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Label-free impedance technology to assess the toxicity of nanomaterials in vitro

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Foreword

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TECHNICAL SPECIFICATION **ISO/TS 21633:2021**

Label-free impedance technology to assess the toxicity of nanomaterials in vitro

1 Scope

This document describes a methodology of a label free and real-time detection for non-invasive monitoring of cell-based assays to assess toxicity of nanomaterials to eukaryotic and prokaryotic cells.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/TS 80004-1, *Nanotechnologies — Vocabulary — Part 1: Core terms*

ISO/TS 80004-2, *Nanotechnologies — Vocabulary — Part 2: Nano-objects*

ISO/TS 10993-1, *Biological evaluation of medical devices — Part 1: Evaluation and testing within a risk management process*

3 Terms and definitions

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

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
nanoscale
length range approximately from 1 nm to 100 nm

Note 1 to entry: Properties that are not extrapolations from larger sizes are predominantly exhibited in this length range.

3.2
nanomaterial
NM
material with any external dimension in the *nanoscale* (3.1), or having internal structure or surface structure in the nanoscale

Note 1 to entry: This generic term is inclusive of *nano-object* (3.3) [and *nanostructured material* (3.4)].

3.3
nano-object
discrete piece of material with one, two or three external dimensions in the *nanoscale* (3.1)

3.4
nanostructured material
material having internal nanostructure or surface nanostructure

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