

ICS 91.040.10

CCS P 33



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

GB/T 32146.3-2015

**Technical requirements for the design and construction of
inspection and testing laboratories - Part 3: Food laboratories**

检验检测实验室设计与建设技术要求 第3部分：食品实验室

Issued on: December 10, 2015

Implemented on: July 1, 2016

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine;
Standardization Administration of the PRC**

Table of Contents

1 Scope	1
2 Normative references	1
4 Food Laboratory Category	2
5 General	2
6 Planning 2	7
2 System Design Deepening design	4
11 Annex D (normative) typical layout 12 food laboratories Appendix E (normative) Description of centralized gas supply system 14 each References	15

Foreword

GB/T 32146 "inspection laboratory design and construction technical requirements", it includes the following components.

--- Part 1. General requirements;

--- Part 2. electrical laboratory;

--- Part 3. food laboratories. This part of GB/T 32146 Part 3. This section drafted in accordance with GB/T 1.1-2009 given rules. Please note that some of the content of this document may involve patents. Release mechanism of the present document does not assume responsibility for the identification of these patents. This part is proposed by China Machinery Industry Federation. This part of the National Instruments and Laboratory Equipment Standardization Technical Committee (SAC/TC526) centralized. This part of the main drafting unit. Hebei Entry-Exit Inspection and Quarantine Technology Center of Instrumentation Technology & Economy Institute, Guangdong Product Quality Supervision and Inspection Institute, China Institute of Metrology, Beijing Hui Nordisk (Beijing) Technology Co., Ltd. Tak friend detection technology Test (Tianjin) Co., Ltd., Fujian Province Product Quality Inspection Institute, the national food safety risk assessment center, China Institute of Metrology negative Responsible for drafting. The main drafters of this section. Mayu Song, Zhang Guiling, Yi Lianfeng Xianghai Nature, Wang Jianchang, Huang Yu, Huang Jianyu, Lu Feilong, Mei Ke, Jiang Jianhui, Liu Yi, Li Peng industry, when FANG Xiao, Li Siyuan, Liu Tang book, Loyalty concerning the Fixation Wang city, Zhang Xiaoyun, skin Xiao Dong, Li Xiuying, Di Chen. Inspection and testing laboratory design and construction of the technical requirements Part 3. Food Laboratory

1 Scope

China's national technical requirements for the design and construction of food inspection and testing laboratories. It is Part 3 of GB/T 32146 and specifies the overall planning and design, the construction, the functional design, the architectural design, the environment and facilities, and the safety requirements for food laboratories, with five normative annexes covering the special technical requirements for a food microbiology laboratory, the special technical requirements for a food molecular biology laboratory, the food toxicology laboratory, typical layouts for food laboratories, and the description of the centralised gas supply systems. A food laboratory has a design problem that an electrical laboratory does not: it works with living organisms and with trace contaminants, and both create contamination risks that run in opposite directions. Microbiology needs containment - the organisms cultured must not escape into the building or into the people working there, so air flows inward, waste is sterilised before it leaves, and the working areas are separated by anterooms. Molecular biology needs the opposite: the analysis amplifies a few molecules of DNA into a measurable quantity, so a trace of amplified product carried on a glove or in the air into the room where samples are prepared will produce a false positive that no control detects. The laboratory is therefore divided into rooms with a one-way workflow, and air flows outward from the clean end. Trace chemical analysis adds a third and unrelated constraint, since the contaminants being measured are present in the ordinary environment at the levels being determined. The typical layouts in Annex D are the practical consequence of all three, and the gas supply annex reflects that a food laboratory runs many chromatographs and needs a piped supply rather than cylinders at every bench. Issued on 10 December 2015 and in force since 1 July 2016.

GB/T 32146 provisions of this part of the overall planning and design and construction of food laboratories, functional design, architectural design, environmental facilities, Safety and other technical requirements. This section applies to new construction, renovation and expansion of the food laboratory design and construction.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB 3836.14 explosive atmospheres - Part 14. Classification of explosive atmospheres

GB 4789.1-2010 National Food Safety Standard Food Microbiology General Inspection

GB 8978 Integrated Wastewater Discharge Standard

GB/T 13868-2009 Sensory analysis sensory analysis laboratory to establish general guidelines

GB 14554 standard malodorous emissions

GB 16297 Air Pollutant Emission Standards

GB 18871 ionizing radiation protection and safety of radiation sources basic standards

GB 19489-2008 General requirements for laboratory biosafety

GB/T 19495.2-2004 technical requirements for GMO testing laboratories

GB 20425 saponin industrial water pollutant discharge standards

GB 24820-2009 laboratory furniture general technical conditions

GB/T 27403-2008 food quality control laboratory of molecular biology standardized testing

GB 50015-2003 Code for design of building water supply and drainage

3 Terms and Definitions

GB/T 32146.1-2015 and as defined in the following terms and definitions apply to this document.

3.1 Food laboratories foodlaboratory Of food, food additives and food-related products for the laboratory testing of the object.