

**FACTORIES ACT**  
**(CHAPTER 104, SECTION 69)**  
**FACTORIES (MEDICAL EXAMINATIONS) REGULATIONS**

[1st March 1985]

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### **PART I**

#### **PRELIMINARY**

##### **Citation**

1. These Regulations may be cited as the Factories (Medical Examinations) Regulations.

##### **Application**

2. —(1) These Regulations shall apply to all factories in which persons are employed in any occupation involving —

- (a) the use or handling of or exposure to the fumes, dust or vapour of arsenic, cadmium, lead, manganese or mercury or any of their compounds;
- (b) the use or handling of or exposure to the fumes or vapour of benzene, perchloroethylene, trichloroethylene, organophosphates or vinyl chloride monomer;
- (c) the use or handling of or exposure to tar, pitch, bitumen or creosote;
- (d) the use or handling of or exposure to the dust of asbestos, raw cotton or silica;
- (e) exposure to excessive noise; and
- (f) work in a compressed air environment.

(2) These Regulations are in addition to and not in substitution for or in diminution of other requirements imposed by or under the Act.

##### **Definitions**

3. —(1) In these Regulations, unless the context otherwise requires —

"designated factory doctor" means a medical practitioner registered as a designated factory doctor in accordance with Part III;

"employer" means a person who has in his employ or intends to employ any person to work in a hazardous occupation in a factory under a contract of service.

(2) For the purposes of these Regulations, any reference to the health of a person shall, where that person is pregnant, include the health of the unborn child which that person is carrying.

### **PART II**

#### **MEDICAL EXAMINATION OF PERSONS EMPLOYED IN HAZARDOUS OCCUPATIONS**

##### **Persons to be medically certified fit before employment**

4. —(1) No person shall be employed in the occupations specified in regulation 2 (referred to in these Regulations as the hazardous occupations) unless he has been medically examined by a designated factory doctor and certified fit to work in those occupations.

(2) The medical examination shall have been carried out —

- (a) in the case of a person required to work in a compressed air environment, within 30 days before such employment; and

(b) in the case of a person required to work in any of the other hazardous occupations, not later than 3 months after he has commenced employment in that occupation.

(3) The medical examinations referred to in this regulation shall consist of the examinations and investigations specified in Part I of the First Schedule and such other examinations or investigations as the Chief Inspector may require.

**Periodic medical examinations**

**5.** —(1) Every person employed in the hazardous occupations shall be periodically examined by a designated factory doctor.

(2) The periodic medical examinations shall —

(a) consist of the examinations and investigations specified in Part II of the First Schedule; and

(b) be at the intervals specified in that Part.

(3) Notwithstanding paragraph (2), the Chief Inspector may, in cases where he considers expedient, require any person to be examined at intervals different from those specified in Part II of the First Schedule.

**Other medical examinations**

**6.** —(1) The Chief Inspector may require any person or category of persons employed in the hazardous occupations to undergo a medical examination other than the examinations referred to in regulations 4 and 5.

(2) The audiometric examinations under these Regulations shall be carried out by persons who have undergone a course of training in audiometric screening approved by the Chief Inspector.

**Medical expenses to be borne by employers**

**7.** —(1) All medical examinations and investigations required under these Regulations shall be arranged by the employer and shall be at his expense.

(2) The persons employed in the hazardous occupations shall —

(a) submit themselves for the medical examinations and investigations prescribed by these Regulations; and

(b) be granted paid leave of absence for the purpose.

**Designated factory doctor to report results of medical examinations to employers**

**8.** —(1) The results of the medical examination of persons working in the hazardous occupations in a factory shall be reported by the designated factory doctor to the employer of those persons in a form determined by the Chief Inspector.

(2) The employer shall, whenever required by the Chief Inspector within a period of 5 years from the date of any medical examination, make available to the Chief Inspector the reports referred to in paragraph (1) or a summary of those reports as the Chief Inspector may specify.

**Registers of employees in hazardous occupations**

**9.** —(1) The employer shall keep in such form and manner, as may be required by the Chief Inspector, registers of persons who are employed in the hazardous occupations.

(2) The employer shall produce the registers to the Chief Inspector upon receiving from the Chief Inspector a notice in writing requiring their production for his inspection.

**Designated factory doctor may recommend suspension from work**

**10.** —(1) Where a designated factory doctor is satisfied on the results of a medical examination carried out under these Regulations that the health of a person is likely to be or has been injuriously affected by his employment in a hazardous occupation, the designated factory doctor shall report his findings to the employer of that person.

(2) The report referred to in paragraph (1) shall be included in the form required under regulation 8 (1).

(3) The designated factory doctor shall, when appropriate, advise that a person whose health is likely to be or has been injuriously affected by his employment in a hazardous occupation --

(a) should not be employed in that occupation; or

(b) that he be suspended from such employment for a period or permanently as determined by the designated factory doctor.

(4) Where the designated factory doctor advises suspension from employment, he shall complete a certificate of suspension in the form set out in the Second Schedule and give a copy thereof to that person, the employer of that person and the Chief Inspector.

(5) In compliance with the advice of the designated factory doctor in the certificate of suspension, the person named in the certificate shall be suspended from his work.

(6) Such person may, within 10 days of being notified of the suspension, appeal to the Chief Inspector against the suspension whose decision shall be final.

**Designated factory doctor may inspect place of work**

**11.** —(1) The occupier shall provide all facilities to the designated factory doctor to inspect any process or work in or on which a person being examined by him is or is proposed to be employed.

(2) The employer of persons working in any hazardous occupation in a factory and the occupier of that factory shall provide the designated factory doctor with all information which is relevant and within their knowledge to enable the designated factory doctor to carry out a proper medical examination of those persons under these Regulations.

**Exemption**

**12.** —(1) The Chief Inspector may, by certificate in writing (which he may in his discretion revoke at any time), exempt any factory or person or class or description of factories or persons from any of the provisions of this Part either absolutely or subject to such conditions as he may specify in the certificate.

(2) Where any certificate is issued under this regulation, the Chief Inspector may require that a legible copy thereof, showing any condition subject to which it has been granted, shall be kept posted up in every factory to which the exemption applies or where persons exempted are employed in a position where it may conveniently be read by persons employed therein.

## **PART III**

### **DESIGNATED FACTORY DOCTORS**

#### **Application for registration as designated factory doctor**

**13.** —(1) A medical practitioner registered under the provisions of the Medical Registration Act (Cap. 174) and who has —

(a) completed a course of training in occupational health approved by the Chief Inspector; and

(b) passed the prescribed examination for that course,  
may apply for registration as a designated factory doctor.

(2) The Chief Inspector may, in his discretion and subject to such conditions as he may impose, exempt a medical practitioner from the requirements of paragraph (1).

(3) An application for registration as a designated factory doctor shall be made to the Chief Inspector in such form as the Chief Inspector may determine.

#### **Refusal to register and appeal against refusal**

**14.** —(1) The Chief Inspector may disapprove an application for registration made under regulation 13 if he is satisfied that the applicant is not a fit and proper person to be registered as a designated factory doctor.

(2) A person whose application is disapproved by the Chief Inspector may, within 2 weeks from the date he is notified of the decision of the Chief Inspector, appeal to the Minister whose decision shall be final.

#### **Register of designated factory doctors and cancellation of registration**

**15.** —(1) The Chief Inspector shall keep a register of persons registered as designated factory doctors.

(2) The Chief Inspector may cancel the registration of any person registered as a designated factory doctor, if his registration was obtained by misrepresentation or fraud.

(3) Any person aggrieved by the cancellation of his name from the register under paragraph (2) may, within 21 days from the date he is notified of the cancellation, appeal to the Minister whose decision shall be final.

## FIRST SCHEDULE

Regulation 4 (3)

### PART I

<i>Nature of occupation</i>	<i>Medical examinations and investigations to determine fitness for employment in the occupation</i>
<p>1. Occupations involving the use or handling of or exposure to the fumes, dust or vapour of —</p>	
<p>(a) arsenic or any of its compounds</p>	<p>(i) A clinical examination for signs and symptoms of arsenic poisoning, skin cancer and lung cancer</p> <p>(ii) A full size chest x-ray examination</p> <p>(iii) Urine arsenic examination</p> <p>(iv) Liver function tests including serum bilirubin, alkaline phosphatase, gamma glutamyl transpeptidase, alanine and aspartate aminotransferase estimations</p>
<p>(b) cadmium or any of its compounds</p>	<p>(i) A clinical examination for signs and symptoms of cadmium poisoning</p> <p>(ii) Blood cadmium estimation</p> <p>(iii) Urine Beta<sub>2</sub>-microglobulin estimation</p>
<p>(c) lead or any of its compounds</p>	<p>(i) A clinical examination for signs and symptoms of lead poisoning</p> <p>(ii) For inorganic lead exposure, haemoglobin and blood lead estimation</p> <p>(iii) For organic lead exposure, urine lead estimation</p>
<p>(d) manganese or any of its compounds</p>	<p>(i) A clinical examination for signs and symptoms of manganese poisoning</p> <p>(ii) Urine manganese estimation</p>
<p>(e) mercury or any of its compounds</p>	<p>(i) A clinical examination for signs and symptoms of mercury poisoning</p> <p>(ii) Urine mercury estimation</p>
<p>2. Occupations involving the use or handling of or exposure to the fumes or vapour of —</p>	
<p>(a) benzene</p>	<p>(i) A clinical examination for signs and symptoms of benzene poisoning</p> <p>(ii) Urine tt-muconic acid or urine s-phenylmercapturic acid estimation</p> <p>(iii) Haemoglobin estimation and full blood count</p> <p>(iv) Peripheral blood film</p>

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| (b) perchloroethylene  | <ul style="list-style-type: none"> <li>(i) A clinical examination for signs and symptoms of perchloroethylene poisoning</li> <li>(ii) Urine trichloroacetic acid estimation</li> <li>(iii) Liver function tests including serum bilirubin, alkaline phosphatase, gamma glutamyl transpeptidase, alanine and aspartate aminotransferase estimations</li> </ul> |
| (c) trichloroethylene  | <ul style="list-style-type: none"> <li>(i) A clinical examination for signs and symptoms of trichloroethylene poisoning</li> <li>(ii) Urine trichloroacetic acid estimation</li> <li>(iii) Liver function tests including serum bilirubin, alkaline phosphatase, gamma glutamyl transpeptidase, alanine and aspartate aminotransferase estimations</li> </ul> |
| (d) organophosphates   | <ul style="list-style-type: none"> <li>(i) A clinical examination for signs and symptoms of organophosphate poisoning</li> <li>(ii) Red blood cell acetylcholinesterase estimation</li> </ul>   |
| (e) vinyl chloride monomer   | <ul style="list-style-type: none"> <li>(i) A clinical examination for signs and symptoms of vinyl chloride monomer effects</li> <li>(ii) Liver function tests including serum bilirubin, alkaline phosphatase, gamma glutamyl transpeptidase, alanine and aspartate aminotransferase estimations</li> </ul>   |
| 3. Occupations involving the use or handling of or exposure to tar, pitch, bitumen or creosote | A clinical examination of the skin and lungs  |
| 4. Occupations involving the use or handling of or exposure to the dust of —                   |   |
| (a) asbestos   | <ul style="list-style-type: none"> <li>(i) A clinical examination for signs and symptoms of asbestosis, lung cancer and mesothelioma</li> <li>(ii) A full size chest x-ray examination</li> </ul>   |
| (b) raw cotton   | <ul style="list-style-type: none"> <li>(i) A clinical examination for signs and symptoms of byssinosis (cotton dust disease)</li> <li>(ii) Lung function tests (FEV<sub>1</sub> and FVC) before and after 6 hours of exposure to cotton dust on the same day</li> </ul>   |
| (c) silica   | <ul style="list-style-type: none"> <li>(i) A clinical examination for signs and symptoms of silicosis and tuberculosis</li> <li>(ii) A full size chest x-ray examination</li> </ul>   |
| 5. Occupations involving exposure to excessive noise   | An audiometric examination (where the air conduction is abnormal, to include bone conduction testing and auroscopic examination)  |

6. Occupations involving work in a compressed air environment
- (i) A clinical examination for signs and symptoms of compressed air illness and fitness for work in a compressed air environment
  - (ii) Height, weight and body fat estimation
  - (iii) An audiometric examination (where the air conduction is abnormal, to include bone conduction testing and auroscopic examination)
  - (iv) Test in a lock
  - (v) A full size chest x-ray examination
  - (vi) Radiographic examination of shoulder, hip and knee joints
  - (vii) Electrocardiogram for workers who are 35 years of age and above
  - (viii) Lung function tests (FEV<sub>1</sub> and FVC)

## PART II

<i>Nature of occupation</i>	<i>Periodic medical examinations and investigations</i>	<i>Regulation 5 Frequency of periodic medical examinations and investigations</i>
1. Occupations involving the use or handling of or exposure to the fumes, dust or vapour of —		
(a) arsenic or any of its compounds	(i) A clinical examination for signs and symptoms of arsenic poisoning, skin cancer and lung cancer  (ii) Urine arsenic estimation	Once in every 12 months  Once in every 12 months
(b) cadmium or any of its compounds	(i) A clinical examination for signs and symptoms of cadmium poisoning  (ii) Blood cadmium estimation  (iii) Urine Beta <sub>2</sub> -microglobulin estimation	Once in every 12 months  Once in every 12 months  Once in every 12 months
(c) lead or any of its compounds	(i) A clinical examination for signs and symptoms of lead poisoning  (ii) For inorganic lead exposure, haemoglobin and blood lead estimation	Once in every 6 months  Once in every 6 months

	(iii) For organic lead exposure, urine lead estimation	Once in every 6 months
(d) manganese or any of its compounds	(i) A clinical examination for signs and symptoms of manganese poisoning	Once in every 12 months
	(ii) Urine manganese estimation	Once in every 12 months
(e) mercury or any of its compounds	(i) A clinical examination for signs and symptoms of mercury poisoning	Once in every 12 months
	(ii) Urine mercury estimation	Once in every 12 months
2. Occupations involving the use or handling of or exposure to the fumes or vapour of —		
(a) benzene	(i) A clinical examination for signs and symptoms of benzene poisoning	Once in every 12 months
	(ii) Urine tt-muconic acid or urine s-phenylmercapturic acid estimation	Once in every 12 months
	(iii) Haemoglobin estimation and full blood count	Once in every 12 months
	(iv) Peripheral blood film	Once in every 12 months
(b) perchloroethylene	(i) A clinical examination for signs and symptoms of perchloroethylene poisoning	Once in every 12 months
	(ii) Urine trichloroacetic acid estimation	Once in every 12 months
(c) trichloroethylene	(i) A clinical examination for signs and symptoms of trichloroethylene poisoning	Once in every 12 months
	(ii) Urine trichloroacetic acid estimation	Once in every 12 months
(d) organophosphates	(i) A clinical examination for signs and symptoms of organophosphate poisoning	Once in every 6 months
	(ii) Red blood cell acetylcholinesterase estimation	Once in every 6 months
(e) vinyl chloride monomer	(i) A clinical examination for signs and symptoms of vinyl chloride monomer effects	Once in every 12 months
	(ii) Liver function tests including serum bilirubin, alkaline phosphatase, gamma glutamyl transpeptidase, alanine and	Once in every 12 months

	aspartate aminotransferase estimations	
3. Occupations involving the use or handling of or exposure to tar, pitch, bitumen or creosote	A clinical examination of the skin and lungs	Once in every 12 months
4. Occupations involving the use or handling of or exposure to the dust of —		
(a) asbestos	(i) A clinical examination for signs and symptoms of asbestosis, lung cancer and mesothelioma	Once in every 36 months
	(ii) A full size chest x-ray examination	Once in every 36 months
(b) raw cotton	(i) A clinical examination for signs and symptoms of byssinosis (cotton dust disease)	Once in every 12 months
	(ii) Lung function tests (FEV <sub>1</sub> and FVC) before and after 6 hours of exposure to cotton dust on the same day	Once in every 12 months
(c) silica	(i) A clinical examination for signs and symptoms of silicosis and tuberculosis	Once in every 36 months
	(ii) A full size chest x-ray examination	Once in every 36 months
5. Occupations involving exposure to excessive noise	An audiometric examination (where the air conduction is abnormal, to include bone conduction testing and auroscopic examination)	Once in every 12 months
6. Occupations involving work in a compressed air environment	(i) A clinical examination for signs and symptoms of compressed air illness and fitness for work in a compressed air environment	(a) Not less than once in every 3 months for working pressures not exceeding one bar
		(b) Not less than once in every 4 weeks for working pressures at or exceeding one bar
		(c) Not more than 3 days prior to re-employment in a compressed air environment --
		(i) after a worker has not been employed in a

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|  | compressed air environment for more than 14 consecutive days  |
|  | (ii) after a worker has suffered from a cold, chest infection, sore throat or earache   |
|  | (iii) after a worker has suffered from any illness or injury necessitating absence from work for more than 3 consecutive days |
| (ii) Radiographic examination of shoulder, hip and knee joints (for working pressures at or exceeding one bar)                     | Once in every 12 months or just before stopping work, whichever is earlier  |
| (iii) Electrocardiogram for workers who are 35 years of age and above (for working pressures at or exceeding one bar)              | Not less than once in every 12 months   |
| (iv) audiometric examination (where the air conduction is abnormal, to include bone conduction testing and auroscopic examination) | Once in every 12 months   |
| (v) Lung function tests (FEV <sub>1</sub> and FVC)   | Once in every 12 months   |

## SECOND SCHEDULE

Regulation 10 (4)

FACTORIES ACT  
(CHAPTER 104)

FACTORIES (MEDICAL EXAMINATIONS) REGULATIONS

CERTIFICATE OF SUSPENSION

Name of Worker: \_\_\_\_\_  
NRIC/WP No.: \_\_\_\_\_ Date of birth: \_\_\_\_\_ Sex: \_\_\_\_\_  
Name and Address of Workplace: \_\_\_\_\_  
\_\_\_\_\_

Date of starting employment: \_\_\_\_\_  
Health hazard present: \_\_\_\_\_

I certify that the abovenamed person examined by me on \_\_\_\_\_  
\_\_\_\_\_ should not continue to work as a  
\_\_\_\_\_ in \_\_\_\_\_  
department/section for \_\_\_\_\_ months, subject to a review  
on \_\_\_\_\_. In the meantime, he should be  
given alternative work in another department/section which does not expose him  
to \_\_\_\_\_.

The reasons for my recommendation are as follows:  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
*Signature and Date*

\_\_\_\_\_  
*Name of Designated Factory Doctor*

\_\_\_\_\_  
*Address of Doctor and Tel. No.*

*Note:* This certificate should be completed in triplicate and the original copy forwarded to the Chief Inspector of Factories and a copy each forwarded to the worker and the employer. The copy to the Chief Inspector of Factories (Ministry of Manpower, 18 Havelock Road, #03-02, Singapore 059764) must include the actual results of the examination/tests. For *quantitative* results, (eg. blood lead) the exact figures and units of measurement must be stated. For *quantitative* results, (eg. chest X-ray) attach copy of report. For audiometric examinations, attach audiogram.

## THIRD SCHEDULE

*Deleted by S 646/2004, wef 01/11/2004.*