 31,5 N + 5SO_3
	Planned start of inter-laboratory study: January 2025 (An earlier or later start of the inter-laboratory study is possible, which depends on the progress on the method in responsibility of the project leader and Working Group.)
10.	***Fertilizers and liming materials – Determination of the chloride content by potentiometric titration*** **(revision of CEN/TS 17758:2022)**
	Scope: This document specifies a method for the determination of the chloride content in organic fertilizers, organo-mineral fertilizers, inorganic fertilizers and liming materials by potentiometric titration.
	Principle: The chlorides, dissolved in water, are precipitated in an acidified medium by an excess of standard solution of silver nitrate. The chloride concentration in the samples is quantified by potentiometric determination. To detect the end point, the voltage between a reference electrode on the one hand and the silver electrode or an ion selective electrode on the other hand, is tracked. This voltage depends on the logarithm of the chloride ion activity. If it is plotted, in mV, on the ordinate and the silver nitrate solution, in ml, on the abscissa, the point of inflec-

	tion of the curve obtained in this manner is the equivalence point. Equivalent methods of evaluation are permitted.
	Proposed samples for the inter-laboratory study: at least 5 (OF, OMF, IF, liming material, liquid fertilizer)
	Planned start of inter-laboratory study: February 2025 (An earlier or later start of the inter-laboratory study is possible, which depends on the progress on the method in responsibility of the project leader and Working Group.)
11.	***Inhibitors — Determination of the chloride content by ion chromatography and conductivity detection (IC-CD)***
	Scope: This document specifies a method for the determination of the chloride content in inhibitors by ion chromatography.
	Principle: The inhibitor sample is diluted in water. The content of chloride is determined in diluted aqueous solution by ion chromatography using a conductivity detector.
	Proposed samples for the inter-laboratory study: nitrification inhibiting compound (e.g. DMPP substance), urease inhibiting compound (e.g. NBPT substance), urease inhibiting compound spiked (e.g. NBPT substance + chloride), Nitrification inhibitor (DMPP liquid), urease inhibitor (NBPT+NPPT liquid)
	Planned start of inter-laboratory study: January 2025 (An earlier or later start of the inter-laboratory study is possible, which depends on the progress on the method in responsibility of the project leader and Working Group.)
12.	***Fertilizers, liming materials and inhibitors —Determination of the phosphonates content***
	Scope: This document specifies a method for the extraction and determination of phosphonates (P-PO3) in organic, organo-mineral, mineral fertilizers, liming materials and inhibitors using ion chromatography and conductivity detection (IC-CD).
	Principle: A representative test portion of the sample is extracted with water. Phosphonate in the extract is selectively separated from other compounds using ion chromatography (IC) and determined by a conductivity detection (CD). External calibration is used for quantification of the amount of the phosphonate.
	Proposed samples for the inter-laboratory study: Approximate number of samples: one sample for each of the following product groups: inorganic fertilizer, organic fertilizer, organo-mineral fertilizer, liming material, inhibitor and polymer).
	Planned start of inter-laboratory study: February 2025 (An earlier or later start of the inter-laboratory study is possible, which depends on the progress on the method in responsibility of the project leader and the Working Group.)