



## JOINT FAO/WHO FOOD STANDARDS PROGRAMME

### CODEx ALIMENTARIUS COMMISSION

#### Forty-fourth Session

#### Proposal for the Development of a Codex Standard for Yeast

#### Prepared by China

#### PROJECT DOCUMENT

### 1. The Purposes and Scope of the Standard

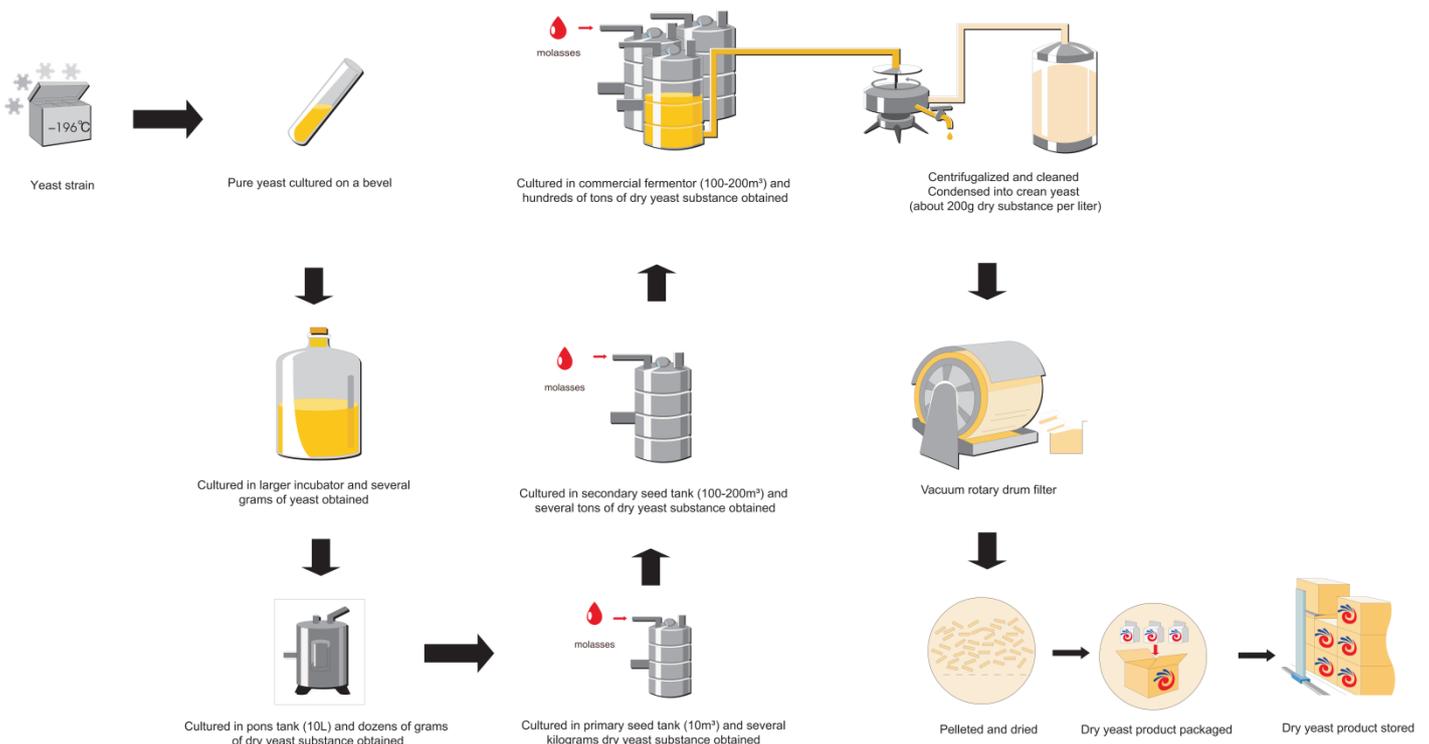
This standard applies to yeast products for fermentation, baking, brewing and other purposes. Currently, there is no harmonized international standard for yeast. The regulations and standards for yeast are various among countries, and there are still many countries which do not have standard for yeast.

The purpose of this standard is to protect the health of consumers and promote fair practices in food trade in accordance with the purpose of the Codex.

### 2. PRODUCT DEFINITION

Yeast: it refers to yeast foods or food ingredients, with the function of producing carbon dioxide and alcohol or increasing food flavor and nutrition or others, which is inoculated with yeast strains and goes through fermentation, separation, filtration, drying or not drying and other processes. The production process is shown in Figure 1.

Figure 1 Production process diagram of yeast  
**Commercial yeast production process**



Products can be classified into baker's yeast and brewer's yeast according to their application scope; products can be classified into cream yeast, fresh yeast and dry yeast according to their moisture content. At present, the major international yeast producers are Angel, Lesaffre and AB Mauri. See Figure 2 for representative products in the market.



Figure 2 Representative products in the market

### 3. Relevance and Timeliness

Yeast has wide applications and broad market potential; Due to the improvement of fermentation technology and production technology, production concentration and unit yield have also been continuously improved, which has further promoted the international trade of yeast. According to the industry reports and data of customs, the global yeast market was valued at US\$3.26 billion in 2018 and is expected to reach US\$5.89 billion by 2026, with a compound annual growth rate of 8.8%. From 2016 to 2019, the global yeast import and export trade remained at around US\$2.5 billion each year. The detailed data is shown in Figure 3 and Figure 4.

At present, yeast is widely used in countries in Asia, Europe, Latin America and the Caribbean, North America and the Southwest Pacific, Africa, and the Middle East region. However, the Codex Alimentarius Commission has not yet formulated the standard for yeast, and there is no harmonized standard among various trading countries have caused many obstacles to international trade. Therefore, the Codex standard for yeast will benefit the trade between countries and regions in the world and it is predicted that yeast will have greater consumption demand and trade potential in the international market in the future.

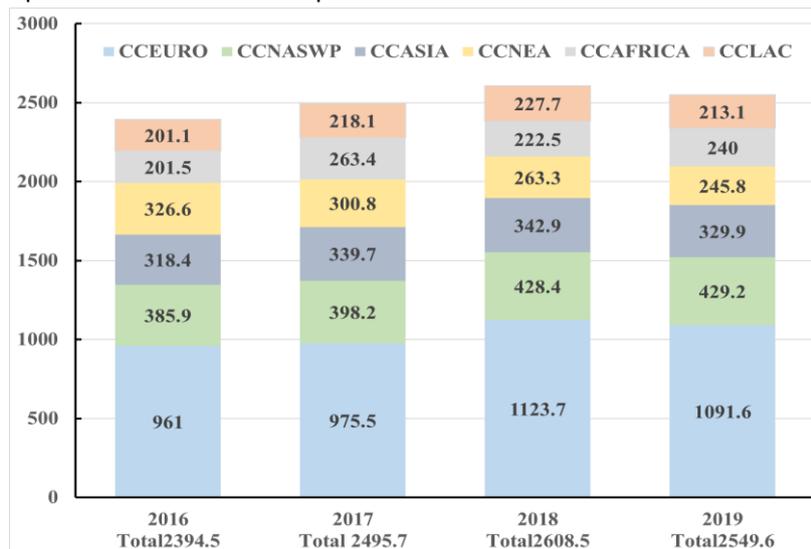
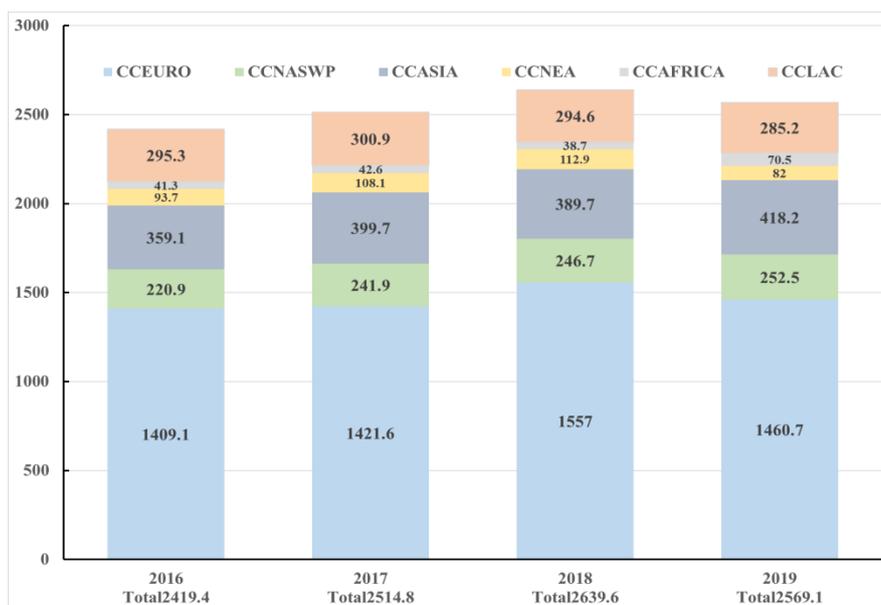


Figure 3 2016-2019 Global Yeast Total Imports (Million US\$)



**Figure 4 2016-2019 Global Yeast Total Outputs (Million US\$)**

**Note: Data source:**

[https://oec.world/en/visualize/tree\\_map/subnational\\_can/export/show/show/4210210/2019/](https://oec.world/en/visualize/tree_map/subnational_can/export/show/show/4210210/2019/)

#### 4. Main Aspects to be covered

The main aspects to be covered by the Codex standard for yeast include scope, description, essential composition and quality factors, food additives, contaminants, food hygiene, weights and measures, labeling as well as methods of analysis and sampling. The use of food additives and contaminant limits of the product will follow the requirements of the existing CAC texts.

#### 5. Assessment against the Criteria for the Establishment of Work Priorities

##### 5.1 General Criterion

The standard aims at ensuring consumer health, food safety and fair food trade practice, especially taking into account the needs of developing countries. The new standard proposal will focus on the following aspects to meet the above requirements:

- Resolve consumers' concerns about food safety by establishing product safety requirements;
- Eliminate trade barriers by unifying standard requirements.

##### 5.2 Criteria applicable to commodities

a) *Volume of production and consumption in individual countries and volume and pattern of trade between countries*

In 2019, the global yeast production capacity was around 1.73 million tons, a net increase of 220,000 tons compared to that of 2015, in which a net increase of 140,000 tons of yeasts, and 80,000 tons of processed yeast products.

Subject to factors such as raw materials, technology and environment, 75% of the global yeast production facilities are located in Europe, Asia Pacific and North America. France, China, Turkey and Mexico are the world's major yeast exporters; the United States, France, Germany and the United Kingdom are major importers. The import and export amounts of major countries are shown in Table 1 and Table 2.

Table 1 Export value of major exporting countries (Million US\$)

Country	2016	2017	2018	2019
France	302	287	269	261
China	286	325	298	324
Turkey	214	219	222	201
Mexico	141	137	132	138
Belgium	132	130	151	146

Table 2 Export value of major importing countries (Million US\$)

Country	2016	2017	2018	2019
United States of America	284	291	318	320
France	108	105	121	126
Germany	87.5	75.7	101	96.1
United Kingdom	93.1	101	107	92.3
Belgium	56.4	71.5	79	77.9

**b) Diversification of national legislation and apparent resultant or potential impediments to international trade**

Different processing and consumption habits in various regions have led to differences in the classification, requirements and inspection methods of yeast products, which may affect the fair trade. For example, different regions have different requirements for heavy metals, microbial content and physical and chemical properties in yeast products (see Table 2), which leads to some trade barriers in importing and exporting yeast products between countries and regions.

**c) International or regional market potential**

The global yeast production and international trade volume continue to grow, and the global production and sales scale are expected to be 2 million tons in 2025. From 2016 to 2019, the global import and export trade data of yeast increased steadily, as shown in Figure 3 and Figure 4. In addition to continents such as Europe, Asia, and the Americas which have a longer history of yeast production and consumption, due to population growth and changes in dietary habits, market demand in Africa, the Middle East, and Asia-Pacific region is strong, and growing steadily.

In addition to the traditional application in food processing such as fermentation, baking, brewing and improving nutrition, and yeast can also be used as the raw material for yeast extract, yeast cell wall, autolyzed yeast and other derivative products. The formulation of this standard can also provide specifications for the control of raw materials for downstream producers.

**d) Amenability of the commodity to standardization**

The Codex standard for yeast will play a positive role in guiding the healthy development of the industry and improving the safety of yeast. CAC has not formulated relevant standards for yeast. The current *General Standard for Food Additives* (CXS 192-1995) have the food category and description of yeast (FC 12.8), as well as food additive provisions in this food category, but Codex Alimentarius still lacks other specifications requirement for this whole food category.

At present, all major regions have their own standards for yeast products. Each country has made specific requirements on sensory indicators, physical and chemical indicators indicators and safety indicators of yeast products. There are many similarities between the standards. For example, most moisture content of dry yeast is less than 10%, while the moisture content of fresh yeast is usually around 70%. The content of heavy metals such as As and Pb in yeast products are concentrated in 1 mg/kg ~ 5 mg/kg. Most

requirements on appearance, flavour and texture in standards of different countries or regions are consistent. In summary, it is feasible to develop a harmonized international standards for yeast.

**e) Coverage of the main consumer protection and trade issues by existing or proposed general standards**

There are no existing commodity standards covering yeast used for food processing. The new work will facilitate trade by establishing an international agreed standard.

**f) Number of commodities which would need separate standards indicating whether raw, semi-processed or processed**

At present, apart from this proposed standard, there is no need to formulate other standards, because the proposed standard will cover all finished products, including raw materials of yeast and the production sanitary conditions for processed products. There is no semi-processed product or unprocessed product sold as a commodity in this product.

**g) Work already undertaken by other international organizations in this field and/or suggested by the relevant international intergovernmental body(ies)**

None were identified.

**6. Relevance to the Codex Strategic Objectives**

The proposed new standard project is in line with the "Strategic Plan 2020-2025 of the Codex Alimentarius Commission", and the development of global standard for yeast is closely related to Goal 1.1 (understanding needs and emerging issues) and Goal 1.2 (prioritizing needs and emerging issues). As a global standard of yeast, it will help to improve the food safety for global consumers and ensure fair international trade practices for this particular food.

**7. Information on the Relation between the Proposal and other Existing Codex Documents**

The standard will be used in conjunction with all existing and relevant Codex standards. It will take into account the provisions of

- CXC 1-1969 (the *General Principles of Food Hygiene*),
- CXS 107-1981(*General Standard for the Labelling of Food Additives When Sold as Such*),
- CXS 1-1985 (*General Standard for the Labelling of Prepackaged Foods*),
- CXS 192-1995 (*General Standard for Food Additives*),
- CXS 193-1995 (*General Standard For Contaminants And Toxins In Food And Feed*),
- CXG 21-1997(*Principles For the Establishment and Application of Microbiological Criteria for Foods*),
- CXS 234-1999 (*Recommended Methods Of Analysis And Sampling*),
- CXC 49-2001 (*Practice Concerning Source Directed Measures to Reduce Contamination of Foods with Chemicals*).

**8. Identification of Any Requirement for and Availability of Expert Scientific Advice**

None is required.

**9. Identification of Any Need for Technical Input to the Standard from External Bodies so that This can be Planned For**

None is required.

**10. The Proposed Time-Line for Completion of the New Work.**

The new work proposal will be submitted to the 44<sup>th</sup> Session of the Codex Alimentarius Commission for discussion in 2021. According to the Codex work process for developing standards, it is estimated that it will take about 5 years.

Procedures	Date
Agreement to initiate the proposal on the 44th Session of the CAC	2021-2022

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Preparation of draft standard and circulation for comments	2022-2023
Consideration of the Proposed Draft in the relevant committee	2024
Adoption of the Proposed Draft by the CAC (Step 5)	2024
Consideration of the Draft Standard in the relevant committee	2026
Final Adoption of the Global Standard by the CAC (Step 8)	2026