NEDERLANDS
REGISTER
GERECHTELIJK
DESKUNDIGEN

Standards Drugs Analysis and Interpretation (005.00)

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Inhoud

Part I. General Introduction to Standards

§ 1. Background to and aim of the Standards

Reporting forensic experts play a crucial role in the administration of justice. The NRGD aims to ensure justified confidence in forensic expertise for stakeholders. This confidence must be based on the demonstrable independently safeguarded quality of forensic investigators and their reports on the basis of (inter)national forensic-specific standards.

The NRGD is managed by the Court Experts Board (hereinafter: Board). The Board's core task is to rule on the applications for registration or repeat registration in the register of the NRGD (register). To that end the Board first defines the field of expertise. This is important in order to inform applicants, assessors and users of the register (e.g. judge, public prosecutor and attorney) about the activities an expert in the field of expertise in question engages in and about the activities that fall outside the field of expertise. The demarcation of the field of expertise is set out in Part II of these Standards.

The Board also determines the criteria on the basis of which an assessment is made for each field of expertise as to whether an application complies with the quality requirements. The generic requirements are set out in the Register of Court Experts in Criminal Cases Decree (Besluit register deskundige in strafzaken). These requirements are elaborated further for each field of expertise. This elaboration is set out in Part III of these Standards.

Furthermore the Board determines the assessment procedure. This procedure is described in Part IV of these Standards.

The NRGD has a system of periodic repeat registration. Court experts must demonstrate every five years that they still meet the requirements in force at that time. The Standards are dynamic and are being developed further in order to enhance the quality of the experts. These Standards set out the current state of the (sub-)field of expertise.

§ 2. Types of applicants

The NRGD distinguishes two types of applicants: the initial applicant and the repeat applicant. The initial applicant is a reporter who at the time of submission of the application is not yet registered in the register for the field of expertise to which the application relates. The repeat applicant is an expert who is already registered in the register for the field of expertise to which the application relates.

These two types of applicants are subdivided as follows:

Initial applicant:

i. independent reporter: a reporter who has independently written and signed the required number of case reports;
ii. reporter without work of his own: a reporter who has not independently written and signed the number of case reports required for registration.
If the assessment is favourable, the reporter without work of his own will only qualify for provisional registration.

Repeat applicant:

i. Repeat applicant after full registration;
ii. Repeat applicant after provisional registration (before: temporary registration).

The initial applicant is an applicant who at the time of submission of the application does not have an NRGD registration. An initial applicant could be:

- the independently reporting expert;
- the newly-trained expert;
- the applicant whose earlier application has been rejected by the Board;
- the applicant whose registration was previously stricken.

In respect of initial applicants, it is necessary to make a clear distinction between the independent reporter and the reporter without work of his own. An example of a reporter without work of his own is the newly-trained expert. This expert has completed the forensic training (reporter's training), but has not yet been able to independently write the number of reports required for the assessment because these are written under the supervision of a tutor during the training. Another example of a reporter without work of his own is the reporter whose earlier application was rejected and who has been working (partly) under supervision following this rejection.

The Board adopts the following principle. Every applicant must draw up a List of Case Information. This list must include a specific number of cases in a period specified by the Board immediately preceding the application. If the List of Case Information includes one or more cases which have been prepared under supervision, the applicant will be qualified as a 'reporter without work of his own'. An additional requirement applies to the applicant who was rejected earlier: the case reports included in the List of Case Information must have been drawn up after the date of the Board's decision rejecting the earlier application (Policy Framework on Application after Rejection).

The distinction between the various types of repeat applicants is important in the context of the assessment procedure: the documents a repeat applicant must submit, the composition of the Advisory Committee on Assessment and the assessment method.

§ 3. Justification of Standards

The draft of these Standards has been published on the NRGD website for public consultation. These Standards have been established by the Board in accordance with the Register of Court Experts in Criminal Cases Decree (Besluit register deskundige in strafzaken) and the Experts in Criminal Cases Act (Wet deskundige in strafzaken).

§ 4. Validity of Standards

The Standards are valid from the date shown on the cover. The validity runs until the moment of publication of a new version. In principle it will be checked annually as being up-to-date. This check can lead to a new version. The aim is to publish the new version no more than once a year. Intermediate alterations can be incorporated in an addendum, which will be published on the NRGD website as well.

§ 5. Version management and formal revision history

All changes made to the Standards lead to a new version. Newer versions of (parts of) the Standards are designated with a higher version number.

5.1. Version management

In the case of editorial changes the old version number is increased by 0.1. Editorial changes have no substantive impact. In the case of substantive changes the version number is increased by 1.

5.2. Formal revision history

The revision history starts with version 1.0 as the first formally approved version. Substantive changes made are briefly described in the revision history (Annex C). This makes it possible to trace which Standards are valid at any given moment at all times.

Part II. Demarcation of Drugs Analysis and Interpretation

§ 1. Introduction

Within the field of expertise of Drugs Analysis and Interpretation, a distinction must be made between four types of examinations:

1. identification and quantification;
2. trace examination;
3. production process examination;
4. comparative examination.

In respect of these four types of examinations, different questions are of relevance in two different stages: the stage of the chemical-physical examination and the interpretation stage. In all types of examination it is important that the expert has the skills to conduct a proper sampling and to analyze samples in a correct manner. Additionally, all types of examination must include an interpretation within the framework of the relevant legislation, i.e. the Dutch Opium Act, the European guidelines referred to in the Misuse of Chemicals Prevention Act and the Dutch Medicines Act. The expert must be aware of his limited knowledge in this respect.

1.1.1. Identification and quantification

Identification aims to determine the presence of:

- any agents listed in the Dutch Opium Act or the European guidelines referred to in the Misuse of Chemicals Prevention Act;
- a substance seen on the drug users market, such as new psychoactive substances and/or a substance that may be covered by the Dutch Medicines Act, such as cutting agents and falsified medicines;
- or chemicals used in production processes.

Quantification aims to determine the concentration and/or amount present of the above-mentioned agents.

a. The chemical-physical examination stage

The following questions are, *inter alia*, of relevance here:

'Can drugs or related substances be identified, if so which?'
'What is the concentration and/or amount of the agent present?'

1.1.2. Trace examinations

Trace examinations are also intended to determine the presence of agents and substances listed under 1.1.1. These examinations are carried out on trace carriers (anything on which a trace is available or could be present) or specific samples obtained from a suspected trace carrier.

a. The chemical-physical examination stage

The following questions are, *inter alia*, of relevance here:

'Can traces of drugs or related substances be identified?'
'If so, where are these traces to be demonstrably identified on the trace carrier?'

b. The interpretation stage

When requested, the probability of the results of the chemical-physical examination is evaluated by the expert within the context of the proposed activity scenarios that could have led to the transfer/movement of traces of drugs.

1.1.3. Comparative examination

A comparative examination is carried out in order to provide an answer to the question whether, and to what degree or at which level, different samples/batches of drugs or drug precursors are from the same origin. In this context the term origin refers to a pre-existing quantity of substance

that has been divided into different parts. The possibly corresponding origin is investigated by comparing features like physical characteristics and chemical composition.

a. The chemical-physical examination stage

The following questions are, *inter alia*, of relevance here:

'What are the external features and physical qualities of the material for examination?'
'What chemical components (e.g. major component, cutting agents, by-products, solvents) are demonstrably identified and in what (relative) concentrations?'

b. The interpretation stage

The following questions are, *inter alia*, of relevance here:

'Do the examined samples or any processed materials contain drugs that are from the same origin?'
'Are the examined samples or any processed materials from the same origin as previously examined materials (database)?'

In this stage the expert comments on the probability of the measured results within the context of the various hypotheses.

1.1.4. Production process examination

The production process examination aims at determining what agent has been produced and in what manner, and which waste material has been created during these processes. The drug related production processes examination is primarily carried out on material which has been secured at a crime scene. By combining the achieved results with information on the circumstances and materials found at the crime scene, comments can be made on possible processes and manufactured agents.

Examples of such processes are:

'Production of synthetic drugs and precursors'
'Extraction/conversion lab of cocaine'
'Production of cutting agents e.g. in connection with heroin'
'Cutting, (re)packing or making pharmaceutical forms of drugs (e.g. tablets, powders)'
'Hash/hash oil production'
'Cultivation and production of cannabis products'

a. The chemical-physical examination stage

The following questions are, *inter alia*, of relevance here:

- *'Can the presence of an agent listed in the Dutch Opium Act or an agent listed in the European guidelines referred to in the Misuse of Chemicals Prevention Act;*
- *or a substance seen on the drug users market, such as new psychoactive substances and/or a substance that may be covered by the Dutch Medicines Act, such as cutting agents and falsified medicines;*
- *or chemicals used in production processes be demonstrated and if so, in what concentration or what quantity?'*

b. The interpretation stage

The following questions are, *inter alia*, of relevance here:

'Was an agent as referred to under 1.1.4.a manufactured[1]?'
'Which production processes have been used or could have been applied?'
'Which agents (precursors) and equipment for the production of the agent were present at the crime scene?'
'What is the production capacity of the equipment found at the crime scene?'
'What do the expected proceeds of drugs amount to, according to the equipment and agents found at the scene?'

[1] Manufacturing also includes 'preparation, treatment and processing'.

'Which production process can be linked to the discarded materials? (in the event of illegal waste dumping)'

§ 2. Core activities

Drugs examination is concerned with samples that are expected to contain:

- agents listed in the Dutch Opium Act and the European guidelines referred to in the Misuse of Chemicals Prevention Act;
- a substance seen on the drug users market, such as new psychoactive substances and/or a substance that may be covered by the Dutch Medicines Act, such as cutting agents and falsified medicines;
- or chemicals used in production processes that are not of human origin.

Within the field of expertise of Drugs Analysis and Interpretation a distinction must be made between two categories for registration: Drugs Comparison and Drugs Production. For both categories experts will be able to answer the questions of *identification, quantification and trace examination in the chemical-physical examination stage* (see 1.1.1.a, 1.1.2.a).

In addition experts with a registration for Drugs Comparison are involved with answering questions related to *comparative examination* in the *interpretation stage* (see 1.1.3.b). Furthermore *these experts will be able to answer questions of comparative examination* in the *chemical-physical examination stage* (see 1.1.3.a).

Experts with a registration for Drugs Production are involved with answering questions related to *production process examination in the interpretation stage* (see 1.1.4.b). Furthermore these experts will be able to answer the questions of *production process examination* in the *chemical-physical examination stage* (see 1.1.4.a).

§ 3. Boundaries of the field of expertise

Experts in the field of expertise of Drugs Analysis and Interpretation must be aware of the opportunities and limitations of their answers to questions concerning *trace examinations* in the *interpretation stage* (1.1.2.b).

Experts must be aware that standard equipment and routine methods will not automatically detect and identify all new and previously unknown substances or detect low dosed substances.

§ 4. Registration

4.1. Registration

The register will record the name of the relevant expert as an expert in the field of Drugs Analysis and Interpretation.

4.2. Defined subfields

Within the field of expertise Drugs Analysis and Interpretation experts can be registered for:

005.1 Drugs Comparison; and/or
005.2 Drugs Production

Part III. Registration requirements for Drugs Analysis and Interpretation

The general (repeat) registration requirements are given in the next paragraphs in italics with a reference to Article 12 paragraph 2 in the Register of Court Experts in Criminal Cases Decree (Besluit register deskundige in strafzaken).

An expert will only be registered as an expert in criminal cases upon submission of the application if, in the opinion of the Board, the expert:

a. has sufficient knowledge and experience in the field of expertise to which the application relates;
b. has sufficient knowledge of and experience in the field of law concerned, and is sufficiently familiar with the position and the role of the expert in this field;
c. is able to inform the commissioning party whether, and if so, to what extent the commissioning party's question at issue is sufficiently clear and capable of investigation in order to be able to answer it on the basis of their specific expertise;
d. is able, on the basis of the question at issue, to prepare and carry out an investigation plan in accordance with the applicable standards;
e. is able to collect, document, interpret and assess investigative materials and data in a forensic context in accordance with the applicable standards;
f. is able to apply the current investigative methods in a forensic context in accordance with the applicable standards
g. is able to give, both orally and in writing, a verifiable and well-reasoned report on the assignment and any other relevant aspects of their expertise in terms which are comprehensible to the commissioning party;
h. is able to complete an assignment within the stipulated or agreed period.
i. is able to carry out the activities as an expert independently, impartially, conscientiously, competently, and in a trustworthy manner.

§ 1. Article 12(2) sub-paragraph a

(…) has sufficient knowledge and experience in the field of expertise to which the application relates.

1.1. Initial applicant: independent reporter

Basic requirements:

- function to the equivalent level of a person possessing a University master Degree (for example in chemistry, pharmacy, pharmaceutical science);
- possess a University master Degree which should contain minimally both Organic Chemistry (12 ECTS[2]) and Analytical Chemistry (12 ECTS) or an equivalent qualification from a College of Higher Education which should contain minimally both Organic Chemistry (12 ECTS) and Analytical Chemistry (12 ECTS);
- have knowledge of the most prevalent:
  - illicit and recreationally used drugs as cocaine, heroin, amphetamines, barbiturates, cannabis, GHB and benzodiazepines or related substances (occurrence, effects, use);
  - cutting agents;
  - (medicinal) products appearing in the drug users market;
- thorough knowledge of analytical techniques (both in quality and in quantity) including gas and liquid chromatography, mass spectrometry, infrared spectroscopy and be able to apply these techniques adequately while being acquainted with other related analytical techniques;
- have knowledge of the synthetic routes for common synthetic drugs and precursors and the by-products and waste streams deriving therefrom;
- have knowledge of the manufacturing of cocaine and heroin, the by-products and waste streams deriving therefrom;

[2] European Credit Transfer and Accumulation System, 1 ECTS = 28 study hours.

- have recent experience in interpreting and reporting cases, which means that the applicant has reported in this field of expertise at least once over the past year;
- be familiar with the proposed literature and guidelines (see Annex A) and must keep up to date with developments *inter alia* regarding new drugs, analytical techniques, the law;
- have knowledge of the possibilities and limitations of the answers to questions within the framework of the *interpretation stage of the trace examination* (see Demarcation 1.1.2.b.).

In addition for the field of Drugs Comparison:

- be able to reply to questions of *comparative examination* in the *interpretation stage* (see Demarcation 1.1.3.b);
- be able to reply to questions of *identification and quantification, trace examinations and comparative examination in the stage of the chemical-physical examination* (see Demarcation 1.1.1.a, 1.1.2.a, and 1.1.3.a).

In addition for the field of Drugs Production:

- be able to reply to questions of *production process examination in the interpretation stage* (see Demarcation 1.1.4.b);
- be able to reply to questions of *identification and quantification, trace examinations and production process examination in the stage of the chemical-physical examination* (see Demarcation 1.1.1.a, 1.1.2.a, 1.1.4.a).

For both subfields:

Specific requirements:

- have drawn up at least 12 case reports not older than 5 years which have been subjected to collegial review. For each subfield the applicant should have at least 6 case reports. These case reports should cover the full spectrum of forensic practice, e.g. research type, different substances and specifically for the subfields:
  - Drugs Comparison: comparative examination and trace examination if applicable;
  - Drugs Production: comparative production process examination and trace examination if applicable;

  In case the applicant is also acting as a supervisor, at least two reports on the List of Case Information should be independently prepared reports.
- have spent an average of 40 hours a year over the past 5 years on forensically relevant professional development (e.g. publications, attending conferences, running or attending courses).

1.2. Initial applicant: reporter without work of his own

Basic requirements:

- function to the equivalent level of a person possessing a University master Degree (for example in chemistry, pharmacy, pharmaceutical science);
- possess a University master Degree which should contain minimally both Organic Chemistry (12 ECTS[3]) and Analytical Chemistry (12 ECTS) or an equivalent qualification from a College of Higher Education which should contain minimally both Organic Chemistry (12 ECTS) and Analytical Chemistry (12 ECTS);
- have knowledge of the most prevalent:
  - illicit and recreationally used drugs as cocaine, heroin, amphetamines, barbiturates, cannabis, GHB and benzodiazepines or related substances (occurrence, effects, use);
  - cutting agents;
  - (medicinal) products appearing in the drug users market;
- thorough knowledge of analytical techniques (both in quality and in quantity) including gas and liquid chromatography, mass spectrometry, infrared spectroscopy and be able to apply these techniques adequately while being acquainted with other related analytical techniques;

[3] European Credit Transfer and Accumulation System, 1 ECTS = 28 study hours.

- have knowledge of the synthetic routes for common synthetic drugs and precursors and the by-products and waste streams deriving therefrom;
- have knowledge of the manufacturing of cocaine and heroin, the by-products and waste streams deriving therefrom;
- have recent experience in interpreting and reporting cases, which means that the applicant has reported in this field of expertise at least once over the past year;
- be familiar with the proposed literature and guidelines (see Annex A) and must keep up to date with developments *inter alia* regarding new drugs, analytical techniques, the law;
- have knowledge of the possibilities and limitations of the answers to questions within the framework of the *interpretation stage of the trace examination* (see Demarcation 1.1.2.b.).

In addition for the field of Drugs Comparison:

- be able to reply to questions of comparative examination in the interpretation stage (see Demarcation 1.1.3.b);
- be able to reply to questions of identification and quantification, trace examinations and comparative examination in the stage of the chemical-physical examination (see Demarcation 1.1.1.a, 1.1.2.a, and 1.1.3.a).

In addition for the field of Drugs Production:

- be able to reply to questions of *production process examination in the interpretation stage* (see Demarcation 1.1.4.b);
- be able to reply to questions of identification and quantification, trace examinations and production process examination in the stage of the chemical-physical examination (see Demarcation 1.1.1.a, 1.1.2.a, 1.1.4.a).

For both subfields:

Specific requirements:

- have drawn up at least 6 reports not older than 2 years which have been subjected to collegial review and/or supervision and of which at least one report has been drawn up under supervision. For each subfield the applicant should have at least three case reports. These case reports should cover the full spectrum of forensic practice, e.g. research type, different substances and specifically for the subfields:
  - Drugs Comparison: comparative examination and trace examination if applicable;
  - Drugs Production: comparative production process examination and trace examination if applicable;
- have spent an average of 40 hours a year over the past 2 years on forensically relevant professional development (e.g. publications, attending conferences, running or attending courses).

1.3. Repeat applicant: after full registration

Basic requirements:

- function to the equivalent level of a person possessing a University master Degree (for example in chemistry, pharmacy, pharmaceutical science);
- possess a University master Degree which should contain minimally both Organic Chemistry (12 ECTS[4]) and Analytical Chemistry (12 ECTS) or an equivalent qualification from a College of Higher Education which should contain minimally both Organic Chemistry (12 ECTS) and Analytical Chemistry (12 ECTS);
- have knowledge of the most prevalent:
  - illicit and recreationally used drugs as cocaine, heroin, amphetamines, barbiturates, cannabis, GHB and benzodiazepines or related substances (occurrence, effects, use);
  - cutting agents;
  - (medicinal) products appearing in the drug users market;

[4] European Credit Transfer and Accumulation System, 1 ECTS = 28 study hours.

- thorough knowledge of analytical techniques (both in quality and in quantity) including gas and liquid chromatography, mass spectrometry, infrared spectroscopy and be able to apply these techniques adequately while being acquainted with other related analytical techniques;
- have knowledge of the synthetic routes for common synthetic drugs and precursors and the by-products and waste streams deriving therefrom;
- have knowledge of the manufacturing of cocaine and heroin, the by-products and waste streams deriving therefrom;
- have recent experience in interpreting and reporting cases, which means that the applicant has reported in this field of expertise at least once over the past year;
- be familiar with the proposed literature and guidelines (see Annex A) and must keep up to date with developments *inter alia* regarding new drugs, analytical techniques, the law;
- have knowledge of the possibilities and limitations of the answers to questions within the framework of the *interpretation stage* of the *trace examination* (see Demarcation 1.1.2.b.).

In addition for the field of Drugs Comparison:

- be able to reply to questions of *comparative examination* in the *interpretation stage* (see Demarcation 1.1.3.b);
- be able to reply to questions of *identification and quantification*, *trace examinations and comparative examination in the stage of the chemical-physical examination* (see Demarcation 1.1.1.a, 1.1.2.a, and 1.1.3.a).

In addition for the field of Drugs Production:

- be able to reply to questions of *production process examination* in the *interpretation stage* (see Demarcation 1.1.4.b);
- be able to reply to questions of *identification and quantification*, *trace examinations and production process examination in the stage of the chemical-physical examination* (see Demarcation 1.1.1.a, 1.1.2.a, 1.1.4.a).

For both subfields:

Specific requirements:

- have drawn up at least 12 reports not older than 5 years, which have been subjected to collegial review. For each subfield the applicant should have at least 6 case reports. These case reports should cover the full spectrum of forensic practice, e.g. research type, different substances and specifically for the subfields:
  - Drugs Comparison: comparative examination and trace examination if applicable;
  - Drugs Production: comparative production process examination and trace examination if applicable
- have spent an average of 40 hours a year over the past 5 years on forensically relevant professional development (e.g. publications, attending conferences, running or attending courses).

1.4. Repeat applicant: after provisional registration

Basic requirements:

- function to the equivalent level of a person possessing a University master Degree (for example in chemistry, pharmacy, pharmaceutical science);
- possess a University master Degree which should contain minimally both Organic Chemistry (12 ECTS[5]) and Analytical Chemistry (12 ECTS) or an equivalent qualification from a College of Higher Education which should contain minimally both Organic Chemistry (12 ECTS) and Analytical Chemistry (12 ECTS);
- have knowledge of the most prevalent:
  - illicit and recreationally used drugs as cocaine, heroin, amphetamines, barbiturates, cannabis, GHB and benzodiazepines or related substances (occurrence, effects, use);

[5] European Credit Transfer and Accumulation System, 1 ECTS = 28 study hours.

  - cutting agents;
  - (medicinal) products appearing in the drug users market;
- thorough knowledge of analytical techniques (both in quality and in quantity) including gas and liquid chromatography, mass spectrometry, infrared spectroscopy and be able to apply these techniques adequately while being acquainted with other related analytical techniques;
- have knowledge of the synthetic routes for common synthetic drugs and precursors and the by-products and waste streams deriving therefrom;
- have knowledge of the manufacturing of cocaine and heroin, the by-products and waste streams deriving therefrom;
- have recent experience in interpreting and reporting cases, which means that the applicant has reported in this field of expertise at least once over the past year;
- be familiar with the proposed literature and guidelines (see Annex A) and must keep up to date with developments *inter alia* regarding new drugs, analytical techniques, the law;
- have knowledge of the possibilities and limitations of the answers to questions within the framework of the *interpretation stage* of the *trace examination (*see Demarcation 1.1.2.b.).

In addition for the field of Drugs Comparison:

- be able to reply to questions of *comparative examination* in the *interpretation stage* (see Demarcation 1.1.3.b);
- be able to reply to questions of *identification and quantification*, *trace examinations and comparative examination in the stage of the chemical-physical examination* (see Demarcation 1.1.1.a, 1.1.2.a, and 1.1.3.a).

In addition for the field of Drugs Production:

- be able to reply to questions of *production process examination* in the *interpretation stage* (see Demarcation 1.1.4.b);
- be able to reply to questions of *identification and quantification*, *trace examinations and production process examination in the stage of the chemical-physical examination* (see Demarcation 1.1.1.a, 1.1.2.a, 1.1.4.a).

For both subfields:

Specific requirements:

- have drawn up at least 3 reports per year during the registration period which have been subjected to collegial review. For each subfield the applicant should have at least three case reports. These case reports should cover the full spectrum of forensic practice, e.g. research type, different substances and specifically for the subfields:
  - Drugs Comparison: comparative examination and trace examination if applicable;
  - Drugs Production: comparative production process examination and trace examination if applicable;

  In case the applicant is also acting as a supervisor, at least 1 report on the List of Case Information should be independently prepared reports.
- have spent an average of 40 hours per year during the registration period on forensically relevant professional development (e.g. publications, attending conferences, running or attending courses).

§ 2. Article 12(2) sub-paragraph b

(…) has sufficient knowledge of and experience in the field of law concerned, and is sufficiently familiar with the position and the role of the expert in this field.

In general an applicant should have adequate knowledge of Dutch criminal law:

- context of criminal law:
  - Trias Politica, distinction between civil law, administrative law and criminal law.
- criminal law procedure:
  - pre-trial investigation;
  - coercive measures;
  - stages of the proceedings;
  - actors in the criminal justice system (tasks/powers/responsibilities);
  - regulations concerning experts laid down in the Dutch Code of Criminal Procedure (position and powers of commissioning party, legal position of expert, position and powers of lawyer, forms of counter-analysis, register of experts in the context of criminal law);
  - legal decision-making framework of the court in criminal cases (decision-making schedule laid down in Section 350 of the Dutch Criminal Code of Procedure), also with a view to the relevance of the commission to the expert and to the question at issue;
  - course of the criminal trial;
  - position of the expert in the court procedure.
- substantive criminal law:
  - sanctions and grounds for exemption from criminal liability (very basic).
- knowledge of the legal context of safeguarding the quality of the expert and the analysis/investigation:
  - position and role of the co-operating organisations in the criminal justice system in safeguarding the quality of the reports;
  - professional codes and relevant regulations in relation to the NRGD Code of Conduct.

In addition to the above requirements, an applicant for the field of expertise Drugs Analysis and Interpretation:

- should be aware of the possible effects of the specific Dutch regulations on the conclusions of their examination. Therefore applicants should have a working knowledge of the Dutch Opium Act, the European guidelines referred to in the Misuse of Chemicals Prevention Act and the Dutch Medicines Act (articles 1, 18, 38 and 40).

§ 3. Article 12(2) sub-paragraph c

(…) is able to inform the commissioning party whether, and if so, to what extent the commissioning party's question at issue is sufficiently clear and capable of investigation in order to be able to answer it on the basis of their specific expertise.

An applicant should:

- have knowledge of the limitations of his own examination and must know when another expert in the same or a different field of expertise should be asked for advice or when follow-up examination must be recommended;
- have knowledge of other fields of expertise such as dactyloscopy/DNA and the aspects which may affect the own field of expertise (such as the order and planning of the examination).

§ 4. Article 12(2) sub-paragraph d

(…) is able, on the basis of the question at issue, to prepare and carry out an investigation plan in accordance with the applicable standards.

An applicant should:

- have knowledge of the pros and cons of the various scientific methods (including sample preparation and chemical analysis) applied in the field of expertise, be aware of the possibilities and limitations of these methods, be able to explain them;
- have knowledge of the (current) guidelines (see Annex A).

§ 5. Article 12(2) sub-paragraph e

(…) is able to collect, document, interpret and assess investigative materials and data in a forensic context in accordance with the applicable standards.

An applicant should:

- be able to take samples in an appropriate manner (e.g. safety, contamination and technical protocol such as Drug Sampling (see Annex A));
- be able to evaluate samples according to the guidelines and be aware of the possibility of contamination;
- have knowledge of the logistic processes regarding the material for examination (chain of custody).

§ 6. Article 12(2) sub-paragraph f

(…) is able to apply the current investigative methods in a forensic context in accordance with the applicable standards.

An applicant should:

- have knowledge of quality and controlling systems for the examination;
- have knowledge of the uncertainty of the measurements of his own quantitative examination;
- have knowledge of selection procedures for sampling;
- be able to modify existing examination methods while preserving validity.

§ 7. Article 12(2) sub-paragraph g

(…) is able to give, both orally and in writing, a verifiable and well-reasoned report on the assignment and any other relevant aspects of their expertise in terms which are comprehensible to the commissioning party.

An applicant should:

- be able to report to a layman on the interpretation and conclusions (both orally and in writing) and to provide statistical evidence insofar as relevant, on the basis of the results;
- be able to formulate hypotheses and interpret results;
- be able to indicate the evidential value of the examination (supporting information, assumptions and limitations);
- In addition to the required administrative data (principal's name, date of the assignment, date of the report, references of the principal, own references, number and nature of annexes, etc.) a report must contain the following items:
  - a description of the received material, including information on the date and manner of delivery;
  - a detailed description of the material under investigation;
  - any and all relevant background information possibly affecting the interpretation of the results of the examination with notification of when taken and from whom and this information comes;
  - the questions asked by the commissioning party, if at all possible by means of hypotheses, and where relevant the related connected communication;
  - the examination method(s) applied;
  - the results of the examination;
  - the interpretation of the results of the examination;
  - the conclusions, including the probability scale applied.

§ 8. Article 12(2) sub-paragraph h

(…) is able to complete an assignment within the stipulated or agreed period.

§ 9. Article 12(2) sub-paragraph i

(…) is able to carry out the activities as an expert independently, impartially, conscientiously, competently, and in a trustworthy manner.

An applicant should:

- comply with the NRGD Code of Conduct determined by the Court Experts Board and published on the website of the NRGD.

§ 10. Hardship clause

The Board may decide not to apply or deviate from a registration requirement if application of such requirement would produce very unreasonable results. The hardship clause may only offer a solution in certain exceptional situations. It is up to the applicant himself to submit facts and circumstances showing that a certain registration requirement is unreasonable in his specific case.

Part IV. Assessment procedure for Drugs Analysis and Interpretation

§ 1. General

In all fields of expertise the assessment will be based on the written information provided, including as a minimum requirement case reports and items of evidence, supplemented in principle with an oral assessment. However, such an oral assessment will not be necessary if the applicant's expertise has already been clearly demonstrated by the written information.

The assessment will in principle be carried out on the basis of the information provided by the applicant:

- general information as part of the application package
- documentary evidence of competence.

If it is felt necessary in the context of the assessment an additional case report and/or information, for example information about the way collegial review and/or supervision is organized within the organization, can be requested.

§ 2. Assessment procedure per type of applicant

2.1. Initial applicant: independent reporter

Documents to be submitted:

- NRGD application form;
- Certificate of Good Conduct;
- a clearly legible copy of a valid passport or identity card;
- copies of documents relating to the highest level of professional qualification;
- a curriculum vitae (CV), preferably in English;
- documentary evidence of the current working level;
- Overview Continuing Professional Development Drugs;
- List of Case Information Drugs;
- 3 case reports not older than 5 years selected by the applicant from the List of Case Information. For each subfield the applicant should have at least two case reports. When several subfields are combined in one case report, it is possible to provide the same case report for different subfields. If possible the case reports should also contain the testimony in court;
  These case reports should provide a clear and broad picture of the applicant's competencies.
- certificates for (proficiency) tests;
- if available:
  - proof of the forms of professional development referred to in the Overview Continuing Professional Development Drugs.

Assessment method:

phase a. administrative, by the NRGD Bureau;
phase b. substantive, by an Advisory Committee for Assessment (ACA) made up of at least three people on the basis of the available written material, including possible supplementary written information. In principle this ACA consists of a lawyer and two professional assessors;
phase c. substantive, by the ACA specified at phase b by means of an oral assessment. This oral assessment will be waived if the applicant's expertise has already been clearly established in phase b;
phase d. decision by the Board: registration, provisional registration or no registration.

2.2. Initial applicant: reporter without work of his own
Documents to be submitted:

- NRGD application form;
- Certificate of Good Conduct;
- a clearly legible copy of a valid passport or identity card;
- copies of documents relating to the highest level of professional qualification;
- a curriculum vitae (CV), preferably in English;
- documentary evidence of the current working level;
- Overview Continued Professional Development Drugs;
- List of Case Information Drugs;
- 3 case reports drawn up in the past 2 years selected by the applicant from the List of Case Information. For each subfield the applicant should have at least two case reports. When several subfields are combined in one case report, it is possible to provide the same case report for different subfields. If possible the case reports should also contain the testimony delivered in court.
  These case reports should provide a clear and broad picture of the applicant's competencies.
- Certificates for (proficiency) tests;
- if available:
  - proof of the forms of professional development referred to in the Overview Continuing Professional Development Drugs.

Assessment method:

phase a. administrative, by the NRGD Bureau;
phase b. substantive, by an Advisory Committee for Assessment (ACA) made up of at least three people on the basis of the available written material, including possible supplementary written information. In principle this ACA consists of a lawyer and two professional assessors;
phase c. substantive, by the ACA specified at phase b by means of an oral assessment. This oral assessment will be waived if the applicant's expertise has already been clearly established in phase b;
phase d. decision by the Board: registration for a provisional registration or no registration.

2.3. Repeat applicant: after full registration
Documents to be submitted:

- NRGD application form;
- Certificate of Good Conduct;
- Copies of documents relating to the highest level of professional qualification (if changed);
- an updated curriculum vitae (CV), preferably in English;
- Overview Continuing professional development Drugs
- List of Case information Drugs;
- 2 case reports drawn up in the past 5 years selected by the applicant from the List of Case Information. For each subfield the applicant should have at least two case reports. When several subfields are combined in one case report, it is possible to provide the same case report for different subfields. If possible the case reports should also contain the testimony delivered in court.
  These case reports should provide a clear and broad picture of the applicant's competencies.
  If possible the case reports should also contain the testimony delivered in court;
- Certificates for (proficiency) tests;
- if available:
  - proof of the forms of professional development referred to in the Overview Continuing Professional Development Drugs.

Assessment method:

phase a. administrative, by the NRGD Bureau;
phase b. substantive, by an Advisory Committee for Assessment (ACA) made up of at least two people on the basis of the available written material. This ACA will in principle consist of a lawyer and a professional assessor;
phase c. substantive, by the ACA specified at phase b to which one professional assessor is added, drawn from the same field of expertise as the applicant, on the basis of the available written material. This will not be necessary if the ACA unanimously gives a positive recommendation to the Board in phase b;
phase d. substantive, by the ACA specified at phase c by means of an oral assessment. This oral assessment will be waived if the applicant's expertise has been clearly established in phase c;
phase e. decision by the Board: registration, provisional registration or no registration.

2.4. Repeat applicant: after provisional registration
Documents to be submitted:

- NRGD application form;
- An updated curriculum vitae (CV), preferably in English;
- Copies of documents relating to the highest level of professional qualification (if changed);
- Overview of Continuing Professional Development Drugs;
- List of Case information Drugs;
- 2 case reports drafted during the registration period selected by the applicant from the List of Case Information. For each subfield the applicant should have at least two case reports. When several subfields are combined in one case report, it is possible to provide the same case report for different subfields. If possible the case reports should also contain the testimony delivered in court;
  These case reports should provide a clear and broad picture of the applicant's competencies.
- Certificates for (proficiency) tests ;
- if available:
  - proof of the forms of professional development referred to in the Overview Continuing Professional Development Drugs.

Assessment method:

phase a. administrative, by the NRGD Bureau;
phase b. substantive, by an Advisory Committee for Assessment (ACA) made up of at least three people on the basis of the available written material. In principle this ACA consists of a lawyer and two professional assessors;
phase c. substantive, by the ACA specified at phase b by means of an oral assessment. This oral assessment will be waived if the applicant's expertise has already been clearly established;
phase d. decision by the Board: registration, provisional registration or no registration.

Annex A Suggested literature and guidelines

- 'Development of a harmonised method for the profiling of amphetamines, deel I-VI (serie)':
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- Andersson, K., Jalava, K., Lock, E., Finnon, Y. e.a.(2007). Development of a harmonised method for the profiling of amphetamines III: Development of the gas chromatographic method. *Forensic Science International*, (169) 1, p. 50-63.
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- United Nations Division of Narcotic Drugs (1986). *Recommended Methods for Testing Cocaine.* New York: United Nations.
- United Nations Division of Narcotic Drugs (1989). *Recommended Methods for Testing Lysergide (LSD).* New York; United Nations.
- United Nation Office on Drugs and Crime (2005). *Methods for Impurity Profiling of Heroin and Cocaine.* New York: United Nations.
- United Nation Office on Drugs and Crime (2006). *Recommended Methods for the Identification and Analysis of Amphetamine, Methamphetamine and their Ring-Substituted Analogues in Seized Materials.* New York: United Nations.
- United Nation Office on Drugs and Crime (2009). *Recommended methods for the identification and analysis of cannabis and cannabis products.* New York: United Nations.
- United Nations in cooperation with the Drugs Working Group of the European Network of Forensic Science Institutes (2009). *Guidelines on Representative Drug Sampling.* New York: United Nations.
- United Nations International Drug Control Programme (1998). *Recommended Methods for Testing Opium, Morphine and Heroin*. New York: United Nations
- United Nation Office on Drugs and Crime (2005). *Methods for Impurity Profiling of Heroin and Cocaine.* New York: United Nations.
- United Nations Office for Drug Control and Crime Prevention (2001). *Drug Characterization/Impurity Profiling: Background and Concepts.* New York: United Nations.
- United Nations Office for Drug Control and Crime Prevention (2013). *Clandestine Manufacture of Substances under International Control*. New York: United Nations.
- List with publications scientists UNODC

Annex B NRGD Glossary

Advisory Committee for Assessment
: A committee appointed by the Board which advises the Board on the (repeat) applicant's (degree of) suitability for (repeat) registration.

Applicant
: Natural person submitting an application to the NRGD in order to be (re-) registered in the register.

Assessor
: A member of an Advisory Committee for Assessment.

Board
: The Court Experts Board is the body as referred to in Section 51k(2) of the Code of Criminal Procedure and is charged with managing the register.

Brdis
: Register of Court Experts in Criminal Cases Decree (Besluit register deskundige in strafzaken).

Bureau
: The NRGD Bureau that supports the Board.

Collegial review
: The assessment of another person's work for the purpose of continuous quality control of a person's expertise. There is thereby not a hierarchical but a horizontal relationship between colleagues specialised in the same subject area. The reviewer does not sign the report.

Continuing professional development
: All (training) activities that contribute to the ongoing development of knowledge and skills, which is desirable and necessary in order to be able to continue performing the role of court expert in a professional manner.

Independent reporter
: A reporter who has independently prepared and signed the required number of case reports

Initial applicant
: An applicant who makes an application to be entered in the register and does not or not yet have an NRGD registration at the time when the application is made.

Intervision
: Intervision is a structured (interdisciplinary) meeting between people who are working or training in the same professional area. The subject of discussion is in any case the forensic work carried out and the associated problems. The aim is to enhance the expertise of those involved and improve quality of work. Unlike supervision, there is no hierarchical relationship between the participants.

NRGD
: The Netherlands Register of Court Experts of which the Board and the Bureau form part.

Provisional registration
: The registration of an expert for a period specified by the Board and possibly under certain conditions which must be met within that period. In principle the period to be specified by the Board is two years.

Register
: The national public register as referred to in Section 51 k(1) of the Code of Criminal Procedure, which lists the court experts which the Board deems suitable.

Registered expert
: An expert who is entered in the register.

Registration
Entry in the register.

Repeat applicant
An expert who at the time of submitting a repeat application already has a NRGD registration, possibly for a provisional registration.

Reporter
An individual who issues a report for the administration of justice and/or gives testimony in court.

Reporter training
A coherent and structured arrangement of organised training activities in which the necessary knowledge and experience are acquired to report as a court expert in criminal law proceedings and that is completed by an exam.

Reporter with no own work
A reporter who has not independently completed and signed the number of case reports required for registration.

Supervision
The assessment of another person's work, the joint consideration of the work and the supervision of a supervisee as part of a training or additional training process. Supervisor and supervisee are thereby in a hierarchical relationship. The supervisor will observe the subject of the investigation (the investigated person) in such a way that they can check the supervisee's investigation, and can endorse and take responsibility for the conclusions thereof. The supervisor will sign the report in all cases.

User
Someone who uses the register in order to find and potentially engage a registered expert.

Annex C Revision History

Version 3.1
Date: Juni 2018
Revisions made:

- Adjustments made on the basis of Template Standards 3.2:
  - changes in policy e.g. provisional registration
  - editorial changes in Englisch terminology
  - Statement NRGD added to Application Form

Version 3.0
Date: 12.12.2016
Revisions made:

- Generic adjustments:
  - addition: generic introduction for all fields of expertise in Part I
  - adjusted description of types of applicants: independent/work of his own
  - differentiation per types of applicants to provide an immediate overview of respective requirements (Part III) and assessment procedure (Part IV)
  - number of case reports adjusted because of extending the registration period;
  - possibility to submit case reports that were interpreted and reported on under the supervision of the applicant
  - integration of several NRGD policy frameworks in Standards selection of case reports by applicant themselves.

Version 2.0
Date: 01.11.2014
Revisions made:

- The specialism has been divided into two different categories: Drugs Comparison and Drugs Production. Experts can register for one or both categories;
- Renewal registration:
  - collegial reviewed reports mandatory;
  - 40 hours per year on continued professional development .

Version 1.0
Date: 01.04.2011
Revisions made:

- First standards documents Drugs Analysis and Interpretation