

RUSSIAN FEDERATION MINISTRY OF PUBLIC HEALTH

THE RUSSIAN FEDERATION CHIEF STATE SANITARY
PHYSICIAN

DECREE No: 36
Dated November 14, 2001

ON INTRODUCTION OF SANITARY RULES

In accordance with provisions of Federal Act N 52-Φ3 "On sanitary and epidemiological well-being of the population" dated March 30, 1999, and Regulations of the state sanitary and epidemiological norms approved by the Russian Federation Government's Decree No: 554 <*> of July 24, 2000, I hereby resolve:

<*> Code of the Russian Federation acts No: 31 (page 3295), 2000.

1. To introduce sanitary and epidemiological rules and norms "Hygienic requirements in respect of the safety and nutritional value of foodstuff". SanPiN 2.3.2.1078-01", as approved by the Russian Federation Chief State sanitary physician on 06.11.2001, from July 1, 2002.

G.G.ONISCHENKO

Approved
Russian Federation Chief
State sanitary
physician
Senior Deputy
Minister of public
Health of the
Russian Federation

G.G.Onischenko
06.11.2001

2.3.2. FOODSTUFF RAW MATERIALS AND FOOD

HYGIENIC REQUIREMENTS IN RESPECT OF THE SAFETY
AND NUTRITIONAL VALUE OF FOODSTUFF

SANITARY AND EPIDEMIOLOGICAL RULES AND NORMS
SanPiN 2.3.2.1078-01

I. Application area

1.1. sanitary and epidemiological rules and norms "Hygienic requirements in respect of the safety and nutritional value of foodstuff" (hereinafter referred to as "Sanitary Rules") shall determine hygienic safety and nutritional value norms of foodstuffs for the

humans, as well as requirements of compliance with the said norms in connection with production, importing and distribution of foodstuff.

1.2. These Sanitary Rules have been developed on the basis of Federal acts "On sanitary and epidemiological well-being of the population" (Code of the Russian Federation acts No:14, 1999, page 1650), "On quality and safety of foodstuff" (Code of the Russian Federation acts No:2, 2000, page 150), "On radiation safety of the population" (the Russian newspaper/Rossijskaya gazeta dated January 17, 1996.), "On protection of consumers' rights" (Code of the Russian Federation acts No:3, 1996, page 140), "Principles of the Russian Federation legislation concerning public health" (The gazette of Congress of the Russian Federation people's deputies and Supreme Soviet of the Russian Federation, No: 33, 1993, page 13818), the Russian Federation Government's Decree No: 554 dated July 24, 2000 "Approval of Regulations of the Russian Federation State sanitary and epidemiological service and Regulations of the State sanitary (Code of the Russian Federation acts No:31, 2000, page 3295).

1.3. Sanitary rules shall be destined for citizens, individual employers, legal entities, engaged in the activities connected with production, import and distribution of foodstuff, provision of services in the sphere of retail trade of foodstuff and the sphere of public catering, as well as for authorities and institutions of the Russian Federation State sanitary and epidemiological service (hereinafter referred to as the "Russian GosSanEpidService"), providing for the state sanitary and epidemiological supervision and control.

1.4. Hygienic requirements to materials and products contacting with foodstuff, shall be determined by special sanitary and epidemiological rules and norms.

II. General Provisions

2.1. Foodstuff shall satisfy physiologic needs of humans in necessary substances and energy, comply with the requirements set forth in respect of foodstuff as regards organoleptic and physical and chemical values. As well as shall comply with requirements prescribed by provisions of norms as regards permissible content of chemical, radiological, biologic substances and compounds, micro-organisms and other biologic organisms, being dangerous for the health of existing and future human generations.

2.2. Foodstuff to be produced, imported and distributed in the Russian Federation territory shall comply with sanitary norms as regards safety and nutritional value.

2.3. Production, import and distribution of foodstuff not complying with provisions of these Sanitary rules, shall be prohibited.

2.4. Provisions of these Sanitary rules shall be observed in connection with development of norms and technical documents regulating the matters concerning production, import and distribution of foodstuff.

2.5. While developing new kinds of foodstuff, new technologic production processes, packaging, storage and transportation, individual employers and legal entities shall motivate quality and safety requirements and requirements concerning preservation of quality and safety, develop programs for industrial quality and safety control, testing methods of quality and safety as well as define shelf life of such foodstuff.

2.6. Drafts of technical documents shall be subject to sanitary and epidemiological inspection in accordance with the established procedure.

2.7. Production of new foodstuff in the Russian Federation territory, importing of foodstuff to the Russian Federation territory to be carried out for the first time, shall be allowed only upon state

registration of such foodstuff in accordance with the established procedure.

2.8. Import foodstuff shall be subject to the state registration before being imported to the Russian Federation territory.

2.9. Foodstuff shall be produced in compliance with norms and technical documents and shall be certified by the manufacturer with quality and safety certificates (hereinafter referred to as the "Quality and safety certificates").

2.10. Foodstuff meant for public catering may not be equipped with Quality and safety certificates.

2.11. Compliance of the foodstuff and drafts of technical documents with provisions of Sanitary rules shall be confirmed by sanitary and epidemiological inspection to be done in accordance with the established procedure.

2.12. Should any quality and safety requirements in respect of any specific new product or any product to be imported for the first time, be absent from the Sanitary rules, such requirements shall be determined for such foodstuff including the following data:

- defined by the developer of such new product as given in the draft norms and/or technical document;
- defined by actual sanitary rules for similar products (as regards composition and features of the product);
- set forth in respect of the product in the country of origin;
- recommended by international organizations.

2.13. Requirements concerning safety and nutritional value of foodstuff shall be included in the sanitary and epidemiological statement to be issued in the established form by authorities and institutions of the Russian GosSanEpidService on the basis of results of sanitary and epidemiological inspection.

2.14. Information concerning pesticides used in connection with cultivation of agricultural crops, fumigation of premises and packing used for storage of agricultural crops, in connection with pest and vermin control as well as the date of last treatment shall be given in respect of raw materials of vegetable origin.

Information concerning use (or non-use) of pesticides for ecto-parasite control or diseases of animals and poultry, for the treatment of live-stock and poultry farm premises, fish-farms and ponds, including specification of pesticides so used and date of last treatment shall be given in respect of raw materials of animal origin.

2.15. Importing, use and distribution of raw materials of vegetable and animal origin without information concerning use of pesticides in connection with production of foodstuff, shall be prohibited.

2.16. Foodstuff shall be packed in due manner to provide for the due preservation of quality and safety on all stages of distribution.

2.17. Individual employers, legal entities, engaged in the activities connected with production and distribution of foodstuff, provision of services in the sphere of retail trade of foodstuff and the sphere of public catering shall provide buyers or consumers as well as bodies of state supervision and control with complete and true information concerning quality and safety of foodstuff, compliance with norms in the process of production and distribution of foodstuff and provision of services in the sphere of retail trade and public catering.

2.18. The following information shall be given for certain kinds of foodstuff (for children, dietary and special meals, food additives, biologically active additives, foodstuff produced using genetically modified products etc.):

- application area (food for children, dietary and special meals, food additives, biologically active additives);
- description of ingredients of the foodstuff, food additives, microbe cultures, ferments and substances used for the

enrichment of foodstuff; information of required day amount (in %%) if any) shall be given for biologically active additives and enriched products to be used in biologically active components;

- recommendations concerning use, application and contraindications, if necessary;

- information «This is not a medicine» shall be given for biologically active additives;

- information "genetically modified products" or "products made using genetically modified components", or "this product includes components of genetically modified sources" (in connection with foodstuff containing more than 5% of genetically modified components) shall be given for foodstuff produced from genetically modified components;

- information of the state registration.

Foodstuff produced from genetically modified sources and not containing deoxyribonucleic acid nor protein, may not be equipped with auxiliary label if their nutritional value is fully equivalent to that of the traditional similar product (appendix 4).

2.19. Terms "dietary", "medicinal", "Prophylactic", "children's" or similar in description of foodstuff, in information given on package and advertising leaves concerning the product shall be used in accordance with the established procedure.

2.20. Use of fodder additives, animal growth stimulants, medicines, pesticides, (including preparations for the treatment of animals and poultry, as well as preparations for the treatment of livestock farm premises) not undergone sanitary and epidemiological inspection nor registered in due manner, in production of raw material of animal origin for foodstuff, shall be prohibited.

2.21. Foodstuff containing fodder additives, animal growth stimulants (including hormone preparations), pesticides, agricultural chemical substances, not undergone sanitary and epidemiological inspection nor registered in due manner, shall not be imported, produced nor distributed in the Russian Federation territory. Such products shall be utilized or eliminated in accordance with the established procedure.

2.22. Compliance of foodstuff with safety and nutritional value requirements shall be under industrial and state sanitary and epidemiological control and supervision.

2.23. Individual employers, legal entities, engaged in the activities connected with production, import and distribution of foodstuff shall provide for industrial control, including laboratory examinations and testing, over compliance of safety and nutritional value of foodstuff with requirements of these Sanitary rules in accordance with sanitary rules concerning organization and fulfillment of industrial control.

2.24. In consideration of the results of measures aimed at the provision of quality and safety of foodstuff, compliance with requirements of norms and technical documents, including industrial control, individual employers and legal entities, engaged in the activities connected with production and distribution of foodstuff shall issue certificates of quality and safety in respect of each batch of certain foodstuff.

2.25. Individual employers and legal entities, engaged in the activities connected with production and distribution of foodstuff shall do laboratory examinations and testing independently or with the assistance of laboratories accredited in accordance with the established procedure.

2.26. Metrologically attested methods complying with the requirements of provision of identity of measurements and complying with specification of measurement errors, application methods of samples and control over parameters, as well as methods meeting the said requirements and approved in due manner, shall be allowed for the

purposes if such laboratory examinations and testing of quality and safety levels of foodstuff.

2.27. Norms and technical documents concerning nutrient media, meant for the control of microbiological safety and nutritional value factors of foodstuff, shall be subject to sanitary and epidemiological inspection in accordance with the established procedure.

2.28. In case of unsatisfactory results concerning at least one of the safety factors, examination shall be repeated with double amount of samples from the same batch. Results of the repeated examination shall apply to the whole batch.

2.29. State sanitary and epidemiological supervision and control of the compliance of foodstuff with provisions of these Sanitary rules shall be carried out by authorities and institutions of the Russian GosSanEpidService in accordance with the established procedure.

III. Hygienic safety and nutritional value requirements in respect of foodstuff

3.1. These Sanitary rules shall prescribe hygienic safety and nutritional value requirements in respect of foodstuff and capability of foodstuff to satisfy physiological needs of the human in basic nutrition substances and energy.

3.2. Organoleptic features of foodstuff shall be determined by taste, colour, odour and consistence typical for each certain kind of products and shall satisfy traditional steady tastes and customs of the population. Organoleptic features of foodstuff shall not change during storage, transportation and realization.

3.3. Foodstuff shall not have foreign odours, smacks, insertions, shall not differ in colour or consistence from those typical for the said product.

3.4. Microbiological and radiation safety of foodstuff as well as permissible amount of chemical contaminants shall be determined in accordance with compliance of foodstuff with hygienic norms defined by these Sanitary rules. (appendix 1).

3.5. Safety and nutritional value factors of foodstuff including biologically active additives and mixtures shall be determined for the basic kind(s) of raw material(s) both on the basis of their mass portion and permissible level of contaminants to be rationed.

3.6. Safety factors of dry foodstuff, concentrates or diluted foodstuff shall be determined in consideration of initial product and dry substances content in raw material and final product.

3.7. Hygienic norms shall apply to potentially dangerous chemical compounds and biological objects, which amount in foodstuff shall not exceed permissible levels in the rated mass (amount) of the product under consideration.

3.8. Basic chemical contaminants content in foodstuff being dangerous for the human health shall be controlled.

Hygienic requirements concerning permissible level of toxic elements shall apply to all kinds of raw materials and foodstuff.

3.9. Content of myco-toxicoids - aflatoxine B1, deoxynivalenol (vomitoxine), zearalenon, toxicoid T-2, patulin - shall be under control in respect of raw materials and foodstuff of vegetable origin; aflatoxine M1 - in milk and dairy products. The following contaminants are basic for certain products: deoxynivalenol for grain-crops, aflatoxine B1 for nuts and seeds, patulin for products produced from fruits and vegetables.

3.10. Presence of myco-toxicoids in foodstuff for children and dietary products shall be prohibited.

3.11. Presence of the following pesticides in all kinds of raw materials and foodstuff shall be under control: hexachlorocyclohexan (alpha-, beta-, gamma-isomers), DDT and its metabolites. Content of

mercury and organic pesticides, 2,4-D acid, its salts and ethers shall be under control in respect of grain-crops and processed products. Content of 2,4-D acid, its salts and ethers shall be under control in respect of fish and fish products.

3.12. Control of raw materials and foodstuff in respect of content of residual amount of pesticides and agricultural chemicals, including fumigants, shall be based on information to be submitted by the manufacturer (supplier) of products about pesticides and agricultural chemicals used in connection with production and storage of foodstuff.

3.13. Sanitary and epidemiological inspection of raw-materials and foodstuff containing pesticides shall be completed in accordance with actual hygienic norms concerning content of pesticides in environmental objects.

3.14. Products of animal origin shall be under control in respect of residual amount of growth stimulants (including hormone preparations), medicines (including antibiotics), used in live-stock breeding for the purposes of fattening, care and prophylactic measures in respect of live-stock and poultry.

Live-stock and poultry meat, meat products, sub-products shall be under control in respect of presence of both approved fodder antibiotics (grizine, bacitracin) and medicinal antibiotics often used in veterinary (antibiotics of tetracycline group, levomycetin. Milk and dairy shall be under control in respect of presence of penicillin, streptomycin, antibiotics of tetracycline group, levomycetin; eggs and egg products shall be under control in respect of presence of bacitracin, antibiotics of tetracycline group, streptomycin, levomycetin.

3.15. Control of content of growth stimulants (including hormone preparations), medicines (including antibiotics), used in live-stock breeding for the purposes of fattening, care and prophylactic measures in respect of live-stock and poultry not mentioned in section 3.14 above, shall be based on information to be submitted by the manufacturer (supplier) of products about growth stimulants and medicines used in connection with production and storage.

3.16. Polychlorinated biphenyls shall be under control in respect of fish and fish products; benzo-pyrene - in respect of grain-crops, smoked meat and fish products.

3.17. Presence of benzo-pyrene in foodstuff for children and dietary products shall be prohibited.

3.18. Presence of the following compounds shall be under control in respect of certain foodstuff: compounds containing nitrogen: histamine - in salmon and mackerel fish (including tunny-fish group); nitrates - in fruits and vegetables; N-nitrosamines - in fish and fish products, meat products and brewing malts.

3.19. Factors of oxidizing (acidity factor and peroxide factor) shall be under control in respect of fat-products.

3.20. Hygienic norms concerning radio-nucleids content shall apply to foodstuff.

Radiation safety of foodstuff in respect of presence of caesium-137 and strontium-90 shall be defined in accordance with permissible levels of specific activity of radio-nucleids, as stipulated by provisions of these Sanitary rules. Conformity factor B, which value shall be calculated proceeding from the results of measurement of specific activity of caesium-137 and strontium-90 in the probe, shall be used for the purpose of determination of compliance of foodstuff with radiation safety criteria:

$$B = \frac{A}{H} \left(\text{Sr}_{90} + \text{Sr}_{137} \right), \text{ where } A - \text{measured specific activity of Sr}_{90} \text{ and Sr}_{137} \text{ in the foodstuff (Bk/kg); } H - \text{permissible}$$

specific activity level for Sr and Sr in the same product (Bk/kg).

Radiation safety of foodstuff contaminated with other radio-nucleids, shall be determined in accordance with sanitary rules concerning radiation safety norms.

3.21. Presence of pathogenic micro-organisms and pathogenic germs, their toxicoids, causing infection and parasitic diseases or being dangerous for the human health and animals, in foodstuff, shall be prohibited.

3.22. Sanitary and epidemiological inspection of meat and meat products, fish, crustacean, molluscs, amphibian, reptiles and processed products in respect of presence of pathogenic germs, shall be done in accordance with provisions of sanitary rules concerning parasitological control and in accordance with parasitological safety factors (appendix 6).

3.23. Presence of the following pathogenic germs which may cause parasitic diseases: finna (cystiser), trichina and echinococci larvae, cysts of sarcocysts and toxoplasms, in meat and meat products - shall be prohibited.

3.24. Presence of live parasites larvae being dangerous for the human health, in fish, crustacean, molluscs, amphibian, reptiles and processed products shall be prohibited.

Should any live helmint larvae be found in products, sanitary rules concerning preventive measures against parasitic diseases shall apply.

3.25. Presence of helminths' eggs and intestinal pathogenic protozoa's cysts in fresh and frozen greens, vegetables, fruits and berries shall be prohibited.

3.26. Hygienic norms concerning parasitological safety factors of drinking water shall be defined in accordance with hygienic norms prescribed for the quality of water of central water supply systems.

3.27. Hygienic norms concerning microbiologic safety factors and nutritional value of foodstuff shall include the following groups of micro-organisms:

- sanitary-demonstrative, comprising: amount of mesophylic aero- and facultative anaerobic micro-organisms, intestinal bacillus group (coliforms), Enterobacteriaceae, enterococcus;
- conventional pathogenic micro-organisms, comprising: E. coli, S. aureus, bacteria Proteus, B. cereus and sulphite-reducing clostridia, Vibrio parahaemolyticus;
- pathogenic micro-organisms including Salmonella and Listeria monocytogenes, bacteria Yersinia;
- oxidizing micro-organisms - yield and mould, sour milk micro-organisms;
- ferment micro flora micro-organisms and probiotic micro-organisms (sour milk micro-organisms, yield, biphidobacteria, acidophilic bacteria etc.) - in products with rationed level of biotechnological micro-flora and in pro-biotic products.

3.28. Microbiologic safety factors of foodstuff shall be rationed in respect of most groups of micro-organisms in accordance with the alternative principle, i.e. product mass presence of intestinal pathogenic protozoa, most of conventional pathogenic micro-organisms, as well as pathogenic micro-organisms, including salmonella and Listeria monocytogenes, in which is prohibited, shall be rationed. In other cases norms shall reflect amount of colony forming units per 1 g (ml) of the product (COE/g, ml).

3.29. Criteria of safety of tinned foodstuff (industrially sterilized) shall be absence of micro-organisms able to develop under storage temperature, defined for certain type of tinned products, and

micro-organisms and microbic toxicoids dangerous for the human health (appendix 8).

3.30. Biologically active additives are the source of food, minor, pro- and prebiotic natural (identical to natural) biologically active food substances (components), providing for their coming into the human organism with food or being included in foodstuff.

Biologically active substances, food components and products being their sources, used in production of biologically active food additives, shall provide for their efficiency and shall not have harmful effect on the human health. (appendix 5a).

Biologically active substances, food components and products being their sources, being dangerous for the human life and health (according to the results of contemporary scientific examinations), when used as components of biologically active food additives, shall be prohibited for use in production of biologically active food additives. (appendix 5b).

3.31. Nutritional value shall be determined for foodstuff. Nutritional value of foodstuff shall be grounded by the manufacturer (developer of technical documents) on the basis of analytical examination methods and/or by using calculation method taking into account formulae of foodstuff and information concerning raw materials.

3.32. Some food products shall meet requirements of these Sanitary rules as regards nutritional value of products. (appendix 2).

3.33. Foodstuff for children shall comply with functional state of the child's organism taking into account age of the child, and shall be safe for the child's health.

3.34. Foodstuff for children and components, foodstuff for pregnant and nursing women (hereinafter referred to as „Special products“) shall comply with hygienic safety and nutritional value norms, determined by these Sanitary rules. (appendix 3).

3.35. It shall be allowed to use food additives, not having harmful effect on the human life and health, nor on the health of future generations (according to the results of contemporary scientific examinations) (appendix 7), in foodstuff.

Foodstuff containing food additives not mentioned in appendix 7, shall not be produced, imported and realized in the Russian Federation territory. They shall be utilized in accordance with the established procedure.

3.36. Use of food additives and permissible levels of their content in foodstuff shall be governed by sanitary rules concerning food additives.

Appendix 1
 To SanPiN 2.3.2.1078-01,
 Approved by Decree
 No: 36 dated
 November 14, 2001,
 of
 The Russian Federation
 Chief State
 sanitary physician

Section:

1.3. Fish, non-fish trade objects and products made of them

| Index, product group | Description | Permissible levels Mg/kg, max. | Comments |
|---|--|---|--|
| 1 | 2 | 3 | 4 |
| 1.3.1. Live fish, fresh fish, cooled fish, frozen fish, minced fish, filet, meat of sea mammals | Toxic elements: Lead Arsenic Cadmium mercury | 1,0 2,0 1,0 5,0 0,2 0,3 0,6 0,5 1,0 | Tunny, sword-fish, white river sturgeon Sea fish River fish Non-predatory River fish Predatory Sea fish Tunny, sword-fish, white sturgeon |
| | Histamine | 100,0 | Tunny, Macherel, salmon herring |
| | Nitrosamines: NDMA+NDEA | 0,003 | |
| | Pesticides: <*> hexachlorcyclohexan (alpha-, beta-, gamma-isomers), DDT and its metabolites 2,4-D acid, its salts and ethers | 0,2 0,03 0,2 0,3 2,0 0,2 not allowed | Sea fish, sea animals' meat River fish Sea fish River fish Surgeon, salmon, herring sea animals' meat river fish |
| | Polychloride biphenyls | 2,0 | |
| | Radio-nucleids: caesium-137 and strontium-90 | 130 100 | Bk/kg ditto |
| | | | |

| Microbiological factors | | | | | |
|---|---|---|-----------|--|---|
| Index, product group | Amount of mesophilic aerobic and facultative anaerobic micro-organisms, intestinal bacillus group (coliforms), Enterobacteriaceae, enterococcus (COE/g, max.) | Product weight (g) presence of the following germs is prohibited: | | | Comments |
| | | intestinal pathogenic protozoa (coliforms) | S. aureus | pathogenic micro-organisms including Salmonella and Listeria monocytogenes | |
| 1.3.1.1.Raw and fresh fish | 5 x 1E4 | 0,01 | 0,01 | 25 | V. parahaemolyticus, max.100 COE/g for sea fish |
| 1.3.1.2. cooled fish, frozen fish, | 5 x 1E5 | 0,001 | 0,01 | 25 | ditto |
| 1.3.1.3. cooled and frozen fish products: - filet - special product | 5 x 1E5 | 0,001 | 0,01 | 25 | Ditto Sulphite reducing Clostridies 0,01 g, not allowed in vacuum packaged products ditto |
| - minced fish, products formed of minced fish, including with bread components - special minced fish | 5 x 1E5 | 0,001 | 0,01 | 25 | |
| | 5 x 1E4 | 0,01 | 0,01 | 25 <*> | Sulphite reducing Clostridies 0,01 g, not allowed in vacuum packaged products <*>salmonella only |

| Index, product group | Description | Permissible levels Mg/kg, max. | Comments |
|------------------------------------|---|-----------------------------------|--|
| 1 | 2 | 3 | 4 |
| 1.3.2. Tinned fish, preserved fish | Toxic elements: Lead Arsenic Cadmium Mercury tin | See section 1.3.1 200 | For tinned products in pre-Fabricated tins |
| | Chrome Benzopyrene | 0,5 0,001 <*> | For tinned products in chrome-plated tins <*> for smoked products |

| | | | |
|--|--|----------------------|--|
| | Histamine Nitrosamines, Pesticides, Polychloride biphenyls and radionucleids | See section 1.3.1 | |
|--|--|----------------------|--|

| Microbiological factors | | | | | | |
|--|---|--|--------------|-------------------------------------|---|--|
| Index, product group | Amount of mesophylic aero- and facultative anaerobic micro- organisms, intestinal bacillus group (coliforms), Enterobacteriaceae, enterococcus (COE/g, max.) | Product weight (g) presence of the following germs is prohibited: | | | | Comments |
| | | coliforms | S. aureus | Sulphite reducing Clostridies | pathogenic micro- organisms including Salmonella and Listeria monocytogenes | |
| 1.3.2.1. preserved fish, spicy, salted, special salted of cut and uncut fish | 5 x 1E5 | 0,01 | - | 0,01 | 25 | Mould max. 10 COE/g, Yield max. 100 COE/g |
| 1.3.2.2. preserved fish, spicy, slightly salted, special salted of: - cut fish - uncut fish | 5 x 1E5 5 x 1E4 | 0,01 0,01 | 1,0 1,0 | 0,01 0,01 | 25 25 | Mould max. 10 COE/g, Yield max. 100 COE/g ditto ditto |
| 1.3.2.3. preserved cut fish,with oil, dressing, with or without garnish (including salmon with oil) | 2 x 1E5 | 0,01 | 1,0 | 0,01 | 25 | ditto |
| 1.3.2.4. preserved - fish pastes - protein pastes | 5 x 1E5 1 x 1E5 | 0,01 0,1 | 0,1 0,1 | 0,01 0,1 | 25 25 | ditto ditto |
| 1.3.2.5. preserved processed | 5 x 1E4 | 1,0 | 1,0 | 1,0 | 25 | |

| | | | | | |
|---|---|--|--|--|--|
| fish | | | | | |
| 1.3.2.6. tinned fish in glass, aluminium or steel tins | Shall meet requirements concerning industrial sterility for tinned products, class A, in accordance with provisions of Appendix 8 of these Sanitary rules | | | | |
| 1.3.2.7. semi- preserved fish products, pasteurized, in glass tins | Shall meet requirements concerning industrial sterility for tinned products, class D, in accordance with provisions of Appendix 8 of these Sanitary rules | | | | |

| Index, product group | Description | Permissible levels Mg/kg, max. | Comments |
|---|--|--|--|
| 1 | 2 | 3 | 4 |
| 1.3.3. Dried, stockfish, smoked and pickled fish, coockery and other ready products | Toxic elements, Histamines and Polychloride biphenyls | See section 1.3.1 200 | in consideration of initial product and dry substances content in raw material and final product |
| | Nitrosamines | 0,003 | |
| -smoked, pickled, salted and other fish products - Dried, stockfish | Radio-nucleids: caesium-137 and strontium-90 | 260 200 | Bk/kg ditto |
| | Pesticides: <*> hexachlorcyclohexan (alpha-, beta-, gamma- isomers) DDT and its metabolites Benzopyrene | 0,2 0,4 2,0 0,001 | Cured fish filet, herring Smoked fish |

| Microbiological factors | | | | | |
|-------------------------|--|---|-----------|-------------------------------|--|
| Index, product group | Amount of mesophylic aero- and facultative anaerobic micro-organisms, intestinal bacillus group (coliforms), Enterobacteriaceae enterococcus (COE/g, max.) | Product weight (g) presence of the following germs is prohibited: | | | Comments |
| | | coliforms | S. aureus | Sulphite reducing Clostridies | pathogenic micro-organisms including Salmonella and Listeria monocytogenes |

| | | | | | | |
|---|-----------|------|-----|------------|----------|---|
| 1.3.3.1. hot smoked fish, including frozen | 1 x 1E4 | 1,0 | 1,0 | 0,1 <*> | 25 | <*> in vacuum package |
| 1.3.3.2. cold smoked fish: -frozen | 1 x 1E4 | 0,1 | 1,0 | 0,1 <*> | 25 | <*> ditto V. parahaemo -lyticus, max.100 COE/g for sea fish |
| -sliced (non-sliced) | 3 x 1E4 | 0,1 | 1,0 | 0,1 <*> | 25 | <*> ditto V. parahaemo -lyticus, max.100 COE/g for sea fish |
| -cured fish filet, cold smoked and sliced | 7,5 x 1E4 | 0,1 | 1,0 | 0,1 <*> | 25 | <*> in vacuum package |
| - assorted fish, ham, minced fish filet, spicy products | 1 x 1E5 | 0,01 | 0,1 | 0,1 <*> | 25 | <*> ditto |
| 1.3.3.3. salted, smoked fish filet, frozen and vacuum packed | 5 x 1E4 | 0,1 | 0,1 | 0,1 | 25 | V. parahaemo -lyticus, max.100 COE/g for sea fish |
| 1.3.3.4. salted, spicy, pickled fish: - uncut | 1 x 1E5 | 0,1 | - | 0,1 <*> | 25 | <*> in vacuum package |
| - cut salted and slightly salted incl. Salmon without preservatives , sliced filet, with oil, dressing, with or without garnish | 1 x 1E5 | 0,01 | 0,1 | 0,1<*> | 25 | <*> in vacuum package |
| 1.3.3.5. stockfish | 5 x 1E4 | 0,1 | - | 1,0 <*> | 25 <***> | <*> in vacuum package <***> salmonell a only mould max.50 COE/g, yield |

| | | | | | | |
|--|---------|------|-----|---------|----------|---|
| | | | | | | max.100 COE/g |
| 1.3.3.6. short weight dried fish | 5 x 1E4 | 0,1 | - | 1,0 <*> | 25 <***> | <*> in vacuum package <***> salmonell a only mould max.50 COE/g, yield max.100 COE/g |
| 1.3.3.7. dried fish | 5 x 1E4 | 0,1 | - | 1,0 <*> | 25 <***> | <*> in vacuum package <***> salmonell a only mould max.50 COE/g, yield max.100 COE/g |
| 1.3.3.8. fish soups, dry product to be cooked | 5 x 1E5 | 0,01 | - | - | 25 <***> | <***> salmonell a only mould and yield max.100 COE/g |
| 1.3.3.9. cookery products, processed: | | | | | | |
| - fish and minced fish products, pastes, pate, baked, fried, cooked, with oil, dressing etc., with flour component (pasties, pelmeni etc., incl. Frozen products) | 1 x 1E4 | 1,0 | 1,0 | 1,0 <*> | 25 <***> | <*> in vacuum package <***> salmonell a only mould and yield max.100 COE/g |
| - multi- component products, thick soup, pilau, snacks, stewed snacks, sea products with vegetables incl. Frozen; | 5 x 1E4 | 0,01 | 1,0 | 1,0 <*> | 25 <***> | <*> in vacuum package <***> salmonell a only |
| - jelled products, galantine, jellied fish | 5 x 1E4 | 0,1 | 1,0 | - | 25 <*> | <*> salmonell a only |

| | | | | | | |
|---|---------|-------|-----|---------|--------|--|
| etc. | | | | | | |
| 1.3.3.10. cooking products, non- processed: | | | | | | |
| - fish and sea product salads without dressing; | 1 x 1E4 | 1,0 | 1,0 | - | 25 | Proteus is not allowed in 0,1 g of the product |
| - salted fish, cut; pate and pastes; | 2 x 1E5 | 0,01 | 0,1 | - | 25 | ditto |
| - butter: with herring, caviar, shrimp products etc. | 2 x 1E5 | 0,001 | 0,1 | - | 25 | Ditto |
| 1.3.3.11. cooked and frozen products: | | | | | | |
| - ready frozen lunch and snack fish meals, pancakes with fish, fish stuffing incl. In vacuum package | 2 x 1E4 | 0,1 | 0,1 | 0,1 <*> | 25 | enterococ cus - 1 x 1E3 COE/g max. (in sliced and served products) <*> in vacuum package |
| - structured products ("crab sticks" etc.) | 1 x 1E3 | 1,0 | 1,0 | 1,0 | 25 | enterococ cus - 2 x 1E3 COE/g max. (in minced products) |
| 1.3.3.12. mayonnaise on the basis of fish broth | - | 0,01 | - | - | 25 <*> | <*> salmonell a only mould max. 10 COE/g, yield max. 100 COE/g |

| Index, product group | Description | Permissible levels Mg/kg, max. | Comments |
|---|---|-----------------------------------|----------|
| 1 | 2 | 3 | 4 |
| 1.3.4. Fish caviar and soft roe and products from caviar and soft roe; caviar analogues | Toxic elements: Lead Arsenic Cadmium mercury | 1,0 1,0 1,0 0,2 | |
| | Pesticides: <*> hexachlorcyclohexan (alpha-, beta-, gamma-isomers), DDT and its metabolites | 0,2 2,0 | |
| | Polychloride biphenyls, Radio-nucleids | See section 1.3.1 | |

Microbiological factors

| Index, product group | Amount of mesophylic aerobic and facultative anaerobic micro-organisms, intestinal bacillus group (coliforms), Enterobacteriaceae, enterococcus (COE/g, max.) | Product weight (g) presence of the following germs is prohibited: | | | | Mould, COE/g, Max. | Yield, COE/g, Max. | Comments |
|--|---|---|-----------|-------------------------------|---|--------------------|--------------------|---|
| | | coliforms | S. aureus | Sulphite reducing Clostridies | pathogenic micro-organisms including Salmonella | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1.3.4.1 Fish soft roe and caviar (cooled and frozen) | 5 x 1E4 | 0,001 | 0,01 | - | 25 | - | - | L.Monocytogene not allowed in 25 g; V.paraheamolycus Max.100 COE/g for sea fish |
| 1.3.4.2. Soft roe, salted | 1 x 1E5 | 0,1 | 0,1 | - | 25 | - | - | L.Monocytogene not allowed in 25 g; |
| 1.3.4.3. cookery caviar products: - processed; | 1 x 1E4 | 1,0 | 1,0 | - | 25 | - | - | |

| | | | | | | | | |
|---|--|-------------------|-------------------|-------------------|-------------------------------------|---------------------|--|---|
| - multi-component products, unprocessed, mixed | 2 x 1E5 | 0,1 | 0,1 | - | 25 | - | - | L.Monocytogene not allowed in 25 g; Proteus not allowed in 0,1 g |
| 1.3.4.4. Sturgeon caviar: - soft packed, pressed; - soft caviar, pausterized; - salted, slightly salted | 1 x 1E4 1 x 1E3 5 x 1E4 | 1,0 1,0 1,0 | 1,0 1,0 1,0 | 1,0 1,0 1,0 | 25 25 25 | 50 0,1 <*> 50 | 50 0,1 <*> 100 | <*> weight (g) in which not allowed |
| 1.3.4.5. Salmon caviar, soft salted: - tinned, from the wood; - fresh frozen | 1 x 1E5 5 x 1E4 | 1,0 1,0 | 1,0 1,0 | 1,0 1,0 | 25 25 | 50 50 | 300 200 | |
| 1.3.4.4. Hard roe (caviar) of other fish species: - punched salted, slightly salted, smoked, dried; - pausterized | 1 x 1E5 5 x 1E3 | 0,1 1,0 | 1,0 1,0 | 1,0 1,0 | 25 25 | 50 0,1 <*> | 300 0,1 <*> | <*> weight (g) in which not allowed |
| 1.3.4.7. caviar analogues, incl. protein | 1 x 1E4 | 0,1 | 1,0 | 0,1 | 25 | 50 | 50 | |
| Index, product group | Description | | | | Permissible levels Mg/kg, max. | | Comments | |
| 1 | 2 | | | | 3 | | 4 | |
| 1.3.5. Fish liver and fish liver products | Toxic elements: Lead Cadmium mercury tin chrome | | | | 1,0 0,7 0,5 200 0,5 | | For tinned products (in prefabricated tin) For tinned products (in chrome-plated tin) | |
| | Pesticides: <*> | | | | | | | |

| | | | |
|--|--|---|---|
| | hexachlorcyclohexan (alpha-, beta-, gamma- isomers), DDT and its metabolites | 1,0 3,0 | |
| | Polychloride biphenyls | 5,0 | |
| | Radio-nucleids: | See section 1.3.1 | |
| Microbiological factors | | | |
| 1.3.5.1. tinned fish liver and fish liver products | Shall meet requirements concerning industrial sterility for tinned products, class A, in accordance with provisions of Appendix 8 of these Sanitary rules | | |
| 1.3.5.2. fish liver and fish heads, frozen | Microbiological factors: amount of mesophylic aero- and facultative anaerobic micro- organisms intestinal bacillus group (coliforms) S. aureus V. parahaemolyticus Pathogenic micro-organisms, incl. Salmonella and L. monocytogenes | 1 x 1E5 0, 001 0,01 100 25 | COE/g, max., product Weight (g) in which they are not allowed Ditto COE/g max. for sea fish ditto |
| Index, product group | Description | Permissible levels Mg/kg, max. | Comments |
| 1.3.6. Cod-liver oil | See section „Oil raw Section 1.7.8. | Materials and | Fat products" |
| 1.3.7. Molluscs, crustacea, invertebrates, seaweed and processed products, as well as Amphibian and reptiles - Molluscs, crustacea - seaweed | Toxic elements: Lead Arsenic Cadmium mercury Lead Arsenic Cadmium mercury Radio-nucleids: caesium-137 and strontium-90 | 1,0 0,7 0,5 200 10,0 5,0 2,0 0,2 0,5 5,0 1,0 0,1 200 100 | |
| Microbiological factors | | | |
| Index, product group | Amount of mesophylic aero- and facultative anaerobic micro- organisms, intestinal bacillus group (coliforms), Enterobacteriaceae, enterococcus (COE/g, max.) | Product weight (g) presence of the following germs is prohibited: | Comments |
| | | coliforms | S. aureus |
| | | Sulphite reducing | pathogenic micro- |

| | | | | Clostridies | organisms including Salmonella and Listeria monocytogenes | |
|--|---|-------|------|-------------|---|--|
| 1.3.7.1. Crustacea: -live | 5 x 1E4 | 0,01 | 0,01 | - | 25 | V. parahaemolyticus, max.100 COE/g for sea crustaceae |
| - cooled, frozen | 1 x 1E5 | 0,001 | 0,01 | - | 25 | Ditto |
| Bivalve molluscs (oysters etc.), live | 5 x 1E3 | 1,0 | 0,1 | 0,1 | 25 | E.coli not allowed in 1,0 g; Enterococcus not allowed in 0,1 g; V. parahaemolyticus not allowed in 25 g for sea molluscs |
| - cooled, frozen | 5 x 1E4 | 0,1 | 0,1 | - | 25 | V. parahaemolyticus, max.100 COE/g for sea molluscs ditto |
| - Cephalopoda | 1 x 1E5 | 0,001 | 0,01 | - | 25 | |
| 1.3.7.2. preserved products (molluscs etc.) with oil, dressing, with or without garnish | 2 x 1E5 | 0,01 | 1,0 | 0,01 | 25 <*> | <*> salmonella only mould max.10 COE/g, yield max.100 COE/g |
| 1.3.7.3. preserved products (bivalve molluscs) with oil, dressing, with or without garnish | 5 x 1E4 | 0,1 | 0,1 | - | 25 <*> | <*> salmonella only mould max.10 COE/g, yield max.100 COE/g |
| 1.3.7.4. preserved non-fish products (Molluscs, crustacea, invertebrates etc.) | Shall meet requirements concerning industrial sterility for tinned products, class A, in accordance with provisions of Appendix 8 of these Sanitary rules | | | | | |
| 1.3.7.5. stock- and dried products (of sea invertebrates) | 2 x 1E4 | 1,0 | - | 0,1 | 25 <*> | <*> salmonella only mould and yield max.100 COE/g |
| 1.3.7.6. cooked and | | | | | | <*> in |

| | | | | | | |
|---|--|---------------------------|---------------------------|---------------------------------------|------------------------------------|---|
| frozen products of non-fish origin - crustacea - molluscs, meals from bivalve molluscs - meals from shrimps, crabs etc. | 2 x 1E4 2 x 1E4 2 x 1E4 | 0,1 1,0 0,1 | 0,1 1,0 1,0 | 1,0 <*> 1,0 <*> 1,0 <*> | 25 25 25 | vacuum package Enterococcus COE/g max: 1 x 1E3 - in Sliced products; 2 x 1E3 - in minced products <*> in vacuum package Enterococcus COE/g max: 1 x 1E3 - in Sliced products; 2 x 1E3 - in minced products ditto Enterococcus COE/g max: 1 x 1E3 - in Sliced products; 2 x 1E3 - in minced products |
| 1.3.7.7. dried and protein products (of non-fish origin): - powder thick soup from oysters, bricks and pastes, isolated protein -hydrolyzed product from oysters - protein and carbohydrate concentrate from oysters | 5 x 1E4 5 x 1E3 - | 0,1 1,0 1,0 | - 1,0 1,0 | 0,001 - 1,0 | 25 <*> 25 <*> 25 <*> | <*> salmonella only ditto ditto |
| 1.3.7.8. seaweed and seaweed products: - raw seaweed (incl.frozen) - dried sea-kale - sea-kale jams | 5 x 1E4 5 x 1E4 5 x 1E3 | 0,1 1,0 1,0 | - - - | - - - | 25 <*> 25 <*> 25 <*> | <*> ditto <*> salmonella only mould max. 100 COE/g <*> salmonella only |
| - agar-agar, agaroid, phurcellarin, sodium alginate | See section "Other products", 1.9.6.2. | | | | | |

 <*> Residual quantity of pesticides used in connection with production of raw material shall be under control (see sections 3.12., 3.13.)

| Index, product group | Description | Permissible levels Mg/kg, max. | Comments |
|--|--|-----------------------------------|-----------------------------------|
| 1 | 2 | 3 | 4 |
| 1.7.8. Cod liver oil and mammals' fat (to be used as prophylactic and medical means) | Factors of oxidizing Spoilure: Acid ratio Peroxide ratio | 4,0 10,0 | Mg CON/g mmol active agents |
| | Toxic elements: Lead Arsenic Cadmium mercury | 1,0 1,0 0,2 0,3 | |
| | Pesticides: <*> hexachlorocyclohexan (alpha-, beta-, gamma-isomers), DDT and its metabolites | 0,1 0,2 | |
| | Polychloride biphenyls | 3,0 | |
| | Radio-nucleids: caesium-137 and strontium-90 | 60 80 | Bk/kg ditto |

 <*> Residual quantity of pesticides used in connection with production of raw material shall be under control

<*> In case of use of chemical methods in connection with detection of grizine, bacitracine, penicillin, streptomycin and other antibiotics of the same group actual quantity shall be changed into units/g in accordance with activity rate of the standard.

| | | | | | | | |
|---|---------|-----|-----|-----|-----|----|--|
| 1.9.15.6. Jelled fish products, Jelled meat (beef, pork) and jelled poultry products | 1 x 1E3 | 1,0 | - | 1,0 | 0,1 | 25 | |
| | 1 x 1E4 | 0,1 | 1,0 | 0,1 | 0,1 | 25 | |
| Meat and liver pate Beef, poultry, rabbit, pork etc. , cooked Fish cooked, fried, dressed | 1 x 1E4 | 0,1 | 1,0 | 0,1 | 0,1 | 25 | Without oil and dressing |
| | 1 x 1E4 | 1,0 | - | 1,0 | 0,1 | 25 | |
| | 1 x 1E4 | 1,0 | - | 1,0 | 0,1 | 25 | |
| 1.9.15.17. Ready cookery products, from fish and poultry (ready served, incl. in vacuum package) | 1 x 1E3 | 1,0 | - | 1,0 | 0,1 | 25 | Sulphide reducing clostridies are not allowed in 0,1 g of the product in vacuum packages |

1.10. Biologically active food additives

| | | | |
|---|--|---|--|
| 1.10.1 Biologically active food additives produced on the basis of fish, sea invertebrates, crustacean, molluscs and other sea products, sea weed and plants. | Toxic elements: Lead Arsenic Cadmium mercury | 10,0 12,0 2,0 0,5 | |
| Sea weed and other, dried | Pesticides: <*> hexachlorcyclohexan (alpha-, beta-, gamma-isomers), DDT and its metabolites Heptachlore Aldrin | 0,2 0,2 not allowed not allowed | <0,002 <0,002 |
| | Radio-nucleids: Caesium-137 Strontium-90 | 200 100 | Bk/kg Ditto |
| | Microbiological factors: mesophylic aero- and facultative anaerobic micro-organisms; intestinal bacillus group (coliforms) E.coli S. aureus Pathogenic micro-organisms, incl. Salmonella Yield and mould | 1 x 1E4 0,1 1,0 1,0 10,0 200 | COE/g max. Weight (g) in which they are not allowed Ditto Ditto Ditto COE/g max. <*> for BAA from sea plants |

| Index, product group | Description | Permissible levels Mg/kg, max. | Comments |
|--|--|-----------------------------------|----------|
| 1.10.11. Biologically active food additives on the basis of single-cell sea weed (spirulina, chlorella etc.), yield and yield lisates | Toxic elements: Lead Arsenic Cadmium mercury | 2,0 1,0 1,0 0,1 | |
| | Nitrates | 1000 | |
| | Pesticides: <*> hexachlorcyclohexan | 0,1 | |

| | | | |
|--|--|--|--|
| | (alpha-, beta-, gamma-isomers), DDT and its metabolites Heptachlore Aldrin | 0,1 not allowed not allowed | <0,002 <0,002 |
| | Radio-nucleids: Caesium-137 Strontium-90 | 200 100 | Bk/kg Ditto |
| | Microbiological factors: mesophylic aero- and facultative anaerobic micro-organisms; intestinal bacillus group (coliforms) E.coli Pathogenic micro-organisms, incl. Salmonella Yield Mould Live cells of producer | 1 x 1E4 0,1 1,0 1,0 10,0 10 50 not allowed for yield and lisants in 0,1 g | COE/g max. Weight (g) in which they are not allowed Ditto Ditto Ditto COE/g max. <*> for BAA from sea plants |

<*> Residual quantity of pesticides used in connection with production of raw material shall be under control (see section 3.12, 3.13.)

<*> In case of use of chemical methods in connection with detection of grizine, bacytracine, penicillin, streptomycin and other antibiotics of the same group actual quantity shall be changed into units/g in accordance with activity rate of the standard.

Appendix 3
 To SanPiN 2.3.2.1078-01,
 Approved by Decree
 No: 36 dated
 November 14, 2001,
 of
 The Russian Federation
 Chief State
 sanitary physician

3.1.5. Additional food for children on fish basis

3.1.5.1. Tinned fish food

1) Nutritional value (in 100 g of the product)

| Criteria and indexes | Measurement units | Permissible levels | | Comments |
|--------------------------------|-------------------|--------------------|--------|-----------------------|
| | | rationed | marked | |
| Mass portion of dry substances | G | 15-25 | - | |
| Protein | G | 8-15 | + | |
| Fat | G | 5-11 | + | |
| Nutritional value | kcal | 100-155 | + | |
| Salt | G, max. | 0,4 | + | |
| Mineral agents: iron | ditto | 0,4-3,0 | + | For enriched products |
| Vitamines: | | | | For enriched products |
| Tiamine (B1) | Mg | 0,1-0,2 | + | products |
| Riboflavin (B2) | Mg | 0,1-0,3 | + | Ditto |
| Niacin (PP) | mg | 1-4 | + | ditto |
| Starch | g, max. | 3 | - | Thickener |
| | | 5 | - | ditto |

2) Safety Factors:

| Description | Permissible levels, Mg/kg, max. | Comments |
|-----------------|---------------------------------|----------|
| Toxic elements: | | |
| Lead | 0,5 | |
| Arsenic | 0,5 | |
| Cadmium | 0,1 | |

| | | | | | | | | | | | | | | | |
|-------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 11. | The Sheat-fish family | - | - | - | - | - | - | - | - | - | - | - | - | n/a | - |
| 12. | Minced fish of Species mentioned in 1-11 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| 13. | Tinned and preserved products from fish species mentioned in 1-11 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| 14. | Fried, jelled, salted, pickled, Smoked, dried fish of the species mentioned in 1-11 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| 15. | Hard roe (caviar) Of fish of the following families: | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| 15.1. | The pike, perch, cod (eel-pot species), the grayling family | - | - | - | - | - | - | - | - | - | n/a | - | - | - | - |
| 15.2. | The salmon family | - | - | - | - | - | - | - | - | - | n/a | n/a | - | - | - |
| 15.3. | The sig family | - | - | - | - | - | - | - | - | - | n/a | - | - | - | - |
| 15.4. | The sturgeon family (the Amur, the Volga river, Caspian sea) | - | - | - | - | - | - | - | - | - | - | n/a | - | - | - |

Notes: 1) n/a - live larvae not allowed;

2) Parasites larvae

| 1 | 2 | 3 |
|--|--------------------|---|
| 3- Opistorhis 4- klonorhis 5- pseudamphist 6- metagonimus 7- nanophietus 8- echinohasmus 9- metorhis 10-rossicotrem 11-apophalus | 12-diphillobotrium | 13- anizakis 14-contracecum 15-dioctophim 16-gnatostom |

Table 2

Passing fish and processed products

| Index | Product group | Parasitological factors and permissible Content levels | | | | | |
|-------|-----------------|--|-----|-----|-----|-----|-----|
| | | Live larvae | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1. | Salmon | - | n/a | n/a | - | - | - |
| 2. | Far East Salmon | n/a | n/a | n/a | n/a | n/a | n/a |

| | | | | | | | |
|----|--|----------|------------|------------|----------|----------|----------|
| 3. | Minced fish mentioned in sections 1 Section 2 | - n/a | n/a n/a | n/a n/a | - n/a | - n/a | - n/a |
| 4. | Tinned and preserved products from fish species mentioned in section 1 Section 2 | - n/a | n/a n/a | n/a n/a | - n/a | - n/a | - n/a |
| 5. | Fried, jelled, salted, pickled, Smoked, dried fish of the species mentioned in section 1 Section 2 | - n/a | n/a n/a | n/a n/a | - n/a | - n/a | - n/a |
| 6. | Hard roe (caviar) Of the species mentioned in sections 1-2 | - | n/a | n/a | - | - | - |

Notes: 1) n/a - live larvae not allowed;

2) parasites larvae

| | | | |
|----------------|--------------------|------------------|-----------------------|
| Trematodas | Cestodas | Trichuris vulpis | Acanthocephalus lucii |
| 3- nanophietus | 4- diphillobotrium | 5- anizakis | 7-bolbozoma |
| | | 6- contracecum | 8-corinozoma |

Table 3

Sea fish and processed products

| Index | Product group | Parasitological factors and permissible Content levels | | | | | | | | | | | | | |
|-------|--|--|---|-----|---|---|-----|---|-----|-----|-----|-----|-----|-----|--|
| | | Live larvae | | | | | | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | |
| | Sea fish (divided acc. to fishing areas and species) | | | | | | | | | | | | | | |
| 1. | Barents Sea: | | | | | | | | | | | | | | |
| 1.1. | The salmon family | - | - | - | - | - | n/a | - | - | n/a | - | - | - | - | |
| 1.2. | The smelt family | - | - | - | - | - | n/a | - | - | n/a | - | - | - | - | |
| 1.3. | The herring family | - | - | - | - | - | - | - | - | n/a | - | - | - | - | |
| 1.4. | The cod family | - | - | n/a | - | - | n/a | - | n/a | n/a | n/a | n/a | n/a | - | |
| 1.5. | The scorpen family | - | - | - | - | - | - | - | - | n/a | - | - | - | - | |
| 1.6. | The flat-fish family | - | - | - | - | - | - | - | - | n/a | - | - | - | - | |
| 2. | Northern Atlantics | | | | | | | | | | | | | | |
| 2.1. | The smelt family | - | - | n/a | - | - | - | - | - | n/a | - | - | - | - | |
| 2.2. | The herring family | - | - | n/a | - | - | - | - | - | n/a | - | n/a | - | - | |
| 2.3. | The cod family | - | - | n/a | - | - | n/a | - | - | n/a | - | - | - | - | |
| 2.4. | The macrorus family | - | - | - | - | - | - | - | - | n/a | - | - | - | - | |
| 2.5. | The merlusa family | - | - | - | - | - | - | - | - | n/a | - | - | - | - | |
| 2.6. | The mackerel family | - | - | - | - | - | - | - | - | n/a | - | - | - | n/a | |

| | | | | | | | | | | |
|--------|-------------------------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|
| 2. | Sea mollusks and processed products | | | | | | | | | |
| 2.1. | Squids | - | - | n/a | n/a | n/a | - | - | - | - |
| 2.2. | Octopus | - | - | n/a | - | n/a | - | - | - | - |
| 2.3. | Crests | - | - | - | - | - | - | - | n/a | - |
| 2.4. | Spizulas | - | - | - | - | - | - | - | n/a | - |
| 2.5. | Oysters | - | - | - | - | - | - | - | - | n/a |
| 3. | Amphibians (frogs) | - | n/a | - | - | - | n/a | n/a | - | - |
| 4. | Reptiles | | | | | | | | | |
| 4.1. | Snakes | - | n/a | - | - | - | - | - | - | - |
| 4.2. | Tortillas | | | | | | | | | |
| 4.2.1. | Sea | - | - | - | - | - | - | - | n/a | - |
| 4.2.1. | Freshwater | - | - | - | - | - | - | n/a | - | - |

Notes: 1) n/a - live larvae not allowed;

2) parasites larvae

| Trematodas | Cestodas | Trichuris vulpis |
|----------------|------------|---|
| 3- paragonimus | 4-spyromer | 5- anizakis 6-contracecum 7-preudoterranium 8-dioctophim 9-gnatostom 10-sulcascaris 11-echinocephalus |

Appendix 8

To SanPiN 2.3.2.1078-01,
Approved by Decree
No: 36 dated
November 14, 2001,
of

The Russian Federation
Chief State
sanitary physician

HYGIENIC SAFETY REQUIREMENTS IN RESPECT OF TINNED FOODSTUFF

Depending on the composition of the tinned food product active oxide value (pH) of tinned food products and content of dry substances tinned products shall be divided into 5 groups: A, Б, В, Г, Д, E.

Tinned products of groups A, Б, В, Г and E shall be called complete tinned products, and group Д - semi-preserved products.

Diary products (drinking milk, cream, sweet products etc.) processed and packed in aseptic packages, shall comprise an independent group of sterilized products.

Tinned products for children and dietary products shall be divided into groups as described above.

Food products packed in sealed containers and thermally processed, what provide for the microbiological stability and safety of the product during storage and realization in normal conditions (not in refrigerators), shall be considered full tinned products.

Food products packed in sealed containers and thermally processed, what provide for the destruction of non-heat resistant non-

spore-forming micro-flora, reducing the amount of spore-forming micro-organisms and ensuring microbiological stability and safety of the product for a limited period of shelf-life in temperature conditions of +6°C and lower, shall be considered semi-tinned products.

There are the following groups of tinned products:

- group A - tinned foodstuff with pH of 4,2 and more, as well as vegetable, meat, meat and vegetable, fish and vegetable and fish tinned products with unlimited pH, produced without using acids; compotes, juices and purees of apricots, peaches and pears, having pH of 3,8 and more; thickened sterilized dairy tinned products; multi-component mixed tinned products (fruits and berries, fruits and vegetables and vegetables with dairy products);

- group B - tinned tomato products:

- a) non-concentrated tomato products (whole tinned tomatoes, tomato juice) with dry content less than 12%;

- b) concentrated tomato products, with dry content of 12% and more (tomato paste, tomato dressings, ketchups etc.);

- group B - tinned light sour vegetable marinades, juices, salads, beetroot salads and other products having pH of 3,7 - 4,2, including tinned cucumbers, vegetable and other products with regulated acidity value;

- group Γ - tinned vegetables having pH of less than 3,7, tinned fruits and fruit and berry mixtures pasteurized, tinned products for public catering with sorbate acid having pH of less than 4,0; tinned apricots, peaches and pears with pH of less than 3,8; vegetable juices having pH of less than 3,7, fruit (citrus), fruit and berry (including with sugar), natural juices with pulp, concentrated, pasteurized; tinned juices of apricots, peaches and pears having pH of 3,8 and less; beverages and concentrates on vegetable basis with pH of 3,8 and less, packed in aseptic packages;

- group Δ - pasteurized meat, meat and vegetable, fish and fish and vegetable tinned products (salted pork, salted and smoked bacon, sausages, ham etc.);

- group E - pasteurized sparkling fruit juices and sparkling fruit soft drinks having pH of 3,7 and less.

Samples shall be taken and prepared for laboratory examination in respect of their compliance with safety requirements concerning microbiological factors after: visual inspection and sanitary treatment; inspection of seals; thermostatic examination; determination of appearance of the tinned product after thermostatic examination.

Table 1

Microbiological safety factors (industrial sterility level) of full tinned products, groups A and B <*>

| NN | Micro-organisms found in tinned products | General purpose tinned products | Tinned products for children and dietary products |
|----|---|--|---|
| 1. | Spore-forming mesophilic aerobic and facultative and anaerobic micro-organisms, group B.subtilis | Meet industrial sterility level requirements. Should amount of such micro-organisms be determined, it shall not exceed 11 cells per 1 g(cm3) of the product. | |
| 2. | Spore-forming mesophilic aerobic and facultative and anaerobic micro-organisms, group B.cereus and (or) | Do not meet industrial sterility level requirements. | |

| | | | |
|----|---|---|--|
| | B.polymyxa | | |
| 3. | Mesophilic clostridies | Meet industrial sterility level requirements if Found clostridies are not of C botulinum and/or C.perfrin-gens. Group. Should amount of such micro-organisms be determined, it shall not exceed 1 cell per 1 g(cm3) of the product. | Do not meet industrial sterility level requirements if Found clostridies If found in 10 g (cm3) of the product |
| 4. | Non-spore-forming micro-organisms and/or mould, and/or yield | Do not meet industrial sterility level requirements. | |
| 5. | Mould, yield, sour milk micro-organisms | - | Do not meet industrial sterility level requirements |
| 6. | Spore-forming thermophilic anaerobic, aerobic and facultative and anaerobic micro-organisms | Meet industrial sterility level requirements, but storage temperature shall not be over 20°C | Do not meet industrial sterility level requirements |

 <*> Industrial sterility level of thickened sterilized diary tinned products shall be evaluated in accordance with actual state norms.

Table 2

Microbiological safety factors (industrial sterility level) of full tinned products, group B and Γ

| NN | Micro-organisms found in tinned products | Group B | Group Γ |
|----|--|---|-------------|
| 1. | Gas-forming and spore-forming mesophilic aerobic and facultative and anaerobic micro-organisms, group B.polymyxa | Do not meet industrial sterility level requirements | Not defined |
| 2. | Non-gas-forming and spore-forming mesophilic aerobic and facultative and anaerobic micro-organisms, group B.polymyxa | Meet industrial sterility level requirements if the amount of micro-organisms in the product does not exceed 90 COE/g (cm3) | Not defined |
| 3. | Mesophilic clostridies | Meet industrial | Not defined |

| | | | |
|----|--|---|--|
| | | sterility level requirements if Found clostridies are not of C botulinum and/or C.perfrin-gens. Group. Should amount of such micro-organisms be determined, it shall not exceed 1 cell per 1 g(cm3) of the product. | |
| 4. | Non-spore-forming micro-organisms and/or mould, and/or yield | Do not meet industrial sterility level requirements. | |

Table 3

Microbiological safety factors (industrial sterility level) of full tinned products, group E

| NN | Description | Permissible level meeting the industrial sterility level requirements |
|----|--|---|
| 1. | Amount of mesophilic aerobic and facultative and anaerobic micro-organisms | Max. 50 COE/g (cm3) |
| 2. | Sour milk micro-organisms | Not allowed in 1 g (cm3) of the product |
| 3. | intestinal pathogenic protozoa (coliforms) | Not allowed in 1000 g (cm3) of the product |
| 4. | Yield | Not allowed in 1 g (cm3) of the product |
| 5. | Mould | Max. 50 COE/g (cm3) |

Table 4

Microbiological safety factors (industrial sterility level) of full tinned products, group D

| NN | Description | Permissible level meeting the industrial sterility level requirements |
|----|--|---|
| 1. | Amount of mesophilic aerobic and facultative and anaerobic micro-organisms | Max. 2 x 1E2 COE/g (cm3) |
| 2. | intestinal pathogenic protozoa (coliforms) | Not allowed in 1 g (cm3) of the product |

| | | |
|----|---|---|
| 3. | B.Cereus | Not allowed in 1 g (cm3) of the product |
| 4. | Sulphite reducing clostridies | Not allowed in 0,1 g (cm3) of the product |
| 5. | S. aureus | Not allowed in 1 g (cm3) of the product |
| 6. | Pathogenic micro-organisms, incl. salmonella | Not allowed in 25 g (cm3) of the product |

 <*> For fish semi-tinned products - not allowed in 1,0 g (cm3) of the product.