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

GB/T 23781-2024

Replacing GB/T 23781-2009

General quality of black sesame paste

黑芝麻糊质量通则

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1 Scope and terms

1 The document lays down the technical requirements, the inspection rules and the provisions on marking, packaging, transport and storage for black sesame paste, defines the terms used and describes the matching test methods. It applies to the production, the inspection and the sale of black sesame paste. The foreword states that the document lays down quality related technical requirements for food, and that the requirements bearing on food safety are found in the relevant laws, regulations, policies and food safety standards.

3.1 black sesame paste: a food that can be reconstituted by stirring, made from black sesame, added at not less than 10%, together with cereal flour or another starchy product as the main raw materials, with or without other raw materials, by processing.

4 Technical requirements

4.1 The black sesame shall meet GB/T 11761 and the other raw materials shall meet the relevant standards.

4.2 The sensory properties follow Table 1, which sets five items. The colour shall be greyish black or the colour proper to the product. The taste and odour shall be those proper to the product, without a burnt smell or any other off-flavour. The texture shall be powdery or that proper to the product, without mould. There shall be no foreign matter visible to normal

eyesight. On reconstitution with a suitable amount of boiling water above 80 °C the product shall form a paste.

4.3 The physical and chemical indexes follow Table 2, in grams per 100 grams. Moisture shall be not more than 10, total sugar expressed as glucose not more than 60, fat not less than 4.0, and protein not less than 5.0. A footnote states that the moisture index applies only to the black sesame paste part of the product.

4.4 The net content follows the administrative measures on the metrological supervision of prepacked commodities.

5 Test methods

5.1 For the sensory examination, two or more smallest independent packs are taken as the sample and poured into a clean white porcelain dish; in an environment of ample soft light the colour, the texture and the foreign matter are observed by eye, the odour is smelled and the taste is tried. For the reconstitution, one smallest independent pack is taken and poured into a transparent glass vessel; a little warm boiled water is added first and stirred to a paste, then a certain amount of boiling water above 80 °C is added, the whole is stirred until even and the behaviour on reconstitution is observed.

5.2 Moisture is determined by the method of GB 5009.3.

5.3 Total sugar is determined by the method of Annex A.

5.4 Fat is determined by the method of GB 5009.6.

5.5 Protein is determined by the method of GB 5009.5.

5.6 The net content is determined by the method of JJF 1070.

6 Inspection rules

6.1 Products of the same variety made from the same charge, in the same shift or on the same date form one batch.

6.2 Samples are drawn at random from the batch, in a quantity that meets the needs of the tests and of the retained sample.

6.3 Finished products shall be inspected batch by batch before they leave the works and may leave only after passing. The items of delivery inspection are the sensory requirements, the net content and the moisture.

6.4 During regular production a type inspection shall be carried out once a year, and also on the trial production and approval of a new product; on resumption of production after it has been stopped for more than six months; on a considerable change of raw material or process that could affect the quality of the product; where the result of delivery inspection

differs markedly from that of the previous type inspection; and where the state supervisory body asks for it. Type inspection covers all the items of 4.2 and 4.3.

6.5 Where all the items of delivery inspection meet the document, the batch is judged to meet the document. Where an item fails, a further sample may be drawn from the same batch and inspected again, and where the item still fails the batch is judged not to meet the document. Type inspection follows the same rule: it is judged to meet the document where all its items pass, and not to meet it where an item still fails on re-inspection.

7 Marking, packaging, transport and storage

7.1 The label of a prepacked product shall conform to the relevant national provisions and shall state how the product is to be eaten; it should also state the amount of black sesame added.

7.2 The pack shall be clean, tight and undamaged and shall meet the relevant standards.

7.3 The product shall be protected against contamination during transport and kept away from strong sun, rain and damp. Conveyances shall be clean, hygienic and dry, and the product shall not be carried together with toxic, harmful, malodorous, volatile or corrosive goods.

7.4 The product shall be stored in a clean, ventilated warehouse away from light, shall not touch the floor or the walls, and shall not be stacked together with toxic, harmful, corrosive or malodorous goods.

A Annex A (normative) Method for the determination of total sugar

A.1 The protein is first removed from the test portion; the sucrose and the other sugars in the sample are then wholly converted into reducing sugars by hydrolysis with hydrochloric acid, and the content of reducing sugars so measured is the total sugar. After acid hydrolysis the sample is neutralised and made up to volume, and is then titrated, while heated and with methylene blue as the indicator, directly into a standardised alkaline copper tartrate solution; the reducing sugar content, that is the total sugar content expressed as glucose, is calculated from the volume of the sample solution consumed.

A.2 The reagents are prepared by the methods of GB 5009.7-2016 and GB 5009.8.

A.3 A test portion of 10.00 g to 20.00 g is weighed out, the amount depending on how high the total sugar content of the sample is, and put into a 100 mL beaker; it is dissolved in distilled water, washed several times and transferred to a 250 mL volumetric flask. The flask is heated in a water bath at 45 °C for 1 h and shaken from time to time. After cooling, water is added to the mark, the contents are mixed, and the solution is left to settle or is centrifuged for 10 min. Then 200 mL of the supernatant is drawn off into another 250 mL volumetric flask, 5 mL of zinc acetate solution and 5 mL of potassium ferrocyanide solution

are added slowly, water is added to the mark, the contents are mixed and the solution is left to settle or is centrifuged for 10 min. Exactly 50 mL of the supernatant is taken into a 250 mL volumetric flask, 5 mL of hydrochloric acid diluted 1 plus 1 is added, and the flask is heated in a water bath at 68 °C to 70 °C for 15 min. After cooling, two drops of methyl red indicator are added, the solution is neutralised with sodium hydroxide solution of 200 g/L, water is added to the mark and the contents are mixed. That is the sample solution for titration, and the reducing sugar is then determined by the procedure of 5.2 to 5.4 of GB 5009.7-2016.

A.4 The mass fraction of total sugar Z is calculated by formula (A.1) as the product of X and 6.25, where Z is the total sugar content of the sample expressed as glucose, in grams per 100 grams; X is the reducing sugar content found by titration, expressed as glucose and calculated by the method of clause 6 of GB 5009.7-2016, in grams per 100 grams; and 6.25 is the dilution factor of the sample after the acid hydrolysis.

A.5 The absolute difference between two determinations obtained under repeatability conditions shall not exceed 10% of their arithmetic mean.

B Relationship to the previous edition

The document replaces GB/T 23781-2009. Besides changes of structure and editorial changes, the main technical changes listed in the foreword are a change to the definition of black sesame paste, a change to the raw material requirements, a change to the texture item of the sensory requirements, a change to the physical and chemical indexes, the deletion of the contaminant and microbiological indexes, the deletion of the requirements on food additives and nutrition fortifiers, the addition of a net content requirement together with its test method, a change to the test method for total sugar, the deletion of the test methods for acid value, peroxide value and aflatoxin B1, changes to the batching and the sampling, a change to delivery inspection, a change to the decision rules, and a change to the marking requirement.