

FOREWORD

This Bangladesh standard was adopted by the Bangladesh Standards and Testing Institution on(date to be inserted)..... after the draft finalized by the Bakery and Confectionary Products Sectional Committee had been approved by the Agricultural and Food Products Divisional Committee.

This standard is based on the Codex Standard for Special Dietary Foods with Low-Sodium Content (including salt substitutes) (CODEX STAN 53-1981). It has been formulated to specify the sodium content of foods intended for special dietary uses and salt substitutes

Sodium is an element that is found in many foods as well as water. Although it is often touted as a nutrition villain, sodium actually plays a variety of important roles in the body. Sodium not only helps maintain healthy fluid balance, but it also contributes to proper muscle contraction and nerve impulse conduction. The body requires a small amount of sodium in the diet to control blood pressure and blood volume. Still, the body needs far less sodium than the average person actually consumes and the importance of sodium is negated when too much of the salty stuff fills the bloodstream. People with certain medical conditions such as high blood pressure, kidney disease, and heart problems can benefit from a diet that is low in sodium. Special dietary foods with low sodium content are foods whose special dietary value results from the reduction, restriction, or removal of sodium.

The purpose of this standard is to enable an opportunity to distribute low-sodium content food to consumers. Prevention of non-communicable diseases is one of the targets under Goal 3 of SDG. Because diets higher in sodium are associated with an increased risk of developing high blood pressure, which is a major cause of non-communicable diseases like stroke and heart disease. Uncontrolled high blood pressure can raise the risk of heart attack, heart failure, stroke, kidney disease, and blindness.

This standard is subject to periodical reviews and amendments, if necessary, in order to keep pace with the latest industrial and technological innovations. Any suggestions for improvement will be recorded and placed before the Committee in due course.

For the purpose of deciding, whether a particular requirement of this standard is complied with the final value observed or calculated, expressing the result of a test or analysis shall be rounded off in accordance with BDS 103. The number of significant places retained in the rounded-off value should be the same as that of the specified value in the standard.

This standard cancels and replaces BDS CAC 53:2000 Special dietary food with low sodium content, which has been technically revised.

Bangladesh Standard Specification for Special Dietary Foods with Low-Sodium Content (Including Salt Substitutes)

1. Scope

1.1 This standard applies to foods which are represented directly or indirectly or by implication, as intended for special dietary uses by reason of their low sodium content. It also applies to salt substitutes with low sodium content.

1.2 The standard contains only provisions which are specific to the sodium content of foods intended for special dietary uses and to salt substitutes. It does not refer to other aspects of the composition of such foods including the use of food additives, except salt substitutes

2. Normative References

2.1 The relevant standards listed in Annex-A are necessary adjuncts to this standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

3. Definition

For the purpose of this standard, the following definitions shall apply:

3.1 **Special Dietary Foods with Low-Sodium Content** — Foods whose special dietary value results from the reduction, restriction, or removal of sodium.

3.2 **Low-Sodium and Very Low Sodium Foods** — Foods conforming to the respective provisions regarding maximum sodium content prescribed in 4.1.1.1 and 4.1.1.2 of this standard.

4 Requirements

4.1 Description

4.1.1 Special Dietary Foods with Low Sodium Content (Excluding Salt Substitutes as such)

4.1.1.1 A special dietary food with low sodium content is a food which has been processed without the addition of sodium salts and the sodium content of which is not more than one half of that of the comparable normal product as consumed and the sodium content of which is not more than 120 mg/100 g of the final product as normally consumed.

4.1.1.2 A special dietary food with very low sodium content is a food which has been processed without the addition of sodium salts, and the sodium content of which is not more than one half of that of the comparable normal product as consumed, and the sodium content of which is not more than 40 mg/100 g of the final product as normally consumed.

4.1.1.3 The addition of salt substitutes conforming to 4.1.2 to a special dietary food with low sodium content is permitted and shall be limited by good manufacturing practice (see BDS 822).

4.1.2 Salt Substitutes

4.1.2.1 The composition of salt substitutes shall be as follows:

(a) Potassium sulphate, potassium, calcium or ammonium salts of adipic, glutamic, carbonic, succinic, lactic, tartaric, citric, acetic, hydro-chloric or orthophosphoric acids, and/or	Not limited, except that P not to exceed 4% m/m and NH_4^+ 3% m/m of the salt substitute mixture
(b) Magnesium salts of adipic, glutamic, carbonic, citric, succinic, acetic, tartaric, lactic, hydro-chloric or orthophosphoric acids, mixed with other Mg-free salt substitutes as listed in 4.1.2.1 (a), (c) and 4.1.2.1 (d), and/or	Mg^{++} to be not more than 20% m/m of the total of the cations K^+ , Ca^{++} and NH_4^+ present in the salt substitute mixture and P not to exceed 4% m/m of the salt substitute mixture
(c) Choline salts of acetic, carbonic, lactic, tartaric, citric or hydrochloric acids, mixed with other choline-free salt substitutes as listed in 4.1.2.1 (a), 4.1.2.1(b) and 4.1.2.1(d), and/or	The choline content not to exceed 3 per cent (m/m) of the salt substitute mixture
(d) Free adipic, glutamic, citric, lactic or malic acids	Not limited

4.1.2.2 Salt substitutes may contain:

- a) Colloidal silica or calcium silicate, not more than 1 per cent (m/m) of the salt substitute mixture, individually or in combination when determined by AOAC 950.85N.
- b) Diluents, safe and suitable nutritive foods as normally consumed (e.g. sugars, cereal flour).

4.1.2.3 The addition of iodine-containing compounds to salt substitutes shall be in conformity with the Iodized Salt Act, 2021 when determined by AOAC.56.

4.1.2.4 The sodium content of salt substitutes shall be not more than 120 mg/100 g of the salt substitute mixture.

4.2 The product shall conform to the microbiological requirements prescribed in the Food Safety (Microbial Contaminants) Regulations, 2021.

4.3 **Legal Requirement** – The product shall in all other aspects comply with the requirements of the legislations enforced in the country.

5 Contaminants

The products covered by this standard shall be prepared with special care under Good Manufacturing Practices (see BDS 822) to avoid contamination with sodium or salt substitutes and shall be within the limit as specified in Clause 4.1.1 and 4.1.2.

6 Hygiene

6.1 During processing, handling, storage and transportation, effective measures must be taken to prevent cross contamination with chemicals, microbial or physical contaminants.

6.1.1 The product shall be processed and packed under strict hygienic conditions in premises maintained in accordance with BDS 822.

7 MARKING AND LABELLING

7.1 Special Dietary Foods with Low Sodium Content (Excluding Salt Substitutes as such)

7.1.1 In addition to any specific labelling provisions applying to the particular food concerned, the following specific provisions for the labelling of special dietary foods with low sodium content shall apply:

- a) The label shall bear the description 'Low sodium' or 'Very low sodium' in accordance with 4.1.1.1 and 4.1.1.2 of this standard.
- b) The sodium content shall be declared on the label to the nearest multiple of 5 mg per 100 g and, in addition per a specified serving of the food as normally consumed.
- c) The average carbohydrate, protein and fat content in 100 g of the product as normally consumed, as well as the calorie (or kilojoule) value shall be declared on the label.
- d) The addition of the salt substitutes listed in 4.1.2.1 of this standard shall be declared on the label.
- e) When a salt substitute, composed entirely or partially of a potassium salt, has been added, the total amount of potassium, expressed as mg cation per 100 g of the food as normally consumed, shall be declared on the label.
- f) The date of minimum durability (preceded by the words 'best before') shall be declared by the day, month and year in uncoded numerical sequence except that for products with a shelflife of more than three months, the month and the year will suffice. The month may be indicated by letters in those countries where such use will not confuse the consumer. In the case of products requiring a declaration of month and year only, and the shelf-life of the product is valid to the end of a given year, the expression 'end (stated year)' may be used as an alternative.
- g) In addition to the date, any special conditions for the storage of the food shall be indicated if the validity of the date depends thereon.
- h) Any other information required under the Packaged Commodities Rules, 2021 under Weights and Measures Act, 2018 and the Packaged Food Labelling Regulations, 2017 under Food Safety Act, 2013

NOTE — Where practicable, storage instructions shall be in close proximity to the date marking.

7.2 Salt Substitutes

In addition to Sections 2, 3, 4.3 to 4.5 and 8 of the *General Standard for the Labelling of Prepackaged Foods* (CXS 1-1985) the following provisions shall apply:

- a) The name of the product shall be 'Low sodium salt' or 'Low sodium salt substitute' or 'Low sodium dietetic salt' with specific declaration.*
- b) A complete list of ingredients shall be declared on the label. The amount of the cations (that is sodium, potassium, calcium, magnesium, ammonium and choline)/100 g *m/m* in the salt substitute mixture shall also be declared on the label.
- c) Any other information required under the Packaged Commodities Rules, 2021 under Weights and Measures Act, 2018 and the Packaged Food Labelling Regulations, 2017 under Food Safety Act, 2013.

* Specific Declaration Note : 'Not Suitable for Kidney Diseases Patient'

7.3 Each package may also be marked with the BSTI Certification Mark.

NOTE – The use of BSTI Certification Mark is governed by the provisions of Bangladesh Standards and Testing Institution Act, 2018 and the Rules and Regulations made thereunder. Details of conditions, under which a license for the use of BSTI Certification Mark may be granted to manufacturers or processors, may be obtained from the Bangladesh Standards and Testing Institution.

8. Sampling

8.1 Representative samples of the material shall be drawn and conformity of the material to the requirements of the specification shall be determined according to the procedure given in BDS 1927:2017.

9. Tests

9.1 Sodium content of the product shall be determined according to AOAC Official Method 50.1.14 'Minerals in Infant Formula, Enteral Products and Pet Foods: Atomic Absorption Spectrophotometric Method'.

9.2 Quality of Reagents – Unless specified otherwise, pure chemicals shall be employed in tests and distilled water (BDS 833) shall be used where the use of water as a reagent is intended.

NOTE - 'Pure chemicals' shall mean chemicals that do not contain impurities, which may affect the result of analysis.

10. Compliance

10.1 When on testing, each of the samples is found to conform to the requirements specified in this Bangladesh Standard Specification, the lot, batch or consignment from which the samples have been drawn shall be deemed to comply with standard specification.

Annex A (Clause 2.1)

List of Relevant Standards

BDS and ISO No.	Title
BDS 103	Methods of rounding off numerical value
BDS 822	Code of hygienic conditions for food processing units
BDS 833	Water for laboratory use
BDS 1927	Potato chips