



# MALAYSIAN STANDARD

MS 838:2018

## Radiation protection for medical diagnostic X-ray - Code of practice (Second revision)

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## Contents

	Page
Committee representation .....	iii
Foreword.....	iv
 SECTION I: INTRODUCTION	
1 Scope .....	1
2 Normative references.....	1
3 Terms and definitions.....	2
4 Abbreviations.....	6
 SECTION II: RADIOLOGICAL SAFETY	
5 Protection of the patient .....	6
6 Protection of personnel.....	9
 SECTION III: SAFETY AND PERFORMANCE REQUIREMENTS OF X-RAY SYSTEMS	
7 General requirements.....	11
8 Performance criteria.....	11
9 X-ray beam limitation .....	12
10 Filtration in the X-ray beam.....	13
11 Leakage radiation .....	15
12 X-radiation emission from television monitors and other electronic equipment .....	16
13 Lights and indicators at control panel .....	16
14 Exposure switches and timers.....	17
15 Additional requirements for fluoroscopy.....	17
16 Mechanical requirements.....	21
17 Electrical requirements .....	22

**Contents** *(continued)*

	<b>Page</b>	
18 Automatic film processing units.....	24	
19 Darkroom.....	25	
20 Computed Radiography (CR).....	26	
21 Digital Radiography (DR).....	28	
22 Computed tomography (CT) scanner systems using transmitted X-ray.....	29	
23 Viewing and reporting requirements.....	34	
24 Installation requirements.....	35	
 SECTION IV: RECORDS AND REPORTS OF X-RAY SYSTEMS		
25 General requirements.....	36	
26 Initial reports before installation.....	36	
27 Reports after installation.....	38	
 SECTION V: ADMINISTRATIVE REQUIREMENTS		
28 Administrative requirements.....	40	
 SECTION VI: STRUCTURAL SHIELDING AND LAYOUT.....		41
Annex A Fundamentals of computed tomography (CT).....	42	
Bibliography.....	44	

## Committee representation

The Industry Standards Committee on Medical Devices and Facilities for Healthcare (ISC R) under whose authority this Malaysian Standard was developed, comprises representatives from the following organisations:

Association of Malaysia Medical Industries  
Atomic Energy Licensing Board  
Biomedical Engineering Association Malaysia  
Department of Standards Malaysia  
Federation of Malaysian Manufacturers  
Institute for Medical Research  
Malaysia Medical Device Association  
Malaysian Investment Development Authority  
Malaysian Medical Association  
Malaysian Nuclear Agency  
Malaysian Organisation of Pharmaceutical Industries  
Malaysian Rubber Board  
Malaysian Rubber Export Promotion Council  
Medical Device Authority, Ministry of Health Malaysia  
Ministry of International Trade and Industry  
Radiation Physics, Biophysics and Medical Physics Sub-Group of Institute of Physics Malaysia  
SIRIM Berhad (Secretariat)  
SIRIM QAS International Sdn Bhd  
Universiti Kebangsaan Malaysia  
Universiti Teknologi Malaysia

The Technical Committee on Diagnostic and Therapeutic Ionising Radiation which developed this Malaysian Standard consists of representatives from the following organisations:

Academy of Medicine of Malaysia  
Atomic Energy Licensing Board  
Biomedical Engineering Association Malaysia  
Malaysia Medical Device Association  
Malaysian Medical Association  
Malaysian Nuclear Agency  
Malaysian Society of Radiographers  
Medical Device Authority, Ministry of Health Malaysia  
Ministry of Health Malaysia (Engineering Services Division)  
Pusat Perubatan Universiti Malaya  
Radiation Physics, Biophysics and Medical Physics Sub-Group of Institute of Physics Malaysia  
SIRIM Berhad (Secretariat)  
Universiti Malaya (Biomedical Engineering Department)  
Universiti Sains Malaysia (School of Medical Sciences)  
Universiti Teknologi Malaysia (Faculty of Biosciences and Medical Engineering)

## **Foreword**

This Malaysian Standard was developed by the Technical Committee on Diagnostic and Therapeutic Ionising Radiation under the authority of the Industry Standards Committee on Medical Devices and Facilities for Healthcare.

Major modifications in this revision are as follows:

- a) Addition of new clauses:
  - i) Clause 4 on Abbreviations;
  - ii) Clause 20 on Computed Radiography (CR);
  - iii) Clause 21 on Digital Radiography (DR);
  - iv) Clause 23 on Viewing and reporting requirements; and
  - v) Bibliography.
- b) Deletion of clauses:
  - i) Clause 7 on General requirements;
  - ii) Clause 8 on Structural shielding; and
  - iii) Clause 9 on Layout and dimensions of X-ray room.
- c) Deletion of figures:
  - i) Figure 1 on Radiation warning sign;
  - ii) Figure 2 on Typical designs of control stations;
  - iii) Figure 3 on An example of X-ray room;
  - iv) Figure 4 on An example of installation of a lead lined door;
  - v) Figure 5 on An example of installation of a lead glass; and
  - vi) Figure 6 on An example of installation of a lead sheet behind bucky.
- d) Deletion of schedules 1, 2, 3a and 3b;
- e) incorporation of new requirement on Protection of the patient in Clause 5;
- f) incorporation of new requirement on Protection of personnel in Clause 6;

**Foreword** *(continued)*

- g) deletion of item b) Non-image intensified fluoroscopy in subclause 9.7;
- h) incorporation of new requirement on Filtration in the X-ray beam in Clause 10;
- i) incorporation of additional requirements for fluoroscopy in Clause 15;
- j) incorporation of new requirement on automatic film processing units in Clause 18;
- k) incorporation of new requirement on darkroom in Clause 19;
- l) incorporation of new information on computed tomography (CT) scanner systems using transmitted X-ray in Clause 22;
- m) incorporation of general requirements in Clause 25;
- n) incorporation of administrative requirements in Clause 28.

This Malaysian Standard cancels and replaces MS 838:2007, *Code of practice for radiation protection - Medical X-ray diagnosis (First revision)*.

Compliance with a Malaysian Standard does not of itself confer immunity from legal obligations.