Uniform Sanitary and Epidemiological and Hygienic Requirements for Goods Subject to Sanitary and Epidemiological Supervision (Control)

Chapter II

Section 21. Requirements for Mineral Waters

Requirements for Mineral Waters (Code under the Nomenclature of Goods subject to Foreign Trade of the Customs Union: 2201 10)

1. Scope of Application

1. This Section of the Unified Sanitary Requirements determines hygienic safety requirements for natural mineral drinking medicinal and medicinal table waters of various chemical composition intended for consumption with therapeutic and preventive purposes. *Therapeutic properties of such products shall not be a subject of regulation stipulated hereunder.*

2. Terms and Definitions

2.1. Mineral waters are natural waters producing therapeutic effect on human organism due to ions, salts and gases in its composition, high concentration of bioactive components and specific properties (such as radioactivity, temperature, medium reaction)

2.2. Mineral drinking waters are waters with mineralization degree of not less than 1 g/dm^3 or less, containing the amount of bioactive components not less than stipulated by balneological standards established for drinking mineral waters.

2.3. Mineral drinking medicinal table waters are waters with mineralization degree from 1 to 10 g/dm^3 or less, containing the amount of bioactive components not less than stipulated by balneological standards.

2.4. Mineral drinking medicinal waters are waters with mineralization degree from 10 to 15 g/dm^3 or less provided that they contain increased amount of arsenic, boron, and some other bioactive microcomponents. The use of medicinal waters with higher mineralization degree is possible.

3. General Provisions

3.1. Bottling of mineral waters shall be carried out in compliance with these Uniform Sanitary Requirements and technological instruction on treatment and bottling of drinking mineral waters approved in the established manner and in compliance with sanitary regulations for bottled water manufacturers.

3.2. Shelf life and temperature conditions of storage for mineral waters in synthetic containers shall comply with the requirements stipulated by regulatory documents for finished products.

3.3. The following methods of mineral waters treatment are permitted:

- removal of compounds of iron, manganese, sulfur, and arsenic by aeration and (or) oxidation;
- removal of such insoluble elements as iron and sulfur compounds by filtration or decantation;
- total or partial removal of free carbon dioxide solely by physical methods;
- carbonation;
- citric or ascorbic acid treatment;
- silver sulfate treatment.

Methods of mineral water treatment other than those stated above are also permitted providing that they do not change the content and proportion of cations of calcium, magnesium, sodium, and potassium, anions of hydrocarbonates, sulfates, chlorides, and bioactive components in mineral waters under treatment.

No chlorine agents are permitted for treatment of mineral waters to be bottled.

3.4. Mass concentration of silver in bottled mineral water during silver sulfate treatment shall not exceed 0.2 mg/dm^3.

3.5. Carbon dioxide shall be used for mineral water carbonation.

3.6. Bottled mineral water manufacturers shall effect sterilization of containers ensuring

their epidemiological and chemical composition safety.

3.7. Only containers which meet these Uniform Sanitary Requirements can be used for bottling of mineral water subject to account of the maximum storage terms.

4. Safety Requirements for Mineral Waters

4.1. Mineral water shall conform to hygienic standards at the time of its bottling, transportation and storage as well as throughout its stipulated shelf life.

4.2. Safety requirements for mineral waters:

favorable organoleptic properties;

chemical composition safety;

epidemiological safety of drinking water;

radiation safety.

Safety parameters for these products are specified in Annex 1 to this Section of the Uniform Sanitary Requirements.

5. Requirements for Packaging, Marking, Transportation and Storage of Mineral Water

5.1. Mineral water shall be packaged in consumer containers intended for contact with food products.

5.2. The marking of mineral water shall contain information in conformity with the requirements of technical and regulatory acts in effect.

5.3. Conditions of storage and transportation of mineral water as well as shelf life shall comply with the requirements specified in manufacturer’s regulatory documents for finished products approved in the established manner.

Annex 1 to Section 21
of Chapter II of the Uniform Sanitary and Epidemiological and Hygienic Requirements for Goods Subject to Sanitary and Epidemiological Supervision (Control)

Safety Requirements for Mineral Waters

1. According to organoleptic parameters mineral waters shall conform to the requirements specified in Table 1

Table 1

Parameter Name	Description
Visual appearance	Transparent liquid free of contaminants. Inessential deposition of mineral salts is possible.
Color	Colorless liquid or liquid with shades of yellow to green.
Taste and odor	Characteristic of the substances dissolved in water.

2. According to mineralization degree, basic ions, and chemical composition mineral waters shall conform to the requirements specified in appropriate technical regulatory acts and in the manufacturer's regulatory documents for finished products approved in the established manner.

3. Mass concentration of the following components of mineral waters shall not exceed the amounts specified in Table 2:

Table 2

Component Name	Mass Concentration, mg/dm^3
Nitrate (NO_3^-)	50.0
Nitrite (NO_2^-)	2.0
Arsenic (As)*	0.1
Lead (Pb)	0.1
Zinc (Zn)	5.0
Cadmium (Cd)	0.01
Copper (Cu)	1.0
Mercury (Hg)	0.005
Selenium (Se)	0.05
Strontium (Sr)	25.0
Fluorine (F): in medicinal waters in table medicinal waters	 15.0 10.0
Notes * - Arsenic is not considered a toxic element if contained in mineral natural drinking medicinal waters as natural bioactive arsenic.	

4. According to microbiological parameters bottled mineral waters shall conform to the requirements specified in Table 3.

Table 3

Parameter Name	Value
Mesophilic aerobic and facultative anaerobic bacteria, CFU in 1 cm^3, maximum value	100
Coliform bacteria	not allowed in 333 cm^3
Pathogenic microorganisms, including Salmonella	not allowed in 100 cm^3
Pseudomonas aeruginosa	not allowed in 100 cm^3

5. Permanganate oxidation of mineral waters shall be 0.5−5.0 mg/dm^3 of oxygen consumed.

6. According to radiation safety parameters bottled mineral waters shall conform to the requirements specified in Table 4.

Таблица 4

Parameter	Units of Measurement	Quality Standards for Bottled Waters, Maximum Value		Hazard Parameter[1)]
		First Category	Prime Category	
Radiation Safety Parameters:				
Specific cumulative α - radioactivity	Bq/l	0.2	0.2	radiation
Specific cumulative β - radioactivity	- “ -	1	1	- « -
Note: Effective dose obtained throughout the annual consumption of bottled water shall not exceed 0.1 mSv.				