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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 30544.7-2023

**Nanotechnologies - Vocabulary - Part 7: Diagnostics and
therapeutics for healthcare**

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foreword

This document is in accordance with the provisions of GB/T 1:1-2020 "Guidelines for Standardization Work Part 1: Structure and Drafting Rules for Standardization Documents"

drafting:

This document is Part 7 of GB/T 30544 "Nanotechnology Terminology": GB/T 30544 has issued the following parts:

- Part 1: Core terms;
- Part 3: Carbon nano-objects;
- Part 4: Nanostructured materials;
- Part 5: Nano/biological interface;
- Part 6: Characterization of nano-objects;
- Part 7: Nanomedicine diagnosis and treatment;
- Part 8: Nano-manufacturing process;
- Part 12: Quantum phenomena in nanotechnology;
- Part 13: Graphene and related two-dimensional materials:

This document is equivalent to ISO /T S80004-7:2011 "Nanotechnology Terminology Part 7: Nanomedicine Diagnosis and Therapy", document category

The type is adjusted from the ISO technical specification to the national standard of our country:

This document adds a chapter "Normative References":

Please note that some contents of this document may refer to patents: The issuing agency of this document assumes no responsibility for identifying patents:

This document was proposed by the Chinese Academy of Sciences:

This document is under the jurisdiction of the National Nanotechnology Standardization Technical Committee (SAC/TC279):

Introduction

With the development of nanomaterial design and processing technology, the primary and secondary research and development methods of materials used in engineering and physics disciplines have also occurred:

major changes: Similar developments are expected in medicine, where functional nanoscale components for diagnostic and therapeutic purposes are also expected to emerge:

will increase substantially: These components may be components of larger structures, such as biomaterials or nanocomposites, or they may be independent nanostructures:

meter structure: my country has established a basic national standard system related to terminology in the field of nanotechnology: GB/T 30544 is proposed to be composed of 13 ministries

points constitute:

--- Part 1: Core terms: The aim is to define basic terminology in the field of nanotechnology:

--- Part 2: Nano-objects: The purpose is to define the term nanoobjects:

--- Part 3: Carbon nano-objects: The purpose is to define the term carbon nanoobjects:

--- Part 4: Nanostructured materials: The purpose is to define the terminology of nanostructure-related materials:

--- Part 5: Nano/biological interface: The aim is to define the terminology of the nano/bio interface:

--- Part 6: Characterization of nano-objects: The purpose is to define the terminology for the characterization of nanoobjects:

--- Part 7: Nanomedicine diagnosis and treatment: The aim is to define the terminology of nanomedicine diagnosis and therapy:

--- Part 8: Nano-manufacturing process: The purpose is to define the terminology of the nanofabrication process:

--- Part 9: Nano electrical products: The purpose is to define the terminology of nanoelectrotechnical products:

--- Part 10: Nanophotonic devices: The purpose is to define the terminology of nanophotonic devices:

--- Part 11: Nanolayer nanocoating nanofilm and related terms: The purpose is to define

nano-layer, nano-coating, nano-thin

Membranes and related terms:

--- Part 12: Quantum phenomena in nanotechnology: The aim is to define the terminology of quantum phenomena in nanotechnology:

--- Part 13: Graphene and related two-dimensional materials: The purpose is to define the term graphene and related two-dimensional materials:

This document is Part 7 of GB/T 30544: Human disease-related diagnostics using nanoscale particle or surface properties

Or treatment falls under the category of medical products and devices, and this practical application of nanomaterials has entered the field of healthcare, both of which are related to nanomedicine:

close: Any biological system at the cellular level usually has the property of self-organization when it moves at the nanoscale, serving as the basic building blocks to form more complex structures:

Common macroscale substances, including lipid bilayers of cell membranes, organelles, and ultramacromolecular structures, contribute to affinity binding, catalytic activity, and motility

Various structures have been designed for their properties, and these nanoparticles or surface structures with relevant properties have been widely used in vivo or in vitro:

nanotechnology terms

Part 7: Nanomedicine Diagnosis and Therapy

1 Scope

This document defines terms and definitions related to medical diagnosis and treatment in the field of nanotechnology:

This document applies to the diagnosis and treatment of functional materials related to human diseases in the range of nanoscale properties, nanoscale properties

Now in materials with nanoscale components, or in materials with nanometer dimensions:

This document does not apply to systems that relate only to the biological effects of nanomaterials without regard to the original use of the nanomaterials, or to describe health areas of safety and environmental impact:

This document is intended for medical-related professionals, manufacturers, consumers, technical experts, patent attorneys, regulatory agencies, etc:

2 Normative references

This document has no normative references:

3 Related terms in other documents

3:1

nanoscale nanoscale

in the size range between 1 nm and 100 nm:

Note 1: This size range usually, but not exclusively, exhibits properties that cannot be extrapolated from larger sizes: For these characteristics, the upper and lower limits of the scale

is approximate:

Note 2: The purpose of introducing a lower limit (approximately 1 nm) in this definition is to avoid single or small clusters of atoms being regarded as nano-objects or

Nanostructural unit:

[Source: GB/T 30544:1-2014,2:1]

3:2

nanoscience nanoscience

The study of size- and structure-dependent properties that arise at the nanoscale (3:1) and that differ significantly from those of individual atoms, molecules, or bulk materials

and phenomenal disciplines:

[Source: GB/T 30544:1-2014,2:2]

3:3

nanotechnology nanotechnology

Nano technology

Apply scientific knowledge to manipulate and control matter at the nanoscale (3:1) to exploit properties significantly different from those of individual atoms, molecules or bulk materials

properties and phenomena related to size and structure:

NOTE: Manipulation and control include material synthesis:

[Source: GB/T 30544:1-2014,2:3]