

Accreditation Programme

**Inspection of consignments
of soil, building materials and
granular waste materials
Section: General**

AP04 - A



DRAFT TRANSLATION

Version 8, 03-10-2013

Introduction	5
A 1 General requirements for AP04	9
A 1.1 Basic requirements and additional requirements	9
A 1.2 Independence	9
A 1.3 Accreditation per test	9
A 1.4 Accreditation of sample pretreatment	10
A 1.5 Recognitions	10
A 1.6 "Recognition subject to restrictions"	11
A 1.7 Amendments	12
A 1.8 Hierarchy	12
A 1.9 Reporting	12
A 1.10 Use of logos	14
A 2 Requirements for the accrediting institution	15
A 2.1 Accrediting institution	15
A 2.2 Accreditation investigation	15
A 2.3 Communication between accrediting institution and Soil Management Accreditation Board.....	15
A 3 Package division of the Accreditation Programme for inspections of consignments of soil, building materials and granular waste materials AP04.....	16
Appendix A1 Regulations use of logo "Quality Assurance Soil Management SIKB"	20
Appendix A2a Package division specification Composition, soil, SG1.....	21
Appendix A2b Package division specification Composition, soil, SG2	22
Appendix A2c Package division specification Composition, soil, SG3.....	23
Appendix A2d Package division specification Composition, soil, SG4	24
Appendix A2e Package division specification Composition, soil, SG5.....	25
Appendix A2f Package division specification Composition soil, SG6	26
Appendix A2g Package division specification Composition soil, SG8	27
Appendix A2h Package division specification Composition, building materials, SB1.....	28
Appendix A2i Package division specification Composition, building materials, SB3.....	29
Appendix A2j Package division specification Composition, building materials, SB4	30
Appendix A2k Package division specification Composition, building materials, SB5.....	31

Appendix A2l Package division specification Composition, building materials, SB6.....	32
Appendix A2m Package division specification Leaching Test, U1 (soil, unshaped and shaped building materials); non-diffusion defined leaching	33
Appendix A2n Package division specification Leaching test, U2 (shaped building materials); diffusion defined leaching when no low level of leaching or swift depletion is expected	34
Appendix A2o Package division specification Leaching test, U3 (shaped building materials); diffusion defined leaching when low level of leaching or swift depletion is expected	35
Appendix A2p Package division specification investigation for Industrial and Hazardous Waste (Notification) Decree/Waste Substances (Landfills and Dumping Bans) Decree, KA (granular waste materials); composition and leaching	36

DRAFT TRANSLATION

Reference number

SIKB-Official doc._S_13_54853

Rights of ownership

This document was commissioned and published by the Foundation Infrastructure for Quality Assurance of Soil Management (SIKB). The Soil Management Accreditation Board, incorporated in the SIKB, manages the contents of this document. The current version of the document is available on the SIKB website (www.sikb.nl) and has been electronically protected against unapproved alterations. It is not permitted to introduce alterations to the original texts, which have been approved and adopted by the Soil Management Accreditation Board, for the purpose of deriving rights thereof.

Indemnification

Except for in case of intentional acts or gross negligence, the SIKB cannot be held liable for damages incurred by the Dutch Accreditation Council (RVA), the accredited company or third parties, which arise from the application of this document and the corresponding documents and the use of this accreditation regulation.

© Copyright SIKB

Copying parts of the text, stating the source references is permitted. All rights are vested in SIKB.

How to order

Electronic versions of this document and the corresponding documents are available from the SIKB website, free of charge. Bound copies are available for purchase at the SIKB.

Update service

Alterations to this document approved by the Soil Management Accreditation Board can be obtained from the SIKB by registering at www.sikb.nl. You may register for the alterations to be forwarded to you automatically. Requests to receive the regular newsletter from SIKB by post may be directed at: info@sikb.nl

Helpdesk / Instructions for use

You may refer to SIKB for questions about the content and application of this document. For disputes in the scope of assessments, please refer to the complaints and disputes settlement scheme in the Policy Regulation Accreditation, also known under its codename RvA-BR002, which can be downloaded from www.rva.nl.



Introduction

Background

In 1993, the Ministry of Housing, Spatial Planning & the Environment and the Ministry of Transport, Public Works & Water Management of the Netherlands issued the policy document "Quality of Environment Measurements" (Dutch House of Representatives, session year 1992-1993, 23 061, nr. 2). In this policy document it is established that environment measurement data form the foundation for the environment policy and therefore the quality of these measurement data must be guaranteed. In the policy document it is observed that the quality and comparability of the environment measurements often lack sufficient standard. In order to improve the quality and comparability of environment measurements on a continuous basis, among other things the abovementioned ministries set up the action programme "Standardization and Validation of Environment Measurements 1993 - 1997". Besides this, the drafting of an Accreditation Programme was commissioned, to provide institutions performing the measurements with an unambiguous set of additional criteria that the performance of the measurements must comply with. The accrediting institution ensures that the accredited institutions carry out the tests as referred to in the Accreditation Programme in conformity with the quality demands applicable to that effect. In a practical sense, the Dutch Accreditation Council is charged with this role in the Netherlands.

The Dutch Accreditation Council has created the possibility to set up accreditation programmes for the market where within a set of demands are laid down that an institution must comply with in order to be accredited for the programme in question.

Accreditation Programmes

The purpose of an Accreditation Programme is to provide clarity into the nature and extent of the accreditation for the commissioning authorities of institutions and to provide clarity on the criteria and requirements set for the institution in itself regarding a specific field. The latter is particularly achieved by formulating specific additional requirements that must at least be complied with. In its most basic form, an Accreditation Programme may contain a set of guidelines for a minimum of tests which should at least be included in the accreditation. Accreditation Programmes are not intended to replace an accreditation in conformity with NEN-EN-ISO/IEC 17025, rather for the market, they form an easily recognizable part of the scope of the accreditation. Accreditation Programmes are drawn up by a number of institutions/companies, in consultation with interested parties.

Scopes of application

By order of the Ministry of Housing, Spatial Planning and the Environment (Dutch abbreviation: VROM), a first version of an Accreditation Programme was drawn up in 1995, for the performances that were carried out in the scope of the Dutch Building Materials Decree. This concerns both composition investigations and leaching tests, including tests / actions concerning sampling, sample pretreatment and the analysis of eluates.

In 2008, the Ministry of Housing, Spatial Planning and the Environment published the Decree for the Implementation of the decision for acceptance of waste materials at landfills. This leads to the implementation in national resolutions of decision nr. 2003/33/EC, establishing criteria and procedures for the acceptance of waste at landfills (OJEC L11). This amending decision lays down requirements in the Industrial and Hazardous Waste (Notification) Decree and the Waste Substances (Landfills and Dumping Bans) Decree, for compliance by parties that wish to perform works in the scope of characterizing and inspecting waste materials respectively, which are dumped at landfills.



Besides the amending decision also amending regulations were published. With these regulations, for the purpose of defining the two decisions referred to, further rules are included in the Industrial and Hazardous Waste (Notification) Regulations and the Conditioned Hazardous Waste at Landfills Regulations. This latter regulation herewith received a new title: Acceptance of Waste at Landfills Regulation.

Since the work activities for laboratories are closely connected with and for a major part even overlap those as laid down in various AP04 documents in the scope of the Soil Quality Decree and the Soil Quality Regulations, it was decided in early 2008 to lay down the detailed requirements to laboratory work activities as set out from the referred decisions and regulations, in AP04.

As per July 2008, the Building Materials Decree is no longer in force and the inspection of consignments of soil, sediment and building materials has been incorporated at the Soil Quality Decree and the Soil Quality Regulations. The required amendments have been introduced in the AP04 documents.

Soil Quality Decree (AP04)

This Accreditation Programme was drafted, among other things, for conducting investigations in the scope of the Soil Quality Decree and the Soil Quality Regulations. The tests in the Accreditation Programme therefore also correspond with the legal requirements as laid down in the Soil Quality Decree and the appurtenant Soil Quality Regulations. In the Soil Quality Decree/Soil Quality Regulations it has been laid down that producers and users of building materials, but also authorities and other enforcers are obliged to assign an accredited institution for establishing the quality of (a consignment of) building material. The purpose of this requirement is to improve the quality of the investigations and therewith also improve the conclusions to be drawn about the investigated building material. All this is in line with the policy document "Quality of Environment Measurement" referred to hereinabove.

The Soil Quality Decree and the Soil Quality Regulations have various types of studies for various types of matrices. There is a (rough) distinction to be made in the investigation of soil and the investigation of other building materials that are either or not shaped. Furthermore, a distinction can be made in the type of investigation; for example, the Soil Quality Decree/Soil Quality Regulations refers to sampling, sample pretreatment, composition investigation, leaching test and analysis of eluates.

Reference points of the Accreditation Programme AP04 are (inter)nationally standardized tests. For a number of method-specific parameters the test is prescribed as mandatory. For other tests, the reference point is defined by a standard. Another method may be applied here, if the results are proven to be equivalent to the reference point.

Industrial and Hazardous Waste (Notification) Decree and the Waste Substances (Landfills and Dumping Bans) Decree.

The Industrial and Hazardous Waste (Notification) Decree and the Waste Substances (Landfills and Dumping Bans) Decree regulate that waste materials to be dumped are regularly inspected in terms of composition and leaching. This Accreditation Programme lays down the package for which accreditation must be obtained (AP04-KA), also the requirements for the relevant tests in the performance sheets.



Structure AP04

For the sake of clarity, it was opted to split up the Accreditation Programme for inspections of consignments of soil, building materials and granular waste materials in the following sections:

AP04-A	general
AP04-V	sample pretreatment
AP04-SG	composition: soil
AP04-SB	composition: building materials (not being soil) and granular waste materials
AP04-U	leaching test
AP04-E	analysis of eluates

In principle, accreditation in conformity with this Accreditation Programme takes place in so-called packages (groups of tests, see chapter A3). Besides this, an institution may also seek accreditation for the individual tests (standards), however only when performed and quality assured as described in this Accreditation Programme. In this latter case, the institution may not carry the name of the Accreditation Programme, but it will be permitted to carry the names of the tests from it. See A1.3 for further requirements to the accreditation.

The specific matters, pertaining to various tests are worked out in detail in the documents AP04-V, AP04-SG, AP04-SB, AP04-U and AP04-E. The more general and coordinative matters are further defined in the present document (AP04-A).

This general section of the Accreditation Programme "for inspection of consignments of soil, building materials and granular waste materials" describes no specific tests, but refers to general requirements regarding accreditation in conformity with the Soil Quality Decree/Soil Quality Regulations and/or Industrial and Hazardous Waste (Notification) Decree/Waste Substances (Landfills and Dumping Bans) Decree. Furthermore, it is stipulated which requirements an institution must comply with to be recognized by the Minister of Infrastructure and the Environment as an institution authorized within the scope of the Soil Quality Decree/Soil Quality Regulations, to carry out the tests in question. Also, this general section provides an overview of the packages of tests for which an institution must be accredited to be recognized by the abovementioned Minister. This general section also contains a description of requirements the accrediting institution must comply with.

Accrediting institutions

In a practical situation, the accrediting institution in virtually all cases will be the Dutch Accreditation Council (RvA). For reasons of clarity where reading these documents is concerned, we will continue to refer to the Dutch Accreditation Council. However, instead of this Council we may also refer to 'an organization the Dutch Accreditation Council has concluded a Multi-Lateral Agreement (MLA) and a Mutual Recognition Arrangement (MRA) with and which also demonstrably complies with the NEN-EN-ISO/IEC 17011'.

Explanation:

The Dutch Accreditation Council has a Multi-Lateral Agreement with the organizations that are members of the European co-operation for Accreditation (EA). Besides this, the Dutch Accreditation Council, either or not through EA, has Mutual Recognition Arrangements with separate organizations connected to the International Laboratory Accreditation Co-operation (ILAC).



History AP04

The first version of the Accreditation Programme AP04 was published in 1995 and consisted only of the section composition soil.

In 1998, the section composition soil was integrated in the total Accreditation Programme Building Materials Decree. The general requirements are included in the general section (AP04-A), matters regarding sample pretreatment are included in the section Sample Pretreatment (AP04-V).

As per 1 December 2000, the Dutch Accreditation Council and the Ministry of Housing, Spatial Planning and the Environment transferred management of the Accreditation Programme AP04 to the Foundation Infrastructure for Quality Assurance of Soil Management (Dutch abbreviation: SIKB). In the revised versions from 2001 of the AP04-documents (AP04-SG version 6, AP04-V version 3, AP04-A / -SB / -U- / -E / -M version 2), the issued errata, updates of NEN standards en results of the relevant SIKB-projects are implemented.

In the period 2004-2006, the Accreditation Programme AP04 was updated by order from SIKB. From the resulting versions of the AP04-documents (AP04-SG version 7, AP04-V version 4, AP04-A / -SB / -U- / -E version 3), various imperfections were removed, the package division was adapted to practical demands and standards for validation investigation (NEN 7777) and equivalence investigation (NEN 7778) were taken as a basis for the sections in question of AP04. These updated versions came into effect on 1 April 2005. The section AP04-M was updated at a later stage. The updated version 3, where within advancing insights are incorporated, came into effect on 1 May 2006. This also aligned the certification schemes under BRL SIKB 1000 and AP04-M as much as possible.

In 2008, the scope of AP04 was expanded to include waste materials in the framework of the European Landfill Directive. In this implementation programme in the Netherlands, leaching is particularly relevant. This is why supplements were drafted for the documents AP04-U and AP04-E. Provisions of LOI, ZBV, TOC and pH-CaCl₂ were added to the AP04-SB. Also, the determination of the dry-matter content has been adjusted for waste materials. Besides this, the sample pretreatment scheme in AP04-V has been adjusted. With the expansion of the scope of Accreditation Programme AP04, the title has been changed from "Accreditation Programme Building Materials Decree" into "Accreditation Programme for Inspection of Consignments of Soil, Building Materials and Granular Waste Materials".

In 2008, AP04 was also adapted to the "Soil Quality Decree" and the "Soil Quality Regulations".

Huge efforts were contributed by many who were involved in establishing the Accreditation Programme AP04, both in its original form as well as in the versions adapted at later stages. The board of SIKB is very grateful for this.

Safety

Institutions conducting investigations into soil, building materials and granular waste materials must be aware that the samples may be contaminated and proper safety measures are required.



A 1 General requirements for AP04

A 1.1 Basic requirements and additional requirements

In order to be eligible for accreditation in conformity with (sections of) the Accreditation Programme AP04 "for inspections of consignments of soil, building materials and granular waste materials", the institution must be accredited in conformity with NEN-EN-ISO/IEC 17025. Additional requirements have been formulated in the Accreditation Programme AP04, which the tests of an institution must comply with in order to be accredited for (sections of) the Soil Quality Decree/Soil Quality Regulations and/or Industrial and Hazardous Waste (Notification) Decree/Waste Substances (Landfills and Dumping Bans) Decree. The requirements drawn up primarily pertain to performance characteristics and quality assurance (internal and external quality control).

An institution may be recognized by the Ministry of Infrastructure and the Environment for the Accreditation Programme AP04 in the scope of the Soil Quality Decree/Soil Quality Regulations, if this institution can demonstrate with historic data accrued over at least a six-month period, to have complied with the quality requirements as specified in the Accreditation Programme.

The requirement does not apply for the performance of analyses in the framework of Industrial and Hazardous Waste (Notification) Decree/Waste Substances (Landfills and Dumping Bans) Decree; see A1.3 and A1.5 for further specification.

A 1.2 Independence

In addition to the requirement as referred to in A.1.1, the institution may in no legal or financial way, nor in terms of personnel matters be affiliated with or linked to the customer, outside the assignment or the contract, to perform laboratory investigations. If such a connection does exist, the supplier may not accept assignments either, if these are awarded by the customers through an interim party. This requirement of independence also applies for a government body in the capacity of supplier relative to that same government body as customer (user of the building material). Only where a laboratory investigation in the framework of enforcement is concerned, may supplier and commissioning authority be the same government body.

A 1.3 Accreditation per test

An institution may obtain accreditation per separate test in conformity with the Accreditation Programme for inspections of consignments of soil, building materials and granular waste materials (AP04). (Also see A1.4 for sample pretreatment). In the framework of the recognition from the Ministry of Infrastructure and the Environment, the accreditation must comprise all compounds or elements referred to in the performance sheet of a test (it is therefore not possible to be accredited for one single compound, for instance, if the performance sheet stipulates multiple compounds).

The accreditation for the test in question according to AP04 will be recorded on the scope of accreditation with the accreditation statement. This does not immediately result in recognition, see A1.5 for this.



It is possible that an institution is accredited for only one test or for a limited number of tests and as such, not for all tests required for the validation of tests to be recognized by the Ministry of Infrastructure and the Environment. In such a situation, the tests required for the validation must be outsourced to an institution that is accredited for this.

A special type of test for which an institution may be accredited in conformity with the Accreditation Programme for inspections of consignments of soil, building materials and granular waste materials (AP04), is the test for which the term investigation protocol is used in the Soil Quality Decree/Soil Quality Regulations. The investigation protocol applies to parameters that are not mentioned in the Accreditation Programme. The investigation protocol directs the selection of a method for such a parameter and lays down requirements for the performance characteristics. Accreditation takes place per compound as referred to in the appendix of the accreditation certificate. Contrary to what the term investigation protocol possibly suggests (being that it is aimed at investigation), the accreditation is obtained as a "fixed scope" (analyte, method and area of application are fixed).

A 1.4 Accreditation of sample pretreatment

The sample pretreatment consists of activities (actions) which in themselves are difficult to verify quantitatively. The Dutch Accreditation Council therefore has adopted the position that, in a general sense, sample pretreatment must be accredited in conjunction with other activities that are easier to verify, such as composition investigations and/or leaching tests. In the scope of the Accreditation Programme AP04, the sample pretreatment may be accredited separately, provided that with extra quality control measures it is demonstrated that this is a controlled procedure. Think here of the ability to unilaterally demonstrate the identity of all samples and sub-samples and taking measures preventing cross-contamination between the various samples, among other things.

A 1.5 Recognitions

Recognition for the "Soil Quality Decree"

Recognition is effected on the basis of the "Quality Assurance" of the Dutch Ministry of Infrastructure and the Environment (see the Dutch website: www.rijksoverheid.nl, Soil Quality Decree, chapter 2).

If an institution wishes to be recognized by the Minister of Infrastructure and the Environment as an institution authorized to perform work activities in the framework of the Soil Quality Decree/Soil Quality Regulations, it must be accredited for the tests of complete sections of the AP04 (so-called packages of tests). Considering the extensive proportions of the Accreditation Programme for inspection of consignments of soil, building materials and granular waste materials and the diversity of the tests, institutions cannot be expected to be able to carry out all tests, nor can they be expected to wish accreditation for all these. This is why, as yet, the following specifications were chosen for the recognition in terms of the "Soil Quality Decree":

1. Sampling;
2. Composition of soil, including sample pretreatment;
3. Composition of building materials (not being soil), including sample pretreatment;
4. Leaching test building materials and soil, including sample pretreatment and eluate analyses.



In order to be eligible for one of the four specifications above to confer the designation "recognized for the Soil Quality Decree", an institution:

- must be accredited for all tests of one of the packages as described in further detail in chapter A3, where;
- in case of recognition for the specification "Composition of soil" this must at least comprise the tests of package SG1 and in case of recognition for the specification "Composition of building materials (not being soil)", this must at least comprise the tests of package SB1. An exception to this are the asbestos packages SG6 and SB5, where the institution does not also require recognition for SG1 or SB1, respectively;
- one of the tests per package may be outsourced (by contract) to an institution that is AP04-recognized for the test in question;
- per package, the institution must carry out at least one test by itself;
- the tests U-I, U-II, U-III, U-IV and U-V may not be outsourced.

The institution to which work activities were outsourced by another institution may in no legal or financial way, nor in terms of personnel matters be affiliated with or linked to the customers.

The package division per specification as referred to will be worked out in further detail in chapter A3.

Recognition for Industrial and Hazardous Waste (Notification) Decree/Waste Substances (Landfills and Dumping Bans) Decree

In the framework of the Industrial and Hazardous Waste (Notification) Decree/Waste Substances (Landfills and Dumping Bans) Decree, there is no system for the recognition of laboratories. What applies here is a requirement on the level of accreditation: a laboratory that wishes to carry out work activities in the framework of the Industrial and Hazardous Waste (Notification) Decree/Waste Substances (Landfills and Dumping Bans) Decree, must have accreditation for the entire package AP04-KA, see appendix A2p. Outsourcing of no more than 1 analysis is permitted.



A 1.6 "Recognition subject to restrictions"

An institution may obtain accreditation for (sections of) the Accreditation Programme for inspections of consignments of soil, building materials and granular waste materials, if it complies with all requirements of the (relevant section of the) Accreditation Programme, with the exception of the requirement as referred to in A1.1 regarding accrued historic data. After the accreditation is granted and following recognition by the Ministry of Infrastructure and the Environment (Soil+), compliance with this requirement must be demonstrated within no more than 6 months. If such is not the case, the Ministry of Infrastructure and the Environment (Soil+) will revoke the recognition. The institution in question will then only be eligible for recognition by the aforementioned ministry after one year.

In order to be eligible for "recognition subject to restrictions" in the framework of the Soil Quality Decree, all tests must be validated. Besides this, demonstrable historic data are required of at least 1 month of the internal quality control of the various tests.

Recognition subject to restrictions is not relevant where the performance of analyses in the framework of the Industrial and Hazardous Waste (Notification) Decree/Waste Substances (Landfills and Dumping Bans) Decree is concerned.

A 1.7 Amendments

If the Accreditation Programme is amended, the institution must implement the amendments within 12 months.

If a new version of a standard (which the Accreditation Programme for inspections of consignments of soil, building materials and granular waste materials refers to) is issued, the institution must implement the amendments within 12 months.

Within 18 months after one of the above types of amendments, the amended situation must be assessed by the accrediting institution. The accredited institution must ensure this and take the initiative to that effect.

If a standard (which the Accreditation Programme for inspections of consignments of soil, building materials and granular waste materials refers to) ceases to apply and is replaced by another standard, the last version of the standard ceasing to apply will remain in force until amendment of the AP04 relative thereto has been effected.

A 1.8 Hierarchy

ISO/IEC 17025 is the leading principle regarding all aspects (requirements of management and technical requirements) within the institution. In the event of conflict between stipulations in documents of the Accreditation Programme for inspections of consignments of soil, building materials and granular waste materials and a standard that is referred to, the stipulations in the Accreditation Programme for inspections of consignments of soil, building materials and granular waste materials shall be the leading principle over the standard (with the exception of the requirements from NEN-EN-ISO/IEC 17025).

A 1.9 Reporting

The aim of the requirements as described in this AP04 for laboratories is that with the results of the laboratory investigation a proper assessment of the requirements of the Soil Quality Decree/Soil Quality Regulations of Industrial and Hazardous Waste (Notification) Decree/Waste Substances (Landfills and Dumping Bans) Decree may take place. The classification of an investigated consignment, however, forms no part of the report and of this Accreditation Programme.



Presentation of results

- The results of the composition analyses are reported based on mass, corrected for the moisture content.
- The results of the analyses of the eluates are reported based on volume and calculated as leached quantity based on mass, corrected for the moisture content.
- The quantified emission of the leaching tests is reported in mg/kgDM with the corresponding L/S ratio or in mg/m²/64 days.
- In the performance sheets, the required detection limits are stated. These required detection limits also apply as minimal reporting limits. If an institution realizes lower than required detection limits, it will also be permitted to report up to this lower level.
- The measurement results are reported in round figures. Measurement results below the reporting limits will be indicated by the symbol for "lower than".
- It may occur that for specific practical samples, through the influence of the matrix, the reporting limit is not achieved (while during validation all requirements were complied with). In such case, a higher reporting limit will be reported, using the "lower than" symbol. In the report it will be recorded that this concerns a higher reporting limit, with a brief explanation of the cause (for example: the reporting limit was increased due to the interfering influence of the sample matrix).
- If for a group of parameters a summation must be made of the concentrations found and (part of) these are lower than the reporting limit used by the laboratory, than for these components in the summation a value of 0.7 * the reporting limit will be applied. This will also be the case if there is a higher reporting limit for one or more components. An example is the determination of the concentration of 10 PAH-components according to the Ministry of Housing, Spatial Planning and the Environment (Dutch: VROM): if the reporting limit for all components amounts to 1 [mg/kg.DM] and the concentrations of all components are lower than the reporting limit, than the 10 PAH (VROM) concentration will be 7 [mg/kg.DM]; if for the concentration of one of these components 1.5 [mg/kg.DM] is found and the other concentrations are lower than the reporting limits, than the 10 PAH (VROM) concentration will be 7.8 [mg/kg.DM] (9 x 0.7 + 1.5).
- For a determination in duplicate the average value will be reported.

Other information to include in the analysis report

- Detected deviations upon delivery of samples.
- The presence of any artefacts in the sample, its mass and (probable) composition.
- The institution must unilaterally record in the analysis report that the measurement value of a test was obtained according to an accredited test in conformity with the Accreditation Programme for inspections of consignments of soil, building materials and granular waste materials. If the analysis was performed in the framework of the Industrial and Hazardous Waste (Notification) Decree/Waste Substances (Landfills and Dumping Bans) Decree, unilateral notification in the analysis report is required, stating compliance with the requirements of AP04-KA.



A 1.10 Use of logos

Logo 'Quality assurance of soil management SIKB'

The logo 'Quality assurance Quality control of soil management SIKB' has been developed to provide clarity to all parties involved, regarding the quality control of activities in the framework of the Soil Quality Decree/Soil Quality Regulations. The laboratory analyses described in this Accreditation Programme fall under the scope of this logo. It means that laboratories accredited for analyses described in this Accreditation Programme and which are also recognized by the Ministry of Infrastructure and the Environment, will have the right to apply the logo. The rules in connection with the application of this logo are included in appendix A1.

Accreditation marks of the Dutch Accreditation Council

When accreditation is obtained for activities described in this Accreditation Programme, a laboratory may also obtain the right to apply an accreditation mark of the accrediting institution.

A 2 Requirements for the accrediting institution

A 2.1 Accrediting institution

During an accreditation investigation in conformity with NEN-EN-ISO/IEC 17025 it must be assessed whether the analyses are carried out according to this Accreditation Programme AP04. This assessment must be conducted by the Dutch Accreditation Council.

The accrediting institution may only issue accreditation certificates according to this Accreditation Programme if it has concluded an agreement with the manager of this Accreditation Programme, being the Soil Management Accreditation Board. This agreement must explicitly refer to this Accreditation Programme AP04.

The accrediting institution must comply with the regulations in force for accreditation organizations (NEN-EN-ISO/IEC ISO 17011). For accreditation by the Dutch Accreditation Council, the policy regulations, instructions and general resolutions from this board will apply, supplemented by the provisions as described in this chapter.

A 2.2 Accreditation investigation

During the initial, the interim (inspection) and re-assessment investigations and in the assessment of corrective measures, the accreditation institution will assess as to whether the execution is in conformity with NEN-EN-ISO/IEC 17025, this AP04 and the corresponding performance sheets.

An accreditation that has been awarded will be valid for four years. In this period, this Accreditation Programme, for which the accreditation was awarded, must each year form part of the annual inspection by the accrediting institution. Each separate test must be assessed at least once every four years.



A 2.3 Communication between accrediting institution and Soil Management Accreditation Board

Communication in writing

The Soil Management Accreditation Board will notify the accrediting and accredited institutions of each amendment to the AP04 and the corresponding sections as soon as possible.

A 3 Package division of the Accreditation Programme for inspections of consignments of soil, building materials and granular waste materials AP04

In the Accreditation Programme AP04 all tests and actions are included, which may be used in the scope of the "Soil Quality Decree/Soil Quality Regulations" and/or "Industrial and Hazardous Waste (Notification) Decree/Waste Substances (Landfills and Dumping Bans) Decree". The tests and actions are divided across the five sections referred to earlier: Sample pretreatment, Composition (soil), Composition (building materials, not being soil and granular waste materials), Leaching test and Eluate analyses.

Although an institution may be accredited for all five individual tests, recognition by the Minister of Infrastructure and the Environment in the scope of the Soil Quality Decree/Soil Quality Regulations will not follow until the institution is accredited for the tests from at least one coherent package of tests. In most packages, tests have been joined together for their mutual coherence. For example, the quality of the sample pretreatment may have great influence on the result of a composition investigation or leaching test. The same applies for the analysis of eluates in regard to the result of a leaching test. This is why the choice was made for a package division where the sample pretreatments and eluate tests have not been set up as separate packages but have been incorporated in packages for composition investigations and leaching tests (in so far as they refer to these). So separate packages have been composed for the specifications as referred to in A1.5 where it concerns the recognition for the "Soil Quality Decree", in conformity with AP04. This refers to soil composition investigations, building materials investigations and leaching tests.

The packages within the specifications Composition (of both soil and building materials) are linked together. This means that an institution may only be recognized for the second package or following packages until after it has been recognized for the first package. Within the specification Leaching test, the packages are not linked together. So an institution may be recognized for the package U2 or U3, without having been recognized for the package U1. For AP04-KA, a laboratory may only be recognized for the entire package.

The package division for the various specifications is set out below. In appendix A2 a summation is given for all the tests included in the various packages. Since the sample pretreatment activities cannot be verified quantitatively (and seeing as they are also different in character from the other sections), a slightly different terminology was chosen for this activity. For instance, the "tests" pertaining to sample pretreatment are referred to as "actions". In appendix A2, apart from actions and tests, there is also mention of "supporting activities". These activities must be included in the quality system of the institution and be assessed by the Dutch Accreditation Council, but are not activities that can be accredited separately.



Package division specification Composition, soil

- In package SG1 the composition tests are included, which in NEN 5740 "Soil quality - Strategy for exploratory survey - Investigation of the environmental quality of soil and soil lots", also in BRL9335-1 and -2, must at least be analyzed for clean soil / soil lots. Added to this are all elements that are not included in NEN 5740, but for which a background value, intervention value or an indicative level for serious contamination does exist. The actions related to the pretreatment of soil samples are linked to this. A complete overview is presented in appendix A2a.
- Package SG2 comprises additional tests for the determination of the composition of soil with regard to non-volatile organic substances which have been standardized and can also be used in the scope of the Soil Quality Decree/Soil Quality Regulations. Package SG2 is linked to package SG1, meaning that recognition for package SG2 is only possible in case the institution has already been recognized for package SG1. A complete overview is presented in appendix A2b.
- Package SG3 comprises additional tests for the determination of the composition of soil with regard to volatile organic substances which have been standardized and can also be used in the scope of the Soil Quality Decree/Soil Quality Regulations. Package SG3 is linked to package SG1, meaning that recognition for package SG3 is only possible in case the institution has already been recognized for package SG1. A complete overview is presented in appendix A2c.
- Package SG4 comprises additional tests for the determination of the composition of soil with regard to inorganic substances which have been standardized and can also be used in the scope of the Soil Quality Decree/Soil Quality Regulations. Package SG4 is linked to package SG1, meaning that recognition for package SG4 is only possible in case the institution has already been recognized for package SG1. A complete overview is presented in appendix A2d.
- In package SG5 the other tests are included, which must be carried out to conduct a complete composition analysis of soil in conformity with the Soil Quality Decree/Soil Quality Regulations. This refers to non-standardized or little-in-demand tests and the investigation protocols for other parameters. Package SG5 is linked to package SG1; recognition for package SG1 is required in order to be eligible for recognition for package SG5. A complete overview is presented in appendix A2e.
- Package SG6 comprises the additional test with regard to the determination of the concentration of asbestos in soil, which is standardized and may also be used in the scope of the Soil Quality Decree/Soil Quality Regulations. Package SG6 is not linked to package SG1, meaning that for recognition for package SG6, no recognition for package SG1 is required. A complete overview is presented in appendix A2f.
- Package SG8 comprises additional tests for the determination of the composition of soil with regard to a number of elements, which have been standardized, but for which in the Soil Quality Decree/Soil Quality Regulations only an indicative level for serious contamination exists. Package SG8 is linked to package SG1, meaning that recognition for package SG8 is only possible in case the institution has already been recognized for package SG1. A complete overview is presented in appendix A2g.

Package division specification Composition, building materials (not being soil)

- In package SB1 the tests are included, which pertain to the determination of the dry matter content, the concentration of PAH (with the exception of bituminous materials), PCB and mineral oils in building materials. Added to these are the actions with regard to the sample pretreatment of building materials of which the composition needs to be determined. A complete overview is presented in appendix A2h.
- Package SB3 comprises the additional test with regard to the determination of the concentration of BTEX in building materials. Package SB3 is linked to package SB1; recognition for package SB1 is required in order to be eligible for recognition for package SB3. In this package the test SB-II may not be outsourced, since at least one test per package must be carried out by the institution in itself. A complete overview is presented in appendix A2i.
- Package SB4 comprises additional tests with regard to the determination of the concentration of PAH in bituminous materials and the investigation protocol for other parameters. Package SB4 is linked to package SB1; recognition for package SB1 is required in order to be eligible for recognition for package SB4. A complete overview is presented in appendix A2j.
- Package SB5 comprises the additional test with regard to the determination of the concentration of asbestos in building materials. Package SB5 is not linked to SB1; recognition for package SB1 is not required in order to be eligible for recognition for package SB5. In this package the test SB-XV may not be outsourced, since at least one test per package must be carried out by the institution in itself. A complete overview is presented in appendix A2k.
- Package SB6 comprises the additional test with regard to the determination of the concentration of phenol in building materials. Package SB6 is linked to package SB1; recognition for package SB1 is required in order to be eligible for recognition for package SB6. In this package the test SB-XIII may not be outsourced, since at least one test per package must be carried out by the institution in itself. A complete overview is presented in appendix A2l.

Package division specification Leaching test

- In package U1 the tests are included that are required for determination of the leaching behaviour of unshaped and shaped building materials and soil, where it is expected that the leaching is non-diffusion defined (including the activities with regard to the preservation of the eluates). Added to this are the actions required for the sample pretreatment for the benefit of leaching tests to unshaped and shaped building materials and soil, also (virtually) all tests with regard to the analysis of the eluates. Test U-I (column leaching test), U-IV (pH) and U-V (conductivity) may not be outsourced. A complete overview is presented in appendix A2m.
- Package U2 comprises the tests for determination of the leaching behaviour of shaped building materials, of which it is expected that the leaching is diffusion defined and that there will be no low concentration of leaching or sudden depletion (supplemented with activities pertaining to the preservation of eluates). Package U2 also comprises the pretreatment of shaped building materials for leaching tests, also all eluate analysis tests. In this package the tests U-II (diffusion test), U-IV (pH) and U-V (conductivity) may not be outsourced. A complete overview is presented in appendix A2n.



- Package U3 comprises the tests for the determination of the leaching behaviour of shaped building materials, of which it is expected that the leaching is diffusion defined and that there will be no low level of leaching or sudden depletion (supplemented with activities pertaining to the preservation of eluates). Added to this are the actions required for the sample pretreatment for the benefit of leaching tests to shaped building materials and all eluate analysis tests. In this package the tests U-III (availability test), U-IV (pH) and U-V (conductivity) may not be outsourced. A complete overview is presented in appendix A2o.

Package division specification Industrial and Hazardous Waste (Notification) Decree/Waste Substances (Landfills and Dumping Bans) Decree

- Package KA comprises all tests pertaining to the tests to be conducted in the scope of the Industrial and Hazardous Waste (Notification) Decree/Waste Substances (Landfills and Dumping Bans) Decree regarding the dumping of waste materials. See appendix A2p for detailed specifications.



Appendix A1 Regulations use of logo "Quality Assurance Soil Management SIKB"

The logo 'Quality Assurance Quality Control Soil Management SIKB', to be referred to hereinafter as "the logo", has been developed to provide clarity to all parties involved regarding the quality control of activities in the framework of the Soil Quality Decree/Soil Quality Regulations, which includes the laboratory analyses according to AP04.

For the Accreditation Programme AP04, the management of the logo and supervision as to its proper use are conducted by the Soil Management Accreditation Board, which operates under the Foundation Infrastructure for the Quality Assurance of Soil Management (Dutch: SIKB). The accreditation institutions authorized for that purpose supervise a proper use of the logo during their inspections at the accredited organizations.

Soil Quality Decree/Soil Quality Regulations

In the framework of the Soil Quality Decree/Soil Quality Regulations, only laboratories that are both accredited for analyses as described in the Accreditation Programme AP04 as well as are recognized by the Ministry of Infrastructure and the Environment and have also fulfilled their annual contribution to SIKB arising therefrom, may use the logo. These laboratories obtain the right to place the logo:

- in reports about laboratory analyses in the framework of the Soil Quality Decree/Soil Quality Regulations, however only if the analyses for the investigation in question have been fully conducted subject to accreditation;
- on stationery paper, provided that the letter does not mention laboratory analyses that were or are not conducted subject to accreditation;
- in a general sense (including promotion, corporate presentations), if this documentation:
 - o also refers to laboratory analyses in the framework of the Soil Quality Decree/Soil Quality Regulations conducted subject to accreditation; AND
 - o in no way whatsoever refers to laboratory analyses in the framework of the Soil Quality Decree/Soil Quality Regulations that were not or are not conducted subject to accreditation.

Industrial and Hazardous Waste (Notification) Decree/Waste Substances (Landfills and Dumping Bans) Decree

In the framework of the Industrial and Hazardous Waste (Notification) Decree/Waste Substances (Landfills and Dumping Bans) Decree, a laboratory may only use the logo if it is accredited for the entire package AP04-KA and if the results of at least one accredited test of this package are recorded in the report.

Other aspects

When a document refers to multiple analyses, of which one part was/is and another part was/is not conducted subject to accreditation and recognition, then the logo may only be used in that document in such a way that it is outright clear which analyses were conducted subject to accreditation and recognition.

The version of these documents that is in force at the time of the performance of the analyses will apply for the executive organization.

When using the logo, directly underneath the logo, which contains there within the text 'Quality Assurance Soil Quality Decree', the scope of application for the situation in question must be displayed in a clearly legible manner, for example by stating 'AP04'.

Companies or institutions violating the prescribed use of the logo may be penalized. A possible sanction is the loss of the authorization to use the logo.

The logo is a legal trademark. Any abuse of the logo may be addressed under private law.



Appendix A2a Package division specification Composition, soil, SG1

Actions (AP04-V):

V-I	Quartering
V-II	Riffling
V-III	Rotary dividing (when applied)
V-IV	Core sampling
V-V	Manual sampling
V-VI	Crushing < 4 mm
V-VII	Grinding < 1 mm and < 0.5 mm
V-VIII	Grinding < 0.125 mm
V-IX	Drying
V-X	Racking free water

Tests (AP04-SG):

SG-I	Determination of the pH-CaCl ₂ in soil
SG-II	Determination of the dry matter content of soil
SG-III	Determination of the clay content of soil
SG-IV	Determination of organic matter concentration in soil
SG-V	Determination of copper, zinc, arsenic, lead, cadmium, nickel, chromium, antimony, barium, cobalt, molybdenum, tin and vanadium in soil
SG-VI	Determination of non-volatile mercury in soil
SG-IX	Determination of Polycyclic Aromatic Hydrocarbons (PAH) in soil
SG-X	Determination of polychlorinated biphenyls (PCBs) in soil
SG-XI	Determination of mineral oil in soil

Supporting activities (AP04-V):

v-xi	Packaging
v-xii	Storage and preservation



Appendix A2b Package division specification Composition, soil, SG2

Tests (AP04-SG):

- SG-XIV Determination of organochlorine pesticides in soil
- SG-XV Determination of the concentration of non-volatile chlorobenzenes in soil

DRAFT TRANSLATION



Appendix A2c Package division specification Composition, soil, SG3

Tests (AP04-SG):

- SG-VIII Determination of volatile aromatic hydrocarbons, volatile halogenated hydrocarbons, MTBE and ETBE in soil
- SG-XV Determination of the concentration of volatile chlorobenzenes in soil

DRAFT TRANSLATION



Appendix A2d Package division specification Composition, soil, SG4

Tests (AP04-SG):

- SG-VII Determination of cyanides (free and total) in soil
- SG-XII Determination of the concentration of chloride in soil

DRAFT TRANSLATION



Appendix A2e Package division specification Composition, soil, SG5

Tests (AP04-SG):

- SG-XIII Determination of chlorophenols in soil
- SG-XVI Determination of organonitrogen and organophosphorus pesticides in soil
- SG-XVII Determination of the concentration of aromatic solvents in soil
- SG-XIX Test protocol for other parameters

DRAFT TRANSLATION



Foundation Infrastructure for Quality Assurance of Soil Management
Burgemeester van Reenensingel 101 P.O. Box 420 2800AK Gouda, the Netherlands
Telephone 085-4862450 www.sikb.nl

Appendix A2f Package division specification Composition soil, SG6

Tests (AP04-SG):

SG-XVIII Determination of the concentration of asbestos in soil

DRAFT TRANSLATION



Foundation Infrastructure for Quality Assurance of Soil Management
Burgemeester van Reenensingel 101 P.O. Box 420 2800AK Gouda, the Netherlands
Telephone 085-4862450 www.sikb.nl

Appendix A2g Package division specification Composition soil, SG8

Tests (AP04-SG):

SG-V Determination of beryllium, selenium, tellurium and thallium in soil

DRAFT TRANSLATION



Appendix A2h Package division specification Composition, building materials, SB1

Actions (AP04-V):

- V-I Quartering
- V-II Riffling (when applied)
- V-III Rotary dividing (when applied)
- V-IV Core sampling
- V-VI Crushing < 4 mm
- V-VII Grinding < 1 mm and < 0.5 mm

Tests (AP04-SB):

- SB-I Determination of the dry matter content of building materials
- SB-III Determination of Polycyclic Aromatic Hydrocarbons (PAH) in building materials with the exception of bituminous materials
- SB-IV Determination of Polychlorinated biphenyls (PCB) in building materials
- SB-V Determination of mineral oil in building materials

Supporting activities (AP04-V):

- v-xi Packaging
- v-xii Storage and preservation



Foundation Infrastructure for Quality Assurance of Soil Management
Burgemeester van Reenensingel 101 P.O. Box 420 2800AK Gouda, the Netherlands
Telephone 085-4862450 www.sikb.nl

Appendix A2i Package division specification Composition, building materials, SB3

Tests (AP04-SB):

SB-II Determination of volatile aromatic hydrocarbons (BTEX) in building materials

DRAFT TRANSLATION



Appendix A2j Package division specification Composition, building materials, SB4

Actions (AP04-V):

V-I	Quartering
V-II	Riffling (when applied)
V-III	Rotary dividing (when applied)
V-IV	Core sampling
V-VI	Crushing < 4 mm
V-VII	Grinding < 1 mm and < 0.5 mm

Tests (AP04-SB):

SB-VII	Determination of Polycyclic Aromatic Hydrocarbons (PAH) in bituminous materials
SB-VIII	Test protocol for other parameters

Supporting activities (AP04-V):

v-xi	Packaging
v-xii	Storage and preservation



Appendix A2k Package division specification Composition, building materials, SB5

Actions (AP04-V):

-

Tests (AP04-SB):

SB-VI Determination of asbestos in building materials

Supporting activities (AP04-V):

v-xi Packaging

v-xii Storage and preservation



Foundation Infrastructure for Quality Assurance of Soil Management
Burgemeester van Reenensingel 101 P.O. Box 420 2800AK Gouda, the Netherlands
Telephone 085-4862450 www.sikb.nl

Appendix A2I Package division specification Composition, building materials, SB6

Tests (AP04-SB):

SB-XIII Determination of phenol in building materials

DRAFT TRANSLATION



Appendix A2m Package division specification Leaching Test, U1 (soil, unshaped and shaped building materials); non-diffusion defined leaching

Actions (AP04-V):

V-I	Quartering
V-II	Riffling (when applied)
V-III	Rotary dividing (when applied)
V-VI	Crushing < 4 mm
V-IX	Drying (when applied)

Tests (AP04-U):

U-I	Determination of the emission of inorganic components through the column test
U-IV	Determination of the pH in eluates
U-V	Determination of the conductivity in eluates

Tests (AP04-E):

E-I	Determination of lead in eluates
E-II	Determination of cadmium in eluates
E-III	Determination of zinc in eluates
E-IV	Determination of nickel in eluates
E-V	Determination of arsenic in eluates
E-VI	Determination of chromium in eluates
E-VII	Determination of copper in eluates
E-VIII	Determination of mercury in eluates
E-IX	Determination of molybdenum in eluates
E-X	Determination of barium in eluates
E-XI	Determination of tin in eluates
E-XII	Determination of cobalt in eluates
E-XIII	Determination of antimony in eluates
E-XIV	Determination of selenium in eluates
E-XV	Determination of vanadium in eluates
E-XVI	Determination of cyanides (free and complex) in eluates
E-XVII	Determination of bromide, chloride and sulphate in eluates
E-XVIII	Determination of fluoride in eluates

Supporting activities (AP04-V):

v-xi	Packaging
v-xii	Storage and preservation

Supporting activities (AP04-U):

U-VI	Preservation of eluates
------	-------------------------



Appendix A2n Package division specification Leaching test, U2 (shaped building materials); diffusion defined leaching when no low level of leaching or swift depletion is expected

Actions (AP04-V):

V-I Quartering

Tests (AP04-U):

U-II Determination of the emission of inorganic components through the diffusion test

U-IV Determination of the pH in eluates

U-V Determination of the conductivity in eluates

Tests (AP04-E):

E-I Determination of lead in eluates

E-II Determination of cadmium in eluates

E-III Determination of zinc in eluates

E-IV Determination of nickel in eluates

E-V Determination of arsenic in eluates

E-VI Determination of chromium in eluates

E-VII Determination of copper in eluates

E-VIII Determination of mercury in eluates

E-IX Determination of molybdenum in eluates

E-X Determination of barium in eluates

E-XI Determination of tin in eluates

E-XII Determination of cobalt in eluates

E-XIII Determination of antimony in eluates

E-XIV Determination of selenium in eluates

E-XV Determination of vanadium in eluates

E-XVI Determination of cyanides (free and complex) in eluates

E-XVII Determination of bromide, chloride and sulphate in eluates

E-XVIII Determination of fluoride in eluates

E-XIX Determination of calcium in eluates

Supporting activities (AP04-V):

v-xi Packaging

v-xii Storage and preservation

Supporting activities (AP04-U):

U-VI Preservation of eluates

U-VII Coating of surfaces of shaped building materials for the diffusion test



Appendix A2o Package division specification Leaching test, U3 (shaped building materials); diffusion defined leaching when low level of leaching or swift depletion is expected

Actions (AP04-V):

- V-I Quartering
- V-II Riffing (when applied)
- V-III Rotary dividing (when applied)
- V-VI Crushing < 4 mm
- V-VII Grinding < 1 mm and < 0.5 mm
- V-VIII Grinding < 0.125 mm
- V-IX Drying

Tests (AP04-U):

- U-III Determination of the availability for leaching of inorganic components
- U-IV Determination of the pH in eluates
- U-V Determination of the conductivity in eluates

Tests (AP04-E):

- E-I Determination of lead in eluates
- E-II Determination of cadmium in eluates
- E-III Determination of zinc in eluates
- E-IV Determination of nickel in eluates
- E-V Determination of arsenic in eluates
- E-VI Determination of chromium in eluates
- E-VII Determination of copper in eluates
- E-VIII Determination of mercury in eluates
- E-IX Determination of molybdenum in eluates
- E-X Determination of barium in eluates
- E-XI Determination of tin in eluates
- E-XII Determination of cobalt in eluates
- E-XIII Determination of antimony in eluates
- E-XIV Determination of selenium in eluates
- E-XV Determination of vanadium in eluates
- E-XVI Determination of cyanides (free and complex) in eluates
- E-XVII Determination of bromide, chloride and sulphate in eluates
- E-XVIII Determination of fluoride in eluates

Supporting activities (AP04-V):

- v-xi Packaging
- v-xii Storage and preservation

Supporting activities (AP04-U):

- U-VI Preservation of eluates



Appendix A2p Package division specification investigation for Industrial and Hazardous Waste (Notification) Decree/Waste Substances (Landfills and Dumping Bans) Decree, KA (granular waste materials); composition and leaching

Actions (AP04-V):

- V-I Quartering
- V-II Riffing (when applied)
- V-III Rotary divider (when applied)
- V-VI Crushing < 4 mm or < 10 mm
- V-VII Grinding < 1 mm and < 0.5 mm
- V-IX Drying

Tests (AP04-SB):

- SB-I Determination of the dry-matter content of waste materials
- SB-IX Determination of the loss on ignition (LOI) in waste materials
- SB-X Determination of TOC in waste materials
- SB-XI Determination of pH in waste materials
- SB-XII Determination of Acid Binding Capacity (ABC) in waste materials

Tests (AP04-U):

- U-IV Determination of the pH in eluates
- U-V Determination of the conductivity in eluates
- U-VIII Compliance test for leaching for granular waste materials

Tests (AP04-E):

- E-I Determination of lead in eluates
- E-II Determination of cadmium in eluates
- E-III Determination of zinc in eluates
- E-IV Determination of nickel in eluates
- E-V Determination of arsenic in eluates
- E-VI Determination of chromium in eluates
- E-VII Determination of copper in eluates
- E-VIII Determination of mercury in eluates
- E-IX Determination of molybdenum in eluates
- E-X Determination of barium in eluates
- E-XIII Determination of antimony in eluates
- E-XIV Determination of selenium in eluates
- E-XVII Determination of chloride and sulphate in eluates **(Please note: accreditation for bromide not required for this package!!)**
- E-XVIII Determination of fluoride in eluates
- E-XX Determination of DOC in eluates
- E-XXI Determination of Total Dissolved Solids (TDS) in eluates

Supporting activities (AP04-V):

- v-xi Packaging
- v-xii Storage and preservation

Supporting activities (AP04-U):

- U-VI Preservation of eluates

