DUTCH ACCREDITATION COUNCIL

Accreditation specification RvA

Accreditation of testing laboratories (EN-ISO/IEC 17025)

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Contents

Introduction

This is the accreditation specification RvA (ASR) that addresses the accreditation of testing laboratories according to the standard EN-ISO/IEC 17025. In addition to this ASR, there may be an ASR for a particular field of activity – as mentioned in Annex B, which details aspects relevant to that field of activity.

The RvA has expressed a preference for some fields of activities to be accredited by EN-ISO/IEC 17025 or EN-ISO 15189. Further information can be found in ASR101 Medical Laboratories, Annex D. The following fields of activities and preferred standards are mentioned, among others:

- Non-human material: EN-ISO/IEC 17025 Testing laboratories
- Analysis for clinical trials: EN-ISO 15189 Medical Laboratories
- Forensic obduction pathology: EN-ISO/IEC 17025 Testing laboratories

1 Relevant documents

1.1 Standard used for accreditation

- EN-ISO/IEC 17025; General requirements for the competence of testing and calibration laboratories

1.2 Additional documents (mandatory)

- ASR001 Overview of RvA, EA, ILAC & IAF documents

The current version of this document provides the overview of the relevant RvA, EA, ILAC and IAF documents, both mandatory and informative, applicable to accreditation for EN-ISO/IEC 17025. The documents can be downloaded from the website of the organisation(s) concerned: IAF (www.iaf.nu), ILAC (www.ilac.org), EA (www.european-accreditation.org), RvA (www.rva.nl).

1.3 Additional documents (informative)

- ISO 33403; Reference materials – Requirements and recommendations for use

The current versions of this document can be downloaded from the website of the organisation concerned: (www.iso.org).

1.4 Specific legislation and regulations

Whether and which laws and/or regulations apply depends on the testing activities. The laboratory shall identify, record and, where applicable, implement the relevant legislation. In addition, there may be a specific ASR containing relevant laws and regulations.

2 Scope of accreditation

For accreditation of testing laboratories the scope is formulated as follows.
Accredited tests can be included in the scope in two ways, as part of a fixed scope (see ILAC G18) or of a flexible scope (see RvA-T054 / ASR004). Matters that can apply to both a fixed and a flexible scope are listed in paragraph 2.3. Annex E gives examples of scopes.

2.1 Fixed scope

2.1.1 Formulation of fixed scope

No.	Material or product	Type of activity	Internal / External reference number	Location
1	The matrix in which the tests are carried out Or Object to be tested	Minimum components / properties to be determined and technique(s) used(1)	Internal coding and reference to the reference method used(2)	Location(s) of test(s)(3)

(1) Shown as much as possible as follows: 'Determination of the content of [xxx]', 'Determination of [xxx]' or 'Detection of [xxx]' followed by the technique or method used
(2) See RvA-T001 / ASR011
(3) See §2.3.1 for explanations

2.2 Flexible scope

A laboratory with a flexible scope may carry out additional activities under accreditation based on its own validations. The conditions for this are set out in RvA-T054 / ASR004.

Flexibility is allowed for the 'material or product' or the 'type of activity', or for both. It is important that the activities fall under the flexible scope within the limits of the descriptions on the scope of accreditation. The laboratory must maintain an up-to-date list of activities of applied test methods performed under accreditation in relation to the flexible scope, see for a template Annex D. The RvA recommends using this template.

2.2.1 Formulation of the flexible scope

The flexible scope is provided with a footnote with the text: *"The laboratory is obliged to maintain an up-to-date list of activities performed under this flexible scope. This list can be requested from the laboratory.';*

No.	Material or product	Type of activity	Internal / External reference number	Location
		Flexible scope(1)		
1	The matrix in which the tests are carried out Or Object to be tested	At least the components/properties to be determined and the technique(s) used	Internal coding and reference to the reference method applied(2)	Location(s) of test(s)(3)

(1) The laboratory is obliged to maintain an up-to-date list of activities performed under this flexible scope. This list can be requested from the laboratory.
(2) See RvA-T001
(3) See §2.3.1 for explanations

2.3 Topics applicable for both fixed and flexible scopes

2.3.1 Explanation on location

The last column of the scope shows the main location and/or the other locations listed at the top of the scope. For tests carried out outside these sites (such as sampling or field measurements), the location from which these activities are coordinated shall be indicated, with the addition of the term 'On-site (at the customer's premises)' and/or 'Mobile

laboratory'. If the tests are carried out in mobile or semi-permanent laboratories,
the location from which these activities are coordinated shall be indicated, with the addition of the term 'MOLA'. If the tests are carried out at the customer's premises or in situ, the location from which these activities are coordinated shall be indicated, with the addition of the letter 'O'.

Location	Abbreviation / location code
Street 1 1234 AB City X Netherlands	SXY
Street 2 5678 DC City Y Netherlands	SYZ
On-site (at the customer)	O-SXY
Mobile laboratory	MOLA- SYZ

No.	Material or product	Type of activity	Internal / External reference number	Location
2	The matrix in which the tests are carried out Or Object to be tested	At least the components/properties to be determined and the technique(s) used	internal coding and reference to the reference method applied	SXY and/or O-SXY and/or MOLA-SYZ
3	The matrix from which the samples are taken to perform the tests Or Object to be tested	Sampling for the [xx] tests with internal reference numbers [yy] and [zz] ; <technique>	Internal coding and reference to the reference method applied	O-SXY

2.3.2 Sampling

In the explanatory document RvA-T021 / ASR010, the RvA explains the conditions under which sampling can be accredited as an activity. Where 'testing' is mentioned in the rest of this document, this also applies to any associated sampling.
There are three options for including sampling in the scope:

- One activity in which sampling and testing are displayed combined.
- Sampling and testing are shown as separate activities. In this case, the description of the sampling shall indicate the activity(s) referred to. These activities are mentioned later in the scope. In this case, there will be a letter in the first column (No.) instead of a number.
- Sampling is carried out for analyses carried out by another accredited laboratory. In this case, the sampling description shall indicate: '*the corresponding test is structurally carried out by another accredited laboratory*'. In this case, there will be a letter in the first column (No.) instead of a number.

No.	Material or product	Type of activity	Internal / External reference number	Location
1.	The matrix in which the tests are carried out Or Object to be tested	Determination of the content of [xx]; <technique>, including associated sampling	Internal coding and reference to the reference method used(1)	Location(s) of test(s)(2)
a.	The matrix from which the samples are taken to perform the tests Or Object to be tested	Sampling for the [xx] tests with internal reference numbers [yy] and [zz] ; <technique>	Internal coding and reference to the reference method used(1)	Location(s) from which these activities are coordinated(2)
b.	The matrix from which the samples are taken Or Object to be tested	Sampling for the determination of the content of [xx]; <technique> *(the associated test is structurally carried out by another accredited laboratory)*	Internal coding and reference to the reference method used(1)	Location(s) from which these activities are coordinated(2)

(1) See RvA-T001 / ASR011
(2) See § 2.3.1 for explanations

2.3.3 Sample pretreatment

If the sample pretreatment and the associated tests are shown as separate activities on the scope, the description of the sample pretreatment shall indicate in which activity(s) in the scope the pretreatment is carried out. In this case, there will be a '--' symbol in the first column (No.) instead of a number.

No.	Material or product	Type of activity	Internal / External reference number	Location
--	The matrix in which the tests are carried out Or Object to be tested	Sample pretreatment for the [xx] tests with internal reference numbers [yy] and [zz] ; <technique>	Internal coding and reference to the reference method used(1)	Location(s) from which these activities are coordinated(2)

(1) See RvA-T001 / ASR011
(2) See §2.3.1 for explanations

2.3.4 Calculations

A separate calculation is usually not mentioned in the scope, unless it belongs to an accredited activity. In the case of calculations relating to a single activity, this is shown in combination in one row of the scope. For calculations based on multiple acitivities, a separate activity is created with a '++' symbol in the first column (No.) instead of a number.

No.	Material or product	Type of activity	Internal / External reference number	Location
1.	The matrix in which the tests are carried out Or Object to be tested	Determination of the content of [xx] and the calculation of (the sum of) [yy] etc.; <technique>	Internal coding and reference to the reference method used(1)	Location(s) of test(s)(2)
++	The matrix of the tests on which the calculations are performed Or Object to be tested on which the calculation is performed	Calculation of [xx], based on the tests: <test xx> (<reference number), <test yy> (<reference number yy>), and so on	Internal coding and reference to the reference method used(1)	Location(s) where calculation(s) is/are performed(2)

(1) See RvA-T001 / ASR011

(2) See §2.3.1 for explanations

2.3.5 Opinions and interpretations

The laboratory may list Opinions & interpretations on the scope if they are based on its own tests / sampling. It is possible to make use of third-party results on parts, provided that they have been carried out under accreditation. Opinions & interpretations as stand-alone activity is not possible. The scope always explicitly indicates on which tests / sampling the Opinions & interpretations are based.

No.	Material or product	Type of activity	Internal / External reference number	Location
Opinions and Interpretations				
1	The matrix or object where opinions and interpretations are applied based on the results of tests performed	Minimum components/properties to be determined and technique(s) used (1) And interpreting the result to determine whether / that.... (2)	Internal coding and reference to the reference method used(3)	Location(s) of test(s)(4)

(1) Shown as much as possible as follows 'Determination of the content of [xxx]', 'Determination of [xxx]' or 'Detection of [xxx]' followed by the technique or method used

(2) For opinions & interpretations, the term 'ExAp' is common in relation to fire tests. For that field only, the scope is as follows: "Extended field of application (ExAp) of testing <reference standard/internal reference number>" . These relevant tests should be mentioned in the scope as described in this scope example.

(3) See RvA-T001 / ASR011

(4) See §2.3.1 for explanations

3 Accreditation assessments

3.1 Documents to be provided

For the purpose of RvA assessments, assessors shall be provided with relevant documents as specified in Annex A and, if applicable, as specified in a supplementary SAP / ASR for the field of activity.

3.1.1 Additional documents for flexible scope

The laboratory shall maintain an up-to-date list of activities of applied test methods reported under accreditation with respect to the flexible scope, according to the requirements in RvA-T054 / ASR004. The RvA makes a template available for the list of activities under the flexible scope, and recommends using this template to display all relevant information, see Annex D.

As soon as the RvA indicates that it will start planning the next study, the laboratory will make the list of activities under the flexible scope available to the RvA. An updated list of flexible scope must be made available to the RvA no later than four weeks before the assessment is carried out, if changes have been made in the meantime.

Annex A lists the documents to be provided for an assessment. In the case of an application of extension for a flexible scope from an institution that does not yet have a flexible scope, the institution shall additionally provide the following documents:

- Description of the process for a flexible scope (see also chapter 3 of T054 / ASR004).
    - With special attention for the implementation of validations and the approval of the new activities under the flexible scope by the management.
- The process of assessing applications, tenders and contracts, also in relation to the flexible scope.
    - This indicates, among other things, what to do in the case of a customer application within the flexible scope, but which does not yet meet the requirements for accreditation.
    - If a laboratory offers activities under the flexible scope and the fixed scope on the basis of a list of activities or a price list, the assessment of applications may be comparable.
- Risk analysis of the flexible scope
- Management assessment regarding implementation of the flexible scope
- Example file(s) of activity(s) to be added
- An overview of applied analytical methods which are under accreditation with regard to the flexible scope, the list of activities

3.2 Nature and content of the assessments

In addition to the general rules for the nature and content of the RvA assessments as laid down in RvA-BR001, the rules from the table below apply to this specific accreditation.

The nature and content of the assessments depend on the requested scope of accreditation, any pre-existing accreditation, the past performance of the organization (if applicable) and risks.

Method of assessment	Initial assessment	Regular assessments in the cycle [1]	Scope extension [2]
Pre-assessment	√		√
Document assessment			If applicable
Office assessment including witnessing of activities in the laboratory[4]	All main and sub-areas are witnessed	An annual assessment of the main areas of accreditation; during the accreditation cycle all sub-areas are assessed[3]	√
Witnessing of activities outside the laboratory [4]	All main and sub-areas are witnessed In the case of witnessing of samplers, √n samplers shall be witnessed and each sampler in the cycle	An annual assessment of the main areas of accreditation; during the accreditation cycle all sub-areas are witnessed[3] In the case of witnessing of samplers, √n samplers shall be witnessed.	√ In the case of witnessing of samplers, √n samplers shall be witnessed.
Flexible scope	Assessment of competence, process. Assessment of application based on an exemplary file	An annual assessment of the main areas of accreditation; during the accreditation cycle all sub-areas are assessed[3] Annually: Assessment of √n activities under the flexible scope since the previous assessment The size of the assessment team and the duration of the examination can be adjusted if interim changes in the list of activities have taken place. This is planned on the basis of a risk assessment. At least once within the accreditation cycle: Assessment of the competence and process with regard to the application of a flexible scope. In accordance with RvA-T054 / ASR004	Not yet accredited for flexible scope: Assessment of competence, process. Assessment of application based on an exemplary file Already accredited for flexible scope, extension for new sub-area: Assessment of implementation on the basis of an exemplary file
Opinions and interpretations (O&I)	Assessment of competence, process. Assessment of application based on an exemplary file	Annually: Assessment of √n files where the results of O&I have been reported At least once within the accreditation cycle: assessment of competence and the process about O&I. In accordance with §4.3.	Not yet accredited for O&I: Assessment of competence, process. Assessment of application based on an exemplary file Already accredited for O&I, extension for a new sub-area: Assessment of application on the basis of an example file

[1] A(n) (accreditation) cycle covers a period of four years, starting after a decision on an initial assessment or reassessment has been taken; the cycle therefore includes surveillance assessments and reassessments during this period.

[2] Based on the application, the RvA will determine how the assessments of the extension will be carried out.

[3] The part A report contains an assessment plan for four years.

[4] As a general rule, a full activity is witnessed, unless the objectives for the assessment activity can also be achieved with a partial witnessing.

3.2.1 Assessment of laboratories with flexible scope

The flexible scope is assessed as described in the table in §3.2. Based on the list of activities, RvA determines which new activities have been added. In consultation with LA and TA, the additional assessment time needed by the TA for the newly added activities is determined. The basis is to assess the root of the number of newly added activities.
The flexible scope is part of the laboratory's management review.

4 Specific points of attention for the RvA assessment

4.1 General

The explanatory document RvA-T015 / INF001 explains how the RvA interprets a number of standard elements of EN-ISO/IEC 17025.
The assessment team will pay particular attention to the performance of the laboratory in comparative laboratory studies (PT/ILC) in both fixed and flexible scope. See also RvA-T030 / ASR008.

4.2 Sampling

The explanatory document RvA-T021 / ASR010 provides a specific explanation of the requirements for sampling. The sample storage depots are listed in Part A and the depots are assessed on a random basis.

4.3 Opinions and Interpretations

It is the policy of the RvA that laboratories that are accredited for the EN-ISO/IEC 17025 may apply Opinions and Interpretations (O&I) in reports, if they are accredited for O&I.
The definition used by the RvA for O&I is the following: A professional judgement with regard to the tests carried out, whether or not in combination with sampling, and with regard to sampling as an independent activity.
The inclusion of O&I on test reports under accreditation is only allowed if these are based on test results of tested objects. For further information see §2.3.5 in this document and EA-4/23 INF.

4.4 Non-accredited support activities

When an accredited laboratory carries out in-house activities as a part of accredited activities for which it is not separately accredited, the RvA will conduct an assessment. The nature and content of the assessment of these activities will depend among other things on the extent to which a laboratory can demonstrate that it assesses these activities itself against the relevant criteria. The activities referred to here are:

- In-house calibrations.

If applicable, this is included in report Part A.

5 Changes compared to the previous version of this document

This is the first English version of ASR105, former SAP-L000. Compared to the Dutch SAP-L000 version 6.0 of March 2022, the following changes have been made:

- Use of new SAP/ASR template, which results, among other things, in the splitting of the additional documents into mandatory and informative documents, and the addition of §4.4 and Annex A, B and C;
- Introduction: addition of preferred standard for certain fields of activities within EN-ISO 15189 and EN-ISO/IEC 17025;
- §1: update of the relevant documents and referral to ASR001;
- Removal former Article 1.6 with definitions, these are incorporated in the text where necessary;
- §2.2, §3.1.1, §3.2.1: with the publication of RvA-T054 on flexible scopes, part of the information has been duplicated and removed and part of the information has been added in addition to the RvA-T054. Examples of modications are the addition of documents to be provided when applying for a flexible scope (§3.1.1) and a template for the list of activities (Annex E);
- §2.3.1: addition explanation of location on scope;
- §2.3.3: addition explanatory notes indicating sample pre-treatment on the scope;
- §2.3.4: addition explanation in the manner of stating calculations on scope;
- §2.3.5: elaboration on O&I methods of description and options;
- §3.2: addition of pre-assessment to assessment methods, modification options for document assessments based on practical experiences, further explanations on what will be assessed during the accreditation cycle, addition number of samplers to be witnessed, for O&I and flexible scopes the number of files to be assessed modified from 1 to √n;
- §3.2.1: addition of explicit explanation of the required assessment time;
- §4.2: addition assessment of sample storage depots;
- §4.4: deleted text repeating EA-4/23 INF;
- §4.5: information on non-accredited support activities is included, in accordance with ASR template;
- Annex A, B, C: added in accordance with the ASR template, contains information from the policy rules specifically for test laboratories which has not been included in the new policy rule BR001;
- Annex D: template with overview of activities under the flexible scope is included;
- Annex E: Addition of scope examples.

Annex A: Documents to be provided

Documents to be provided ISO/IEC 17025 Test laboratories	Initial assessment	Extension within main and/or sub-area	Extension outside the main and/or sub-area	Surveillance	Reassessment	Witnessing
1. Completed RvA application form for accreditation (F001a);	√					
2. Completed RvA application form for scope extensions and/or scope adjustments (F105);		√	√			
3. Completed RvA supplementary application form testing (F004-1);	√	√	√			
4. Adapted Chapter 1 of the Part A report for this accreditation;			√	√	√	√
5. Proof of Chamber of Commerce registration (not more than six months old);	√				√	
6. An organisational chart and description of your organisational structure;	√		√[1)]			
7. Documentation (e.g. quality manual or similar documentation) and general management system procedures;	√		√[1)]	√	√	√
8. A cross-reference between the requirements of the EN-ISO/IEC 17025 and your quality system;	√		√	√	√	√
9. Reporting of internal audit(s);	√	√	√			
10. Management review report;	√					
11. Management review report focusing on the new activities;		√[2)]	√[2)]			
12. The working instructions for all requested tests;	√	√	√	√	√	√
13. Validation or verification file (plan and report) for all requested tests including the validation procedure(s);	√	√	√			
14. Results of internal quality controls as stated under EN-ISO/IEC 17025, crit. 7.7.1 for all requested tests;	√[3)]	√[3)]	√[3)]			
15. Results of external quality controls as statedunder EN-ISO/IEC 17025, crit. 7.7.2: declaration and results of PT (Proficiency Test) or ILC (interlaboratory comparison) in which the participant participated and the PT plan (see RvA-T030 / ASR008);	√[4)]	√[4)]	√[4)]	√[4)]	√[4]	√[4)]
16. Measurement uncertainty calculation(s) according to EA-4/02 for all quantities (only applicable if the laboratory performs its own calibrations as referred to in clause 6.4.6 of EN-ISO/IEC 17025);	√	√	√	√	√	

Documents to be provided ISO/IEC 17025 Test laboratories	Initial assessment	Extension within main and/or sub-area	Extension outside the main and/or sub-area	Surveillance	Reassessment	Witnessing
17. Example of a report to the customer;	√	√	√			
18. Declarations of competence (matrix and requirements) for sampling only;	√	√	√	√	√	√
19. General procedures developed or adapted;	√	√[1)]	√[1)]			
20. When applying for a flexible scope: the specific procedures relating to the management of the activities applied for under the flexible scope (see § 3.1.1 for a specification);	√	√[1)]	√[1)]			
21. An overview of applied analytical methods covered by accreditation with regard to the flexible scope, the list of activities (if applicable);		√		√	√	
22. The specific procedures related to managing Opinions and Interpretations (if applicable);	√	√	√	√	√	
23. Any additional documentation in accordance with the ASR for the parts of the scope in question.	√[1)]	√[1)]	√[1)]	√	√	√

[1)] if applicable for this new activity(ies). If you do not consider it applicable, please state this.
[2)] for this new activity/these new activities.
[(3)] in the case of an application for sampling activities: results of the competence of the sampler(s) as specified under EN-ISO/IEC 17025, criterion 6.2.5.f for all tests applied for.
[4)] does not apply to applications for sampling activities, unless external quality controls are common in the sector concerned.

Annex B: Fields of activities RvA

Conformity assessment activities for which accreditation can be requested from the RvA.

Activities marked with (NL) are only accredited by bodies established in the Netherlands.

If the RvA no longer has active accreditations in a field of activity, the field of activity is considered inactive.

Performance of tests as referred to in EN-ISO/IEC 17025

MAIN AREA	SUBAREA
Agricultural products, food, food industry, feed;	Microbiology and biology; Chemical testing; Physical testing; Sampling.
Environmental compartments water, soil and air;	Microbiology and biology; Chemical testing; Physical testing; Acoustic testing; Radiation; Sampling.
Forensic;	Toxicology; DNA testing; Chemical (forensic) testing; Physical (forensic) testing; Biological (forensic) testing; Biometry; Pathology.
Human health, animals and animal health;	Veterinary toxicology; Veterinary chemistry; Microbiology; Virology; Biology; Immunology; Histology; Pathology; Fertility; Sampling.
Fuels, ores, minerals, chemicals, metals and precious metals, medicines;	Chemical testing; Physical testing; Toxicology; Sampling.
Materials, raw materials, products for the construction industry, including road construction;	Chemical testing; Physical testing; Functionality tests; Fire resistance; Sampling.
Machinery, instruments, (pressure) equipment, (electrical) appliances, installations and equipment, tools, vehicles and toys;	Destructive testing; Non-destructive testing; Mechanical tests; Functionality tests; Safety; Electrical safety, EMC.

MAIN AREA	SUBAREA
Textiles, leather and leather products;	Chemical testing; Physical testing.
Personal protective equipment;	Physical testing; Functionality; Safety.
Software;	Security; Functionality.
European Directives and Regulations (NL).	As stipulated in Annex 2 of ASR006, applicable when the mandatory standard is EN-ISO/IEC 17025.

Annex C: Examples of category A non-conformities

Laboratories

a. The laboratory has reported erroneous results.
b. In the absence of adequate quality controls it is not demonstrable that results are correct.
c. The laboratory cannot demonstrate that the application of the method used gives correct results.
d. The accreditation mark (or other communication) is used in a way that suggests that the body is accredited for an activity where this is not the case.
e. In one or more files so many of the records required are lacking that it is no longer possible to see that tests have been carried out correctly.

Annex D: Template - Overview of activities under flexible scope

List of activities under the flexible scope of accreditation Lxxx										
Scope No.	**Material or product**	**Component(s), parameter(s) or characteristic(s) to be determined;**	**Type of activity**	**Internal reference number**	**Reference method, standard, in-house method or protocol supplier**	**Date of validation/ verification**	**Implementation date**	**Location**	**Remarks**	**Date removal method**
reference to the number of the scope element on the scope of accreditation	*specified matrix, material or product to be tested*	*component(s), parameter(s) or characteristic(s) to be determined*	*methods, tests or types of tests carried out and, where applicable, the techniques, methods and/or equipment used*	*number(s) of the work instruction(s), SOP(s) or protocol(s) applied for this method*	*reference to reference method or standard ('in accordance with' and 'equivalent to'), protocol supplier or in-house method*	*date of approval of the validation or verification report*	*from which date the method is carried out under accreditation*	*if multiple locations under the scope of accreditation*		*it is also possible to include deleted methods in a separate tab*

Annex E: Scope examples

1. Examples for locations

Location	Abbreviation / location code
Parallel road 12 3511 AB Utrecht Netherlands	UTR
Office street 34 1002 CD Amsterdam Netherlands	AMS
On location (at the customer)	O-UTR
Mobile laboratory	MOLA-AMS

No.	Material or product	Type of activity	Internal / External reference number	Location
1.	Wind turbines	Determination of sound power; microphone, wind meter and power meter	HKL W 1.1 IEC 61400-11	UTR and/or O-UTR
2.	Granular material / soil	Determination of the relationship between density and water content (proctor test); volumetrics, gravimetry	T.012xxFuL RAW 2015 test 9 and NEN-EN 13286-2 RAW 2020 test 9 and NEN-EN 13286-2	O-UTR and/or MOLA-AMS

2. Examples for a fixed scope

No.	Material or product	Type of activity	Internal / External reference number	Location
		Inorganic analyses (wet chemistry)		
3.	Wastewater	Determination of the chemical oxygen demand (COD); titrimetry	COD1 NEN 6633	UTR
4.	Soil	Determination of the sieve fractions; wet sieve analysis fractions <0,125 mm, <0,400 mm, < 1,00 mm and <1,25 mm	SIEVE04 in-house method	AMS
		Inorganic analyses (metal analyses)		
5.	Soil	Determination of copper content after decomposition with nitric acid and hydrochloric acid; AAS Flame, including associated sampling	IW098 NEN 5758	HHW
6.	Ground water	Determination of the content of metals; ICP-AES chromium, copper, lead, nickel and zinc	AAMET-02 NEN 6426	GRN
7.	Compost	Determination of the content of chromium and copper; ICP-AES	WVS-07 and WVS-006 in-house method (digestion NEN 6961 and measurement destruate NEN-EN-ISO 17294-2)	HHW, GRN
8.	Coal ash	Determination of the content of elements; XRF aluminium, calcium, iron, potassium, magnesium, sodium and phosphorus	COLEN-02 ASTM D 4326	AMS
		Organic analyses		
9.	Lettuce and grain	Determination of the chloropesticide content; GC-ECD aldrin, ppDDD, opDDE, ppDDE, opDDT, α-HCH, β-HCH, γ-HCH, -HCH, δhexachlorobenzene, telodrin, dichloran, quitozene, perthane, chlordane, chlorfenson, procymidone, bromopropylate, endrin, heptachlor, tetradifon, heptachlorβ and pentachlorobenzene and the sum of these 23 chlorine pesticides	CHE409W in-house method	UTR
10.	Soil	Determination of mineral oil content; GC-FID	AH1103W NEN 6970 (extraction NEN 6972, cleanup NEN 6975, measurement NEN 6978)	UTR, AMS

		Microbiological analyses		
11.	Poultry faeces	Detection of *Salmonella;* MRSV	MICR01 ISO 6579: 2002/Amd.1:2007, Annex D	UTR, AMS, HHW
12.	Surface water	Determination of the number of *Escherichia coli;* MPN (microtiter)	MICR02 EN-ISO 9308-3	HHW
13.	*Salmonella* isolates from poultry	Confirmation and identification of *Salmonella*; agglutination reaction according to Kauffman-White classification *S. enteritidis, S. typhimurium S. infantis, S. hadar, S. virchow, S. java.*	MICR03 NPR-CEN-ISO/TR 6579-3	GRN
		Hydrobiological analyses		
14.	Substrate and surface water (fresh)	Determination of the abundance and coverage of water and riparian flora; Vegatation according to Tansley	HYD-A1 Handbook Hydrobiology - Bijkerk R. (chapter 11)	UTR, AMS, HHW
15.	Surface water (fresh)	Determination of species composition, density, biovolume and phytoplankton; cuvette method (microscopy and image analysis)	HYD-A2 EN 15204	HHW
		Road construction		
16.	Granular material	Determination of the relationship between moisture content and density with the proctor test; gravimetry	WVS145 RAW 2020 test 9	HHW
17.	Precast concrete paving and pavement (concrete paving)	Determination of the properties; dimensions, force measurement shape and appearance, length, width and height, thickness and adhesion of the coating, and fission tensile strength	WVS146 NEN-EN 1338	GRN
18.	Aggregates	Determination of the Los Angeles coefficient; gravimetry	WVS147 EN 1097-2	HHW, GRN
19.	Asphalt cores	Detection of PAH; PAH detector	WVS148 in-house method	AMS
20.	Asphalt	Detection of PAH; thin layer chromatography	WVS149 in-house method	UTR
21.	Asphalt cores	Determination of the layer thickness and construction structure; ruler	WVS 150 RAW 205 trial 152	UTR, AMS, HHW
22.	Paving material	Determination of the bending resistance (bending tensile strength); strength test	WVS 152 EN 1344 Annex D	HHW

		Testing for animal identifiers		
23.	Low frequency transponders (animal identification transponders)	Determination of the resonance frequency; two-channel oscilloscope in combination with spectrum analyzer	MET01 ISO 24631 part 1 ch. 7.2, 7.3 and 7.4	UTR

3. Examples for a flexible scope

No.	Material or product	Type of activity	Internal / External reference number	Location
		Flexible scope(1)		
24.	Feed and feed raw materials, food and food raw materials	Detection of genetic modifications (GMO); PCR	RX718.01	UTR
25.	Plant material and Arthropods	Identification of Arthropods with morphology, PCR, Real-time PCR, PCR Sequencing, NGS (Next Generation Sequencing) including bioinformatic data analysis	R-CMV-000-001 R-ENT-000-001	UTR
26.	Consumer products as listed below: - Toys - FCM (Food Contact Materials) - Cosmetics	Determination of the content of organic components; liquid chromatography (LC-DAD, LCMS, LC-MS-MS)	Register Accreditation PVCMO Lab	AMS
27.	Cow milk and cow milk products	Determination of the fatty acid profile and the associated authentication of the production system; GC-FID and multivariate classification	SOP VAL-0002	GRN
28.	Water	Determination of the content of metals; ICP-AES	AAMET-12	UTR
29.	Pharmaceutical products	Determination of the composition and/or contaminants; gravimetry, spectrophotometry, titrimetry, ICP-AES, GC-ECD/FID/MS and HPLC	FARM302 according to pharmacopoeia	GRN

(1) The laboratory is obliged to maintain an up-to-date list of activities performed under this flexible scope. This list can be requested from the laboratory.

4. Examples for sampling

No.	Material or product	Type of activity	Internal / External reference number	Location
		Cluster: Gaseous (in)organic		
30.	Emitted air, smoke, process and exhaust gases	Determination of oxygen content (O_2); paramagnetism, including associated sampling	LM-WV-12 NEN-EN 14789 (sampling NEN-EN 15259)	MOLA-HHW
		Sampling		
a.	Surface water	Sampling for inorganic and organic testing with internal reference numbers AAx and OAy; random sampling	SPV1 NEN 6600-2	O-UTR
b.	Air and (process) gases	Sampling for the determination of ammonia content; absorption method *(the associated content determination is structurally carried out by another accredited laboratory)*	MDW-20 NEN 2826 and NEN-EN 15259	HHW, O-UTR

5. Example for pre-treatment of samples

No.	Material or product	Type of activity	Internal / External reference number	Location
--	Organic and inorganic coatings on metal surfaces	Sample pre-treatment for testing after exposure to Salt spray test using the NSS method and AASS method	WI001, ISO 9227, ISO 12944-6, ISO 12944-9, NORSOK M501	HHW
--	Coal and cokes	Sample pre-treatment for the following physical and chemical tests; breaking, drying and grinding	ISO 18283	AMS

6. Examples for calculations

No.	Material or product	Type of activity	Internal / External reference number	Location
31.	Sand / bentonite (/ polymer) mixtures)	Determination of bentonite / content of sand /bentonite/polymer mixtures; titrimetry Calculation of the mixing quality of sand/bentonite/polymer mixtures	T.102xxFuL BRL 1148, III / 1153, VI T.102xxFuL Trial E, CUR Recommendation 33, as mentioned in BRL 1153	AMS and MOLA-AMS

No.	Material or product	Type of activity	Internal / External reference number	Location
++	Coal and cokes	Calculation of the solid carbon content from the tests: total moisture content (94.COAL.W003), moisture content (94.COAL.W004), ash content (94.COAL.W005) and volatile matter content (94.COAL.W006)	94.COAL.W007 ASTM D3172 ASTM D3180	HHW

7. Examples for Opinions and Interpretations

No.	Material or product	Type of activity	Internal / External reference number	Location
		Opinions and Interpretations		
32.	Doors and shutters, controllable textile screens and openable windows	Extended field of application (ExAp) of smoke resistance testing (EN1634-3)	HKL B7.1 EN 15725, EN 15269-1 and EN 15269-20	AMS
33.	Raw data derived from RapidDNA method of human saliva or blood trace samples	Analysis for typing of STR systems and the XY amelogenine gene And interpretation regarding comparison (forensic) DNA results on source level	QOL-01150 in-house method	HHW