

ICS 67.050

English Version

**Foods of plant origin - Multimethod for the determination of pesticide residues using GC- or LC-based analysis following acetonitrile extraction/partitioning and cleanup by dispersive SPE - Validation data of the modular QuEChERS-method**

Aliments d'origine végétale - Méthodes multiples de détermination des résidus de pesticides par analyse GC ou CL après extraction/partition avec de l'acétonitrile et purification par SPE dispersive - Données de validation de la méthode modulaire QuEChERS

Pflanzliche Lebensmittel - Multiverfahren zur Bestimmung von Pestizidrückständen mit GC- oder LC-Verfahren nach Acetonitril Extraktion/Verteilung und Reinigung mit dispersiver SPE - Validierungsdaten des modularen QuEChERS-Verfahrens

This Technical Report was approved by CEN on 3 March 2017. It has been drawn up by the Technical Committee CEN/TC 275.

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## European foreword

This document (CEN/TR 17063:2017) has been prepared by Technical Committee CEN/TC 275 “Food analysis - Horizontal methods”, the secretariat of which is held by DIN.

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## 1 Scope

This Technical Report lists the validation data which were obtained with EN 15662:2008 and prEN 15662:2016 in interlaboratory tests and in single laboratory method validation studies.

## 2 Normative references

Not applicable.

## 3 General

When the applicability of these validation data in Table 1 is considered, the most important difference between EN 15662:2008 and prEN 15662:2016 is the duration of first extraction. This first extraction was extended from 1 min to 15 min. It is assumed that the extended extraction does not result in reduced recoveries. Instable pesticides are the only exception. Well known examples are the losses of chlorothalonil in extracts of *Allium*, the oxidation of Malathion in cereals after addition of water and the degradation of thiram in plant homogenates. Furthermore, in plant homogenates the formation of carbofuran from carbosulfan or benfuracarb and the formation of carbendazim from benomyl or thiophanate-methyl can be observed. Finally, several pesticides of the sulfonyl urea group are known for fast hydrolysis at pH conditions used within QuEChERS.

Validity of the method has been supposed to be confirmed for any specific commodity/pesticide combination if at least two laboratories conducted independently validation studies with the same matrix at two identical fortification levels with at least five replicates per level and obtained a recovery between 70 % and 120 %. Furthermore, the relative standard deviation had to be below or equal 20 % for both spiking levels in each laboratory.