SLOVENSKI STANDARD
oSIST prEN 18000-1:2023

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Diagnostične analize zdravja živali - Nadzor diagnostičnih reagentov in vitro - 1. del: Vloga za začetno kontrolo in kontrolo od serije do serije

Animal health diagnostic analyses - Control of in vitro diagnostic reagents - Part 1: Application file for the initial and the batch-to-batch control

Tiergesundheitsdiagnostische Analysen - Kontrolle von in-vitro-diagnostischen Reagenzien - Teil 1: Antragsunterlagen für die Erstkontrolle und die Kontrolle von Charge zu Charge

Analyses de diagnostic en santé animale - Contrôle des réactifs de diagnostic in vitro - Partie 1 : Dossier de présentation pour le contrôle initial et le contrôle lot à lot

Ta slovenski standard je istoveten z: **prEN 18000-1**

ICS:

11.100.10	Diagnostični preskusni sistemi in vitro	In vitro diagnostic test systems
11.220	Veterinarstvo	Veterinary medicine

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EUROPEAN STANDARD

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ICS

English Version

Animal health diagnostic analyses - Control of in vitro diagnostic reagents - Part 1: Application file for the initial and the batch-to-batch control

Analyses de diagnostic en santé animale - Contrôle des réactifs de diagnostic in vitro - Partie 1 : Dossier de présentation pour le contrôle initial et le contrôle lot à lot

Tiergesundheitsdiagnostische Analysen - Kontrolle von in-vitro-diagnostischen Reagenzien - Teil 1: Antragsunterlagen für die Erstkontrolle und die Kontrolle von Charge zu Charge

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (prEN 18000-1:2023) has been prepared by Technical Committee CEN/TC 469 “Animal health diagnostic analyses”, the secretariat of which is held by AFNOR.

This document is currently submitted to the CEN Enquiry.

Introduction

The objective of the EN 18000 series is to facilitate the mutual recognition of the work of the animal health *in vitro* diagnostic reagent control organizations at European level (or even more widely) and thus to eventually allow the use of strategic reagents controlled by a single control organization for a given disease.

The EN 18000 series aims to describe the optimal requirements for in vitro diagnostic reagents in animal health. It is divided into three parts. The first part concerns the submission of a reagent dossier to a control organization for control and approval. The second and third parts concern the specific aspects of the control of an immunological diagnostic reagent and of a polymerase-chain reaction diagnostic reagent for the detection or quantification of pathogen-specific nucleic acids (PCR), respectively.

Like any standard, it is intended to be voluntary and, if its use is prescribed by a competent authority or any other animal health stakeholder, it will be up to them to determine for which diseases this standard will be applied by the control bodies they have designated for this purpose.

1 Scope

The level of requirements presented in the EN 18000 series has been established as a priority for infectious diseases (bacterial, viral, fungal or parasitic) and associated animal species for which harmonization of practices in this area is necessary, i.e. those for which the national, regional or international regulatory framework provides for the control of trade in animals and/or animal products and/or the definition of a health status (absence of infection) of areas, establishments or individuals.

The EN 18000 series is therefore not intended to be applicable to all existing *diagnostic reagents*, in particular those for which certain parameters described in this standard cannot be validly evaluated in accordance with international requirements due, e.g. to the absence of a specific *reference method* and/or accessible and duly validated *reference materials*.

This first part describes the general and specific elements constituting the dossier for the submission of an animal health *in vitro diagnostic reagent*, in the above-described framework, to the *control* and approval by a *control organization*. Its purpose is to provide the *applicant* submitting an animal disease *in vitro diagnostic reagent* to *control* with the general input for the preparation of the *control* application file. It describes the optimal administrative and technical information regarding the *applicant* and the *reagent* required for the application file for *initial control* and for a *batch-to-batch control* respectively. It specifies, in particular, the *validation* parameters of the method using the *reagent* (objectives, methodology, criteria and results) according to international *standards.*

NOTE This document does not cover the step in which the user verifies a reagent (refer to section 3.1 for definition).

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

NOTE These terms are written in italics throughout the EN 18000 series.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp/

— IEC Electropedia: available at https://www.electropedia.org/

3.1
analysis method adoption
verification by a laboratory that it can properly perform a method before introducing it by ensuring that it can achieve the required performance, e.g. in comparison with a second test method

Note 1 to entry: This concept is called “in-house validation” by WOAH.

[SOURCE: EN ISO/IEC 17025:2017]

3.2
analyte
substance to be detected or determined purpose of the analysis method

Note 1 to entry: In this standard, the term analyte may refer to a single analyte or to a given population of analytes (antibodies, antigens, nucleic acids, live or inactivated organisms, etc.).

3.3
analytical sensitivity
<qualitative approach> measured through the limit of detection (LOD), i.e. the estimated amount of *analyte* in a specified *matrix* that would produce a positive *result* at least a specified per cent of the time

[SOURCE: WOAH Manual of Diagnostic Tests and Vaccines for Terrestrial Animals 2022 - Glossary of terms]

3.4
analytical sensitivity
<quantitative approach> measured through the limit of detection (LOD), i.e. the smallest detectable amount of *analyte* that can be measured with a defined certainty (i.e. a signal significantly above a *matrix* without the analyte)

[SOURCE: WOAH Manual of Diagnostic Tests and Vaccines for Terrestrial Animals 2022 - Glossary of terms]

3.5
analytical specificity
degree to which the assay distinguishes between the target *analyte* and other components in the *sample matrix*

Note 1 to entry: The higher the *analytical specificity*, the lower the level of *false positives.*

[SOURCE: WOAH Manual of Diagnostic Tests and Vaccines for Terrestrial Animals 2022 - Glossary of terms]

3.6
applicant
individual or legal entity that submits the dossier of a *reagent* for initial *control* or who submits a *batch* of *reagent* for *batch*-to-*batch control*

3.7
assay validation
confirmation, through the provision of objective evidence, that the requirements for a specific intended use or application have been fulfilled

Note 1 to entry: In this *standard*, for the *applicant*, this consists in providing assessment results that demonstrate that the method using the *reagent* submitted to *control* is validated according to existing standards, i.e. generic ones (Test validation according to WOAH) and disease-specific ones (according to the state of art, e.g. disease-specific standards, scientific literature).

Note 2 to entry: The *control organization* does not strictly speaking validate the *reagent* itself, but verifies through the documentation provided and by the implementation of a limited number of appropriate tests, that the elements of the application file and the submitted *batch* comply with the requirements.

[SOURCE: WOAH Manual of Diagnostic Tests and Vaccines for Terrestrial Animals 2018 - Chapter 1.1.6]

3.8
batch
production batch
defined amount of material, either starting material, intermediate or finished product which is uniform in its properties and has been produced in one process or series of processes

Note 1 to entry: FDA (FDA's Code of Federal Regulations 21 CFR 210.3) definition considers "A certain amount of a material that is intended to have a uniform character and quality within defined limits and is manufactured according to a single production order during the same manufacturing cycle". Therefore, to avoid any ambiguity, according to FDA definition, one process or series of processes should be understood as a single production order during the same manufacturing cycle.

Note 2 to entry: The circumstances under which the conditions are assumed to be uniform cannot be defined in general terms; for example, a change of the material or the tool used, or an interruption of the manufacturing process can produce different conditions.

[SOURCE: EN 13975:2003]

3.9
batch conformity certificate
document issued by the *control organization* guaranteeing that a specific *reagent batch* meets the previously defined requirements, when used according to one or more specified technical protocols

3.10
batch number
a given *reagent batch* number corresponds to a particular *batch* number for each of its *components*

Note 1 to entry: The *reagent batch* number is inseparable from the version number of the *instructions for use*, except otherwise clearly specified on the *reagent* final package.

3.11
batch-to-batch control
when necessary, applies to a single *reagent* associated with a defined technical protocol and a single *production batch* and consists of a *control* at the start of the *batch* by the *applicant* and the *control organization*, prior to distribution to the user, and a *control* in the course of *batch* validity, where appropriate, by the *control organization*

3.12
certified reference material
reference material accompanied by a certificate, of which one or more values of the specified properties are certified by a procedure that establishes the accurate production of the unit, which the values of the property are given and for which each certified value is associated with an uncertainty at a specified level of confidence

[SOURCE: ISO Guide 30:1992, 2.1, modified - ISO 16140-1]

3.13
characterization of a reagent
determination of the characteristics of a *reagent*, when used according to one or more specified technical protocols

EXAMPLE Analytical specificity, analytical sensitivity (limit of detection), precision.

3.14
coefficient of variation
CV
relative standard deviation
RSD
statistical measure that reports the relative dispersion of a set of data, calculated by the ratio of the standard deviation of numerical data to their mean, obtained under *conditions of repeatability* or *reproducibility*

3.15
component
part of a finished, packaged and labelled *diagnostic reagent*

EXAMPLE Raw material, substance, piece, part, software, firmware or labelling.

Note 1 to entry: Typical immunological *diagnostic kit components* include antibody solutions, antigen preparation (solutions, coated plates), buffer solutions, calibrators, and/or control materials.

[SOURCE: ISO 18113-1]

3.16
control
measurement, examination, testing or gauging of one or more characteristics of a product or service and comparing them with specific requirements in order to verify their conformity

Note 1 to entry: The term "control" is also commonly used to refer to a *control sample* as defined below. In this standard, to avoid confusion, when the term "*control*" is used, only the definition above applies.

[SOURCE: ISO 3534-2:2006]

3.17
control organization
CO
entity of a recognized scientific and diagnostic expertise for a specified animal disease and for its analysis methodology, and designated as such by the competent authority

Note 1 to entry: This expertise includes the capability for the *characterization* and/or the assignment of values to reference materials.

[SOURCE: WOAH definition of a Reference laboratory modified by adding "designated as such by the competent authority"]

3.18
control sample
substance, material or article intended by its *manufacturer* to be used to verify the performance properties of *a diagnostic reagent*

EXAMPLES Positive control samples, negative control samples.

[SOURCE: ISO 18113-1]

3.19
diagnostic kit
set of *components* that are packaged together and intended to be used to perform one or more specific *in vitro* diagnostic examinations

[SOURCE: ISO 18113-1]

3.20
diagnostic sensitivity
proportion of *reference animals* known to be infected and producing a positive result upon analysis

Note 1 to entry: The infected *reference animals* that produce a negative result are considered to be "*false negatives*".

[SOURCE: WOAH Manual of Diagnostic Tests and Vaccines for Terrestrial Animals 2022 - Glossary of terms]

3.21
diagnostic specificity
proportion of *reference animals* known to be uninfected and producing a negative result upon analysis

Note 1 to entry: The uninfected *reference animals* that produce a positive result are considered to be "*false positives*".

[SOURCE: WOAH Manual of Diagnostic Tests and Vaccines for Terrestrial Animals 2022 - Glossary of terms]

3.22
dose-response relationship
correlation between successive dilutions of an *analyte* and the corresponding values obtained using a specified *reagent* and a technical protocol within the range of concentrations where this *linear* relationship exists

3.23
exclusivity
capacity of an assay to detect an *analyte* or genomic sequence that is unique to a targeted organism, and excludes all other known organisms that are potentially cross-reactive

[SOURCE: WOAH Manual of Diagnostic Tests and Vaccines for Terrestrial Animals 2018 - Chapter 1.1.6]

3.24
false negative reaction
negative reactivity in an assay of a test *sample* obtained from an animal infected with the organism in question

Note 1 to entry: It may be due to lack of *analytical sensitivity*, restricted *analytical specificity* or analyte degradation.

Note 2 to entry: It decreases *diagnostic sensitivity.*

[SOURCE: WOAH Manual of Diagnostic Tests and Vaccines for Terrestrial Animals 2022 - Glossary of terms]