

هيئة التقييس لدول مجلس التعاون لدول الخليج العربية GCC STANDARDIZATION ORGANIZATION (GSO)

مشروع تحديث
Final Draft of Standard FDS

اعداد اللجنة الخليجية رقم TC05

Prepared by GSO Technical Committee No. TC05

GSO 1871 /2020 (E)

الشعيرية سريعة التحضير (النودلز)

INSTANT NOODLES

I.C.S: 67.060 . 00

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هذه الوثيقة مشروع لمواصفة قياسية خليجية تم توزيعها لإبداء الرأي والملاحظات بشأنها، لذلك فإنها عرضة للتغيير والتبديل، ولا يجوز الرجوع إليها كمواصفة قياسية خليجية إلا بعد اعتمادها من الهيئة.

تقديم

هيئة التقييس لدول مجلس التعاون لدول الخليج العربية هيئة إقليمية تضم في عضويتها أجهزة التقييس الوطنية في الدول الأعضاء ، ومن مهام الهيئة إعداد المواصفات القياسية واللوائح الفنية الخليجية بواسطة لجان فنية متخصصة.

قرر (المجلس الفني لـ/مجلس إدارة) هيئة التقييس لدول مجلس التعاون لدول الخليج العربية في اجتماعه رقم () الذي عقد بتاريخ / / هـ ، الموافق / / م اعتماد تحديث (اللائحة الفنية) الخليجية (GSO 1871) الشعيرية سريعة التحضير (النودلز) باللغة (العربية/الإنجليزية) التي تم دراستها وإعدادها ضمن برنامج عمل (اللجنة الفنية) الخليجية رقم "TC05" اللجنة الفنية الخليجية لمواصفات قطاع المنتجات الغذائية والزراعية" المدرجة في خطة (دولة قطر).
على أن تلغي المواصفة القياسية/اللائحة الفنية الخليجية رقم (/) وتحل محلها.

INSTANT NOODLES

1- SCOPE

This standard applies for to various kinds of noodles. The instant noodle may be packed with noodle seasonings, or in the form of seasoned noodle and with or without noodle garnish(s) in separate pouches, or sprayed on noodle and ready for consumption after dehydration process. This standard does not apply to pasta.

2- COMPLEMENTARY REFERENCES

- 2.1 GSO 9 “Labeling of Prepackaged Foods”.
- 2.2 GSO 21 “Hygienic Regulations for Food Plants and Their Personnel”.
- 2.3 GSO 2500 “Additives Permitted for Use in Food Stuffs”.
- 2.4 GSO 382 “Maximum Limits for Pesticide Residues in Agricultural and Food Products – Part 1”.
- 2.5 GSO 383 “Maximum Limits for Pesticide Residues in Agricultural and Food Products – Part 2”..
- 2.6 GSO 168 “Conditions of Storage Facilities for Dry and Canned Foodstuffs”.
- 2.7 GSO 707 “Flavorings Permitted for Use in Food Products”.
- 2.8 GSO Codex Stan 193 “General Standard for contaminants & toxins in food”.
- 2.9 GSO 841 “ Maximum Limits of Mycotoxins Permitted in Food and Animal Feeds – Aflatoxins”.
- 2.10 GSO 988 “Limits of radionativity levels permitted in foods stuff part - 1.”.
- 2.11 GSO 1016 " Microbiological criteria for foodstuffs ".
- 2.12 GSO 839 " Food packages – Part 1: General requirements ".
- 2.13 GSO 1863 “Food Packages – Part 2: Plastic Packages, General Requirements” .
- 2.14 GSO 2231 “General Requirements for the materials intended to come into contact with food”.
- 2.15 GSO 2055-1 “HALAL FOOD - Part 1 : General Requirements”.
- 2.16 Gulf Standards which shall be approved by GSO concerning with:
 - 2.16.1 “Sampling and methods of test for instant noodles”.
 - 2.16.2 “Maximum permitted limits for heavy metals” .

3- DEFINITIONS

3.1 Instant Noodles:

It’s a product prepared from wheat flour and/or rice flour and/or other flours and/or starches as the main ingredient, with or without the addition of other ingredients. It may be treated by alkaline agents. It is characterized by the use of

pregelatinization process and dehydration either by frying or by other methods.
The product should be presented as one of the following styles:.

- .1 Fried noodles, or
- .2 Non-fried noodles

4- REQUIREMENTS

The product shall have the following requirements :

- 4.1 All raw materials used in the manufacturing shall comply with their own gulf standards.
- 4.2 The product shall be free from burning scars and shall bear the same color in all containers.
- 4.3 The product shall maintain its characteristic without kneading when it is prepared.
- 4.4 The product shall be identical to the classification.
- 4.5 The product shall have natural odor and flavor characteristics of the ingredients used in the production and shall be free of rancidity.
- 4.6 The sample taken from manufacturing site shall have broken threads not more than 8% of net weight (m/m).
- 4.7 Limits of heavy metals shall not exceed the limits prescribed in GSO mentioned in item (2.16.2).
- 4.8 Without prejudice to the requirements stated in GSO mentioned in item (2.3) colours other than natural food colours are prohibited.
- 4.9 The manufacturing shall comply with GSO mentioned in item (2.2).
- 4.10 The microbial content of the product shall not exceed the limits of microbial content prescribed in GSO mentioned in item (2.11).
- 4.11 The pesticides residues shall not exceed the limits of pesticides prescribed in GSO mentioned in item (2.4) – (2.5) .
- 4.12 The fungal toxins (aflatoxins) shall not exceed the limits of aflatoxins prescribed in GSO mentioned in item (2.9).
- 4.13 Radiation shall not exceed the limits of radiation prescribed in GSO mentioned in item (2.13).

5. ESSENTIAL COMPOSITION AND QUALITY FACTORS

5.1 Composition

5.1.1 Essential Ingredients

- (a) Wheat Flour and/or Rice Flour and/or other flours and/or starches;
- (b) Water.

5.1.2 Optional Ingredients

The optional ingredients shall be ingredient(s) which are commonly used.

5.2 Quality Criteria

5.2.1 Organoleptic

Shall be acceptable in term of appearance, texture, aroma, taste and colour.

5.2.2 Foreign Matter

The product shall be free from foreign matter.

5.2.3 Analytical Requirement for Noodle Block (Noodle Excluding Seasonings)**(a) Moisture Content**

- Maximum of 10% for fried noodles
- Maximum of 14% for non-fried noodles

(b) Acid value: maximum of 2 mg KOH/g oil (applicable only to fried noodles)

C. Health requirements:

- 1- The product shall be free of E-coli.
- 2 - The product is free of salmonella bacteria / 25 g.
3. The product shall be free of fungal growths.
- 4- The edible oil used shall comply with its specifications.

6. FOOD ADDITIVES

Shall comply with GSO standard mentioned in item 2.3

7. CONTAMINANTS

Shall comply with GSO standard mentioned in item 2.8

8- PACKING

Without prejudice to the requirement stated in GSO mentioned in item (2.12), (2.13), the product shall be packed in clean, dry and hermetically sealed containers and the internal surface in contact with food shall not react to contained food in any manner.

9- TRANSPORTATION

The product shall be transported in such a way that protect the product from damage and contamination.

10- STORAGE

Without prejudice to the requirement stated in GSO mentioned in item (2/6). The product must be stored in good ventilated stores to eliminate the direct heat and moisture and contamination sources.

11- LABELLING

Without prejudice to the provision of the standard prescribed in item (2.1) the following shall be declared on each container.

11.1 Product name and classification.

- 11.2 Net weight in gram.
- 11.3 Cooking instructions.
- 11.4 Product flavor.
- 11.5 Production and expiry date.
- 11.6 In case of using term Halal, consideration shall be given to GSO mentioned in item 2.15

12. METHODS OF ANALYSIS AND SAMPLING

12.1 Sampling

Sampling shall follow the General Guidelines on Sampling (CAC/GL 50-2004).

12.2 Determination of Moisture

12.2.1 Apparatus

- (a) Aluminum dish: diameter ≥ 55 mm, height ≥ 15 mm, and with inverted tight-fitting lid.
- (b) Air-oven: with control accuracy ± 1 °C.
- (c) Air-tight desiccator: silica gel heated at 150 °C is satisfactory drying agent.

12.2.2 Preparation of Test Sample

Remove instant noodles from package, and leave garnishing and seasoning in package. Transfer the noodles to plastic bag to prevent moisture change, and then break these into small fragments with hands or wooden hammer. Select broken noodles in the size range of 2.36 mm to 1.7 mm by using two sieves with 2.36 mm and 1.7 mm openings (mesh size 12-8), and mix well. Use these noodles for test sample. If noodles are too thin to screen with sieves, cut them into 1 to 2 cm lengths, mix well, and use these cut noodles for test sample.

12.2.3 Determination

12.2.3.1 Fried Noodles

In cooled and weighed dish (with lid), previously heated to 105°C, weigh ca 2 g well-mixed test portion to 1mg. Uncover test portion and dry dish, lid, and contents 2 h in oven provided with opening for ventilation and maintained at 105°C. (The 2 h drying period begins when oven temperature is actually 105 °C.) After drying period, cover dish while still in oven, transfer to desiccator, and weigh to 1 mg soon after reaching room temperature. Report loss in weight as moisture (indirect method).

12.2.3.2 Non-fried Noodles

For non-fried noodles, follow the directions for fried noodles, but dry test portion for 4 h.

12.2.4 Calculation

Calculate using the following equation:

Moisture (%) = $\{(g \text{ test portion before drying} - g \text{ test portion after drying}) / g \text{ test portion before drying}\} \times 100$

12.3 Extraction of Oil from Instant Noodles

12.3.1 Apparatus

(a) Rotary evaporator

(b) Water bath

12.3.2 Preparation of Test Sample

Remove instant noodles from package, and leave garnishing and seasoning in package. Transfer the noodles to plastic bag to prevent moisture change, and then break these into small fragments with hands or wooden hammer. Select broken noodles in the size range of 2.36 mm to 1.7 mm by using two sieves with 2.36 mm and 1.7 mm openings, and mix well. Use these noodles for the test sample. If the noodles are too thin to screen with sieves, cut them into 1 to 2 cm lengths, mix well, and use these cut noodles for the test sample.

12.3.3 Extraction

Weigh 25 g test portion into 200 mL Erlenmeyer flask. Add 100 mL petroleum ether to the flask after replacing air in flask by N₂ gas. Stopper flask and leave for 2 hours. Decant supernatant through filter paper into separating funnel. Add 50 mL petroleum ether to residue and filtrate supernatant through filter paper into the separating funnel. Add 75 mL water to the separating funnel and shake well. Allow layers to separate and drain the lower aqueous layer. Add water, shake, and remove aqueous layer again as done previously. Decant the petroleum ether layer after dehydration with Na₂SO₄ into pear-shaped flask. Evaporate petroleum ether in the flask on rotary evaporator at not over 40°C. Spray N₂ gas on extract in the flask to remove all petroleum ether.

12.4 Determination of Acid Value

12.4.1 Definition and Principle

Acid value of oil from fried instant noodles = mg KOH required to neutralize 1 g oil. Oil extracted from noodle is dissolved in alcohol-ether mixture and titrated with alcoholic KOH standard solution.

12.4.2 Apparatus

Air-tight desiccator: silica gel heated at 150°C is satisfactory drying agent.

12.4.3 Reagents

(a) Alcoholic potassium hydroxide standard solution: 0.05 mol/L. Dissolve 3.5 g potassium hydroxide in equal volume of water (CO₂-free) and add ethanol (95%) to 1 L. After mixing, let solution stand for several days keeping the solution CO₂-free. Use supernatant after standardization.

Standardization:

Weigh required quantity of amidosulfuric acid (certified reference material for volumetric analysis) and place it into desiccator (<2.0 kPa) for 48 hour. Next, accurately weigh 1 to 1.25 g (recording the weight to 0.1mg), dissolve in water (CO₂-free), and dilute to 250 mL. Put 25 mL solution into Erlenmeyer flask, add 2 to 3 drops of

bromothymol blue indicator and titrate with 0.05 mol/L alcoholic potassium hydroxide solution until colour of solution change to faint blue.

Calculation:

Factor of molarity = (g amidosulfuric acid \times purity \times 25) / 1.2136 / mL KOH

(b) Alcohol-ether mixture: equal volumes ethanol (99.5%) and ether.

(c) Phenolphthalein solution: 1% in alcohol.

12.4.4 Titration

Before sampling, liquefy extracted oil using water bath. Weigh 1 to 2 g liquefied test portion into Erlenmeyer flask. Add 80 mL alcohol-ether mixture and a few drops of phenolphthalein solution. Titrate with 0.05 mol/L alcoholic KOH until faint pink colour appears and retain for more than 30 s. Perform blank test using only alcohol-ether mixture and phenolphthalein solution.

12.4.5 Calculation

Calculate using following equation:

Acid value [mg/g] = (mL test portion – mL blank) \times factor of molarity \times 2.806 / g test portion

REFERENCES:

STANDARD FOR INSTANT NOODLES
CODEX STAN 249-2006 .Amendment: 2019