



JAPANESE  
INDUSTRIAL  
STANDARD

Translated and Published by  
Japanese Standards Association

---

JIS B 9650-2 : 2021

(FOOMA)

**General design requirements for safety  
and hygiene of food processing  
machinery — Part 2: General design  
requirements for hygiene**

---

ICS 13.110 ; 67.260

Reference number : JIS B 9650-2 : 2021 (E)

PROTECTED BY COPYRIGHT

32 S

Date of Establishment: 2003-03-20

Date of Revision: 2021-03-25

Date of Public Notice in Official Gazette: 2021-03-25

Investigated by: Japanese Industrial Standards Committee

Standards Board for ISO area

Technical Committee on Industrial Machinery

---

JIS B 9650-2 : 2021, First English edition published in 2022-09

Translated and published by: Japanese Standards Association  
Mita MT Building, 3-13-12, Mita, Minato-ku, Tokyo, 108-0073 JAPAN

---

In the event of any doubts arising as to the contents,  
the original JIS is to be the final authority.

© JSA 2022

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

Printed in Japan

AH/HN

## Contents

	Page
Introduction .....	1
1 Scope .....	1
2 Normative references .....	1
3 Terms and definitions .....	2
4 List of main hazards .....	7
4.1 General .....	7
4.2 Hazards arising from constituent materials .....	7
4.3 Hazards arising from design/manufacture of food contact surface .....	8
4.4 Hazards arising from design/manufacture of food splash area .....	11
4.5 Hazards arising from design/manufacture of non-food contact surface .....	11
4.6 Installation of machinery .....	13
4.7 Fluids in machinery .....	13
4.8 Instrumentation devices and control systems .....	13
4.9 Unintended supply suspension of electricity and utility .....	13
4.10 Pneumatic/hydraulic system .....	13
5 Risk assessment on hygiene aspect .....	13
5.1 General .....	13
5.2 Determination of limitation on machinery .....	16
5.3 Identification of hazards on hygienic aspect .....	16
5.4 Estimation of hygienic risks .....	16
5.5 Evaluation of hygienic risks .....	19
6 Hygiene requirements for hygiene risk reduction .....	20
6.1 General .....	20
6.2 Constituent materials .....	20
6.3 Design and manufacture of food contact surface .....	21
6.4 Design and manufacture of food splash area .....	27
6.5 Design and manufacture of non-food contact surface .....	27
6.6 Installation of machinery .....	31
6.7 Fluids in machinery .....	31
6.8 Instrumentation devices and control systems .....	31
6.9 Unintended supply suspension of electricity and utility .....	32
6.10 Pneumatic/hydraulic system .....	32
7 Verification of hygiene requirements .....	32
8 Information for use including instruction manual .....	35
Annex A (informative) Examples of structure with low hygiene risk .....	36

Annex B (informative) List of hazards on hygienic aspect .....50

## Foreword

This Japanese Industrial Standard has been revised by the Minister of Health, Labour and Welfare and the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision of Japanese Industrial Standard submitted by The Japan Food Machinery Manufacturers' Association (FOOMA) with a draft being attached, based on the provision of Article 12, paragraph (1) of the Industrial Standardization Act applied *mutatis mutandis* pursuant to the provision of Article 16 of the said Act. This edition replaces the previous edition (**JIS B 9650-2** : 2011), which has been technically revised.

This **JIS** document is protected by the Copyright Act.

Attention is drawn to the possibility that some parts of this Standard may conflict with patent rights, published patent application or utility model rights. The relevant Ministers and the Japanese Industrial Standards Committee are not responsible for identifying any of such patent rights, published patent application or utility model rights.

**JIS B 9650** series consists of the following 2 parts under the general title *General design requirements for safety and hygiene of food processing machinery* —:

*Part 1 : General design requirements for safety*

*Part 2 : General design requirements for hygiene*

Blank

# General design requirements for safety and hygiene of food processing machinery — Part 2 : General design requirements for hygiene

## Introduction

This Japanese Industrial Standard corresponds to a product safety standard among the types of safety standard specified in **JIS Z 8051**, and is a type-C standard shown in Foreword of **JIS B 9700**. A methodology for risk assessment and risk reduction complies with the requirements specified in **JIS B 9700**.

In designing machinery and its auxiliary equipment used for processing and production of food (hereafter referred to as food processing machinery), risks due to food processing machinery causing harm to workers/operators, those due to food produced by machinery causing harm to health of consumers, and also those for food producers suffering economic losses due to recall, etc. of food shall be considered. **JIS B 9650** series specifies general requirements regarding safety aspects to handle harms against workers/operators, and general requirements regarding hygienic aspects to handle harms against health of consumers caused by produced food and economic damages to producers, in respective parts.

## 1 Scope

**1.1** This Standard specifies requirements specified in **JIS B 9700** as well as the extended requirements, among general requirements for hygienic design that address the hygienic aspect of food processing machinery.

**1.2** This Standard is applicable to machinery/devices of open-system or closed-system that perform a batch process or a consecutive process. It is not applicable to an integrated manufacturing system that connects and uniformly operates multiple food processing machinery having different functions in a coordinated manner.

**NOTE** Safety of integrated manufacturing systems is provided in **ISO 11161**.

**1.3** This Standard is applicable to food processing machinery classified as industrial machinery used in business locations such as factories that mass produce commercial food or its raw materials, using a certain energy as power source and to heat and control. However, it is not applicable to food processing machinery classified as professional-use machinery used in kitchens of households, restaurants, etc.

Refer to **JIS B 9650-1** for examples of major groups of food processing machinery.

## 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.