



**BRUNEI DARUSSALAM STANDARD  
PIAWAI BRUNEI DARUSSALAM**

**DRAFT PBD XX:2022**

**STANDARD FOR CHILI SAUCE**

---



**NATIONAL STANDARDS COUNCIL  
BRUNEI DARUSSALAM**

Published by  
National Standards Centre

*All rights reserved. Unless otherwise specified, no part of this Piawai Brunei Darussalam may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilming, without permission in writing from National Standards Centre.*

Attention is drawn to the fact that this Brunei Darussalam Standard does not confer any immunity from legal obligations in any contract for compliance to the Standard.

The Brunei Darussalam Standards are subject to periodical review according to the current needs of the local industries and to keep abreast of progress in the industries concerned. Suggestions of amendments will be recorded and in due course brought to the notice of the committees concerned.

***Disclaimer:***

- 1.) Brunei Darussalam Standards are subject to periodic review with references to technological changes and new developments. Any changes made hereafter are documented through the issue of either amendments or revisions.*
- 2.) Compliance with this Brunei Darussalam Standard does not exempt users from legal obligations or purport to include all the necessary provisions of a contract.*
- 3.) This PBD XX: 2022 does not purport to include all the necessary provisions of a contract*

**Amendments issued since publication**

<b>Amd No</b>	<b>Date of issue</b>	<b>Text affected</b>

## Brief Introduction on National Standards Council

Formed in 2009, the Council is envisioned to act as the body responsible for strengthening and monitoring standards and conformance in Brunei Darussalam. Its members encompass multiple agencies across the Government, industry and consumer interests and are envisaged to provide policy direction that will firm up national initiatives to create and stimulate sustainable economic growth. In this endeavour, factors such as the creation and promotion of awareness on consumer safety and interests will also form part of the main scope of the council.

The work of the council is facilitated by the National Standards Centre (NSC), under the Ministry of Finance and Economy. With the main role of strengthening the capacity and sustainability of the national standards infrastructure, the NSC has been instructed to act as a body that provides a platform to complement the formation of the Council.

On matters pertaining to the development of national standards i.e. *Piawai Brunei Darussalam* (PBD), the management of activities are monitored through the formation of National Standards Committees. Clustered based on the scope of its industry, the work of developing PBD stands guided by international practice with the involvement of multiple agencies across the Government, industry and public as a whole.

*Further information on Piawai Brunei Darussalam, please contact:*

National Standards Centre  
Ministry of Finance and Economy  
B19, Simpang 32-15, Flat Anggerek Desa, BB8810  
Office No: +673 2333964  
Email: [standarddevelopment@mofe.gov.bn](mailto:standarddevelopment@mofe.gov.bn)

<b>CONTENTS</b>	<b>PAGE</b>
Brief Introduction on National Standards Council	ii
Committee Representation	4
Foreword	5
1 Scope	6
2 Rationale	6
3 Description	6
4 Essential Composition and Quality Factors	7
5 Food Additives	8
6 Contaminants	12
7 Hygiene	12
8 Labelling	13
References	14

## COMMITTEE REPRESENTATION

The Technical Committee on Food (TCoF) under the National Food Standards Committee was initially entrusted by the Department of Agriculture and Agrifood, Ministry of Primary Resources and Tourism to prepare the Brunei Darussalam Standard on Chili Sauce. With the establishment of the Brunei Darussalam Food Authority (BDFA) on the 1<sup>st</sup> January 2021, the role and responsibility of developing this standard was transferred to the BDFA. The members of the Technical Committee involved in developing the Brunei Darussalam Standard on Chili Sauce are as follows:

	Name	Organisation
<b>Chairperson</b>	: Hjh Siti Raihani binti Haji Abdul Hamid	Brunei Darussalam Food Authority
<b>Secretariat</b>	: Siti Nasreyah binti Haji Ahmed	Brunei Darussalam Food Authority
<b>Members</b>	: Pg. Hjh Masliati binti PSJ Pg. Hj Abd Momin	Department of Agriculture and Agrifood, Ministry of Primary Resources and Agrifood
	: Hjh Saaimah binti Haji Abdi Manaf	
	: Hjh Siti Juhaidah binti Haji Mohd Junaidi	
	: Nurul Ehra Hayati binti Haji Md Hussin	
	: Siti Syafiqah @ Fatin binti Haji Abd Kadir	
	: Nor Amirah Ehsani binti Haji Md Manan	Department of Scientific Services, Ministry of Health
	: Habibah binti Awang Abdul Razak	
	: Siti Khadizah binti Haji Abd Latiff	Brunei Darussalam Food Authority
	: Pg Halimatussaadiah binti Pg Mohd Alias	National Standards Centre, Ministry of Finance and Economy
	: Hjh Noorlela binti DPS Haji Abdul Rahman	
	: Hartini binti Haji Kamero Jamen	

## **FOREWORD**

This publication is a result of dedication and commitment from the Technical Committee of Food (TCoF) which comprised of subject matter experts from various backgrounds under the Brunei Darussalam Food Authority, the Department of Agriculture and Agrifood, Ministry of Primary Resources and Tourism, and the Department of Scientific Services, Ministry of Health.

Brunei Darussalam Standard on Chili Sauce was adopted from the Codex Standard for Chili Sauce (CXS 306R - 2011) amended 2020, with modification made in the format, product definition, microbiological criteria, labelling and name of product in accordance with the Brunei Darussalam Public Health (Food) Regulation (R1, Chapter 182) (Amendment) 2020.

Throughout the series of discussions and technical research, the standard had been finalized with reference primarily to the Brunei Darussalam Public Health (Food) Act and Regulations (R1, Chapter 182), (Amendment) 2020 and the Codex Standard for Chili Sauce (CXS 306R - 2011) amended 2020. Reference was also made to the Thai Agricultural Standard for Chili Sauce, TAS 8401 – 2009, Ministry of Agriculture and Cooperatives, 28 December 2009 as well as laboratory analyses results of locally produced chili sauces.

The standard aims to provide a common understanding on the scope of the standard, product description, essential composition and quality factors, definition of defects, food additives, metal contaminants, hygiene and labelling. It is hoped that this standard will serve as a general reference and guidance for importers, exporters, food manufacturers, agricultural extensions, farming communities, academic researchers, policy makers and also general public who are involved in various aspects of the food supply chain.

*Chief Executive Officer*  
*Brunei Darussalam Food Authority*  
*Brunei Darussalam*

# BRUNEI DARUSSALAM STANDARD ON CHILI SAUCE

## 1. SCOPE

This standard applies to chili sauce, as defined in Section 3 below, and offered for direct consumption, including for catering purposes or for repacking if required. It does not apply to the product when indicated as being intended for further processing.

## 2. RATIONALE

To establish a guideline for the industrial standard of Chili Sauce production in Brunei Darussalam in compliance with the Brunei Public Health (Food) Act and Regulations (R1, Chapter 182), (Amendment) 2020, for the determination of raw materials, quality, food additive, contaminants, hygiene, packaging and labelling, and analysis of the stated food product.

## 3. DESCRIPTION

### 3.1 PRODUCT DEFINITION

Chili sauce is the product:

- (a) intended for use as seasoning and condiment;
- (b) prepared from the edible portion of sound ripe chilies and clean raw materials referred to in section 4.1. below which are mixed and prepared to obtain the desired quality and characteristics;
- (c) shall contain not less than the equivalent of 5% (w/w) chilies;
- (d) shall contain total acidity of 0.8% and a pH of below 4.5;
- (e) shall contain no other substance except permitted chemical preservatives, colouring matters, stabilisers and flavour enhancers;
- (f) processed by heat, in an appropriate manner, before or after being hermetically sealed in a container, so as to prevent spoilage.

### 3.2 PRODUCT VARIETY

#### 3.2.1 Chili sauce can be of the following variety:

- (a) Chili sauce with pulp and seeds homogeneously ground together.
- (b) Chili sauce with pulp and seeds homogeneously ground together with the addition of particles of chili pulp, flakes and pieces and seeds distributed in the sauce.
- (c) Chili sauce with crushed pulp and seeds as separate layers or distributed in the sauce.
- (d) Chili sauce with only pulp or crushed pulp or both.

### 3.2.2 Other variety

Any other presentation of the product should be permitted provided that the product:

- (a) is sufficiently distinctive from other forms of presentation laid down in the standard;
- (b) meets all other requirements of the standard, as applicable; and
- (c) is adequately described on the label to avoid confusing or misleading the consumer.

## 4. ESSENTIAL COMPOSITION AND QUALITY FACTORS

### 4.1 COMPOSITION

#### 4.1.1. Basic Ingredients

Product covered by this standard shall consist of the following ingredients:

- (a) fresh chili (*Capsicum spp.*) or processed chili such as chili powder from dried chili, roasted chili, ground chili, chili preserved in vinegar or in brine;
- (b) vinegar or other permitted acid;
- (c) salt; and
- (d) water.

#### 4.1.2. Other Permitted Ingredients

The following optional ingredients may also be used in certain product:

- (a) mango, papaya, tamarind and/or other fruits;
- (b) tomato, garlic, onion, carrot, sweet potato, yellow pumpkin and/or other vegetables;
- (c) spices and herbs;
- (d) sugars;
- (e) chili extract; and
- (f) other edible ingredients as appropriate to the product.

### 4.2. QUALITY CRITERIA

#### 4.2.1. General Requirements

Chili sauce should have normal colour, flavour, and odour, corresponding to the type of raw materials used and should possess texture characteristic of the product.



#### 4.2.2. Definition of Defects

**Foreign vegetal matter** means any vegetable part (such as, but not limited to, chili pedicels, leaves, calyxes and garlic stems) that does not pose any hazard to human health but affects the overall appearance of the final product.

#### 4.2.3. Defects and Allowances

The product shall be practically free from dark specks or scale-like particles, discoloured seeds or pieces of abnormally discoloured ingredients and foreign vegetal matter excluding the dark specks or dark particles that are obtained from the natural process of the sauce, for example in the roasting process.

### 5. FOOD ADDITIVES

Only those food additive classes listed below are technologically justified and may be used in products covered by this Standard. Within each additive class only those food additives listed below, or referred to, may be used and only for the functions, and within limits, specified. Any food additives used in the production of chili sauce must be Halal.

**5.1.** Acidity regulators, antioxidants, colours, flavour enhancers, preservatives, sweeteners and thickeners listed in Table 3 of the Codex General Standard for Food Additives (CODEX STAN 192-1995) are acceptable for use in food conforming to this standard.

#### 5.2. Food Additive Maximum Level

##### 5.2.1. Acidity Regulators

INS No.*	Acidity Regulators	Maximum Level
236	Formic Acid	5000 mg/kg
260	Acetic Acid	1000 mg/kg
334	Tartaric Acid	200 mg/kg
452	Sodium Polyphosphate (phosphorus)	1000 mg/kg

\*INS - The International Numbering System for Food Additives

## 5.2.2. Antioxidants

INS No.	Antioxidant	Maximum Level
301	Sodium Ascorbate	1000 mg/kg
303	Potassium Ascorbate	1000 mg/kg
304	Ascorbyl esters	500 mg/kg
307a	Tocopherol, d-alpha-	600 mg/kg (singly or in combination)
307b	Tocopherol concentrate, mixed	
307c	Tocopherol, dl-alpha-	
310	Propyl Gallate	200 mg/kg
320	Butylated hydroxyanisole	100 mg/kg
321	Butylated hydroxytoluene	100 mg/kg
386	Disodium ethylene diamine tetra acetate	75 mg/kg

## 5.2.3 Colours

INS No.	Colour	Maximum Level
100	Curcumin	GMP
101(i)	Riboflavin, synthetic	350 mg/kg (singly or in combination)
101(ii)	Riboflavin, 5'-phosphate sodium	
102	Tartrazine	100 mg/kg
110	Sunset Yellow FCF	300 mg/kg
127	Erythrosine	50 mg/kg
129	Allura Red AC	300 mg/kg
132	Indigo Carmine	300 mg/kg
133	Brilliant Blue	100 mg/kg
141	Chlorophylls, copper complexes	30 mg/kg (as copper)
150c	Caramel III - ammonia process	1500 mg/kg
150d	Caramel IV - sulphite ammonia process	1500 mg/kg

INS No.	Colour	Maximum Level
155	Brown HT	50 mg/kg
160a (ii)	Carotenes, beta (vegetable)	500 mg/kg
160b (i)	Annato extracts, bixin based	10 mg/kg
160c	Paprika oleoresin	GMP
160d	Lycopene (synthetic)	390 mg/kg

#### 5.2.4. Preservatives

INS No.	Preservative		Maximum Level
200	Sorbic acid	as sorbic acid	1000 mg/kg (singly or in combination)
201	Sodium sorbate		
202	Potassium sorbate		
203	Calcium sorbate		
210	Benzoic acid	as benzoic acid	1000 mg/kg (singly or in combination)
211	Sodium benzoate		
212	Potassium benzoate		
213	Calcium benzoate		
218	Methyl para-hydroxybenzoate		1000 mg/kg
220	Sulphur dioxide	as residual SO <sub>2</sub>	300 mg/ kg (singly or in combination)
221	Sodium sulphite		
222	Sodium hydrogen sulphite		
223	Sodium metabisulphite		
224	Potassium metabisulphite		
225	Potassium sulphite		
227	Calcium hydrogen sulphite		
228	Potassium bisulphate		
539	Sodium thiosulphate		

## 5.2.5. Emulsifiers

INS No.	Emulsifier	Maximum Level
481	Sodium stearoyl 2-lactate	20 000 mg/kg

## 5.2.6. Sweeteners

INS No.	Sweetener	Maximum Level
420	Sorbitol	GMP
950	Acesulfame potassium	1000 mg/kg
951	Aspartame	350 mg/kg
954	Sodium saccharin	150 mg/kg
955	Sucralose	450 mg/kg
960a 960b(i)	Steviol glycoside	350 mg/kg

## 5.2.7. Stabilizers

INS No.	Stabilizer	Maximum Level
472e	Diacetyl tartaric and fatty acid esters of glycerol	10 000 mg/kg

## 5.2.8. Thickeners

INS No.	Thickener	Maximum Level
405	Propylene glycol alginate	8000 mg/kg
461	Methyl cellulose	GMP
464	Hydroxypropyl methyl cellulose	GMP
1204	Pullulan	50 000 mg/kg

### 5.2.9. Flavourings

The flavourings used in products covered by this standard shall comply with the Brunei Public Health (Food) Regulation (R1, Chapter 182), (Amendment) 2020 and the Codex Guidelines for the Use of Flavourings (CAC/GL 66-2008).

## 6. CONTAMINANTS

### 6.1. METAL CONTAMINANT

The product covered by this Standard shall comply with the maximum permitted proportion of metal contaminant in sauce as stated in the Brunei Public Health (Food) Regulation (R1, Chapter 182), (Amendment) 2020 as follows:

Heavy Metal	Maximum Level (ppm*)
Arsenic	1
Lead	2
Copper	30
Tin	40
Zinc	40
Mercury	0.05
Cadmium	1
Antimony	1

\*ppm – parts per million

## 7. HYGIENE

- 7.1. It is recommended that the products covered by the provisions of this Standard be prepared and handled in accordance with the appropriate sections of the Recommended International Code of Practice – General Principles of Food Hygiene (CAC/RCP 1-1969, revised 2020), Recommended International Code of Hygienic Practice for Low-Acid and Acidified Low-Acid Canned Foods (CAC/RCP 23-1979) and other relevant Codex texts such as Codes of Hygienic Practice and Codes of Practice.

- 7.2.** The product should comply with any microbiological criteria established in accordance with the Principles for the Establishment and Application of Microbiological Criteria for Foods (CAC/GL 21-1997)<sup>1</sup>.

The total plate count of colonies must not exceed 100,000 colony forming unit per gram (CFU/g) of sample at 37°C for 48 hours. The microbiological criteria must comply with the following guidelines:

Micro-organism	Microbiological criteria
Yeast and Moulds	10 CFU/g of sample
<i>Escherichia coli</i>	Less than 3 MPN/g as determined by the Most Probable Number (MPN) method
<i>Staphylococcus aureus</i>	Not detected in 25 g of sample
<i>Salmonella spp.</i>	Not detected in 25 g of sample

<sup>1</sup> For products that are rendered commercially sterile in accordance with the Recommended International Code of Hygienic Practice for Low-Acid and Acidified Low-Acid Canned Foods (CAC/RCP 23-1979), microbiological criteria are not recommended as they do not offer benefit in providing the consumer with a food that is safe and suitable for consumption.

## **8. LABELLING**

The product covered by the provisions of this Standard shall be labelled in accordance with Brunei Public Health (Food) Regulation (R1, Chapter 182), (Amendment) 2020, such as the expiry date of the product.

### **8.1. NAME OF THE PRODUCT**

- 8.1.1.** The name of the product shall be “Chili sauce”, “Sweet chili sauce” or other names in accordance with the composition and the Brunei Public Health (Food) Regulation (R1, Chapter 182), (Amendment) 2020, in the manner not to mislead the consumer.
- 8.1.2.** If other permitted ingredients, as defined in Section 3.1.2, alters the flavour characteristic of the product, the name of the product shall be accompanied by the term “flavoured with X” or X flavoured” as appropriate.

## **REFERENCES**

1. Brunei Public Health (Food) Act and Regulations (Chapter 182), (Amendment) 2020
2. Regional Standard for Chili Sauce (CXS 306R - 2011), Adopted in 2011. Amended in 2013, 2017, 2020.
3. Thai Agricultural Standard for Chili Sauce, TAS 8401 – 2009, Ministry of Agriculture and Cooperatives, 28 December 2009.
4. Codex General Standard for Food Additives (CODEX STAN 192-1995)
5. Codex Guidelines for the Use of Flavourings (CAC/GL 66-2008).
6. Recommended International Code of Practice – General Principles of Food Hygiene (CAC/RCP 1-1969, revised 2020)
7. Recommended International Code of Hygienic Practice for Low-Acid and Acidified Low-Acid Canned Foods (CAC/RCP 23-1979)
8. Principles for the Establishment and Application of Microbiological Criteria for Foods (CAC/GL 21-1997)