

SS 565:2011(2022)
(ICS 67.120.30)

SINGAPORE STANDARD

**Specification for chilled and frozen partially
cooked fish balls**

Confirmed and classified as a mature standard 2022

SS 565:2011(2022)

(ICS 67.120.30)

SINGAPORE STANDARD

**Specification for chilled and frozen partially cooked
fish balls**

Published by Enterprise Singapore

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilised in any form or by any means, electronic or mechanical, including photocopying and microfilming, without permission in writing from Enterprise Singapore. Request for permission can be sent to: standards@enterprisesg.gov.sg.

© Enterprise Singapore 2011

ISBN 978-981-4278-90-4

Contents

	Page
Foreword _____	3
1 Scope _____	5
2 Normative references _____	5
3 Terms and definitions _____	5
4 Requirements _____	6
5 Tests _____	7
6 Sampling _____	7
7 Packaging _____	7
8 Labelling _____	8
9 Storage instructions _____	8

Annexes

A Determination of expressible liquid by using texture analyser _____	9
B Determination of gel strength by using texture analyser _____	10
C Determination of whiteness _____	11
D Determination of moisture content _____	12

Table

1 Chemical, physical and microbial characteristics _____	7
--	---

Foreword

This Singapore Standard was prepared by the ad-hoc Technical Committee (TC) for Fish Balls under the purview of the Food Standards Committee.

The fish processing industry in Singapore now produces annually close to 30,000 tonnes of surimi-based products (mainly fish balls and fish cakes) valued at about S\$80 million, mainly for local consumption and with several processors exporting their products. In order to increase their export capability, the fish balls processing industry realised that they have to adapt to the changing environment. Apart from being able to mechanise and automate their operations that lead to increased productivity, they will also have to develop good quality value-added surimi-based products to increase their export markets.

The Singapore Standard on chilled and frozen partially cooked fish balls that use surimi as the basic raw material for further processing, with reference to specifications, sampling and methods of test and analysis, was developed to enhance the competitive edge of the fish balls industry and improve Singapore's reputation as a trusted business hub for fish balls processing globally, through better quality product and high hygienic standards. It also aims to increase productivity for the fish balls processing industry. This standard would also help to safeguard public health, ensure freshness and wholesomeness of fish balls supplied to consumers.

In preparing this standard, reference was made to the following publications:

1. Agri-food & Veterinary Authority of Singapore. 2005. Sale of Food Act. Sale of Food (Food Establishments) regulations. Chapter 283, Section 56(1).
2. Agri-food & Veterinary Authority of Singapore. 2004. Sale of Food Act. Food Regulations. Chapter 283, Section 56(1).
3. Agri-food & Veterinary Authority of Singapore. 2001. Wholesome Meat and Fish Act. Chapter 349A, Section 42.
4. Codex Alimentarius Commission, General Guidelines on Sampling, CAC/GL 50-2004.
5. Codex Standard for Quick Frozen Fish Sticks (Fish Fingers), Fish Portions and Fish Fillet – Breaded or In Batter, Codex Stan 166-1989. Adopted 1989, Revisions 1995, 2004.
6. Low L K, *et al.*, 2010. Laboratory Manual on Analytical Methods and Procedures for Fish and Fish Products. Version 5.10 Singapore: Marine Fisheries Research Department.
7. Park J W, 1994. Functional Properties of Additives in Surimi. *Food Technology*. 40(3):107-114,124.
8. Park J W, 1995. Surimi Gel Colors as Affected by Moisture Content and Physical Condition. *Journal of Food Science*. 60:15-18.

Acknowledgement is made to the Marine Fisheries Research Department for the reproduction of their materials into Annexes A to D of this standard.

Attention is drawn to the possibility that some of the elements of this Singapore Standard may be the subject of patent rights. Enterprise Singapore shall not be held responsible for identifying any or all such patent rights.

NOTE

- 1. Singapore Standards (SSs) and Technical References (TRs) are reviewed periodically to keep abreast of technical changes, technological developments and industry practices. The changes are documented through the issue of either amendments or revisions. Where SSs are deemed to be stable, i.e. no foreseeable changes in them, they will be classified as “mature standards”. Mature standards will not be subject to further review unless there are requests to review such standards.*
- 2. An SS or TR is voluntary in nature except when it is made mandatory by a regulatory authority. It can also be cited in contracts making its application a business necessity. Users are advised to assess and determine whether the SS or TR is suitable for their intended use or purpose. If required, they should refer to the relevant professionals or experts for advice on the use of the document. Enterprise Singapore and the Singapore Standards Council shall not be liable for any damages whether directly or indirectly suffered by anyone or any organisation as a result of the use of any SS or TR. Although care has been taken to draft this standard, users are also advised to ensure that they apply the information after due diligence.*
- 3. Compliance with a SS or TR does not exempt users from any legal obligations.*

Specification for chilled and frozen partially cooked fish balls

1 Scope

The Singapore standard applies to partially cooked fish balls that are chilled or frozen using surimi as the basic raw material for processing.

2 Normative references

The following referenced documents are indispensable for the application of this standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

Horwitz W, 2000	Official Methods of Analysis of AOAC International 17th edition. Maryland: AOAC International
Williams S, 1984	Official Methods of Analysis of AOAC International 14th edition. Maryland: AOAC International.
ICMSF, 1986	Microorganisms in Foods, 2. Sampling for Microbiological Analysis: Principles and Specific Applications 2nd edition. University of Toronto Press, Buffalo, NY.
Marker RI, <i>et al.</i> , 2002	Bacteriological Analytical Manual 8th edition. Maryland: AOAC International.