INTERNATIONAL STANDARD

ISO 23753-1

Second edition 2019-02

AMENDMENT 1 2020-10

Soil quality — Determination of dehydrogenases activity in soils —

Part 1: **Method using triphen**

Method using triphenyltetrazolium chloride (TTC)

iTeh STAMENDMENREVIEW

Squalité du sol subétermination de l'activité des déshydrogénases dans les sols —

Partie 1: Méthode au chlorure de triphényltétrazolium (CTT) https://standards.iteh.ai/catalog/standards/sist/9at326a1-6d4b-4c85-bd03-5f9c9dcAMENDEMENTI-12019-amd-1-2020



iTeh STANDARD PREVIEW (standards.iteh.ai)

ISO 23753-1:2019/Amd 1:2020 https://standards.iteh.ai/catalog/standards/sist/9af326a1-6d4b-4c85-bd05-5f9c9dcb9789/iso-23753-1-2019-amd-1-2020



COPYRIGHT PROTECTED DOCUMENT

© ISO 2020

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office CP 401 • Ch. de Blandonnet 8 CH-1214 Vernier, Geneva Phone: +41 22 749 01 11 Email: copyright@iso.org Website: www.iso.org

Published in Switzerland

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html. (standards.iteh.ai)

This document was prepared by Technical Committee ISO/TC 190, *Soil quality*, Subcommittee SC 4, *Biological characterization*. ISO 23753-12019/Amd 12020 https://standards.iteh.ai/catalog/standards/sist/9af326a1-6d4b-4c85-bd05-

A list of all parts in the ISO 23753 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

iTeh STANDARD PREVIEW (standards.iteh.ai)

ISO 23753-1:2019/Amd 1:2020 https://standards.iteh.ai/catalog/standards/sist/9af326a1-6d4b-4c85-bd05-5f9c9dcb9789/iso-23753-1-2019-amd-1-2020

Soil quality — Determination of dehydrogenases activity in soils —

Part 1:

Method using triphenyltetrazolium chloride (TTC)

AMENDMENT 1

Clause 9

Replace the text with the following:

Determine the dehydrogenases activity (based on dry soil) from the standard curve and Formula (1):

$$A = \frac{\left(C_{\rm s} - C_{\rm b}\right) \times V \times 100}{m \times DM \times RT} \tag{1}$$

where

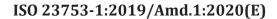
iTeh STANDARD PREVIEW

- A is the enzymatic activity in mu/g of each dry sample replicate (nmol/(min·g) of dry sample);
- $C_{\rm s}$ is the concentration of TPF formed in sample replicates in nmol/ml;

https://standards.iteh.ai/catalog/standards/sist/9af326a1-6d4b-4c85-bd05-

- C_b is the concentration of TPF formed in control tube in nmol/ml;
- V is the reaction volume [= volume of substrate + volume of buffer solution + volume of ethanol], in ml;
- RT is the reaction time (min);
- *m* is the soil mass per tube, in g;
- *DM* is the sample dry matter content in accordance with ISO 11465, as percentage.

NOTE The factor 100 in Formula (1) is needed because *DM* is given as percentage.



iTeh STANDARD PREVIEW (standards.iteh.ai)

ISO 23753-1:2019/Amd 1:2020 https://standards.iteh.ai/catalog/standards/sist/9af326a1-6d4b-4c85-bd05-5f9c9dcb9789/iso-23753-1-2019-amd-1-2020