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Republic of Latvia

Cabinet  
Regulation No. 189  
Adopted 21 May 2002

## **Labour Protection Requirements when coming into Contact with Biological Substances**

*Issued pursuant to Section 25, Clause 12 of the Labour Protection Law*

### **I. General Provisions**

1. These Regulations prescribe requirements for the protection of employees against the risk to their safety and health (hereinafter – risk) which is caused or may be caused when coming into contact with biological substances in the workplace.

2. Biological substances are biological agents – micro-organisms (unicellular or non-cellular organisms capable of replication or of transferring genetic material), including genetically modified micro-organisms, cell cultures (cells grown in laboratory conditions originated from multi-cellular organism) and human endoparasites, which may be agents of an infectious disease or which may cause an infestation, allergy or toxicity (hereinafter – health impairment) or due to which a person may become a carrier of a disease causing agent (hereinafter – biological agents).

3. These Regulations shall not apply to the protection of employees against the risk that is caused or may be caused when coming into contact with ectoparasites, insects, biological material of animal origin, plant allergens and toxins.

4. Biological agents shall be classified into four risk groups taking into account their ability to cause health impairments:

4.1. group 1 biological agent – biological agent unlikely to cause health impairments and against the effect of which effective prophylactic measures and medical treatment are possible;

4.2. group 2 biological agent – biological agent, which may cause health impairments and may be dangerous to employees, but the possibility that it may present a threat to other people is small. Effective prophylactic measures and medical treatment are possible against the effect thereof;

4.3. group 3 biological agent – biological agent, which may cause severe health impairment (health impairment proceeding with explicit subjective deterioration of health and objectively determined explicit distortions of organism functions endangering life) and is dangerous to employees. There is a risk that it may present a threat to other people. Effective

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prophylactic measures and medical treatment are possible against the effect thereof; and

4.4. group 4 biological agent – biological agent, which may cause a severe health impairment and is dangerous to employees. There is a high risk that it may present a threat to other people. Effective prophylactic measures and medical treatment are not possible.

5. If when classifying biological agents there are doubts in which risk group the biological agent is to be included, it shall be included in a group of the highest risk level.

6. If biological agents are not to be included in groups 2, 3 or 4 according to their classification (Annex 1), it shall not mean that they belong to group 1. Such biological agents shall be included in group 1 in case if there is evidence that a biological agent is unlikely to cause health impairments to a person and there are effective prophylactic measures and medical treatment against the effect thereof.

7. All viruses that have already been isolated in the human organism but have not been assessed and not referred to in Annex 1 of these Regulations shall be deemed to be at least group 2 biological agents, except cases where there is evidence that the relevant viruses are unlikely to cause impairments of human health.

8. The employer shall be responsible for compliance with these Regulations.

9. Compliance with these Regulations shall be controlled by the State Labour Inspection, but specific control functions shall be performed by the State Environment Inspection and State Sanitary Inspection (hereinafter – supervisory and control authorities) in accordance with by-laws thereof.

## **II. Risk Assessment**

10. In accordance with the procedures determined in regulatory enactments employers shall ensure risk assessment within the scope of internal supervision of working environment and a risk assessment system of the working environment of an undertaking.

11. If in performing the inspection of workplaces it is determined that biological agents cause or may cause a risk, they shall be assessed determining the type, level and duration of exposure to biological agents.

12. If the work is connected with several biological agents, the risk shall be assessed considering all biological agents used at work.

13. Risk shall be assessed not less than once a year, as well as if changes in the working environment have occurred that may affect the safety and health of employees.

14. In performing risk assessment, the following shall be taken into account:

14.1. classification of biological agents;

14.2. recommendations of the supervisory and control authorities regarding the control of

biological agents in order to ensure the health protection of an employee if the employee is or may be subject to exposure to biological agents during the work process;

14.3. information on diseases, which may be contracted by employees while performing work duties;

14.4. potential allergic and toxic effects, which may occur in performing work duties;

14.5. information on occupational diseases determined to employees and diseases related to work; and

14.6. intensified biological agent impact on the employees whose susceptibility to diseases may be affected by a disease suffered earlier, use of medical products, immunosystem deficiency, pregnancy or breast-feeding, and similar.

15. Upon a request of the supervisory and control authorities employers shall provide information regarding risk assessment in the undertaking.

### **III. Prevention and Reduction of Risk**

16. If possible, employers shall not utilise the biological agents referred to in Annex 1 of these Regulations in the working process, but they shall replace them with such biological agents as are not dangerous or, in accordance with scientific findings, are less dangerous to the health of employees.

17. On the basis of the results of the risk assessment and the information obtained during inspection of workplaces, an employer shall determine:

17.1. workplaces at which employees are or may be subject to the impact of biological agents;

17.2. employees who are or may be subject to the impact of biological agents; and

17.3. measures performed to prevent or reduce the risk caused by biological agents.

18. If during risk assessment it is determined that there is a risk to the safety and health of employees, the employer has an obligation to eliminate it, but if it is not technically possible to do so taking account the specific nature of particular work, the employer shall reduce the risk to a minimum taking the following measures:

18.1. limiting the number of employees who are or may be subject to exposure to biological agents at their workplaces;

18.2. organising working procedures and control thereof so as to prevent or reduce to a minimum the release of biological agents into working environment;

18.3. taking collective protection measures or if it is not possible to prevent the impact of biological agents on employees by utilising other means, providing employees with personal protective equipment;

18.4. ensuring compliance with the hygiene and epidemic safety regime at workplaces in order to prevent or reduce the possibility of accidental transmission or release of biological agents;

18.5. installing, in accordance with the requirements on the use of safety signs at workplaces determined in regulatory enactments, biohazard signs and other safety signs at

workplaces where coming into contact with biological agents is possible;

18.6. developing an evacuation plan and an action plan for employees in cases of unforeseen high pollution and other emergency situations related to exposure to biological agents;

18.7. if necessary and technically possible, utilising appropriate regular or continuous control methods for the detection of biological agents in the working environment in order to determine in sufficient time the release thereof (for example, release of biological agents into environment, escape out of containers and technological equipment);

18.8. in accordance with the procedures determined in regulatory enactments ensuring fast and safe collection, storage and disposal of waste containing biological agents using sealed, specially labelled containers made of appropriate material on which the contents thereof has been indicated;

18.9. ensuring safe storage, transport and reloading of biological agents at a workplace; and

18.10. in accordance with the procedures determined in regulatory enactments taking samples of human and animal tissue, as well as treating and testing them.

19. If employees work with biological agents which endanger the safety and health of employees at the workplace, the employer shall ensure the following:

19.1. employees shall not drink, eat and smoke in the risk area;

19.2. appropriate washing and toilet facilities equipped with eye washes and skin antiseptics;

19.3. provision of employees with protective clothing and other necessary individual protective equipment in accordance with the procedures determined in regulatory enactments;

19.4. storage of work protective clothing separately from the personal clothing of employees and washing of work protective clothing in appropriate equipment separately from other clothing;

19.5. work protective clothing and other personal protective equipment shall not be taken out of the territory of the undertaking; and

19.6. storage of individual protective equipment in a place particularly provided for this purpose, regular checking and cleaning thereof, timely repair or replacement with new devices of defective and worn devices.

20. Protective clothing and personal protective equipment, which may have come into with biological agents shall be stored separately from other clothing. The employer shall ensure the disinfection and cleaning or, if necessary, destruction of such clothing and protective equipment.

21. The employer shall cover expenditures related to the use of individual protective equipment including repair, checking, cleaning, disinfection and destruction of protective clothing.

#### **IV. List of Employees Subject to Exposure of Biological Agents**

22. The employer shall ensure:

22.1. preparation of a list of employees. Employees whose work is related to group 3 and 4 biological agents, as well as information (in writing or electronically) regarding the type of

work performed, biological agents, type and duration of exposure thereof shall be indicated in the list; and

22.2. registration of accidents in which the release of group 3 or group 4 biological agents occurred or may have occurred, which caused or may have caused the impairment of human health, as well as employees connected with the accident shall be indicated (information shall be recorded in writing or electronically).

23. Employers shall keep the documents referred to in Paragraph 22 of these Regulations for 10 years after the employees have finished the work with biological agents. Upon the expiry of the specified time period the documents shall be deposited in archives in accordance with the procedures specified in these Regulations, except in cases referred to in Paragraph 24 of these Regulations.

24. Employers shall keep the documents referred to in Paragraph 22 of these Regulations for 45 years following the last known exposure of biological agents and, upon the expiry of the specified time period, shall deposit the documents in archives in accordance with the procedures determined by law, if the exposure of biological agents may cause health impairments and:

24.1. the exposure is connected with biological agents known to be capable of causing persistent and latent infections;

24.2. the health impairment is undiagnosable prior to the appearance of symptoms thereof;

24.3. the biological agent has a long incubation period prior to the appearance of health impairment symptoms;

24.4. after appropriate medical treatment the health impairment recrudesces (repeats) over a long time after a specified or unspecified time period; and

24.5. the exposure of biological agents may have long-term complications.

25. The documents referred to in Paragraph 22 of these Regulations shall be accessible to primary health care doctors, supervisory and control authorities, institutions competent in labour protection issues, labour protection specialists and trusted representatives of the employees.

26. Each employee has the right to receive the information referred to in Paragraph 22 of these Regulations, which relates directly to him or her.

27. If an undertaking is liquidated, the documents referred to in Paragraph 22 of these Regulations and medical records referred to in Chapter VIII of these Regulations shall be stored in accordance with the procedures specified in regulatory enactments.

### **Informing Supervisory and Control Authorities**

28. If an employer determines after the risk assessment that there is a risk to the safety and health of employees, upon a request of supervisory and control authorities the employer shall provide information on:

28.1. the results of the risk assessment;

28.2. the activities during which employees were or may have been subject to exposure to

biological agents;

- 28.3. the list of employees subject to exposure to biological agents;
- 28.4. labour protection and preventative measures taken, information on work procedures and methods;
- 28.5. collective and personal protective equipment utilised in the undertaking;
- 28.6. the labour protection specialist and his or her powers; and
- 28.7. the action plan in emergency situations in order to protect employees from exposure to group 3 or group 4 biological agents that may occur due to release of biological agents.

29. Employers shall submit to the supervisory and control authorities:

- 29.1. an initial notification at least 30 days prior to the commencement of work if he or she is preparing to work with group 2, 3 or 4 biological agents for the first time; and
- 29.2. a re-notification if the information specified in the initial notification has changed or substantial changes have taken place in the working environment.

30. Laboratories shall submit to the supervisory and control authorities only an initial notification 30 days prior to the commencement of work if they:

- 30.1. provide diagnostic services related to group 4 biological agents;
- 30.2. prepare to work with any other group 4 biological agent and any other new group 3 biological agent, and the employer has classified such biological agents himself or herself in conformity with Annex 1 of these Regulations.

31. The employer shall provide the following information in the notifications referred to in Paragraphs 29 and 30 of these Regulations:

- 31.1. requisites of the employer (name, registration number and legal address);
- 31.2. the labour protection specialist and his or her powers;
- 31.3. the place where the work with biological agents is performed;
- 31.4. the results of risk assessment;
- 31.5. the species of the biological agent; and
- 31.6. the provided for labour protection and preventative measures.

32. In accordance with the procedures specified in regulatory enactments the employer shall, without delay, provide information to the relevant supervisory and control authority on all accidents, which may have caused the release of biological agents and which may cause a serious impairment of human health in conformity with exposure to group 3 or group 4 biological agents.

## **VI. Labour Protection Requirements in Medical Treatment Institutions and Veterinary Care Institutions (except Diagnostic Laboratories)**

33. In assessing risk in medical treatment institutions and veterinary care institutions (except diagnostic laboratories), the employer shall in addition specify:

- 33.1. potential presence of biological agents in humans or animals, as well as in materials and samples taken therefrom;
- 33.2. threat presented by biological agents the presence of which in humans or animals,

and materials and samples taken therefrom is known or there are suspicions of the presence thereof; and

33.3. risk related to the nature of work.

34. In order to protect the safety and health of employees in medical treatment institutions and veterinary care institutions (except diagnostic laboratories), the employer shall take the following measures:

34.1. disinfection;

34.2. determine procedures by which waste containing biological agents shall be handled and shall perform the disposal thereof.

35. In order to minimise the risk of infection of other persons or animals, the containment measures appropriate to the situation shall be selected in accordance with Annex 2 of these Regulations in isolation facilities in which there are persons or animals who are infected or there is a possibility of becoming infected with group 3 or group 4 biological agents.

## **VII. Special Measures in relation to Laboratories, Premises Intended for Animals and Industrial Processes**

36. The following measures shall be taken in laboratories, including diagnostic laboratories, and premises where laboratory animals, which are deliberately infected with group 2, 3, or 4 biological agents or which are carriers of such biological agents, or which are suspected to be carriers of such biological agents have been placed:

36.1. the containment level shall be determined in conformity with the risk level:

36.1.1. when working with group 2 biological agents at least containment level 2 shall be determined;

36.1.2. when working with group 3 biological agents at least containment level 3 shall be determined; and

36.1.3. when working with group 4 biological agents at least containment level 4 shall be determined; and

36.2. after the determination of the containment level provided for in Sub-paragraph 36.1 of these Regulations the necessary containment measures shall be taken in accordance with Annex 2 of these Regulations in order to minimise the risk of infection.

37. In laboratories the purpose of activities of which is not related to the cultivating or collection of biological agents, but where materials are handled that may possibly have biological agents, which may cause human health impairment, containment level 2 at least shall be ensured, but if it is known or indications exist that containment level 3 or 4 is required, containment level 3 or 4 shall be ensured.

38. If the strain of the biological agent is of low virulence or has lost the known virulence genes, the containment appropriate to the classification of the strain of origin thereof may be not applied. The required containment level shall be determined on the basis of the appropriate risk assessment at the workplace (for example, if it has been planned to utilise such strain as a product or a component of the product intended for prophylactic or therapeutic purposes).

39. In assessing group 3 biological agents which may cause only a minor risk of infection to employees (marked with two asterisks (\*\*) in Annex 1 of these Regulations), the applicable containment measures shall be selected taking into account the specific nature of relevant activities and the quantity of agent utilised therein in order to determine whether some of such measures may be dispensed with under specific circumstances.

40. Containment requirements in conformity with the classification of parasites shall be applied only to such stages of the life cycle of parasites in which they are capable to cause health impairments by exposure on employees at the workplace.

41. The following conditions shall be complied with in industrial processes in which group 2, 3 and 4 biological agents are utilised:

41.1. requirements referred to in Sub-paragraph 36.1 of these Regulations shall be also applied to industrial processes and containment measures referred to in Annex 3 shall be performed;

41.2. containment requirements conforming to various categories and referred to in Annex 3 of these Regulations shall be selected and combined, substantiating the selection by risk assessment of any specific process or part of the process; and

41.3. in accordance with the risk assessment related to the utilisation of group 2, 3 and 4 biological agents, the supervisory and control authorities may take a decision on special measures applied to industrial utilisation of such biological agents.

42. If it is not possible to classify the biological agent and the utilisation thereof may present a risk, it is permitted to work with such biological agents only at workplaces where at least a containment level 3 has been ensured.

43. General labour protection principles shall be complied with when working with group 1 biological agents and live attenuated vaccines.

44. The employer shall ensure the conformity of safety measures to the requirements referred to in Paragraphs 36, 37, 38, 39, 40, 41 and 42 of these Regulations in industrial processes, laboratory demonstrations and in work with animals where there is exposure of group 3 or group 4 biological agents or where such exposure is possible.

### **VIII. Health Surveillance of Employees**

45. If contact with biological agents is possible at the workplace, mandatory health examinations of employees shall be performed in accordance with the procedures specified in regulatory enactments.

46. Medical treatment institutions shall provide information to employees and employers regarding health examinations, as well as necessary medical treatment and additional examinations of the state of health in accordance with the procedures specified in regulatory enactments.



47. Based on the result of risk assessment, as well as taking into account the requirements specified in regulatory enactments, the employer shall determine those employees who require special labour protection measures.

48. If employees do not have immunity against the biological agent to the exposure of which they are or may be subject, the employer shall provide the employees with an opportunity of vaccination in compliance with the following procedures:

48.1. if it is determined in the risk assessment that employees are subject to exposure to such biological agents due to which there is threat to safety and health of employees and if effective vaccines against such biological agents are available, the employer shall offer to employees an opportunity for vaccination;

48.2. vaccination shall be performed in accordance with regulatory enactments;

48.3. an employer shall inform employees both on the positive and negative effects, which may arise when vaccinating and when not vaccinating; and

48.4. the employer shall cover expenditures related to vaccination referred to in this Paragraph.

49. If health impairment of employees has been determined:

49.1. a doctor certified in occupational diseases or a medical treatment institution shall offer to perform additional health examinations to other employees who were subject to a similar exposure of biological agents;

49.2. employer shall perform a repeat risk assessment; and

49.3. expenditures related to health examinations referred to in Sub-paragraph 49.1 of these Regulations shall be covered by the employer.

50. Health examination records shall be kept for at least 10 years following the end of biological agent exposure and after that deposited in archives in accordance with the procedures specified by law. In cases referred to in Paragraph 24 of these Regulations the results of individual health examinations shall be kept for 45 years after the last known case of biological agent exposure on employees and after that deposited in archives in accordance with the procedures specified by law.

51. A doctor certified in occupational diseases or an epidemiologist of the State agency *Sabiedrības veselības aģentūra* [Public Health Agency], if necessary, shall recommend to the employer appropriate labour protection and preventative measures to be taken in relation to each employee individually.

52. The employer shall provide information and recommendations to each employee regarding health examinations, which may be performed also after the end of biological agent exposure.

53. Employees have the right to become acquainted with the results of examinations relating particularly to them.

54. The relevant employee and employer may request that a medical practitioner responsible for

the health care of employees review the results of health examinations.

55. In performing the health surveillance of employees the following requirements shall be taken into account:

55.1. if an employee is or has been subject to the exposure of biological agents, a doctor certified in occupational diseases shall become acquainted with the conditions and circumstances of biological agent exposure;

55.2. the health care of employees shall be performed in accordance with the principles and practice of general medicine including the following measures:

55.2.1. summarising of information regarding the state of health and work of employees;

55.2.2. individual assessment of the state of health of each employee; and

55.2.3. if necessary, regular control of presence of the biological agents in the organism of the employee, as well as the determination of early and reversible effects; and

55.3. regular health examinations taking into account the latest scientific findings.

56. An employer shall notify the supervisory and control authorities in accordance with the procedures specified in regulatory enactments on health impairments or cases of death caused by the exposure of biological agents at the workplace.

### **IX. Informing, Training, Consultation and Participation of Employees**

57. If employees come into contact with biological agents during the working process, the employer shall ensure training of employees and representatives of employees in conformity with the specific nature of work (including practical training) and necessary information on the relevant labour protection measures. The employer shall inform employees and their representatives regarding:

57.1. the potential threat to health;

57.2. the protection measures to be taken to prevent exposure to biological agents;

57.3. the hygiene requirements;

57.4. the use of protective equipment and protective clothing; and

57.5. the actions of employees during accidents and actions to prevent them.

58. Employer shall ensure employees who are or may be in contact with biological agents with the following training:

58.1. initial – prior to the commencement of work;

58.2. periodic - not less frequently than once a year; and

58.3. additional – if changes which may affect the safety and health of employees take place in the working environment.

59. The employer shall ensure that written instructions are provided at the workplace and notations are placed at a place accessible to everyone with information to employees regarding action if:

59.1. an accident has occurred while working with the biological agents; and

59.2. employees work with group 4 biological agents.

60. Employees shall notify the employer, direct work supervisor and labour protection specialist without delay regarding all accidents at the workplace.

61. The employer shall provide, without delay, information to employees and their representatives regarding all accidents, if release of biological agents has occurred that may cause serious health impairment, causes thereof, as well as inform regarding the measures that have been or will be taken to prevent the impact of exposure of biological agents on employees.

62. The employer shall provide employees and their representatives with general information on the state in the undertaking in the field of work safety and health protection of employees.

63. The employer shall ensure the accessibility of the information referred to in Paragraph 22 of these Regulations to employees and their representatives.

64. Consultations and participation of employees and their representatives in solving the issues provided for in these Regulations shall take place in accordance with the Labour Protection Law.

#### **X. Application of Specific Paragraphs of these Regulations Based On Risk Assessment**

65. If it is determined in the risk assessment that employees are subject or may be subject to exposure to the group 1 biological agents (which are unlikely to cause health impairments), the requirements referred to in Sections II, IV, V, VI and VIII, and Paragraphs 36, 37, 38, 39, 40, 41, 42, 44, 57, 58, 59, 60, 61, 62, and 63 of these Regulations shall not be applied, but Paragraph 43 shall be complied with.

66. If it is determined in the risk assessment that the provided for activity is not directly connected with the utilisation of biological agents, but a possibility exists that employees may be subject to exposure to biological agents and the exposure may cause a risk to the safety and health of employees, Paragraphs 15 and 16, and Sub-paragraph 18.10, as well as Paragraphs 19, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62 and 63 of these Regulations shall be applied. Provisions of this Paragraph shall apply to the following activities:

66.1. work in clinical, veterinary and diagnostic laboratories and scientific research laboratories (except microbiological diagnostic laboratories to which all Paragraphs of these Regulations shall be applied);

66.2. work in food production;

66.3. work in agriculture;

66.4. work with animals or products of animal origin;

66.5. work in medical treatment institutions, including pathologic anatomy departments and isolation facilities;

66.6. work with waste water treatment plants; and

66.7. waste management.

## **XI. Closing Provision**

67. These Regulations shall come into force on 1 January 2003.

Prime Minister

A. Bērziņš

Acting for the Minister for Welfare,  
Minister for Environmental Protection and Regional Development

V. Makarovs

## Classification of Groups 2, 3 and 4 Biological Agents

### I. Bacteria and Similar Organisms

No.	Biological agent	Classification group	Notes
1.	<i>Actinobacillus actinomycetemcomitans</i>	2	
2.	<i>Actinomadura madurae</i>	2	
3.	<i>Actinomadura pelletieri</i>	2	
4.	<i>Actinomyces gerencseriae</i>	2	
5.	<i>Actinomyces israelii</i>	2	
6.	<i>Actinomyces pyogenes</i>	2	
7.	<i>Actinomyces spp.</i>	2	
8.	<i>Arcanobacterium haemolyticum</i> ( <i>Corynebacterium haemolyticum</i> )	2	
9.	<i>Bacillus anthracis</i>	3	
10.	<i>Bacteroides fragilis</i>	2	
11.	<i>Bartonella bacilliformis</i>	2	
12.	<i>Bartonella quintana</i> ( <i>Rochalimaea quintana</i> )	2	
13.	<i>Bartonella</i> ( <i>Rochalinea</i> ) <i>spp.</i>	2	
14.	<i>Bordetella bronchiseptica</i>	2	
15.	<i>Bordetella parapertussis</i>	2	
16.	<i>Bordetella pertussis</i>	2	V
17.	<i>Borrelia burgdorferi</i>	2	
18.	<i>Borrelia duttonii</i>	2	
19.	<i>Borrelia recurrentis</i>	2	
20.	<i>Borrelia spp.</i>	2	
21.	<i>Brucella abortus</i>	3	
22.	<i>Brucella canis</i>	3	
23.	<i>Brucella melitensis</i>	3	
24.	<i>Brucella suis</i>	3	
25.	<i>Burkholderia mallei</i> ( <i>Pseudomonas mallei</i> )	3	
26.	<i>Burkholderia pseudomallei</i> ( <i>Pseudomonas pseudomallei</i> )	3	
27.	<i>Campylobacter fetus</i>	2	
28.	<i>Campylobacter jejuni</i>	2	
29.	<i>Campylobacter spp.</i>	2	

30.	<i>Cardiobacterium hominis</i>	2	
31.	<i>Chlamydia pneumoniae</i>	2	
32.	<i>Chlamydia trachomatis</i>	2	
33.	<i>Chlamydia psittaci</i> (avian strains)	3	
34.	<i>Chlamydia psittaci</i> (other strains)	2	
35.	<i>Clostridium botulinum</i>	2	T
36.	<i>Clostridium perfringens</i>	2	
37.	<i>Clostridium tetani</i>	2	T, V
38.	<i>Clostridium spp.</i>	2	
39.	<i>Corynebacterium diphtheriae</i>	2	T, V
40.	<i>Corynebacterium minutissimum</i>	2	
41.	<i>Corynebacterium pseudotuberculosis</i>	2	
42.	<i>Corynebacterium spp.</i>	2	
43.	<i>Coxiella burnetii</i>	3	
44.	<i>Edwardsiella tarda</i>	2	
45.	<i>Ehrlichia sennetsu</i> ( <i>Rickettsia sennetsu</i> )	2	
46.	<i>Ehrlichia spp.</i>	2	
47.	<i>Eikenella corrodens</i>	2	
48.	<i>Enterobacter aerogenes/cloacae</i>	2	
49.	<i>Enterobacter spp.</i>	2	
50.	<i>Enterococcus spp.</i>	2	
51.	<i>Erysipelothrix rhusiopathiae</i>	2	
52.	<i>Escherichia coli</i> (except non-pathogen strains)	2	
53.	<i>Escherichia coli</i> (verocitotoxicogene strains, O157:H7 or O103)	3**	
54.	<i>Flavobacterium meningosepticum</i>	2	
55.	<i>Fluoribacter bozemanai</i> ( <i>Legionella</i> )	2	
56.	<i>Francisella tularensis</i> (type A)	3	
57.	<i>Francisella tularensis</i> (type B)	2	
58.	<i>Fusobacterium necrophorum</i>	2	
59.	<i>Gardnerella vaginalis</i>	2	
60.	<i>Haemophilus ducreyi</i>	2	
61.	<i>Haemophilus influenzae</i>	2	
62.	<i>Haemophilus spp.</i>	2	
63.	<i>Helicobacter pylori</i>	2	
64.	<i>Klebsiella oxytoca</i>	2	
65.	<i>Klebsiella pneumoniae</i>	2	
66.	<i>Klebsiella spp.</i>	2	
67.	<i>Legionella pneumophila</i>	2	
68.	<i>Legionella spp.</i>	2	
69.	<i>Leptospira interrogans</i> (all serological variants)	2	
70.	<i>Listeria monocytogenes</i>	2	
71.	<i>Listeria ivanovii</i>	2	
72.	<i>Morganella morganii</i>	2	

73.	<i>Mycobacterium africanum</i>	3	V
74.	<i>Mycobacterium avium/ intracellulare</i>	2	
75.	<i>Mycobacterium bovis</i> (except BCG strain)	3	V
76.	<i>Mycobacterium chelonae</i>	2	
77.	<i>Mycobacterium fortuitum</i>	2	
78.	<i>Mycobacterium kansasii</i>	2	
79.	<i>Mycobacterium leprae</i>	3	
80.	<i>Mycobacterium malmoense</i>	2	
81.	<i>Mycobacterium marinum</i>	2	
82.	<i>Mycobacterium microti</i>	3**	
83.	<i>Mycobacterium paratuberculosis</i>	2	
84.	<i>Mycobacterium scrofulaceum</i>	2	
85.	<i>Mycobacterium simiae</i>	2	
86.	<i>Mycobacterium szulgai</i>	2	
87.	<i>Mycobacterium tuberculosis</i>	3	V
88.	<i>Mycobacterium ulcerans</i>	3**	
89.	<i>Mycobacterium xenopi</i>	2	
90.	<i>Mycoplasma caviae</i>	2	
91.	<i>Mycoplasma hominis</i>	2	
92.	<i>Mycoplasma pneumoniae</i>	2	
93.	<i>Neisseria gonorrhoeae</i>	2	
94.	<i>Neisseria meningitidis</i>	2	V
95.	<i>Nocardia asteroides</i>	2	
96.	<i>Nocardia brasiliensis</i>	2	
97.	<i>Nocardia farcinica</i>	2	
98.	<i>Nocardia nova</i>	2	
99.	<i>Nocardia otitidiscaviarum</i>	2	
100.	<i>Pasteurella multocida</i>	2	
101.	<i>Pasteurella spp.</i>	2	
102.	<i>Peptostreptococcus anaerobius</i>	2	
103.	<i>Plesiomonas shigelloides</i>	2	
104.	<i>Porphyromonas spp.</i>	2	
105.	<i>Prevotella spp.</i>	2	
106.	<i>Proteus mirabilis</i>	2	
107.	<i>Proteus penneri</i>	2	
108.	<i>Proteus vulgaris</i>	2	
109.	<i>Providencia alkalifaciens</i>	2	
110.	<i>Providencia rettgeri</i>	2	
111.	<i>Providencia spp.</i>	2	
112.	<i>Pseudomonas aeruginosa</i>	2	
113.	<i>Rhodococcus equi</i>	2	
114.	<i>Rickettsia akari</i>	3**	
115.	<i>Rickettsia canada</i>	3**	
116.	<i>Rickettsia conorii</i>	3	
117.	<i>Rickettsia montana</i>	3**	

118.	<i>Rickettsia typhi</i> ( <i>Rickettsia mooseri</i> )	3	
119.	<i>Rickettsia prowazekii</i>	3	
120.	<i>Rickettsia rickettsii</i>	3	
121.	<i>Rickettsia tsutsugamushi</i>	3	
122.	<i>Rickettsia</i> spp.	2	
123.	<i>Salmonella arizonae</i>	2	
124.	<i>Salmonella enteritidis</i>	2	
125.	<i>Salmonella typhimurium</i>	2	
126.	<i>Salmonella paratyphi</i> A, B, C	2	V
127.	<i>Salmonella typhi</i>	3**	V
128.	<i>Salmonella</i> (other serological variants)	2	
129.	<i>Serpulina</i> spp.	2	
130.	<i>Shigella boydii</i>	2	
131.	<i>Shigella dysenteriae</i> (type 1)	3**	T
132.	<i>Shigella dysenteriae</i> (except type 1)	2	
133.	<i>Shigella flexneri</i>	2	
134.	<i>Shigella sonnei</i>	2	
135.	<i>Staphylococcus aureus</i>	2	
136.	<i>Streptobacillus moniliformis</i>	2	
137.	<i>Streptococcus pneumoniae</i>	2	
138.	<i>Streptococcus pyogenes</i>	2	
139.	<i>Streptococcus suis</i>	2	
140.	<i>Streptococcus</i> spp.	2	
141.	<i>Treponema carateum</i>	2	
142.	<i>Treponema pallidum</i>	2	
143.	<i>Treponema pertenuis</i>	2	
144.	<i>Treponema</i> spp.	2	
145.	<i>Vibrio cholerae</i> (including <i>El Tor</i> )	2	
146.	<i>Vibrio parahaemolyticus</i>	2	
147.	<i>Vibrio</i> spp.	2	
148.	<i>Yersinia enterocolitica</i>	2	
149.	<i>Yersinia pestis</i>	3	V
150.	<i>Yersinia pseudotuberculosis</i>	2	
151.	<i>Yersinia</i> spp.	2	

## II. Viruses

152.	Adenovirus family, <i>Adenoviridae</i>	2	
153.	Arenavirus family, <i>Arenaviridae</i>		
153.1.	Lymphocytic choriomeningitis - <i>Lassa virus</i> ( <i>LCM</i> ) group (Old world viruses)		
153.1.1.	Lassa virus (Lassa fever virus)	4	
153.1.2.	Lymphocytic virus (strains)	3	
153.1.3.	Lymphocytic choriomeningitis virus, <i>LCM</i> (other strains)	2	
153.1.4.	<i>Mopeia</i> virus	2	



153.1.5.	Other viruses of Lassa virus (LCM) group	2	
153.2.	Tacaribe virus group (New world viruses)		
153.2.1.	<i>Guanarito</i> virus	4	
153.2.2.	Junina virus (Argentine hemorrhagic fever virus)	4	
153.2.3.	<i>Sabia</i> virus	4	
153.2.4.	<i>Machupo</i> virus	4	
153.2.5.	<i>Flexal</i> virus	3	
153.2.6.	Other viruses of Tacaribe virus group	2	
154.	Astrovirus family, <i>Astroviridae</i>	2	
155.	Bunyavirus family, <i>Bunyaviridae</i>		
155.1.	<i>Belgrade-Dobrava</i> virus	3	
155.2.	<i>Bhanja</i> virus	2	
155.3.	Bunyamwera virus supergroup	2	
155.4.	<i>Germiston</i> virus	2	
155.5.	<i>Oropouche</i> virus	3	
155.6.	<i>Sin Nombre</i> virus	3	
155.7.	California encephalitis virus	2	
155.8.	Hantaviruses		
155.8.1.	<i>Hantaan</i> virus (Corea hemorrhagic fever virus)	3	
155.8.2.	<i>Seoul</i> virus	3	
155.8.3.	<i>Puumala</i> virus	2	
155.8.4.	<i>Prospect Hill</i> virus	2	
155.8.5.	Other hantaviruses	2	
155.9.	Nairoviruses		
155.9.1.	Crimean-Congo hemorrhagic fever virus	4	
155.9.2.	<i>Hazara</i> virus	2	
155.10.	Phleboviruses		
155.10.1.	Rift Valley fever virus (infectious enzootic hepatitis virus)	3	V
155.10.2.	<i>Sandfly</i> fever virus	2	
155.10.3.	Toscana virus	2	
155.10.4.	Other bunyaviruses known as disease causing agents	2	
156.	Calicivirus family, <i>Caliciviridae</i>		
156.1.	Hepatitis E virus	3**	
156.2.	<i>Norwalk</i> virus	2	
156.3.	Other caliciviruses	2	
157.	Coronavirus family, <i>Coronaviridae</i>	2	
158.	Filovirus family, <i>Filoviridae</i>		
158.1.	<i>Ebola</i> virus	4	
158.2.	<i>Marburg</i> virus	4	
159.	Flavivirus family, <i>Flaviviridae</i>		
159.1.	Australian encephalitis virus ( <i>Murray Valley</i> encephalitis virus)	3	

159.2.	Central European tick-borne encephalitis virus (TBE)	3**	V
159.3.	<i>Absettarov</i> virus	3	
159.4.	<i>Hanzalova</i> virus	3	
159.5.	<i>Hypr</i> virus	3	
159.6.	<i>Kumlinge</i> virus	3	
159.7.	<i>Dengue</i> virus (type 1–4)	3	
159.8.	Hepatitis C virus	3**	D.
159.9.	Hepatitis G virus	3**	D.
159.10.	Japanese B encephalitis virus	3	V
159.11.	<i>Kyasanur Forest</i> virus	3	V
159.12.	<i>Louping ill</i> virus	3**	
159.13.	Omsk hemorrhagic fever virus	3	V
159.14.	<i>Powassan</i> virus	3	
159.15.	<i>Rocio</i> virus	3	
159.16.	Russian spring-summer encephalitis virus, TBEa	3	V
159.17.	Saint Louis encephalitis virus	3	
159.18.	<i>Wesselsbron</i> virus	3**	
159.19.	West Nile fever virus	3	
159.20.	Yellow fever virus	3	V
159.21.	Other flaviviruses known as disease causing agents	2	
160.	Hepadnavirus family, <i>Hepadnaviridae</i>		
160.1.	Hepatitis B virus	3**	V, D
160.2.	Hepatitis D virus (Delta)b	3**	V, D
161.	Herpesviruses, <i>Herpesviridae</i>		
161.1.	Cytomegalovirus, CMV	2	
161.2.	Epstein-Barr virus, EBV	2	
161.3.	Herpesvirus B ( <i>Herpesvirus simiae</i> )	3	
161.4.	<i>Herpes simplex</i> virus (type 1 and 2)	2	
161.5.	<i>Varicella-zoster</i> herpesvirus	2	
161.6.	Human B-lymphotropic virus, human herpesvirus (HBLV-HHV-6)	2	
161.7.	Human herpesvirus 7, HHV-7	2	
161.8.	Human herpesvirus 8, HHV-8	2	D.
162.	Orthomyxoviruses, <i>Orthomyxoviridae</i>		
162.1.	Influenza A, B and C viruses	2	V c
162.2.	Orthomyxoviruses spread by ticks: <i>Dhori</i> virus and <i>Thogoto</i> virus	2	
163.	Papovavirus family, <i>Papovaviridae</i>		
163.1.	BK and JC viruses	2	D d
163.2.	Human papillomaviruses	2	D d
164.	Paramyxovirus family, <i>Paramyxoviridae</i>		
164.1.	Measles virus	2	V
164.2.	Epidemic parotitis (mumps) virus	2	V

164.3.	Newcastle disease (avian influenza) virus	2	
164.4.	<i>Parainfluenza</i> virus (type 1-4)	2	
164.5.	Respiratory syncytial viruses	2	
165.	Parvovirus family, <i>Parvoviridae</i>		
165.1.	Human parvovirus (B19)	2	
166.	Picornavirus family, <i>Picornaviridae</i>		
166.1.	Acute hemorrhagic conjunctivitis virus, AHC	2	
166.2.	Coxsackie viruses	2	
166.3.	ECHO viruses	2	
166.4.	Hepatitis A virus, human enterovirus 72	2	V
166.5.	Poliomyelitis viruses	2	V
166.6.	Rhinoviruses	2	
167.	Poxvirus family, <i>Poxviridae</i>		
167.1.	Buffalopox virus e	2	
167.2.	Cowpox virus	2	
167.3.	Elephantpox virus f	2	
167.4.	Pox vaccine virus	2	
168.	<i>Molluscum contagiosum</i> virus	2	
168.1.	Monkeypox virus	3	V
168.2.	<i>Orf</i> virus	2	
168.3.	Rabbitpox virus g	2	
168.4.	<i>Vaccinia</i> virus	2	
168.5.	<i>Variola</i> (major and minor) virus	4	V
168.6.	White pox virus ( <i>Variola</i> virus)	4	V
168.7.	<i>Yatapox</i> virus ( <i>Tana &amp; Yaba</i> )	2	
169.	Reovirus family, <i>Reoviridae</i>		
169.1.	Coltivirus	2	
169.2.	Human rotaviruses	2	
169.3.	Orbiviruses	2	
169.4.	Rheoviruses	2	
170.	Retrovirus family, <i>Retroviridae</i>		
170.1.	Human immunodeficiency viruses	3**	D.
170.2.	Human T-cell lymphotropic viruses (HTLV), type 1 and 2	3**	D.
170.3.	<i>SIV</i> viruses h	3**	
171.	Rhabdovirus family, <i>Rhabdoviridae</i>		
171.1.	Rabbies virus	3**	V
171.2.	Vesicular stomatitis Indiana virus	2	
172.	Togavirus family, <i>Togaviridae</i>		
172.1.	Alphaviruses		
172.1.1.	Eastern equine encephalomyelitis	3	V
172.1.2.	<i>Bebaru</i> virus	2	
172.1.3.	<i>Chikungunya</i> virus	3**	
172.1.4.	<i>Everglades</i> virus	3**	
172.1.5.	<i>Mayaro</i> virus	3	

172.1.6.	<i>Mucambo</i> virus	3**	
172.1.7.	<i>Ndumu</i> virus	3	
172.1.8.	<i>O'nyong-nyong</i> virus	2	
172.1.9.	<i>Ross River</i> virus	2	
172.1.10.	<i>Semliki Forest</i> virus	2	
172.1.11.	<i>Sindbis</i> virus	2	
172.1.12.	<i>Tonate</i> virus	3**	
172.1.13.	Venezuelan equine encephalomyelitis	3	V
172.1.14.	Western equine encephalomyelitis	3	V
172.1.15.	Other known alphaviruses	2	
172.2.	Rubivirus ( <i>rubella</i> )	2	V
173.	Torovirus family, <i>Toroviridae</i>	2	
174.	Non-classified viruses		
174.1.	Equine morbillivirus	4	
174.2.	Provisionally non-identified hepatitis viruses	3**	D.
175.	Non-traditional agents related to transmissible spongiform encephalopathies (TSE)		
175.1.	Creutzfeldt-Jakob disease	3**	Dd
175.2.	variety of the Creutzfeldt-Jakob disease	3**	Dd
175.3.	Bovine spongiform encephalopathies (BSE) and other related animal TSE i	3**	Dd
175.4.	Gerstmann-Straussler-Scheinker syndrome	3**	Dd
175.5.	<i>Kuru</i>	3**	Dd

### III. Parasites

176.	<i>Acanthamoeba castellani</i>	2	
177.	<i>Ancylostoma duodenale</i>	2	
178.	<i>Angiostrongylus cantonensis</i>	2	
179.	<i>Angiostrongylus costaricensis</i>	2	
180.	<i>Ascaris lumbricoides</i>	2	A
181.	<i>Ascaris suum</i>	2	A
182.	<i>Babesia divergens</i>	2	
183.	<i>Babesia microti</i>	2	
184.	<i>Balantidium coli</i>	2	
185.	<i>Brugia pahangi</i>	2	
186.	<i>Capillaria philippinensis</i>	2	
187.	<i>Capillaria</i> spp.	2	
188.	<i>Clonorchis sinensis</i>	2	
189.	<i>Clonorchis viverrini</i>	2	
190.	<i>Cryptosporidium parvum</i>	2	
191.	<i>Cryptosporidium</i> spp.	2	
192.	<i>Cyclospora cayetanensis</i>	2	
193.	<i>Dipetalonema streptocerca</i>	2	
194.	<i>Diphyllobothrium latum</i>	2	

195.	<i>Dracunculus medinensis</i>	2
196.	<i>Echinococcus granulosus</i>	3**
197.	<i>Echinococcus multilocularis</i>	3**
198.	<i>Echinococcus vogeli</i>	3**
199.	<i>Entamoeba histolytica</i>	2
200.	<i>Fasciola gigantica</i>	2
201.	<i>Fasciola hepatica</i>	2
202.	<i>Fasciolopsis buski</i>	2
203.	<i>Giardia lamblia (Giardia intestinalis)</i>	2
204.	<i>Hymenolepis diminuta</i>	2
205.	<i>Hymenolepis nana</i>	2
206.	<i>Leishmania brasiliensis</i>	3**
207.	<i>Leishmania donovani</i>	3**
208.	<i>Leishmania ethiopica</i>	2
209.	<i>Leishmania mexicana</i>	2
210.	<i>Leishmania peruviana</i>	2
211.	<i>Leishmania tropica</i>	2
212.	<i>Leishmania major</i>	2
213.	<i>Leishmania spp.</i>	2
214.	<i>Loa loa</i>	2
215.	<i>Mansonella ozzardi</i>	2
216.	<i>Mansonella perstans</i>	2
217.	<i>Naegleria fowleri</i>	3
218.	<i>Necator americanus</i>	2
219.	<i>Onchocerca volvulus</i>	2
220.	<i>Opisthorchis felinus</i>	2
221.	<i>Opisthorchis spp.</i>	2
222.	<i>Paragonimus westermani</i>	2
223.	<i>Plasmodium falciparum</i>	3**
224.	<i>Plasmodium spp. (human and monkey)</i>	2
225.	<i>Sarcocystis suihominis</i>	2
226.	<i>Schistosoma haematobium</i>	2
227.	<i>Schistosoma intercalatum</i>	2
228.	<i>Schistosoma japonicum</i>	2
229.	<i>Schistosoma mansoni</i>	2
230.	<i>Schistosoma mekongi</i>	2
231.	<i>Strongyloides stercoralis</i>	2
232.	<i>Strongyloides spp.</i>	2
233.	<i>Taenia saginata</i>	2
234.	<i>Taenia solium</i>	3**
235.	<i>Toxocara canis</i>	2
236.	<i>Toxoplasma gondii</i>	2
237.	<i>Trichinella spiralis</i>	2
238.	<i>Trichuris trichiura</i>	2
239.	<i>Trypanosoma brucei brucei</i>	2

240.	<i>Trypanosoma brucei gambiense</i>	2	
241.	<i>Trypanosoma brucei rhodesiense</i>	3**	
242.	<i>Trypanosoma cruzi</i>	3	
243.	<i>Wuchereria bancrofti</i>	2	

#### IV. Fungi

244.	<i>Aspergillus fumigatus</i>	2	A
245.	<i>Blastomyces dermatitidis</i> ( <i>Ajellomyces dermatitidis</i> )	3	
246.	<i>Candida albicans</i>	2	A
247.	<i>Candida tropicalis</i>	2	
248.	<i>Cladophialophora bantiana</i> (previously <i>Xylohypha bantiana</i> , <i>Cladosporium bantianum</i> or <i>trichoides</i> )	3	
249.	<i>Coccidioides imunitis</i>	3	A
250.	<i>Cryptococcus neofonnans</i> var. <i>neofonnans</i> ( <i>Filobasidiella neofonnans</i> var. <i>neofonnans</i> )	2	A
251.	<i>Cryptococcus neofonnans</i> var. <i>gattii</i> ( <i>Filobasidiella bacillispora</i> )	2	A
252.	<i>Emmonsia parva</i> var. <i>parva</i>	2	
253.	<i>Emmonsia parva</i> var. <i>crescens</i>	2	
254.	<i>Epidermophyton floccosum</i>	2	A
255.	<i>Fonsecaea compacta</i>	2	
256.	<i>Fonsecaea pedrosoi</i>	2	
257.	<i>Histoplasma capsulatum</i> var. <i>capsulatum</i> ( <i>Ajellomyces capsulatus</i> )	3	
258.	<i>Histoplasma capsulatum duboisii</i>	3	
259.	<i>Madurella grisea</i>	2	
260.	<i>Madurella mycetomatis</i>	2	
261.	<i>Microsporium</i> spp.	2	A
262.	<i>Neotestudina rosatii</i>	2	
263.	<i>Paracoccidioides brasiliensis</i>	3	
264.	<i>Penicillium marneffeii</i>	2	A
265.	<i>Scedosporium apiospermum</i> ( <i>Pseudallescheria boydii</i> )	2	
266.	<i>Scedosporium prolificans</i> ( <i>inflatum</i> )	2	
267.	<i>Sporothrix schenckii</i>	2	
268.	<i>Trichophyton rubrum</i>	2	
269.	<i>Trichophyton</i> spp.	2	

Notes and designations.

1. Classification includes biological agents, which may cause health impairment to a human, and possible toxicity and allergenic effect thereof, availability of an effective vaccine have been

indicated, as well as the agents have been specified after exposure to which the list of employees subject to exposure thereof is to be kept for 10 years designating them by letters:

A – allergy possible;

D – the list of such employees who have been subject to the exposure of such biological agent. The list shall be kept for 10 years after the end of the last known exposure;

T – production of toxins; and

V – effective vaccine available.

2. If several species of the biological agent are known, which may cause health impairments, such species as cause health impairment most frequently, and a general reference indicating the capability of another representatives of species belonging to the same genus to affect the state of health have been included in the classification. If the whole genus has been referred to in the list of biological agents, it means that species and strains known not to cause health impairment are not referred to.

3. Such animal and plant disease-causing agents, which are known as not affecting humans have not been included in the classification, as well as genetically modified micro-organisms have not been considered.

4. Biological agents have been classified in compliance with the nomenclature specified in international agreements in force at the time of the preparation of such a list.

5. Group 3 biological agents marked with two asterisks (\*\*) in the list may cause only a minor risk of infection to employees because usually it is not possible to become infected with them by inhalation.

6. The indication “spp.” next to the biological agents referred to in this list shall mean other species known as human disease-causing agents.

7. Indications on the biological agent mean:

a tick-borne encephalitis;

b hepatitis D virus is pathogenic only to such employees who have become infected simultaneously or secondary with hepatitis B virus. Therefore the vaccination against hepatitis B virus will also protect employees not infected with this virus against the hepatitis D (Delta) virus;

c for types A and B only;

d recommended for work, which includes direct contact with these agents;

e two viruses have been determined: one of them is the buffalopox type virus and other – *Vaccinia* virus variety;

f cowpox virus variety;

g *Vaccinia* virus variety;

h at present there is no evidence on human health impairment caused by retroviruses of similar origin. It is recommended to apply the containment level 3 as a precaution measure working with these viruses;

i there is no evidence that the agents causing other animal TSE may cause human infection. However, it is recommended to apply containment measures for protection in laboratory work

with group 3\*\* agents, except such laboratory work connected with the infected agent which has an adequate containment level 2.

Acting for the Minister for Welfare,  
Minister for Environmental Protection and Regional Development

V. Makarovs



**Containment Measures and Containment Levels for Protection of Employees against Risk  
when coming into Contact with Biological Agents**

No.	A. Containment measures	B. Containment level			
		2.	3.	4.	
1.	The workplace shall be separated from all other activities in the same building	no	recommended	yes	
2.	Input air and extract air at the workplace shall be filtrated utilising HEPA (ultra) filter or likewise	no	yes (extract air)	yes (input and extract air)	
3.	Access to the workplace shall be permitted only to employees specially designated and trained	recommended	yes	yes (through a hermetically sealed room)	
4.	The workplace shall be sealable for disinfection	no	recommended	yes	
5.	Specific disinfection procedures	yes	yes	yes	
6.	Air pressure lower than atmospheric pressure shall be maintained at the workplace	no	recommended	yes	
7.	Effective control of agent carriers (for example, rodents and insects)	recommended	yes	yes	
8.	Waterproof and easy to clean surfaces	yes (work surfaces)	yes (work surfaces and floors)	yes (work surfaces, walls, floors and ceilings)	
9.	Surfaces resistant to acids, alkalis, solvents and disinfectants	recommended	yes	yes	
10.	Safe storage of a biological agent	yes	yes	yes (protected storage facility)	
11.	An observance window or analogous thereof in order to see persons in the working premises	recommended	recommended	yes	
12.	The laboratory shall use only its own equipment and facilities for activities	no	recommended	yes	

- |     |   |               |                                 |                    |
|-----|---|---------------|---------------------------------|--------------------|
| 13. | Infected material, including all the animals, shall be treated in a safety chamber or an isolation facilities, or in another appropriate contained room | yes, required | yes (if infected by inhalation) | yes                |
| 14. | Cremation equipment of animal carcasses   | recommended   | yes (available)                 | yes (at workplace) |

Acting for the Minister for Welfare,  
Minister for Environmental Protection and Regional Development

V. Makarovs

**Containment Measures and Containment Levels for Protection of Employees against Risk  
when coming into Contact with Biological Agents in Industrial Processes**

No.	A. Containment measures	B. Containment level		
		2.	3.	4.
1.	Viable organisms shall be handled in the environment that physically separates the process from the environment	yes	yes	yes
2.	Exhaust gases from the closed system shall be treated in compliance with requirements specified for the relevant containment level	minimise release thereof	prevent release thereof	prevent release thereof
3.	Taking of samples, placing of materials in a closed system and transferring of viable organisms to another closed system shall be performed in compliance with requirements specified for the relevant containment level	minimise the release thereof	prevent release thereof	prevent release thereof
4.	Culture fluid (containing biological agents) shall not be taken out of the closed system in large quantities unless viable organisms are therein:	inactivated with approved means	inactivated with approved chemical or physical means	inactivated with approved chemical or physical means
5.	Containment means of the system shall be such as to:	minimise release	prevent release	prevent release
6.	The closed systems shall be located in the controlled territory	optional	optional	yes (specially arranged for this purpose)
6.1.	biohazard signs shall be placed	optional	yes	yes
6.2.	access to the workplace shall be permitted only to employees specially designated and trained	optional	yes	yes (through a hermetically sealed room)

6.3.	employees shall wear protective clothing	yes (working clothes)	yes	yes (complete change of clothing)
6.4.	employees shall have access to disinfection and washing facilities	yes	yes	yes
6.5.	employees shall have a shower before leaving the controlled territory	optional	optional	yes
6.6.	waste waters from sinks and showers shall be collected and inactivated before disposal thereof	no	optional	yes
6.7.	the controlled territory shall be adequately ventilated to reduce to the minimum the air contamination	optional	optional	yes
6.8.	air pressure lower than atmospheric pressure shall be maintained in the controlled territory	no	optional	yes
6.9.	input and extract air in the controlled territory shall be filtrated with HEPA (ultra) filter	no	optional	yes
6.10.	the controlled territory shall be designed to retain therein the whole content of the closed system in case of complete release	no	optional	yes
6.11.	the controlled territory shall be sealable for disinfection	no	optional	yes
6.12.	waste water treatment before the final disposal thereof	inactivated with approved means	inactivated with approved chemical or physical means	inactivated with approved chemical or physical means

Acting for the Minister for Welfare  
Minister for Environmental Protection and Regional Development

V. Makarovs