

**Accreditation Programme
Building Materials Decree
Section: General:**

AP04 - A



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Preface

The Accreditation Board has created the opportunity to draw up accreditation programmes for market use, in which a set of requirements have been established to which an institution must comply in order to become accredited for the relevant programme.

The objective of an Accreditation Programme is to clarify the nature and scope of the accreditation for the clients of institutions, and to clarify the set criteria and requirements for the actual institution in a specific field. The latter is being primarily achieved by the formulation of specific supplementary requirements, which serve as an absolute minimum for compliance.

This Accreditation Programme was drawn up for the execution of analyses under the terms of the Building Materials Decree – soil and surface water protection (Building Materials Decree).

The Building Materials Decree recognises various types of analyses in various types of matrices. Thus, a (rough) distinction must be made between soil analysis and analysis of other, moulded or un-moulded, building materials. Furthermore, a distinction must be made in the type of analysis; the Building Materials Decree refers to sampling, sample pre-treatment, composition analysis, leaching analysis, and analysis of eluates.

On account of the size of the Accreditation Programme Building Materials Decree the decision has been made to divide it into the following sections:

AP04-A	general
AP04-M	sampling
AP04-V	sample pre-treatment
AP04-SG	composition; soil
AP04-SB	composition; building materials (non-soil)
AP04-U	leaching analysis
AP04-E	analysis of eluates

A number of sections, or clusters of sections, have been subdivided into related groups of procedures (see section A3).

The simplest form of an Accreditation Programme contains a set of guidelines for procedures, which must fall under the accreditation at the very least. These procedures are in keeping with the legal requirements as laid down in the Building Materials Decree and the relevant Execution Regulation Building Materials Decree on soil and surface water protection (Execution Regulation Building Materials Decree). The Building Materials Decree states that manufacturers and users of building materials, but also competent authorities and other upholders for determining the quality of (a batch) of building materials, must make use of an accredited institution. The aim of this requirement is to improve the quality of the analysis, and in turn, the conclusions drawn from this, pertaining to the analysed building material. This is in line with the 'Quality Environmental Measurements' bill (Lower House of Parliament of the Netherlands, session year 1992-1993, 23 061, no. 2) that was drawn up by the Ministries of Transport, Public Works and Water Management (V and W) and Housing, Spatial Planning and the Environment (VROM) and approved by the Lower House.

Accreditation programmes are not a substitute for accreditation in conformance with NEN-EN-ISO/IEC 17025; however, they do form part of the scope of the accreditation that is easily recognisable by the market. Accreditation programmes are drawn up by a number of institutions/companies in consultation with the parties concerned.



As a rule, accreditation in conformance with this Accreditation Programme will take place in accordance with so-called packages (groups of procedures). Furthermore, an institution can also strive towards an accreditation for the individual procedures (standards), but only if these are executed and quality assured as defined in the Accreditation Programme. In the latter case, the institution may not bear the name of the Accreditation Programme, but it is allowed to bear the name of the procedures of it.

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

The soil composition section was integrated in the total Accreditation Programme Building Materials Decree in 1998. The general requirements have been incorporated in the general section (AP04-A), the matters relating to sample pre-treatment in the Sample pre-treatment section (AP04-V).

As of December 1, 2000, the management of the Accreditation Programme AP04 was transferred to the Foundation Infrastructure for Quality Assurance of Soil Management (SIKB) by the Accreditation Board and the Ministry of VROM. The published errata, actualisation of NEN standards and results of the relevant SIKB-projects were incorporated in the revised versions of the AP04-documents of 2001 (AP04-SG version 6, AP04-V version 3, AP04-A / -SB / -U- / -E / M version 2).

The updating of the Accreditation Programme AP04 was commissioned by SIKB in 2004. Various imperfections were removed, resulting in the current versions of the AP04-documents (AP04-SG version 7, AP04-V version 4, AP04-A / -SB / -U- / -E version 3), the package classification has been altered in keeping with practical requirements and standards for validation analysis (NEN 7777) and equivalency of measurement methods (NEN 7778) have been used as a basis for the relevant sections of AP04. The current versions will become effective as of April 1, 2005.

A large number of persons have worked hard for the establishment of the Accreditation Programme AP04, both for the original version and for the versions that were altered at a later stage. The SIKB Board would like to express their gratefulness for these contributions.

Gouda,
March 3, 2005



Introduction

An Accreditation Programme was drawn up at the request of the Ministry of Housing, Spatial Planning and the Environment (Dutch: VROM) for the procedures that are executed within the scope of the Building Materials Decree. This relates to both composition and leaching analysis, including procedures/tasks that relate to the sampling, the Sample pre-treatment, and the analysis of eluates.

The Ministries of VROM and Traffic and Water Management (Dutch: V&W) published the bill "Quality of Environmental Measurements" in 1993. This bill determines that environmental measurement data are the foundation of the environmental policy and that the quality of the measurement data must therefore be guaranteed. In this bill the observation is made that the quality and comparability of the environmental measurements often leave a lot to be desired. In order to improve the comparability and quality of environmental measurements during the coming years, the aforementioned Ministries have set up the "Standardisation and Validation of Environmental Measuring Methods 1993-1997" task force programme. In addition to this, they commissioned the establishment of an Accreditation Programme, which provides institutions that execute measurements with an unambiguous set of supplementary criteria, to which the execution of the measurement must comply. The accrediting institution ensures that the accredited institutions execute the procedures defined in the Accreditation Programme in conformance with the relevant quality requirements.

Reference points in the Accreditation Programme AP04 are (inter)nationally standardised procedures. The procedure is prescribed as mandatory for a number of method specific parameters. For the remaining procedures, the reference point is defined using a standard. An alternative method may be applied here, if it can be demonstrated that the results are equivalent to the reference point.

For clarification purposes, the Accreditation Programme Building Materials Decree has been divided into the following sections:

AP04-A	general
AP04-M	sampling
AP04-V	sample pre-treatment
AP04-SG	composition; soil
AP04-SB	composition; building materials (non-soil)
AP04-U	leaching analysis
AP04-E	analysis of eluates

The specific matters relating to the various procedures have been comprehensively elaborated in the documents AP04-M, AP04-V, AP04-SG, AP04-SB, AP04-U, and AP04-E. The more general and all-embracing matters will be elaborated further in this document (AP04-A).

This general section of the Accreditation Programme "Building Materials Decree" does not define any specific procedures; it provides general requirements pertaining to accreditation in accordance with the Building Materials Decree. It also states the requirements to which an institution must comply in order to be appointed by the Ministries of VROM and V and W as an institution authorised to execute the relevant procedures under the terms of the Building Materials Decree.

This general section also contains an overview of the procedure packages, for which an institution must be accredited in order to be appointed by the aforementioned Ministries.



Furthermore, this general section describes the requirements to which the accrediting institution must comply.

In actual practice, the accrediting institution will be the Accreditation Board (Dutch: RvA) in the majority of cases. In order to safeguard the readability of these documents, the term Accreditation Board will be continually used. However, in all cases the term 'Accreditation Board' can be taken as 'an organisation with which the Accreditation Board has concluded a Multi Lateral Agreement (MLA) and a Mutual Recognition Agreement (MRA) and which demonstrably complies with ISO 17011'.

Explanation:

The Accreditation Board has entered into a Multi Lateral Agreement with the organisations that are affiliates of the European co-operation for Accreditation (EA). Furthermore, the Accreditation Board has Mutual Recognition Arrangements, whether arranged by the EA or not, with individual organisations that are affiliates of the International Laboratory Accreditation Co-operation (ILAC).



A 1 General requirements for AP04

A 1.1 Basic requirement and supplementary requirements

In order to be eligible for accreditation in accordance with (sections of) the Accreditation Programme AP04 "Building Materials Decree", the institution must be accredited in conformance with NEN-EN-ISO/IEC 17025. In the AP04 Accreditation Programme supplementary requirements have been formulated, to which an institution's procedures must comply in order to be accredited for (sections of) the "Building Materials Decree". The set requirements primarily relate to performance characteristics and quality assurance (first, second, and third line control).

An institution can be appointed for the Accreditation Programme AP04 by the Ministries of VROM and V and W, if these institutions can demonstrate, using historical data for a period of at least six months, that they have complied with the quality requirements defined in the Accreditation Programme. This requirement is not applicable for Sampling, on account of the low frequency of the execution of certain procedures.

A 1.2 Independence

In addition to the requirement defined in A.1.1, the institution may not be affiliated or connected to the purchasers in any legal, financial, personal, or other way, beyond the assignment or contract for the execution of sampling or laboratory analysis. In the event of such a relationship, the supplier is also not allowed to accept assignments, when these are issued by the purchasers via an intermediate person. This requirement of independence also applies to a government body as supplier in respect of the same government body as purchaser (user of the building material). The supplier and the client may only be the same government body in situations that relate to sampling and/or laboratory analysis in the scope of enforcement.



A 1.3 Accreditation per procedure

In conformance with the Accreditation Programme Building Materials Decree (AP04), an institution can obtain an accreditation per procedure (for sample pretreatment see A1.4). The accreditation comprises all compounds or elements named in the relevant procedure performance sheet (therefore, it is not possible to become accredited for a single compound if multiple compounds are named on the performance sheet).

The accreditation for the relevant procedure according to AP04 will be stated in the appendix of the accreditation certificate. However, this does not automatically result in an appointment, see A1.5.

An institution may only be accredited for one or a limited number of procedures, and therefore not for all procedures that are required for the validation of the procedures to be accredited. In such a situation, the procedures required for the validation must be subcontracted to an institution that is accredited for these procedures.

A special type of procedure that an institution can be accredited for in conformance with the Accreditation Programme Building Materials Decree (AP04) is the procedure for which the term research protocol is used in the Building Materials Decree. The research protocol

applies to the parameters that are not stated in the Accreditation Programme. The research protocol is a guide for selecting a method for such a parameter and sets requirements for the performance characteristics. Accreditation takes place per compound, which is stated on the appendix of the accreditation certificate. Contrary to the potential connotations of the term "research protocol" (i.e., that this focuses on carrying out research), the accreditation is obtained as a "fixed scope" (analyte, method, and field of application are fixed).

A 1.4 Accreditation of sample pre-treatment

The sample pre-treatment comprises activities (tasks) that are difficult to quantitatively assess individually. Therefore, the Accreditation Board has assumed the standpoint that, in general terms, sample pre-treatment must be accredited in connection with other, more assessable activities, such as composition and/or leaching analysis.

Within the scope of the Accreditation Programme AP04, sample pre-treatment can be individually accredited where required, provided that with the aid of additional quality monitoring measures it is possible to demonstrate a controlled process. This includes a.o. the ability to establish of the identity of all samples and sub-samples and to take measures to prevent the occurrence of cross contamination between the various samples.

A 1.5 Appointment for the "Building Materials Decree"

Appointment takes place based on the Ministry of VROM's "Policy regulations appointment and acknowledgement Building Materials Decree" (see VROM internet site: www.vrom.nl/bouwstoffenbesluit, under Legislation and regulations).

If an institution wishes to be appointed by the Ministers of VROM and V and W as an institution authorised to execute work under the terms of the Building Materials Decree, it must be accredited for the execution of complete sections of the AP04 (so-called packages of procedures).

Given the significant scope of the Building Materials Decree Accreditation Programme and the diversity of the procedures, institutions are not expected to be capable of executing all procedures and request accreditation for this. This is why the following specifications for the "appointment for the Building Materials Decree" have been chosen for the time being:

1. Sampling;
2. Soil composition, including sample pre-treatment;
3. Composition of building materials (non-soil), including sample pre-treatment;
4. Leaching analysis of building materials and soil, including sample pre-treatment and eluate analyses.

In order to become eligible for one of the four aforementioned specifications for the title "Appointed for the Building Materials Decree", an institution must:

- be accredited for all procedures from one of the groups of procedures, as defined in more detail in section A3, whereby;
- in case of an appointment for the specification soil composition, this must at least contain the package SG1 procedures, and in case of an appointment for the specification composition of building materials (non-soil), this must contain all procedures of package SB1;



- one of the procedures per package (contractual) may be subcontracted to an institution that is accredited for this in conformance with AP04;
- execute at least one of the procedures per package internally;
- the procedures U-I, U-II, U-III, U-IV and U-V may not be subcontracted.

The institution to which work is being subcontracted by another institution is not allowed to be associated or attached to the purchasers in any legal, financial, personal, or other way.

The aforementioned package classifications per specification will be defined in more detail in section A3.

A 1.6 “Conditional appointment”

An institution can be provided with an accreditation for (sections of) the Building Materials Decree Accreditation Programme if it complies with the (relevant section of the) Accreditation Programme, with the exception of the requirement stated in point A1.1 relating to the compiled historical data. Compliance with this requirement must be demonstrated within a six-month period following an accreditation award and the subsequent appointment by the Ministries of VROM and V and W. In case this requirement is not met, the appointment by VROM and V and W will be withdrawn. The institution concerned may only reapply for appointment by the aforementioned ministries after a year has passed.

All procedures must be validated in order to become eligible for “conditional appointment” under the terms of the Building Materials Decree. Furthermore, there must also be a demonstrable history of at least 1 month of first-line controls of the various procedures. Conditional appointment is not relevant for Sampling, as the history requirement is not applicable here.

A 1.7 Alterations

In the event of alterations to the Accreditation Programme, the institution is obliged to implement the alterations within 12 months.

In case a new version of a standard (to which the Building Materials Decree Accreditation Programme refers) is published, the institution must have implemented the alterations within 12 months.

The altered situation must have been assessed by the accrediting institution within 18 months of an alteration as stated above. The accredited institution is responsible for this and is obliged to initiate this process.

In case a standard (to which the Building Materials Decree Accreditation Programme refers) becomes ineffective and is substituted by another standard, the last version of the ineffective standard remains in force, until AP04 has been altered in this respect.

A 1.8 Hierarchy



If there should be a discrepancy between the contents of the documents of the Building Materials Decree Accreditation Programme and a standard which is referred to, the text of the Building Materials Decree Accreditation Programme prevails above the standard (with the exception of the requirements of NEN-EN-ISO/IEC 17025).

A 1.9 Reporting

It is the objective of the requirements for laboratories defined in this AP04 that a correct assessment of the requirements of the Building Materials Decree can be carried out, based on the results of the laboratory analysis. However, the classification of an analysed batch does neither form part of the reporting nor of this Accreditation Programme.

Presentation of results

- The results of the composition analyses are reported based on mass, with a moisture content correction factor.
- The results of the analyses of the eluates are reported based on volume, and calculated as leached quantity based on mass, with a moisture content correction factor.
- The determined emission of the leaching test will be reported in mg/kgds with the respective L/S ratio or in mg/m²/64 days.
- The required detection limits are stated on the performance sheets. These required detection limits are also taken as the minimum reporting limits. In the event that an institution achieves a lower detection limit than required, this may also be reported at this lower level.
- The analysis results are rounded off in the reports. Analysis results below the reporting limit will be indicated using the "less than" symbol.
- It may occur that on account of an influence from the matrix, in specific samples the reporting limit is not achieved (while all requirements during validation were met). In this case an increased reporting limit will be reported using the "less than" symbol. The report must then state that this relates to an increased reporting limit with a concise explanation of the cause (for example: the reporting limit is higher on account of the disruptive influence of the sample matrix).
- If the established concentrations for a group of parameters are to be summed and (part of) the established concentrations are below the reporting limit adopted by the laboratory, in the summation for these components a value of 0.7 * the reporting limit will be used. If the concentrations of all components are below the reporting limit, then the less than symbol must also be used for the sum. An example of this is the determination of the 10 PAH-compounds level, according to VROM: if the reporting limit for all components is 1 [mg/kg.ds] and the concentrations of all components are below the reporting limit, the 10 PAH (VROM) level is <7 [mg/kg.ds]; if a concentration of 1.5 [mg/kg.ds] is established for one of the components and the remaining concentrations are below the reporting limit, the 10 PAH (VROM) level is 7.8 [mg/kgDS] (9 x 0.7 + 1.5).
- The average value is to be reported for the determination of a double analysis.

Other information to be reported in the analysis report

- Deviations established at the delivery of samples.
- The presence of possible artefacts in the sample, the mass and the (probable) composition of these.



- The institution must clearly state in the report that the measured value of a procedure is obtained in accordance with an accredited procedure in conformance with the Building Materials Decree Accreditation Programme.

A 1.10 Use of quality marks

Quality mark 'Quality Assurance Soil management SIKB'

The quality mark 'Quality Assurance Building Materials Decree' was developed in order to provide clarity to all parties involved pertaining to the quality assurance of activities under the terms of the Building Materials Decree. The laboratory analyses defined in this Accreditation Programme fall within the scope of this quality mark. This entails that laboratories that are accredited for the analyses defined in this Accreditation Programme and have also been appointed by the Ministries of VROM and V and W, are entitled to bear the quality mark. The regulations connected to this quality mark have been included in appendix A1.

Accreditation marks from the Accreditation Board

When obtaining an accreditation for the activities defined in this Accreditation Programme, a laboratory can be granted the right to use an accreditation mark from the accrediting institution. The regulations relating to the use of the accreditation mark of the Accreditation Board have been included in the document 'Regulations for the Use of Accreditation Marks' (RvA-R3). This document can be downloaded from the Accreditation Board website, www.rva.nl.



A 2 Requirements for the accrediting institution

A 2.1 Accrediting institution

During an accreditation assessment in conformance with NEN-EN-ISO/IEC 17025 an evaluation is carried out as to whether the analyses are executed in conformance with this Accreditation Programme AP04. This assessment must be carried out by the Accreditation Board.

The accrediting institution may only issue accreditation certificates in accordance with this Accreditation Programme if it has entered into an agreement with the manager of this Accreditation Programme, being the Soil Management Accreditation Board. This agreement must make explicit reference to this Accreditation Programme AP04.

The accrediting institution must keep to the regulations in force for accreditation organisations (ISO 17011). The Accreditation Regulations (RAC; RvA-R2), supplemented with the provisions described in this section are applicable for accreditation by the Accreditation Board. The document RvA-R2 can be downloaded from the Accreditation Board website, www.rva.nl.

A 2.2 Accreditation assessment

The purpose of the accreditation assessment by the accrediting institution is to determine whether the organisation complies with and is potentially capable of continuing to comply with all aspects of this Accreditation Programme AP04 for which an accreditation has been requested.

An issued accreditation is valid for a period of four years. During this period, this Accreditation Programme, for which the accreditation has been issued, must be included in the annual random check carried out by the accrediting institution. The rule is that each individual procedure must be assessed at least once every four years.

A 2.3 Communication between the accrediting institution and the Soil Management Accreditation Board

Periodic consultation

At least once a year, a consultation will be held between representatives of the accrediting institution(s) and the Soil Management Accreditation Board. During this consultation, the accrediting institution(s) will provide an insight into the content, scope and frequency of the accreditations in conformance with this AP04 during the past year. At the same time, the branch-wide deficiencies determined during the past year will be dealt with anonymously. In this way, potential bottlenecks that crop up in practise can be traced and if need be, the AP04 altered accordingly.

Also, the branch-wide points of attention to be investigated for the coming year will be discussed during the annual consultation, as well as the functioning of the annual report referred to below.



Written communication

The Soil Management Accreditation Board will inform the accrediting institutions of all alterations to the AP04 as soon as possible.

The accrediting institution(s) will submit an anonymous annual report to the Soil Management Accreditation Board of the audit results and the processing of complaints under the regulations during the previous year. For the execution of this report, the agreement entered into for this purpose by the Soil Management Accreditation Board and the accrediting institution(s) is applicable.



A 3 Package classification of the Accreditation Programme Building Materials Decree AP04

In the Accreditation Programme AP04, all procedures and tasks have been included that may be used within the scope of the "Building Materials Decree". The procedures and tasks have been distributed over the six previously named sections, Sampling, Sample pre-treatment, Composition (soil), Composition (building materials, non-soil), Leeching analysis, and Eluate analyses.

Although an institution can be accredited for all individual procedures, an appointment by the Ministers of VROM and V and W will only be effected if the institution is accredited for the procedures from at least one coherent package of procedures. Procedures from various sections have been combined in the majority of packages, on account of the mutual connection. For example, the quality of sample pre-treatment may have a significant influence on the result of a composition- or leeching analysis. The same applies to the analysis of eluates with respect to the result of a leeching analysis. For this reason, a package classification has been opted for, in which sample pre-treatment and eluate analysis procedures are not being classed as individual packages, but have been incorporated in packages for composition- and leeching analysis (insofar as these apply to them). As sampling is more or less unrelated to the other sections, the choice has been made not to couple the sampling procedures to the other sections. Therefore, separate packages have been compiled for the specifications stated in A1.5 for the appointment of the "Building Materials Decree", in conformance with AP04. This relates to sampling, soil composition, building materials composition and leeching analysis.

The packages within the specifications Composition (both soil and building materials) are linked. This means that an institution can only be approved for the second or subsequent package(s) if this institution was appointed for the first package. The packages are not linked within the specifications Sampling and Leeching Analysis. An institution can therefore be appointed for package U2, or U3 without having been appointed for package U1.

The package classification for the various specifications is shown below. A summary of all of the procedures included in the various packages has been included in appendix A2. As the activities of sampling and sample pre-treatment cannot be quantitatively tested (and differ in character from the other sections), a slightly altered terminology has been chosen for those activities. The "procedures" pertaining to sampling and sample pre-treatment are referred to as "tasks".

In addition to tasks and procedures, the 'supporting activities' are also stated in appendix A2. These activities must be incorporated in the institutions' quality system and be judged by the Accreditation Board, but they do not constitute activities that can be accredited separately.



Package classification of Sampling

- The sampling of soil from static batches has been incorporated in package M1; applicable to both sampling of non-contaminated and contaminated soil i.e. unclean soil (see appendix A2a). This is a limited package (a part of package M2), which only relates to sampling of soil from static batches (depots, in the soil, in use).
- Package M2 is an elaborated version of package M1 and contains all tasks that are necessary for sampling soil, both non-contaminated and contaminated i.e. unclean (see appendix A2b).
- All tasks relating to the sampling of non-moulded building materials (see appendix A2c) have been incorporated in package M3.
- All tasks relating to the sampling of moulded form building materials (see appendix A2d) have been incorporated in package M3.

Package classification of Composition, Soil

- The composition tasks that at the very least must be analysed in NEN 5740 "Soil Analysis Strategy for Exploratory research – Research into environmental hygienic quality of soil and ground" for non-contaminated soil/ground have been incorporated in package SG1. The tasks that pertain to the pre-treatment of ground samples are coupled to this. A complete overview is given in Appendix A2e.
- Package SG2 comprises supplementary procedures for the determination of the composition of ground pertaining to non-volatile organic substances that have been standardised and can also be used under the terms of the Building Materials Decree. Package SG2 is linked to package SG1, which means that appointment for package SG2 is only possible if the institution has already been appointed for package SG1. A complete overview is given in Appendix A2f.
- Package SG3 comprises supplementary procedures for the determination of the composition of ground pertaining to volatile organic substances that have been standardised and can also be used under the terms of the Building Materials Decree. Package SG3 is linked to package SG1, which means that appointment for package SG3 is only possible if the institution has already been appointed for package SG1. A complete overview is given in Appendix A2g.
- Package SG4 comprises supplementary procedures for the determination of the composition of ground pertaining to inorganic substances that have been standardised and can also be used under the terms of the Building Materials Decree. Package SG4 is linked to package SG1, which means that appointment for package SG4 is only possible if the institution has already been appointed for package SG1. A complete overview is given in Appendix A2h.
- The remaining procedures that must be executed in order to carry out a complete analysis of soil composition in accordance with the Building Materials Decree have been incorporated in package SG5. These are non-standardised procedures or procedures that are seldom required as well as the research protocol for other parameters. Package SG5 is linked to package SG1; appointment for package SG1 is required in order to become eligible for package SG4. A complete overview is given in Appendix A2i.



Package classification of Composition specification, building materials (non-soil)

- Incorporated in package SB1 are the procedures pertaining to the determination of the dry matter content, PAH (with the exception of bituminous materials), EOX and mineral oils in building materials. The tasks pertaining to sample pre-treatment of building materials, the composition of which must be determined, have been added to these. A complete overview is given in Appendix A2j.
- Package SB2 comprises additional procedures, pertaining to the determination of the content of PCB/OCB, ONB, and OPB in building materials. Package SB2 is linked to package SB1, which means that appointment for package SG2 is only possible if the institution has already been appointed for package SB1. A complete overview is given in Appendix A2k.
- Package SB3 comprises additional procedure pertaining to the determination of the content of BTEX in building materials. Package SB3 is linked to package SB1; appointment for package SB1 is required in order to become eligible for appointment for package SB3. Procedure SB-II of this package may not be subcontracted, because at least one procedure per package must be executed internally. A complete overview is given in Appendix A2l.
- Package SB4 comprises additional procedures pertaining to the determination of the contents of PAH in bituminous materials and the research protocol for other parameters. Package SB4 is linked to package SB1; appointment for package SB1 is required in order to become eligible for appointment for package SB4. A complete overview is given in Appendix A2m.

Package classification of Leaching analysis specification

- In package U1, the procedures necessary for the determination of the leaching behaviour of non-moulded and moulded building materials and soil have been incorporated, whereby it is expected that the leaching is non-diffusion-determined (including the activities pertaining to preservation of the eluates). The tasks that are necessary for sample pre-treatment for leaching analysis of non-moulded and moulded building materials and soil, as well as (almost) all procedures pertaining to the analysis of the eluates have been added to these. Procedures U-I (column test), U-IV (pH) and U-V (conductivity) may not be subcontracted. A complete overview is given in Appendix A2n.
- Package U2 contains the procedures for the determination of the leaching behaviour of moulded building materials, of which it is expected that the leaching is diffusion-determined and no limited leaching nor rapid exhaustion will occur (supplemented with activities pertaining to the preservation of the eluates). Package U2 also comprises the pre-treatment of moulded building materials for leaching analysis as well as all procedures for eluate analysis. The procedures U-II (diffusion analysis), U-IV (pH), and U-V (conductivity) in this package may not be subcontracted. A complete overview is given in Appendix A2o.
- Package U3 contains the procedures for the determination of the leaching behaviour of moulded building materials, of which it is expected that the leaching is diffusion-determined and that limited leaching or rapid exhaustion will occur (supplemented with the activities pertaining to the preservation of the eluates). The tasks necessary for sample pre-treatment for leaching analysis of moulded building materials have been added to this, as well as all procedures for eluate analysis. The procedures U-III (availability test), U-IV (pH), and U-V (conductivity) in this package may not be subcontracted. A complete overview is given in Appendix A2p.



Appendix A1 Regulations for use of quality mark "Quality Assurance Building Materials Decree"

The quality mark 'Quality Assurance Building Materials Decree', hereinafter referred to as 'the quality mark', has been developed in order to provide clarity to all parties involved pertaining to the quality assurance of activities under the terms of the Building Materials Decree, including Sampling and Laboratory Analyses in accordance with AP04.

The management of the quality mark and the supervision of the correct use of the quality mark for the Accreditation Programme AP04 are carried out by the Soil Management Accreditation Board, which operates under the aegis of the Foundation Infrastructure Quality Assurance of Soil Management (SIKB). The authorised accreditation institutions supervise the correct use of the quality mark during their checks on the accredited organisations.

Only laboratories that are both accredited for the analyses defined in the Accreditation Programme APO4 and have been appointed by the Ministries of VROM and V and W, and have also complied with the resulting annual payment to the SIKB may use the quality mark. These laboratories are entitled to apply the quality mark:

- on reports on laboratory analyses under the terms of the Building Materials Decree, but only, if the analyses for the investigation concerned have been fully executed under accreditation;
- on headed paper, provided that the letter does not refer to laboratory analyses that have not been or are not being executed under accreditation;
- in general (including promotion, corporate presentations), if these documentation:
 - also relates to laboratory analyses under the terms of the Building Materials Decree that have been or are being executed under accreditation and
 - relates in no way whatsoever to laboratory analyses under the terms of the Building Materials Decree that have not been or are not being executed under accreditation.



If a document refers to several analyses, part of which has been or is being executed under accreditation and part of which not, the quality mark may only be used in this document in such a way that it is absolutely clear which analyses have been executed under accreditation.

The term "under accreditation" means "in conformance with the requirements, as defined in AP04". The current version of these documents at the time of the execution of the analyses is applicable for the executing organisation.

When using the quality mark, the relevant range for the situation concerned must always be legibly indicated immediately below the logo which includes the text "Quality Assurance Building Materials Decree". For example by mentioning 'AP04'.

Penalties can be enforced against companies or institutions that violate the outlined use of the quality mark. The loss of authority for the use of the quality mark is a potential penalty.

The quality mark is a registered mark. Any misuse of the quality mark can be proceeded against in accordance with private law.

Appendix A2a Package classification of Sampling specification, M1 (soil from static batches)

Tasks (AP04-M):

- M-I Soil – manual sampling in random locations in a static batch
- M-II Soil – manual sampling in random locations by partial displacement of a static batch
- M-III Soil – manual sampling from randomly selected loads during the entire displacement of a static batch
- M-VII Non-moulded building material – manual sampling in random locations from a static batch
- M-VIII Non-moulded building material – manual sampling in random locations by partial displacement of a static batch
- M-IX Non-moulded building material – manual sampling from randomly chosen loads during the entire displacement of a static batch

Supporting activities (AP04-M):

- m-xv Packaging, coding, storage, and transport



Appendix A2b Package classification of Sampling specification, M2 (soil)

Tasks (AP04-M):

- M-I Soil – manual sampling in random locations in a static batch
- M-II Soil – manual sampling in random locations by partial displacement of a static batch
- M-III Soil – manual sampling from randomly selected loads during the entire displacement of a static batch
- M-IV Non-moulded building materials- mechanical sampling from the material flow
- M-V Non-moulded building materials- manual sampling from the halted material flow
- M-VI Non-moulded building materials- manual sampling from the flow of poured material
- M-VII Non-moulded building materials – manual sampling from random locations in a static batch
- M-VIII Non-moulded building materials – manual sampling from random locations by partial displacement of a static batch
- M-IX Non-moulded building materials – manual sampling from randomly chosen loads during the entire displacement of a static batch

Supporting activities (AP04-M):

- m-xv Packaging, coding, storage, and transport



Appendix A2c Package classification Sampling specification, M3 (non-moulded building materials)

Tasks (AP04-M):

- M-IV Non-moulded building materials- mechanical sampling from the material flow
- M-V Non-moulded building materials- manual sampling from the halted material flow
- M-VI Non-moulded building materials- manual sampling from the flow of poured material
- M-VII Non-moulded building materials – manual sampling from random locations in a static batch
- M-VIII Non-moulded building materials – manual sampling from random locations by partial displacement of a static batch
- M-IX Non-moulded building materials – manual sampling from randomly chosen loads during the entire displacement of a static batch
- M-XIV Sample pre-treatment

Supporting activities (AP04-M):

- m-xv Packaging, coding, storage, and transport



Appendix A2d Package classification Sampling specification, M3 (moulded building materials)

Tasks (AP04-M):

- M-X Moulded building materials- sampling of fresh mix of raw materials for production
- M-XI Moulded building materials - sampling from the material flow in connection with the production process
- M-XII Moulded building materials – sampling from static batch at randomly selected locations
- M-XIII Moulded building materials – sampling of static batch related to the production process
- M-XIV Sample pre-treatment

Supporting activities (AP04-M):

- m-xv Packaging, coding, storage, and transport



Appendix A2e Package classification Composition specification, soil, SG1

Tasks (AP04-V):

- V-I Quartering
- V-II Static split distribution
- V-III Rotatory distribution (where applied)
- V-IV Random sampling
- V-V Manual sampling
- V-VI Reduction < 4 mm.
- V-VII Reduction < 1 mm and < 0.5 mm
- V-VIII Reduction < 0.125 mm.
- V-IX Drying
- V-X Siphoning off free water

Procedures (AP04-SG):

- SG-I Determination of the pH-CaCl₂
- SG-II Determination of the dry matter content
- SG-III Determination of the clay content
- SG-IV Determination of the organic matter content
- SG-V Determination of the content of copper, zinc, arsenic, lead, cadmium, nickel, chrome, antimony, barium, cobalt, molybdenum, selenium, tin and vanadium.
- SG-VI Determination of non-volatile mercury content
- SG-IX Determination of polycyclic aromatic hydrocarbon content (PAH)
- SG-X Determination of the extractable organo-halogen compounds content (EOX)
- SG-XI Determination of the mineral oil content

Supporting activities (AP04-V):

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



Appendix A2f Package classification Composition specification, soil, SG2

Tasks (AP04-SG):

- SG-XVI Determination of the polychlorinated biphenyls (PCB) and organochlorine pesticides (OCP) content
- SG-XVII Determination of non-volatile chloro-benzene content



Appendix A2g Package classification Composition specification, soil, SG3

Procedures (AP04-SG):

- SG-VIII Determination of volatile aromatic compound and volatile halogenated hydrocarbon content.
- SG-XVII Determination of volatile chloro-benzene content



Appendix A2h Package classification Composition specification, soil, SG4

Procedures (AP04-SG):

- SG-VII Determination of the cyanide content (free and total)
- SG-XII Determination of the bromide content
- SG-XIII Determination of the fluoride content
- SG-XIV Determination of the chloride content



Appendix A2i Package classification Composition specification, soil, SG5

Procedures (AP04-SG):

- SG-XV Determination of the content chlorophenols
- SG-XVIII Determination of the content of organo-nitrate pesticides
- SG-XIX Research protocol for remaining parameters



Appendix A2j Package classification Composition specification, building materials, SB1

Tasks (AP04-V):

- V-I Quartering
- V-II Static split distribution (if applied)
- V-III Rotatory distribution (if applied)
- V-IV Random sampling
- V-VI Reduction < 4 mm.
- V-VII Reduction < 1 mm and < 0.5 mm

Procedures (AP04-SB):

- SB-I Determination of the dry matter content
- SB-III Determination of polycyclic aromatic hydrocarbon content (PAH), with the exception of bituminous materials
- SB-IV Determination of the extractable organo-halogen compounds content (EOX)
- SB-V Determination of the mineral oil content

Supporting activities (AP04-V):

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



Appendix A2k Package classification Composition specification, building materials, SB2

Procedures (AP04-SB):

- SB-VI Determination of the polychlorinated biphenyls (PCB) and organochloride pesticides (OCP) content
- SB-VII Determination of the organonitrate pesticides content
- SB-VIII Determination of the organophosphate pesticides content



Appendix A2I Package classification Composition specification, building materials, SB3

Procedures (AP04-SB):

SB-II Determination of the content of volatile aromatic hydrocarbons (BTEX)



Appendix A2m Package classification Composition specification, building materials, SB4

Tasks (AP04-V):

- V-I Quartering
- V-II Static split distribution (if applied)
- V-III Rotatory distribution (if applied)
- V-IV Random sampling
- V-VI Reduction < 4 mm.
- V-VII Reduction < 1 mm and < 0.5 mm

Procedures (AP04-SB):

- SB-IX Determination of the content of polycyclic aromatic hydrocarbons (PAH) in bituminous materials
- SB-X Research protocol for remaining parameters

Supporting activities (AP04-V):

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



Appendix A2n Package classification Leaching analysis specification, U1 (soil, non-moulded and moulded building materials); leaching not determined by diffusion

Tasks (AP04-V):

- V-I Quartering
- V-II Static split distribution (if applied)
- V-III Rotatory distribution (if applied)
- V-VI Reduction < 4 mm.
- V-IX Drying (where applicable)

Procedures (AP04-U):

- U-I Determination of the emission of inorganic compounds using the column test
- U-IV Determination of the pH of eluates
- U-V Determination of the conductivity of eluates

Procedures (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 chrome 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 A2o Package classification Leaching analysis specification, U2 (moulded building materials); diffusion determined leaching during extensive leaching or when no rapid exhaustion is expected

Tasks (AP04-V):

V-I Quartering

Procedures (AP04-U):

U-II Determining the emission of inorganic compounds using the diffusion test

U-IV Determination of the pH of eluates

U-V Determination of the conductivity of eluates

Procedures (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 chrome 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 sodium and potassium 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 moulded building materials for the diffusion test



Appendix A2p Package classification Leaching analysis specification, U3 (moulded building materials); diffusion determined leaching during limited leaching or when rapid exhaustion is expected

Tasks (AP04-V):

- V-I Quartering
- V-II Static split distribution (where applicable)
- V-III Rotatory distribution (where applicable)
- V-VI Reduction < 4 mm.
- V-VII Reduction < 1 mm and < 0.5 mm
- V-VIII Reduction < 0.125 mm.
- V-IX Drying

Procedures (AP04-U):

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

Procedures (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 chrome 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

