SLOVENSKI STANDARD
SIST-TS CEN ISO/TS 19807-1:2022

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Nanotehnologija - Magnetni nanomateriali - 1. del: Specifikacija lastnosti in meritev za magnetne nanosuspenzije (ISO/TS 19807-1:2019)

Nanotechnologies - Magnetic nanomaterials - Part 1: Specification of characteristics and measurements for magnetic nanosuspensions (ISO/TS 19807-1:2019)

Nanotechnologien - Magnetische Nanopartikel - Teil 1: Festlegung der Eigenschaften und Messung magnetischer Nanosuspensionen (ISO/TS 19807-1:2019)

Nanotechnologies - Nanomatériaux magnétiques - Partie 1: Spécification des caractéristiques et des mesures pour les nanosuspensions magnétiques (ISO/TS 19807-1:2019)

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Nanotechnologies - Magnetic nanomaterials - Part 1: Specification of characteristics and measurements for magnetic nanosuspensions (ISO/TS 19807-1:2019)

Nanotechnologies - Nanomatériaux magnétiques - Partie 1: Spécification des caractéristiques et des mesures pour les nanosuspensions magnétiques (ISO/TS 19807-1:2019)

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European foreword

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Endorsement notice

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Nanotechnologies — Magnetic nanomaterials —

Part 1: Specification of characteristics and measurements for magnetic nanosuspensions

Nanotechnologies — Nanomatériaux magnétiques —

Partie 1: Spécification des caractéristiques et des mesures pour les nanosuspensions magnétiques

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Foreword

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Introduction

Nanomaterials offer the opportunity for new technologies at the interfaces between chemistry, physics and biology. The term nanomaterial is used to refer to a wide range of particles, thin films, self-assembling and lithographically produced structures in which at least one dimension is less than 100 nm. Magentic nanosuspensions are fluid nanodispersion, where the solid phase is formed by magnetic nanoparticles.Magnetic nanosuspensions and bulk materials react to applied magnetic fields in different ways. These unique properties enable the development of innovative technologies and products.

Magnetic nanosuspensions have important potential industrial and healthcare applications such as vacuum seals, lubricants, coolants, dampers, magnetic soaps, environmental remediation, medical imaging, drug delivery technologies, magnetic hyperthermia therapy, etc. To satisfy the demands of rapidly accelerating application markets, there is a strong need to provide universal definitions and measurement methods for the characteristics of these suspensions. There are three components of a magnetic nanosuspension: (1) magnetic nanoparticles (2) dispersing medium and (3) dispersant (Annex A).