Voluntary _ Public

Date: 10/22/2015
GAIN Report Number: CH15055

China - Peoples Republic of

Post: Beijing

China Announces Revised Standards on Fermented Alcoholic Beverages and their Integrated Alcoholic Beverages

Report Categories:
FAIRS Subject Report

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Report Highlights:

On September 7, 2015, China notified the WTO of the National Food Safety Standard on Fermented Alcoholic Beverages and their Integrated Alcoholic Beverages, issued by the National Health and Family Planning Commission (NHFPC), as SPS/N/CHN/1006. The deadline for submission of final comments to China is November 6, 2015. This standard pertains to production and processing of wine, fruit wine (fermentation type) and rice wine. 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 7, 2015, China notified the WTO of the National Food Safety Standard on Fermented Alcoholic Beverages and their Integrated Alcoholic Beverages, issued by the National Health and Family Planning Commission (NHFPC), as SPS/N/CHN/1006. The deadline for submission of final comments to China is November 6, 2015. This standard pertains to production and processing of wine, fruit wine (fermentation type) and rice wine, and it will partially replace (GB 12696-1990) on Hygienic Specifications of Factory for Wine and (GB 12697-1990) on Hygienic Specifications of Factory for Fruit Wine (GB 12698-1990). 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 Fermented Alcoholic Beverages and their Integrated Alcoholic Beverages

(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 12696-1990Hygienic Specifications of Factory for Wine and GB 12697-1990 Hygienic Specifications of Factory for Fruit Wine GB 12698-1990.

In comparison with GB 12696-1990, GB 12697-1990 and GB 12698-1990, 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 Fermented Alcoholic Beverages and their Integrated Alcoholic Beverages ”;
- 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 Fermented Alcoholic Beverages and their Integrated Alcoholic Beverages

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 the production process of fermented alcoholic beverage and their integrated alcoholic beverages.

This standard is applicable to production and processing of wine, fruit wine (fermentation type) and rice wine.

2 Terms and Definitions

The terms and definitions given in GB 14881-2013 and GB/T 17204-2008 are applicable to this standard.

3 Site selection and plant environment

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

4 Factory building and workshop

4.1 Design and layout

They shall meet the regulations in chapter 4 of GB 14881-2013.

4.2 Building’s interior structure and material

They shall meet the requirements in provision 4.2 of GB 14881-2013.

4.3 Design characteristic requirement of rice wine factory building

4.3.1 The raw and auxiliary material warehouse and liquor production, filling and storage and other areas shall be provided separately in rice wine production area. The sewage treatment area, if any, shall be kept a certain distance to the production area.

4.4 Characteristic requirements for wine (fruit wine) factory building design

4.4.1 The wine(fruit wine)processing may be divided into grape (fruit) raw material processing area, fermentation area, wine storage area, ageing area, brut post-processing area and filling area which shall have a reasonable layout.

4.4.2 The wine (fruit wine) cellar shall be kept hygienic, with the damp-proof material for wall surface and ceiling. The cellar shall be well-ventilated, with temperature and humidity control according to production need.

4.4.3 The factory building shall be designed for the plant area only producing wine (fruit wine), in a reasonable way and according to production need.

5 Facility and equipment

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

5.2 The wine (fruit wine) oak barrel shall be kept clean and hygienic prior to use. The new barrel shall be treated by steam fumigation, acid and alkali soaking, alcohol soaking and other method before use; and in case of mildewing, peculiar smell and coloring of barrel, the corresponding method shall adopted for cleaning prior to use.

5.3 If the wine (fruit wine) adopts the cement pit, it shall be coated with the anti-corrosive layer meeting the following requirements:

a) Non-toxic, acid-proof, alkali resistant and anticorrosive and no adverse impact on wine taste.
b) Strong adhesion and no falling off.
c) Smooth and even surface and good hygienic conditions.
d) High mechanical strength, dense structure, sufficient thickness and free from leakage.
e) Simple laying technology and easy construction. The new stainless steel tank shall be subject to acid pickling and passivation prior to use.

5.4 The fermentation tank for sparkling wine (fruit wine) shall meet the relevant requirements.

5.5 The facility and equipment shall be provided only for the plant area for production of wine (fruit wine) brut.

5.6 The traditional tools for rice wine production shall be easy for cleaning and maintenance.

6 Hygienic management

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

7 Raw Material, Food Additives and Related Products

7.1 Wine (fruit wine) raw material

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

7.1.2 The procurement record and acceptance record shall be kept for procurement of grape (fruit) raw material. The procurement record shall contain the detailed information concerning raw material type and place of origin; and the acceptance record shall contain the quality inspection on raw material sugar degree, acidity and

appearance, etc. The pesticide residue in raw material shall meet the requirements of GB2763.

7.1.3 The production license is required for domestic grape juice (fruit juice) purchased. In case of procurement of grape (fruit) juice, the grape (fruit) juice manufacturing enterprise shall provide the corresponding valid qualification and detailed production process record, including the information concerning raw material, processing technology, food additives and processing agent and the corresponding qualification certificate. The grape (fruit) juice shall be subjected to acceptance in accordance with relevant national regulations and can be purchased after passing the inspection. The supplier shall provide the certificate of origin, customs certificate and inspection and quarantine certificate for imported grape juice (fruit juice).

7.1.4 The production license is required for domestic brut purchased. In case of procurement of brut, the brut manufacturing enterprise shall provide the corresponding valid qualification and detailed production process record, including the information concerning raw material, processing technology, food additives and processing agent and the corresponding qualification certificate. The brut shall be subjected to acceptance in accordance with relevant national regulations and can be purchased after passing the inspection.

7.1.5 The grape (fruit) juice shall be subjected to acceptance in accordance with relevant national regulations and can be purchased after passing the inspection.

7.1.6 The raw material of special wine (fruit wine) shall meet particular requirement of production process or relevant standards.

7.2 Rice wine raw material

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

7.2.2 The grain raw material used in production, shall be provided with the purchase record and acceptance record and meet the relevant national food safety standards and it is forbidden to use the moldy and degenerative raw material or the raw material contaminated by toxic and harmful substance.

7.2.3 The special auxiliary material for production of the special type Chinese rice wine shall be among the list of homology of medicine and food and food new material approved by China and shall meet the corresponding standards.

7.3 Food additives

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

7.3.2 The caramel for coloring in rice wine production shall meet the relevant regulations of GB 8817 and GB 2760.

7.3.3 The diatomite for filtration aiding in rice wine production shall meet the relevant regulations of GB 14936.

7.4 Food-related product

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

8 Food Safety Control in Wine (Fruit Wine) Production Process

8.1 Fermentation process control

8.1.1 The instrument and equipment, tool, vessel and pipeline and fittings used in fermentation workshop and fermentation process shall be cleaned and disinfected before and after grape (fruit) processing and the cleaning and disinfection effect shall be detected regularly. The dedicated tool and instrument cleaning and disinfection sites shall be provided in the workshop. The fermentation workshop shall be kept clean and hygienic to prevent the

growth of infectious microbe.

8.1.2 The yeast, lactic acid bacteria, various auxiliary materials, processing agent and other additives used in the fermentation process, shall meet the requirements of their hygienic standards and food hygienic requirements, and the management system and operating procedure shall be developed and followed in a strict way.

8.1.3 The appropriate measures shall be taken for control of bad metabolite in fermentation process.

8.2 Brut storage and ageing process control

8.2.1 The vessel for brut storage and ageing shall safe and cleaned and sterilized before use to prevent microorganism breeding. The oak barrel shall be kept clean inside and outside to prevent bacteria growth.

8.2.2 The brut transport and turnover vessel shall be cleaned and sterilized before use, to prevent the contact with the hazardous or peculiar smell-generating substance.

8.2.3 In the storage and ageing process, the temperature shall be controlled in a reasonable way, the appropriate amount of sulfur dioxide shall be added and the wine lees shall be separated as appropriate, to prevent brut oxidation or microorganism reproduction.

8.3 Stabilizing treatment process control

The processing agent used in stabilizing treatment of wine (fruit wine) shall be subject to the test for volume of addition, to prevent excessive or insufficient addition and influence on wine (fruit wine) quality.

8.4 Filtration and filling control

8.4.1 The wine transportation pipeline, wine filling machine, wine storage tank and plate and frame filter and so on used in filling shall be sterilized, to ensure the aseptic wine transportation pipeline and wine filling machine. The semi-finished wine shall be filtered and sterilized prior to transport into the wine filling machine, to prevent the bacteria or yeast from introduction into the finished wine.

8.4.2 The regular cleaning and replacement of filter membrane filter rod and filter element shall be carried out for the filter. The filling equipment shall be cleaned and sterilized after completion of daily production.

8.4.3 The empty bottle shall be cleaned and checked for dirty, impurity and damage prior to filling. The bottle cap (plug) used shall be kept clean and hygienic.

8.4.4 If the thermal treatment is required for the wine (fruit wine), e.g., pasteurization treatment, temperature rise or other technologies adopted shall not result in an obvious change in appearance, aroma and taste.

8.5 Microbiological monitoring

The critical control points shall be identified for microbiological monitoring during wine (fruit wine) production and the microbiological monitoring procedure shall be established for wine (fruit wine) processing, including microbiological monitoring in production environment and production process, as shown in Annex A.

8.6 Packaging

They shall meet the requirements in provision 8.5 of GB 14881-2013.

9 Rice Wine Production Process Control

9.1 Raw material treatment process control

9.1.1 Koji-making

9.1.1.1 The impurities shall be removed from the grain raw material used for koji-making, to prevent the

introduction of stone and metal and other substances from.

9.1.1.2 The koji-making and fermentation room and the apparatus, equipment and tool and instrument and so on used in the process, shall be disinfected on a regular basis, to ensure the clean and hygienic fermentation room; and the fermentation place, apparatus, equipment and tool and instrument and so on used in the process, shall be disinfected prior to use.

9.1.1.3 The strain used in pure-culture koji-making, shall meet the hygienic requirements of food strain and the strict management system and operating procedure shall be worked out to prevent contamination.

9.1.1.4 The quality standard for production koji and pure-culture saccharification fermentation starter (strain) shall be developed and it implementation shall be ensured.

9.1.2 Rice steeping

The raw material shall follow the principle of first-in first-out, and the rice steeping vessel and tool and instrument shall be made of non-toxic, harmless, odor-free, corrosion proof and cleaning material and shall be cleaned completely prior to use to prevent contact with the harm or smelly substance.

9.1.3 Rice steaming (cooking)

9.1.3.1 The instrument, equipment, conveys pipeline and other tools and instruments and vessels for rice steaming (cooking) shall meet the food hygienic requirements.

9.1.3.2 The rice steaming and cooking and other gelatinization processes shall be effective and the appropriate measures shall be taken for cooling after gelatinization, e.g., spreading for cooling, air cooling and water spraying, and the food shall be fed for production as soon as possible to avoid rice resuscitation.

9.2 Liquor production process monitoring

9.2.1 Fermentation

9.2.1.1 The mechanical equipment, pipeline, vessel and various tools and instruments with possible contact with rice wine in fermentation process, shall be made of non-toxic, harmless, odor-free, corrosion proof, and easy cleaning material (e.g., food-grade stainless steel and pottery clay and other materials). If the steel and other materials are used, the non-toxic, harmless and odorless coating not affecting rice wine quality and meeting food safety requirements shall be applied.

9.2.1.2 The instrument, equipment, tool, vessel, pipeline and fittings used in fermentation site and fermentation process shall be disinfected on a regular basis before and after production. The workshop shall be provided with the dedicated tool and instrument disinfection site to ensure the clean and hygienic fermentation site and prevent harmful microorganism growth.

9.2.1.3 The strict management system and operating procedure shall be worked out for yeast, distiller's yeas, various auxiliary materials and other additive used in fermentation process, to prevent contamination, and the operation shall be carried out in a strict accordance with the flow, with fermentation record well kept.

9.2.1.4 A good job shall be done in the temperature control management and sugar degree and acidity monitoring in fermentation process.

9.2.1.5 The appropriate measures shall be taken for control of bad metabolite in fermentation process.

9.2.2 Compression filtration

9.2.2.1 The ground and wall in compression filtration site and the equipment and vessel in them shall be cleaned

and disinfected on a regular basis. The filter cloth and filter plate for compression filtration shall meet the food and hygienic requirements. The vessel and pipeline with contact with wine liquid shall be made of non-toxic, harmless, odor-free, corrosion proof and easy cleaning material.

9.2.2.2 The press filter shall be kept clean, with smooth filtration pore and regular cleaning, disinfection and sterilization of filter cloth.

9.2.2.3 The compressed air for squeezing shall be filtered to prevent the grease dirt and sewage from entering into the win. The compression filtration shall be carried out according to the established operating procedure and shall be recorded properly.

9.2.3 Boiling wine

9.2.3.1 The boiling wine equipment and vessel shall be cleaned and disinfected on a regular basis.

9.2.3.2 The boiling wine temperature and time shall be controlled effectively in the boiling wine process to ensure the product quality and safety.

9.2.4 Brut storage and ageing process control

9.2.4.1 The vessel for brut storage and ageing shall be safe and harmless and shall be controlled before use to prevent microorganism breeding.

9.2.4.2 The brut transport and turnover vessel shall be made of non-toxic, harmless, odor-free, corrosion proof and easy cleaning material without chemical reaction with rice wine. The cleaning and sterilization are required before use to prevent the harmful or peculiar smell generating substance.

9.2.4.3 The brut information shall be well recorded and marked. The contents include variety, date of manufacture, batch, warehousing time and quantity, etc. The information shall be complete and accurate.

9.2.5 Blending, filtration and filling

9.2.5.1 The ground and wall in compression filtration site and the equipment and vessel used in them shall be cleaned and disinfected on a regular basis, to prevent microorganism reproduction.

9.2.5.2 The semi-finished wine after blending shall not be placed for too long and shall be refrigerated if necessary.

9.2.5.3 The wine transportation pipeline, wine storage tank and filter for filling, shall be sterilized strictly, to ensure the clean and hygienic wine transportation pipeline and filling machine. The semi-finished wine may be subject to filtration sterilization, heating sterilization or heating sterilization after filling and cap-sealing, to control the harmful microorganism effectively and ensure product quality and safety.

9.2.5.4 The empty bottle shall be cleaned and checked for dirty, impurity and damage prior to filling. The bottle cap (plug) used shall be kept clean and hygienic.

9.2.5.5 The bottled wine after filling or bottled wine after sterilization shall be subject to lighting detection and the lighting detection personnel shall have a rest or be allocated to other posts after working for a certain time.

9.3 Microbiological monitoring

The critical control points shall be established for rice wine production for microbiological monitoring. The microbiological monitoring procedure shall be established for rice wine processing, including microbiological monitoring in production environment and process. Refer to Annex B for details.

9.4 Packaging

They shall meet the requirements in provision 8.5 of GB 14881-2013.

10 Inspection

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

11. Product Storage and Transport

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

12. Product Recall Management

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

13 Training

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

14 Management system and personnel

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

15 Record and document management

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

Annex A

Guide for microbiological monitoring procedure in processing of wine (fruit wine)

Monitoring items		Sampling point	Microorganism recommended to be monitored	Recommended monitoring frequency	Recommended monitoring indicators limit
Microbiological monitoring in production environment	Fermentation equipment (Tank and barrel, etc.)	Any position in equipment or washing water	Total bacteria	Self-inspection, once a month	Define the indicating limit according to the production condition.
	Storage/ and transport equipment	Any position in equipment or washing	Total bacteria	Self-inspection, once a month	Define the indicating limit according to the

	(Tank and barrel, etc.)	water			production condition.
	Filling workshop(area)	Ambient air	Total bacteria Monitor the pathogenic bacteria if necessary	Self-inspection, once a month	Define the indicating limit according to the production condition.
	Filling equipment (Filling machine, pipeline, wine bottle and bottle cap, etc.)	Washing water	Total bacteria	Self-inspection, once a month	Define the indicating limit according to the production condition.
Microbiological monitoring in production process	Wine storage equipment	Brut and wine to be filled	Total bacteria	Self-inspection, once a month	Define the indicating limit according to the production condition.
	Wine filling equipment	After finished wine filling	Total bacteria	Self-inspection once a day or a batch	Define the indicating limit according to the production condition.
		After finished wine filling Prior to shutdown	Total bacteria	Self-inspection once a day or a batch	Define the indicating limit according to the production condition.

Note: in case of any abnormal total bacteria through the monitoring above, it is required to find out the cause, e.g., yeast, lactic acid bacteria, acetic bacteria and mold.

Annex B

Guide for microbiological monitoring procedure in processing of rice wine

Monitoring items		Sampling point	Recommended microorganism to be monitored	Recommended monitoring frequency	Recommended monitoring indicating limit
Microbiological monitoring in production	Fermentation room	Ambient air	Total bacteria	Self-inspection once two weeks Times	Define the indicating limit according to the

environment					production condition.
	Yeast culture room	Ambient air	Total bacteria	Self-inspection, once a month	Define the indicating limit according to the production condition.
	Filling workshop	Ambient air	Total bacteria	Self-inspection, once a month	Define the indicating limit according to the production condition.
	Fermentation equipment (Tank and jar, etc.)	Any position in equipment	Total bacteria	Self-inspection, once a month	Define the indicating limit according to the production condition.
	Storage/ and transport equipment (Tank and jar, etc.)	Any position or washing water in equipment	Total bacteria, monitoring the pathogenic bacteria if necessary.	Self-inspection, once a month	Define the indicating limit according to the production condition.
	Filling equipment (Filling machine, pipeline, wine bottle and bottle cap, etc.)	Washing water	Total bacteria	Self-inspection, once a month	Define the indicating limit according to the production condition.
Microbiological monitoring in production process	Fermentation equipment	Fermented mash	Lactic acid bacillus	Once a week	Define the indicating limit according to the production condition.
			Acetobacter aceti	Once a week	
	Wine storage equipment	Brut	Total bacteria Coliform, yeast and lactic acid bacteria	Once a week for the first three months and once a week after the first three months	Define the indicating limit according to the production condition.
	Wine filling equipment(wine filler, wine bottle and bottle cap)	Finished wine	Total number of bacterial colony and coliform	By product batch	Define the indicating limit according to the production condition.

Note: in case of any abnormal total number of bacterial colonies through monitoring, it is required to find out the cause, e.g., yeast, lactic acid bacteria, acetic bacteria and mold.