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

GB 4143-2022

Replacing GB 4143-2008

Frozen bovine semen

牛冷冻精液

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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 replaces GB 4143-2008 "Frozen Semen of Cattle". Compared with GB 4143-2008, except for structural adjustments and editorial changes In addition, the main technical changes are as follows:

---Changed the definition of "total number of bacterial colonies" (see 3.3,

3.4 of the.2008 edition);

---Delete the requirements of "breeding bull" and "fresh semen" (see 4.1,

4.2 of the.2008 edition);

--- Adjust the technical requirements of "appearance of frozen semen" to the requirements of "packaging" (see 9.1,

4.3 of the.2008 edition);

--- Changed the technical requirements of "dosage", "sperm motility", "forward motile sperm count", "sperm deformity rate" and "total number of colonies" (see Section

4 Chapter, 4.4, 4.5.1, 4.5.2, 4.5.3,

4.5.4 of the.2008 edition);

--- Deleted "sampling" (see Chapter 5, Appendices A and B.1 of the.2008 edition), and added "sampling" content (see Chapter 5);

---Changed the "inspection type" and "judgment rules" (see 7.2, 7.3,

6.4 and Chapter 7 of the.2008 edition);

1 Scope

GB 4143-2022 is the Chinese national standard on frozen bovine semen, in the field of agriculture. It carries no /T suffix, which in the Chinese system means compliance is mandatory: a product or a practice within its scope has to meet it to be lawfully made, sold or carried out in China. It was issued on 29 December 2022 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 January 2024. Classification: ICS 65.020.30, CCS B43. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This document specifies the technical requirements, sampling, inspection rules, signs and accompanying documents, packaging, storage and transportation of bovine frozen semen, and describes Test method for quality control of bovine frozen semen. This document applies to bovine frozen semen.

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text. Among them, dated references For documents, only the dated version is applicable to this document; for undated reference

documents, the latest version (including all amendments) is applicable to this document.

GB 4789.2-2016 National Food Safety Standard Food Microbiological Inspection
Determination of Total Bacterial Count

GB/T 5458 Liquid nitrogen biological container

GB/T 8170 Numerical rounding off rules and expression and determination of limit values

GB/T 14174 Large diameter liquid nitrogen container

GB/T 30396-2013 Packaging, labelling, storage and transportation of bovine frozen semen

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 sperm motility spermmotility Percentage of forward motile sperm count to total sperm count at 37°C. [Source: GB 20557-2006, 3.2]

3.2 Abnormal sperm count as a percentage of total sperm count. [Source: GB 20557-2006, 3.3]

3.3 Total number of colonies aerobicplatecount The total number of microbial colonies observed per dose of semen after incubation under certain conditions.

3.4 frozen semen frozensemen The semen processed by a special method is cryogenically frozen and stored in liquid nitrogen (-196°C) for a long time. [Source: GB 20557-2006, 3.5]

3.5 The total number of forward motile sperm per dose of semen.