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China Announces Revised Standards on Beer

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FAIRS Subject Report

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Report Highlights:

On September 4, 2015, China notified the WTO of the National Food Safety Standard on Beer (an update to GB 8592), issued by the National Health and Family Planning Commission (NHFPC), as SPS/N/CHN/1004. The deadline for submission of final comments to China is November 3, 2015. This standard pertains to beer production and processing. The proposed date of entry is yet to be determined. Comments can be sent to China's SPS Enquiry Point at sps@aqsiq.gov.cn. The following report contains an unofficial translation of this draft measure.

Executive Summary:

On September 4, 2015, China notified the WTO of the National Food Safety Standard on Beer (an update to GB 8592), issued by the National Health and Family Planning Commission (NHFPC), as SPS/N/CHN/1004. The deadline for submission of final comments to China is November 3, 2015. This standard pertains to beer production and processing, and it will partially replace (GB 8952-1988) on Hygienic Specifications of Beer Factory. The proposed date of entry is yet to be determined. Comments can be sent to China's SPS Enquiry Point at sps@aqsiq.gov.cn. The following report contains an unofficial translation of this draft measure. In addition, interested parties are also welcomed to submit comments through the U.S. SPS Enquiry Point below so that comments can be considered as part of the U.S. Government official comment submission to the WTO:

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BEGIN TRANSLATION:

National Food Safety Standard

Code of Hygienic Practice for the Production of Beer

(Draft for comments)

Issued by National Health and Family Planning Commission of the People's Republic of China

Foreword

This national standard will replace GB 8952-1988 Hygienic Specifications of Beer Factory.

In comparison with GB 8952-1988, the main changes in this standard are as follows:

– The title was modified to "National Food Safety Standard - Code of Hygienic Practice for the Production of Beer";

– The applicability of standard was modified;

– The standard structure was modified;

– The product recall and management requirements were added;

– The training requirements were added;

– The management system and personnel requirements were added.

National Food Safety Standard

Code of Hygienic Practice for the Production of Beer

1. Scope

This standard specifies the essential requirement and management rule for site, facility and personnel involved in raw materials procurement, processing, packaging, storage and transport and so on in beer production process.

This standard is applicable to beer production and processing.

2. Terms and Definitions

The terms and definitions given in GB 14881 and GB 4927 are applicable to this standard.

3. Site Selection and Plant Environment

It shall meet the relevant regulations in chapter 3 of GB 14881-2013.

4. Factory Building and Workshop

4.1 Design and layout

It shall meet the relevant regulations in provision 4.1 of GB 14881-2013.

4.2 Building Internal Structure and Materials

It shall meet the relevant regulations in provision 4.2 of GB 14881-2013.

4.3 Requirements of factory building design characteristic

4.3.1 The work area shall be divided in a reasonable way for factory building and workshop, cleaning work area and quasi-cleaning work area and common work area

a) In general, the cleaning work area includes yeast spreading cultivation room (except for the spreading cultivation process that is carried out completely in closed tank and pipeline) and draught (fresh) beer filling room (area), etc.

b) In general, the quasi-cleaning work area includes water treatment room, saccharification room, sake room, beer filling room with automatic filling room and outer packaging room, etc.

c) The common work area includes the raw and auxiliary material warehouse, packaging material warehouse, finished product warehouse and auxiliary power house, etc.

4.3.2 The filling room (area) of different types of beer shall have the corresponding environmental sterilization facilities and may be separated independently or not according to the different sterilization facilities with which the filling equipment is equipped.

4.3.3 If the recycled bottle without prewashing is applied in the automatic continuous beer filling line containing bottle feeding, bottle washing, filling, cap-sealing, sterilization, labeling and boxing and other processes, the bottle

washing process shall be separated from the downstream processes effectively or the effective dust proof method (e.g., water spraying) shall be adopted to prevent cross contamination.

5. Facilities and Equipment

5.1 They shall meet the relevant regulations in chapter 5 of GB 14881-2013.

5.2 The packaging container (bottle and barrel), filtration equipment and filling equipment applied in draught/fresh beer production, shall be sterilized, except for the barrel with beer spear for containing draught/fresh beer, and the beverage may be flushed by aseptic water only. The asepsis control shall be applied for gas and water used in filling and cap-sealing operating processes, all materials, equipment and tools with contact to beer, environment and site and operator.

5.3 The water source, water treatment agent, water treatment equipment, water storage vessel and water pipeline shall meet the relevant national regulations.

5.4 Each warehouse shall be kept clean and dry and provided with fire, damp proof, rat proof, insect prevention and appropriate facilities; and the fresh beer shall be stored at the temperature meeting the requirements of relevant standards.

5.5 The waste water treatment system and equipment or facility for storage of vinasse, broken glass bottle and garbage and other waste shall be provided.

5.6 The malting process, if any, shall be equipped with the barley separation and selection equipment, barley separation and selection equipment, barley steeping equipment, sprouting equipment and drying equipment.

5.7 The recovery and treatment equipment shall be provided for recycling utilization of carbon dioxide involved in fermentation process, including demister, washing tower, air bag (or air tank), compressor, adsorption tower, drying tower, storage tank as well as vaporizer.

5.8 In case of special beer production, the production equipment adaptive to special beer production process shall be provided.

6. Hygienic Management

It shall meet the relevant regulations in chapter 6 of GB 14881-2013.

7. Beer Raw and Auxiliary Material, Food Additives and Relevant Products

7.1 It shall meet the relevant regulations in provision 7.1-7.2 of GB 14881-2013.

7.2 Beer raw and auxiliary material

7.2.1 Barley and rice and other grain raw and auxiliary material shall meet the requirements of GB 2715; and no degenerative raw and auxiliary material and raw and auxiliary material with content over standard of fungaltoxin, contaminant and pesticide residue shall be used. The warehouse shall be checked on a regular basis and shall be handled in time if the insect pest or mildewing exists.

7.2.2 The barley, rice, malt, syrup, starch, hop products and other raw and auxiliary materials shall be provided with the minimum of feeling item inspection and acceptance record.

7.2.3 The hop products shall be stored in the dry and dark place at appropriate temperature according to relevant product standards.

7.2.4 The beer yeast shall meet the requirements of relevant regulations. The strict operating system shall be developed for strain management and the strain storage and strain spreading cultivation shall be implemented and recorded as specified.

7.3 Food additives

7.3.1 It shall meet the relevant regulations in provision 7.3 of GB 14881-2013.

7.3.2 The carbon dioxide for recycling utilization by beer enterprise in fermentation process shall not be applicable to food additive management but shall meet the requirements of inspection item for enterprise self-produced and self-used carbon dioxide (see table 1).

Table 1 Requirements and inspection item of enterprise self-produced and self-used carbon dioxide

Inspection item	Index	Inspection method	Inspection frequency
Carbon dioxide volume fraction	≥99.95%	GB 10621	Once a day or a batch
Water solution smell, taste and appearance	Comply with GB 10621	GB 10621	Once a day or a batch
Acidity	Comply with GB 10621	GB 10621	Once a year
Grease mass fraction	Comply with GB 10621	GB 10621	Once a year
Volume fraction of Methyl alcohol	Comply with GB 10621	GB 10621	Once a year

7.3.3 The self-produced and self-used carbon dioxide or purchased carbon dioxide shall be subject to volume fraction, water solution smell, taste and appearance inspection once a day or by batch according to GB 10621, and the detecting instrument for carbon dioxide volume fraction and effective detection means shall be provided for control of smell, taste and appearance.

7.3.4 The carbon dioxide purchased by the enterprise shall meet the requirements of GB 10621.

7.4 Food-related Product

7.4.1 It shall meet the relevant regulations in provision 7.4 of GB14881-2013.

7.4.2 The beer bottle shall meet the requirements of GB 4544 and only B-type bottle can be used. The beer bottle (barrel) for repeated use shall be cleaned and disinfected completely prior to use.

8 Food Safety Control in Production Process

8.1 It shall meet the relevant regulations in provision 8.1-8.4 of GB 14881-2013.

8.2 The critical control segments shall be determined for microbiological monitoring and the microbiological monitoring procedure shall be established for beer production, including microbiological monitoring in production environment and process. Refer to Annex B for details.

8.3 Packaging

8.3.1 It shall meet the relevant regulations in provision 8.5 of GB 14881-2013.

8.3.2 The recycled bottle must be washed and checked one by one (Bottle Inspection), prior to filling.

8.3.3 The beer enterprise shall establish an effective bottle cleaning and disinfection method and system, to ensure the filling site, equipment and pipeline clean and hygienic and prevent contamination. The process record shall be kept in a complete and real way for effective tracing.

8.3.4 The draught beer filling area shall be provided with the corresponding environmental sterilization facility and may be separated or not according to different sterilization facilities provided for the filling equipment.

8.4 Sterilization

8.4.1 The beer enterprise shall establish a sterilization (degerming) process standard and regular cleaning management system for sterilization (degerming) equipment and the relevant process record shall be kept in a complete and real way for effective tracing.

8.4.2 The fresh beer and draught beer may be subject to sterilization and degerming by means of low-temperature film filtering and other physical methods; the pasteurized beer shall be subject to pasteurization or instantaneous high temperature sterilization; and the beer sterilization (degerming) effectiveness shall be monitored and verified.

8.4.3 After sterilization, the finished beer shall achieve the biological stability as required.

9 Inspection

It shall meet the relevant regulations in chapter 9 of GB 14881-2013.

10 Product storage and transport

10.1 Finished product transport

It shall meet the relevant regulations in chapter 10 of GB 14881-2013.

10.2 Intermediate product transportation

10.2.1 The semi-finished beer conveyance is the enclosed tank truck with the function of thermal insulation and 0.08-0.10MPa working pressure and capable of CIP cleaning. All tank inlets and outlets shall be locked and provided with the protective facilities and the key shall be kept by special person to ensure the safe, harmless and clean of the transport equipment.

10.2.2 The beer enterprise shall develop a food hygienic safety management system and conduct the sampling of beer in tank on a regular basis and the beer shall meet the relevant quality standard requirements; regularly clean and sterilize the tank truck, verify the cleaning effect and keep record of the inspection.

10.2.3 Each tank truck should come with the food safety tracing record chart with the locking, cleaning and sanitary inspection at all tank inlets and outlets so as to track and manage the products in each tank truck.

10.2.4 The semi-finished beer can be stored in the tank for the maximum of 3 days.

11 Product Recall Management

It shall meet the relevant regulations in chapter 11 of GB 14881-2013.

12 Training

It shall meet the relevant regulations in chapter 12 of GB 14881-2013.

13 Management System and Personnel

It shall meet the relevant regulations in chapter 13 of GB 14881-2013.

14 Record and Document Management

It shall meet the relevant regulations in chapter 14 of GB 14881-2013.

Annex A

Suggestion on microbiological monitoring in beer processing

Monitoring items		**Recommended sampling point** [a]	**Recommended microorganism to be monitored** [b]	**Recommended monitoring frequency** [c]	**Recommended monitoring index limit**
Environmental microbiological monitoring	Beer contact surface	Inner surface of equipment with direct contact with beer (equipment ultimate cleaning water or inner surface sample coated)	Total number of bacterial colony, yeast and beer and other harmful bacteria.	The cleaning effect shall be verified after cleaning and disinfection once a month or a quarter.	The monitoring index limit shall be determined according to the actual production condition.
	Contact surface adjacent to beer or beer contact surface.	Outside surface of equipment in draught beer and fresh beer filling area filling area (surface coating sample).	Mold and other hygienic conditions indicator microorganisms, the harmful bacteria in yeast and beer shall be monitored if necessary.	Once two weeks or a month	The monitoring index limit shall be determined according to the actual production condition.
	Ambient air in production area	Location to which the draught beer and fresh beer filling machine and capping machine is adjacent (ambient air sample).	Total number of bacterial colony, yeast and beer and other harmful bacteria.	Once two weeks or a month	The monitoring index limit shall be determined according to the actual production condition.
Microbiological monitoring of the process product		Fermentation liquor, sake and draught beer	Total number of bacterial colony, yeast and beer and other harmful bacteria.	Once a week, two weeks or a month	The monitoring index limit shall be determined according to the actual production

				condition.

[a] One or more sampling points can be selected according to the actual conditions in production process.
[b] One or more hygienic indicator microorganisms may be selected for implementation of monitoring according to the actual demands.
[c] The monitoring frequency can be determined according to the risk of specific sampling points.