TNI

## Krmivá pre zvieratá Metódy odberu vzoriek a analýz Odporúčania na organizáciu a hodnotenie kolaboratívnych štúdií pri multianalytických metódach analýzy

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Animal feeding stuffs: Methods of sampling and analysis - Recommendations for the organization and evaluation of collaborative studies for multi-analyte methods of analysis

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Animal feeding stuffs: Methods of sampling and analysis -Recommendations for the organization and evaluation of collaborative studies for multi-analyte methods of analysis

Aliments pour animaux : Méthodes d'échantillonnage et d'analyse - Recommandations pour l'organisation et l'évaluation des études comparatives interlaboratoires utilisant des méthodes d'analyses multianalytes

Futtermittel - Probenahme- und Untersuchungsverfahren - Ringversuchsvorgaben für Multi-Analyt-Untersuchungsverfahren; Deutsche und Englische Fassung prEN 00327126:2018

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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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## **European foreword**

This document (CEN/TR 17421:2019) has been prepared by Technical Committee CEN/TC 327 "Animal feeding stuffs: Methods of sampling and analysis", the secretariat of which is held by NEN.

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#### Introduction

One of the important parts of the development of a European standard method of analysis is the collaborative study to validate this method. This study should provide sufficient information whether the method is fit for its intended purpose and on the performance characteristics that can be expected in practice. At the same time the necessary effort for the study organizer and the participating laboratories should be kept at a minimum. This guideline is to provide support to those involved in designing, executing, and evaluating such studies.

General information on how to do this is already described in a number of different documents of which a non-exhaustive list can be found at the end of this document in the Bibliography. CEN/TC 327 recommends that for all collaborative studies executed under the auspices of its working groups the "AOAC guidelines for collaborative study procedures to validate characteristics of a method of analysis" [1] is used as the primary source of information for any issues not dealt with in this document. Other relevant documents have been published by ISO [2], IUPAC [3], and EURACHEM [4].

In addition, this document presents prerequisites related to the acceptance of single-laboratory validation studies, the preparation of the standard operating procedure, and the proper implementation of the analytical method by the participating laboratories to ensure the transferability of the method.

The development of methodologies such as GC-MS, LC-MS, ICP-MS, etc. has made it possible to determine multiple analytes in a single analysis (i.e. same extraction, clean up, and determination procedure). The specificities of such multi-analyte methods need to be taken into account when organizing the collaborative trial in order to minimize the workload required while covering the necessary analyte/matrix/concentrations combinations.

## 1 Scope

This document provides guidance to study organizers involved in designing, executing and evaluating collaborative studies for multi-analyte methods developed by the various working groups of the CEN/TC 327 "Animal feeding stuffs: Methods of sampling and analysis". The main goal of such studies is to determine the reproducibility standard deviations for the analytes investigated in the selected matrices. They are calculated from the repeatability and the between-laboratory standard deviations determined from the study data. An additional goal may be the determination of the trueness (whenever possible).

### 2 Normative references

There are no normative references in this document.

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