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Biotechnology - Basic terms

生物技术 基本术语

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Foreword

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Xiaomin, Li Mengzhen, Gan Yuanshan, Li Qianyi, Peng Fang, Zhong Huawei, Li Yunxiao, Huang Ruijuan, Zheng Xiaoling, Chen Donghuang, Zhang Bingqiang and Gong Tianguai.
Basic terms in biotechnology

1 Scope

GB/T 44471-2024 is the Chinese vocabulary of biotechnology, the document that fixes what the basic terms of the field mean in Chinese standards, regulations and technical documents. A terminology standard in a fast-moving field is more useful than it sounds: the Chinese biotechnology sector has grown largely through translation, and the same English term is often rendered several ways, which makes regulatory and contractual text ambiguous exactly where it must not be. The standard is organised by subject: the general terms of biotechnology first, then nucleic acids, covering the structures, the sequences and the manipulations performed on them; proteins; cells, including the culture and engineering vocabulary; enzymes; and fermentation, with its process and equipment terminology. For anyone reading Chinese biotechnology standards, patents or regulatory submissions in translation, this is the reference that says which Chinese term corresponds to which English one and what each is taken to mean. It took effect on 29 September 2024.

This document defines the fundamentals of the field of biotechnology related to nucleic acids, proteins, cells, enzymes, fermentation, bioprocesses and bioengineering the term. This document applies to biotechnology research and the production and application of its products.

2 Normative references

This document has no normative references.

3 General terms

3.1 Biotechnology Based on modern life sciences, combined with the scientific principles of other basic disciplines, using advanced engineering technology, according to the pre-designed The technology of modifying organisms or processing biological materials to provide products or services to society.

3.2 Genome The sum of all genetic material (4.12) present in a cell (6.1), tissue or organism. Note

1.The entire deoxyribonucleic acid (4.3) molecule including coding and non-coding sequences. Note

2.Size is expressed as the total number of base pairs of all deoxyribonucleic acid (4.3).

3.3 Genomics A discipline that collectively characterizes and quantifies all the genes (4.9) of an organism and conducts comparative studies of different genomes (3.2).

Note. This study mainly studies the structure, function, evolution, location and editing of the genome (3.2), as well as their effects on organisms.

3.4 proteome Under certain conditions, all proteins (5.1) present in a system including cells (6.1), subcellular organelles, body fluids, etc.

3.5 Proteomics Analyze the dynamic changes of protein (5.1) composition, expression level and modification status in cells (6.1) from a holistic perspective to understand protein The discipline that studies the interactions and connections between proteins (5.1) and reveals the functions of proteins (5.1) and the laws of cell (6.1) life activities. [Source: GB/T 29859-2013, 2.4.7]

3.6 Metabolome All metabolites of an organism's cells (6.1) at a specific physiological and developmental stage.

Note. The dynamic whole of endogenous metabolites in organisms.