

Sanpin 2.1.4.1175-02. Hygienic requirements for water quality non-centralized water supply. Sanitary protection of sources

Decision of Chief State sanitary doctor of the RUSSIAN FEDERATION

from March 19, 2002 N 12

"The introduction of sanitary-epidemiological rules and regulations" drinking water. Hygienic requirements for water quality, packaged in containers. Quality control. Sanpin 2.1.4.1116-02 "

On the basis of the Federal law on sanitary-epidemiological welfare of population "from March 30, 1999 N 52-FZ and Provisions on state sanitary and epidemiological standardization, approved by the Government of the Russian Federation dated July 24, 2000 N 554 I Decree:

Enforce sanitary-epidemiological rules and regulations "drinking water. Hygienic requirements for water quality, packaged in containers. Quality control. Sanpin 2.1.4.1116-02 ", approved by the Chief Medical Officer of the Russian Federation on March 15, 2002, with July 1, 2002 year.

G.g. Onischenko

Registered with the Ministry of Justice of RUSSIA April 26, 2002

Registration N 3415

2.1.4. drinking water and water for populated places

Sanitary and epidemiological regulations and guidelines Sec 02-2.1.4.1116

"Drinking water. Hygienic requirements for water quality, packaged in containers. Quality control»

(approved Chief Medical Officer of the RUSSIAN FEDERATION March 15, 2002)

Date of introduction: from July 1, 2002

I. scope of application

1.1. sanitary-epidemiological rules and regulations "drinking water. Hygienic requirements for water quality, packaged in containers. Quality control (hereinafter referred to as the sanitary regulations) establish hygienic requirements for drinking water quality, packaged in containers: bottles, containers, packages (hereinafter referred to as "prepackaged water) intended for drinking and cooking purposes, as well as the requirements of its quality.

1.2. the present sanitary regulations are binding on the territory of the Russian Federation all legal entities and individual entrepreneurs (hereinafter referred to as the manufacturers), whose activity is connected with the development, production, testing and marketing of pre-packaged water and also for organizations conducting state sanitary and epidemiological surveillance.

1.3. the present sanitary regulations does not apply to mineral water (therapeutic, medicinal, table, table).

II. General provisions

2.1. the present sanitary regulations are designed to ensure high quality and optimal population in content of nutrients packaged water to promote health and to prevent the emergence of the commercial network and special services (for emergencies) substandard prepackaged water intake which can lead to public health.

2.2. The requirements of these regulations must be respected in the development of national standards, technical conditions, project and technical-technological documentation, instructions and methodological materials, advertising and other accompanying information, regulatory, characterizing and defining quality of pre-packaged water, processes of production, storage, transportation, as well as in the construction, renovation and operation of enterprises for the production of prepackaged water.

2.3. Manufacture and sale of packaged water producers is only allowed if:

-sanitary-epidemiological conclusion on the water, water supplies and finished products

-normative documentation for finished products (specifications)

-the approved rules of technology (or instructions),

-Working water quality control programme, consistent with the territorial Center of the State.

2.4. water quality to be filling, must conform to the hygienic standards set out in the present SanPiNe. Chemicals in the water content of industrial, agricultural, domestic origin not specified in SanPiNe should not exceed the established standards for maximum allowable concentrations (MACs) of chemicals in water water features drinking and recreational water use. In the presence of water, which are not set standards, manufacturers of prepackaged water are obliged to provide the substantiation of Macs and methods of their control.

2.5. Manufacturers of prepackaged water must ensure disinfection and decontamination filling tanks or conserving water, guaranteeing their safety in epidemiological and harmlessness of chemical composition.

2.6. it is not allowed to use chlorine to drinking water processing, designed for filling, the preferred methods of decontamination are ozonation and physical processing methods, in particular, UV-irradiation.

2.7. technological process of drinking water at the enterprise is carried out in strict accordance with the industrial-technological regulations (technological description of the technological instructions), which takes into account the hygienic water quality water feature.

2.8. for filling water tanks use prepacked received sanitary-epidemiological conclusion on their security, taking into account the maximum periods of storage of products.

2.9. The timing and temperature conditions of water storage, packaged in containers made of synthetic materials, shall comply with the requirements specified in the normative documentation (hereinafter ND) on finished products.

2.10. State supervision over compliance with the requirements of these regulations shall be carried out by the organs and agencies of the state sanitary and epidemiological service of the Russian Federation in accordance with the current legislation.

2.11. the decision on Prohibitions or restrictions on the use of population regulation by water packaged Chief State sanitary doctor of the territory concerned based on hazard and risk assessment of its consumption on human health.

2.12. information on the suspension of the sanitary-epidemiological conclusion on bottled water or its abolition is brought to the attention of the centramigossanèpidnadzora manufacturer, consumers, Department of State of the Ministry of health of Russia for a period of not more than 10 days from the date of adoption of the decision.

2.13. The activities for the observance of production control carried out by manufacturers, whose activity is connected with the production of prepackaged water. Manufacturers are obliged to promptly carry out production control.

III. classification of categories of drinking water quality, pre-packaged capacity

3.1. Depending on water drinking water are divided into:

-artesian spring, (a key), soil (infiltration) from underground water;

-River, Lake, the ice surface from water.

3.2. Depending on how the water treatment drinking water are divided into:

— purified or completely from the mains;

-air conditioned (Additionally enriched with vital necessary macro-and micronutrients).

3.3. Depending on the water quality, improved relatively sanitary water requirements of centralized water supply, as well as additional medical-biological requirements, bottled water are divided into 2 categories:

the first category is water of drinking quality (regardless of the source of its receipt) safe for health, fully matching the criteria of the quality of the organoleptic properties, security in the epidemic and radiation against, the harmlessness of chemical composition and consistently keeping his high drinking properties;

is the highest category is water safe for health and the optimum in quality (from independent, usually underground, preferably spring or artesian, water sources, reliable, 085; protected from biological and chemical contamination).

While maintaining all of the criteria for category 1 water drinking water quality should be the criterion of physiological integrity on the contents of the main biologically necessary macro-and micronutrients and stricter regulations on a number of organoleptic and hygienic-toxicological variables.

IV. Hygienic requirements and standards of quality of drinking water, prepackaged in capacity

4.1. The present sanitary regulations set hygienic standards of composition and properties of pre-packaged water to two quality categories (table 1, p. Ib).

4.2. the quality of packaged water must conform to the hygienic standards as when it is filling, transportation, storage, and during the entire duration of the permitted in wholesale and retail trade.

4.3. enabling organoleptic properties of water are determined by its compliance standards specified in table 1, as well as the basic norms of salt components affecting the organoleptic properties of water described in tables 1 (clause I b) and 2 (p. II).

Table 1

| Indicators | Units of measurement | Packaged drinking water quality standards, not more than | | Hazard rate *) | Hazard class |
|---|----------------------|--|-----------------|----------------|--------------|
| | | The first category | Higher category | | |
| (I) the criterion of the aesthetic properties | | | | | |
| II. Organoleptic characteristics | | | | | |
| Odor in 20 with | points | 0 | 0 | Org. | - |
| When heated to 60 with | | 1 | 0 | | |
| Smack | | 0 | 0 | Org. | - |
| Chromaticity | degrees | 5 | 5 | Org. | - |
| Turbidity | SMF | 1.0 | 0.5 | Org. | - |
| PH value (Ph), within | units | 6.5 -8.5 | 6.5 -8.5 | Org. | - |
| I. b. salt composition Indicators * | | | | | |
| Chlorides | g/l | 250 | 150 | Org. | 4 |
| Sulfates | | 250 | 150 | Org. | 4 |
| Phosphates (RO4) | | 3.5 | 3.5 | Org. | 3 |

Note: * — the salt composition, normalized to influence the organoleptic (aesthetic) properties of water.

*) Is Limiting sign hazard substances to which the standard is installed: "s.-t.» — sanitary and poison," Organizer "is organoleptic.

4.3.1. Not allowed packaged water variety of inclusions visible to the naked eye, surface film and sludge.

4.4. Safety of water chemical composition is determined by its regulations compliance:

4.4.1. The content of the basic component of salt (table 2, p. II).

4.4.2. The content of toxic metals (I), (II) and (III) hazard classes (table 2, p. II. b).

4.4.3. Content of toxic elements in the nonmetallic and halogens (table 2, p. II. g).

4.4.4. The contents of organic substances of anthropogenic and natural origin for generalized and selected indicators (table 2, p. II).

4.4.5. Indicators on regional characteristics of chemical composition of drinking water for industrial bottling, are set individually for each water in accordance with current safety regulations.

Table 2

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| Indicators | Units of measurement | Prepackaged water quality standards, not more than | | Hazard rate * | Hazard class |
|--|----------------------|--|-----------------|---------------|--------------|
| | | The first category | Higher category | | |
| II. criteria for the harmlessness of chemical composition: | | | | | |
| II. Indicators of salt and gas composition *: | | | | | |
| Silicate (Si) | mg/l | 10 | 10 | s.-t. | 2 |
| Nitrates (NO ₃) | -«- | 20 | 5 | org. | 3 |
| Cyanide (CN) | -«- | 0.035 | 0.035 | s.-t. | 2 |
| Hydrogen Sulfide (H ₂ S) | -«- | 0.003 | 0.003 | org. zap. | 4 |
| II. b. toxic metals: | | | | | |
| Aluminum (Al) | mg/l | 0.2 | 0.1 | s.-t. | 2 |
| Barium (Ba) | -«- | 0.7 | 0.1 | -«- | 2 |
| Beryllium (Be) | -«- | 0.0002 | 0.0002 | -«- | 1 |
| Iron (Fe, total) | -«- | 0.3 | 0.3 | org. | 3 |
| Cadmium (Cd, total) | -«- | 0.001 | 0.001 | s.-t. | 2 |
| Cobalt (Co) | -«- | 0.1 | 0.1 | s.-t. | 2 |
| Lithium (Li) | -«- | 0.03 | 0.03 | s.-t. | 2 |
| Manganese (Mn) | -«- | 0.05 | 0.05 | org. | 3 |
| Copper (Cu, total) | -«- | 1 | 1 | -«- | 3 |

| | | | | | |
|--|---------|--------|--------|-----------|---|
| Molybdenum (Mo, total) | -«- | 0.07 | 0.07 | s.-t. | 2 |
| Sodium (Na) | -«- | 200 | 20 | s.-t. | 2 |
| Nickel (Ni, total) | -«- | 0.02 | 0.02 | s.-t. | 3 |
| Mercury (Hg, total) | -«- | 0.0005 | 0.0002 | s.-t. | 1 |
| Selenium (Se) | -«- | 0.01 | 0.01 | -«- | 2 |
| Silver (Ag) | -«- | 0.025 | 0.025 | s.-t. | 3 |
| Lead (Pb, total) | -«- | 0.01 | 0.005 | s.-t. | 2 |
| Strontium (Sr (2 +)) | -«- | 7 | 7 | -«- | 2 |
| Antimony (Sb) | -«- | 0.005 | s.-t. | 2 | |
| Chrome (Cr (+ 6)) | -«- | 0.05 | 0.03 | s.-t. | 3 |
| Zinc (Zn (2 +)) | -«- | 5 | 3 | org. | 3 |
| II. Toxic non-metallic elements: | | | | | |
| Boron (B) | mg/l | 0.5 | 0.3 | s.-t. | 2 |
| Arsenic (As) | -«- | 0.01 | 0.006 | -«- | 2 |
| Ozone * | -«- | 0.1 | 0.1 | org. | 3 |
| II. g. Halogens: | | | | | |
| Bromide ion | mg/l | 0.2 | 0.1 | s.-t. | 2 |
| Chlorine residual is associated | -«- | 0.1 | 0.1 | org. | 3 |
| Residual chlorine free | -«- | 0.05 | 0.05 | org. | 3 |
| II. Indicators of organic contamination: | | | | | |
| Okislâemost'permanganatnâ | mg O2/l | 3 | 2 | - | - |
| Ammonia and ammonium ion | -«- | 0.1 | 0.05 | | |
| Nitrite (NO2) | -«- | 0.5 | 0.005 | org. | 2 |
| Organic carbon | mg/l | 10 | 5 | - | - |
| Surface-active substances (Saw) anion | -«- | 0.05 | 0.05 | org. | - |
| Petroleum products | -«- | 0.05 | 0.01 | org. | |
| Volatile phenols (total) | µg/l | 0.5 | 0.5 | org. zap. | 4 |
| Chloroform | -«- | 60 * | 1 | s.-t. | 2 |
| Bromoform | -«- | 20 | 1 | s.-t. | 2 |
| Dibromhlormetan | -«- | 10 | 1 | s.-t. | 2 |
| , </td > | | | | | |
| Bromodichloromethane | -«- | 10 | 1 | s.-t. | 2 |
| Carbon tetrachloride | -«- | 2 | 1 | s.-t. | 2 |
| Formaldehyde | -«- | 5 | 5 | s.-t. | 2 |
| Benzo (a) pyrene | -«- | 0.005 | 0.001 | s.-t. | 2 |
| Di (2-ethylhexyl) CFT ALAT | -«- | 6 | 0.1 | s.-t. | 2 |
| Hexachlorobenzene | -«- | 0.2 | 0.2 | s.-t. | 2 |
| Lindane (gamma-HCH) | -«- | 0.5 | 0.2 | s.-t. | 1 |
| 2.4-d | -«- | 1 | 1 | s.-t. | 2 |
| Heptachlor | -«- | 0.05 | 0.05 | s.-t. | 2 |
| DDT (sum of isomers) | -«- | 0.5 | 0.5 | s.-t. | 2 |

| | | | | | |
|---|-------|-------|-------|-------|---|
| Atrazine | -«- | 0.2 | 0.2 | s.-t. | 2 |
| Simazine | -«- | 0.2 | 0.2 | org. | 4 |
| II. e. integrated indicators of toxicity: | | | | | |
| On the sum of NO ₂ and NO ₃ | Units | < 0.5 | < 0.1 | - | - |
| On the sum of employment | -«- | < 0.5 | < 0.1 | - | - |

Note: * — the salt composition, normalized by the toxic effects on the body.

* Limiting sign hazard substances to which the standard is installed: "s.-t.» — sanitary and poison," Organizer "is organoleptic.

-Monitoring of the content of residual ozone is produced after mixing chamber while ensuring contact time not less than 12 minutes.

4.4.6. chemicals in the water Content of industrial, agricultural, domestic origin not specified in this SanPiNe, shall not exceed the established norms for maximum allowable concentrations (MACs) of harmful substances in the water objects of drinking and recreational water use.

4.5. Radiation safety packaged water is determined by its conformity to norms of radiation safety of specific indicators of total alpha and Beta activity, presented in table 3.

Table 3

| Indicators | Units of measurement | Prepackaged water quality standards, not more than | | Hazard rate |
|------------------------------------|----------------------|--|-----------------|-------------|
| | | The first category | Higher category | |
| Radiation safety indicators | | | | |
| Specific total alpha-radioactivity | B/l | 0.1 | 0.1 | radiac. |
| Specific total beta radioactivity | -«- | 1 | 1 | -«- |

4.5.1. the effective dose that is generated when the annual consumption of packaged water should not exceed 0.1 mSv.

4.6. security of drinking water in epidemic against its being compliant for microbiological and parazitologičeskimpokazatelâm, presented in table 4.

Table 4

| Indicators | Units of measurement | Prepackaged water quality standards | |
|--|----------------------|-------------------------------------|-------------------------|
| | | The first category | Higher category |
| IV. a. Bacteriological indicators: | | | |
| TMC at temperature 37° c | Cfu/ml | not more than 20 | not more than 20 |
| TMC at the temperature 22° c | | not more than 100 | not more than 100 |
| Total coliform bacteria | Cfu/100 ml | the absence of a 300 ml | the absence of a 300 ml |
| Termotolerantnye koliformnyebakterii | Cfu/100 ml | the absence of a 300 ml | the absence of a 300 ml |
| Glûkozopoložitel'nye koliformnyebakterii | Cfu/100 ml | the absence of a 300 ml | the absence of a 300 ml |
| Sul'fitreducirujušihklostridij disputes | Cfu/100 ml | absence in 20 ml | absence in 20 ml |
| Pseudomonas aeruginosa | | absence in 1000 ml | absence in 1000 ml |
| IV. b. Virological indicators: | | | |
| Coliphage | COMBAT/100 ml | absence in 1000 ml | absence in 1000 ml |
| IV. Parasitic indices: | | | |
| Oocisty Cryptosporidium | Qty/50 l | the absence of | the absence of |
| Giardia | -«- | the absence of | the absence of |
| Helminth eggs | -«- | the absence of | the absence of |

4.7. physiological integrity of macro-and microelement composition of packaged water is determined by its compliance regulations submitted to the vtbl. 5.

Table 5

| Indicators | Units of measurement | Physiological integrity standards for drinking water, within | Prepackaged water quality standards | |
|---|----------------------|--|-------------------------------------|-----------------|
| | | | The first category | Higher category |
| Total dissolved solids (dry matter), within | mg/l | 100-1000 | 1000 | 200-500 |
| Stiffness | MEQ/l | 1.5-7 | 7 | 1.5 -7 |
| Alkalinity | -«- | 0.5-6.5 | 6.5 | 0.5 -6.5 |

| | | | | |
|---------------------------------|------|------------|-------|----------|
| Calcium (Ca) | mg/l | 25 — 130 * | 130 | 25-80 |
| Magnesium (Mg) | -«- | 5-65 * | 65 | 5-50 |
| Potassium (K) | -«- | - | 20 | 2-20 |
| Bicarbonate (HCO ₃) | -«- | 30-400 | 400 | 30 -400 |
| Fluoride (F) | -«- | 0.5 -1.5 | 1.5 | 0.6 -1.2 |
| Iodide ion (J) | µg/l | 10-125 | 125 * | 40-60 * |

Notes:

* Settlement: based on the maximum permissible hardness 7 MEQ/l or accounting minimum required levels of magnesium in the calculation of the permitted maximum calcium content and vice versa;

* Salt water MPC level allowed in the absence of prophylaxis of iodine deficiency due to iodized salt, subject to observance of the permissible daily intake (TDI) iodide ion coming in total from all objects of the environment in the body;

Iodization of water 30-60 µg/l is permitted as a method of mass prophylaxis of iodine deficiency when other preventive measures.

4.9. The oxygen content in packaged water should not be less than:

-5 mg/l is for water,

— 9 mg/l (saturation, close to optimal when $t=20 — 22^{\circ}$) for water of the highest category.

4.10. As preservatives prepackaged water allowed reagents indicated in table 6.

Table 6

| Preservatives | Units of measurement | Maximum allowable concentration in drinking water | Prepackaged water quality standards, not more than | |
|-----------------------------------|----------------------|---|--|-----------------|
| | | | The first category | Higher category |
| Silver (Ag) | mg/l | 0.05 | 0.025 | 0.0025 |
| Iodine (J) | -«- | 0.125 | 0.06 | 0.06 |
| Carbon dioxide (CO ₂) | % | 0.4 * | 0.4 | 0.2 |

Note: * maximum permissible mass fraction of carbon dioxide in accordance with State standard for mineral drinking medicinal and medicinal-table waters.

4.11. Put up water for making baby food (if bottle-fed children) must correspond to normative values, by main indicators of water of the highest category, as well as the following additional requirements:

is not allowed the use of silver and carbon dioxide as a preservative;

— content of fluoride ion must be within 0.6-0.7 mg/l;

— content of iodide ion must be within the range 0.04-0.06 mg/l.

V. Production quality control of packaged drinking water

5.1. Manufacturers engaged in production of pre-packaged water must comply with the requirements of the sanitary legislation and ordinances, regulations and sanitary-epidemiological conclusions officials exercising State sanitary and epidemiological surveillance, including:

— ensure the safety for human health of the packaged waters during their manufacture, transportation, storage and realization of population;

— carry out production control, including by conducting laboratory research and testing.

5.2. on the basis of the requirements of these regulations, manufacturers prior to the commencement of production of pre-packaged water develop working production control program (hereinafter referred to as the program). The program is coordinated by the Chief Medical Officer of the appropriate territory for 3 years and approved by the manufacturer.

5.3. production control Objects are: water, water, water, water treatment, water phases before bottling, containers and closures, the finished products.

5.4. list of indicators, frequency-controlled laboratory studies and tests are determined depending on the water source, water treatment technologies, the quality of the finished product.

5.5. water accept Packaged lots (quantity of water in containers of the same type in one capacity, a bottling date (day, month, year) rented the warehouse one document about quality).

5.6. For quality control of finished products shall be provided with a shortened (each batch), abridged periodic (at least once a month) and full (at least 1 times per year).

5.7. Organoleptic and microbiological control packaged water should be in each batch, regardless of the source of water and water treatment method.

5.8. Types of defined indicators of the quality of packaged water with reduced (each batch) and reduced periodic (at least 1 time per month) analyses establish, taking into account the requirements specified in the annex.

5.9. Laboratory studies carried out by the manufacturer independently or by laboratories accredited in accordance with the established procedure.

5.10. Manufacturers of packaged water provide information on the results of the production control centres of the State upon request.

5.11. the manufacturer, in identifying violations of sanitary regulations on the production of pre-packaged water should take measures aimed at elimination of revealed violations and to prevent their occurrence, including:

-suspend or cease production of packaged water;

-remove from the realization of products not corresponding to the sanitary regulations and represents a danger for the person;

— inform the Centre epidemiological supervision in the territory about the measures taken to eliminate violations of sanitary regulations.

Vi. State sanitary-epidemiological supervision over the quality of pre-packaged water

6.1. The supervision of the Organization and conduct of the production control is an integral part of the state sanitary-and-epidemiologic supervision over the quality of pre-packaged water carried out by the organs and agencies of the state sanitary and epidemiological service of the Russian Federation.

6.2. the territorial Center of the State produces sanitary-epidemiological conclusion on water supplies, projects, companies producing packaged waters, negotiates jobs production control; in order for public oversight carries out selective laboratory control, verifies records, registers the results of analyses on the agreed points and indicators, technological parameters of disinfection, preservation, etc.

6.3. when changing the sanitary-epidemiological situation in the intakes and the locations of organizations, the Center for state sanitary and epidemiological supervision shall inform the head of the institution carrying out the production of packaged water, with a view to adjusting work programmes (increase sampling frequency, expanding the range of monitored indicators).

Annex

to Sanpin 2.1.4.1116-02

Production control with reduced rates and periodic analysis

| Name of indicator | Type of analysis | |
|--|-----------------------|---|
| | Abridged (each batch) | Abridged periodic (at least once per month) |
| Organoleptic characteristics: | | |
| -smell when 20° c | + | |
| -When heated up to 60° c | + | |
| -smack | + | |
| -pH value | + | |
| -color | | + |
| -turbidity | | + |
| Bacteriology: | | |
| TMC at temperature 37° c | + | |
| TMC at the temperature 22° c | | + |
| Total coliform bacteria | + | |
| Glûkozopoložitel'nye coliform bacteria | + | |
| Pseudomonas aeruginosa | | + |
| Indicators of organic contamination: | | |
| Okislâemost' permanganatnaâ | | + |
| The content of the reactants: | | |
| ozone | + | |
| Silver | + | |
| iodide ion | + | |
| fluoride-ion | + | |
| dioksidugleroda | + | |

[Read more at <http://forumtest.ru/samoe-neobhodimoe/sanpinyi/sanpin-2-1-4-1175-02-gigienicheskie-trebovaniya-k-kachestvu-vodyi-netsentralizovannogo-vodosnabzheniya-sanitarnaya-ohrana-istochnikov.html>]

Effective from March 1, 2003

4. Since the introduction of the present sanitary regulations ' requirements for water quality non-centralized water supply. Sanitary protection of springs SP 2.1.4.554-96 "shall be null and void.

5. Registered in Ministry of Justice of the Russian Federation December 20, 2002 registration No. 4059.

**Federal law
On sanitary-epidemiological well-being of the population "
from March 30, 1999 No. 52-FZ**

State sanitary-and-epidemiologic rules and regulations (hereinafter referred to as the sanitary rules)-regulatory legal acts establishing sanitary-epidemiological requirements (including the security criteria and (or) safety of environmental factors for human, sanitary and other regulations), the failure of which endangers the life or health of the person, as well as the threat of the emergence and spread of diseases "(article 1).

"On the territory of the Russian Federation Act federal health regulations, approved and put into effect by the Federal Executive Body authorized to carry out sanitary and epidemiological supervision in the manner prescribed by the Government of the Russian Federation.

Compliance with regulations is obligatory for citizens, individual entrepreneurs and legal entities (article 39).

"For violation of sanitary legislation establishes the disciplinary, administrative and criminal liability (article 55).

The Ministry of health of the Russian Federation

**CHIEF STATE SANITARY PHYSICIAN
THE RUSSIAN FEDERATION**

REGULATION

25.11.02 Moscow No. 40

The introduction of sanitary
hygienic requirements for rules
water quality non-centralized
water supply. Sanitary protection
sources. Sanpin 2.1.4.1175-02»

On the basis of the Federal law on sanitary-epidemiological welfare of population "from March 30, 1999 No. 52-FZ and" regulation about sanitary-epidemiological standardization ", approved by the Government of the Russian Federation dated July 24, 2000 No. 554.

I DECREE:

Enforce sanitary rules "hygienic requirements for water quality non-centralized water supply. Sanitary protection of sources. Sanpin 2.1.4.1175-02», approved by the Chief Medical Officer of the Russian Federation on November 17, 2002 year, with March 1, 2003

G. G. Onishchenko

The Ministry of health of the Russian Federation

**CHIEF STATE SANITARY PHYSICIAN
THE RUSSIAN FEDERATION**

REGULATION

25.11.02 Moscow No. 41

Repealing Regulations

"Requirements for water quality

non-centralized water supply.

Sanitary protection of sources.

Sanpin 2.1.4.554-96»

In connection with the adoption of 17.11.02 Chief Medical Officer of the Russian Federation and entry into force 01.03.2003 with g. sanitary rules "hygienic requirements for water quality non-centralized water supply. Sanitary protection of sources. Sanpin 2.1.4.1175-02.

I DECREE:

Since the introduction of these sanitary rules considered unenforceable on the territory of the Russian Federation "sanitary regulations requirements for water quality non-centralized water supply. Sanitary protection of sources. Sanpin 2.1.4.554-96 ", approved by the former epidemiological supervision of Russia.

G. G. Onishchenko

CLAIM

Chief State sanitary

doctor of the Russian Federation-the first

Deputy Minister of health

The Russian Federation

G. G. Onishchenko

November 17, 2002

Date of March 1, 2003

2.1.4. drinking water and water supply
POPULATED PLACES

**Hygienic requirements
non-centralized water supply to water quality.
Sanitary protection of sources**

**Sanitary-epidemiological rules and regulations
Sanpin 2.1.4.1175-02**

1. General provisions

1.1. the present sanitary-epidemiological rules and regulations (hereinafter referred to as the *sanitary rules*) are prepared on the basis of the Federal law on sanitary-epidemiological welfare of population "from March 30, 1999 No. 52-FZ (collection of laws of the Russian Federation, 1999 No. 14, item 1650), the decision of the Government of the Russian Federation No. 554 dated July 24, 2001" on approval of the regulations on the state sanitary and epidemiological service of the Russian Federation and the state sanitary and epidemiological standardization "(collection of laws of the Russian Federation 2000, no. 31, art. 3295) and are aimed at the prevention and elimination of pollution of water sources shared non-centralized water supply and individual use.

1.2. sanitary rules establish hygienic requirements for water quality non-centralized water supply sources, to the choice of location, equipment and maintenance of water facilities and surrounding territory.

1.3. Non-centralized water supply is used for drinking and household needs of the population of water underground Springs, taken using a variety of structures and devices, open to the public or individual use, without submitting it to the site.

1.4. non-centralized water supply Sources are groundwater, whose capture is done by devices and special equipment intake structures (shaft and tube wells, kaptazi Springs) General and individual use.

1.5. Sanitary rules are mandatory for compliance with legal persons, individual entrepreneurs and citizens.

1.6. Monitoring of compliance with regulations is carried out by the centres of the state sanitary-and-epidemiologic supervision in accordance with the regulations of the state sanitary and epidemiological service of the Russian Federation.

2. Requirements for the location of non-centralized water supply intakes

2.1. the choice of the location of non-centralized water supply intakes is a priority in maintaining the permanence of drinking water quality, prevention of bacterial or chemical contamination, prevention of morbidity of the population sexually transmitted by water, as well as prevent possible intoxication.

2.2. choosing the location of the water intake constructions is carried out by the owner, with the involvement of relevant professional and conducted on the basis of geological and hydrogeological data, as well as the results of sanitary surveys of nearby territory.

2.3. Geological and hydrological data should be presented to the extent necessary to address the following issues: depth of groundwater, groundwater flow direction in terms of locality, estimated capacity of the aquifer, interoperability with existing or emerging water diversion structures on adjoining sections, as well as with surface water (pond, swamp, stream, reservoir, river).

2.4. the data of the sanitary surveys should contain information on the sanitary condition of the location of the planned water intake structures and adjacent territory indicating existing or potential sources of microbial or chemical contamination of water.

2.5. Location of intakes should be chosen on the unspoiled stretch of remote to not less than 50 metres upstream of groundwater from existing or potential sources of pollution: pit toilets and latrines, warehouses of fertilizers and [pesticides](#), local industrial enterprises, sewage, etc.

If you cannot comply with this location distance water diversion structures in each case consistent with the Centre for state sanitary and epidemiological surveillance.

2.6. non-centralized water supply intakes should not enter floodwater inundated areas, wetlands, as well as locations exposed to opolnym and other types of deformation, as well as closer to 30 meters from the highways with [intensive traffic](#) of transport.

2.7. the number of the population using non-centralized water supply source is determined in each specific case on the basis of yield source and accepted norms of water consumption. Diversion structures must ensure that through them the required volume of water.

3. requirements to the hardware device and non-centralized water supply intakes

3.1. The correct device and equipment intake structures can solve not only questions of reliability and durability of such facilities, ease of use, but also the protection of water against pollution and littering.

3.2. the most prevalent water facilities in populated places are mine and tube wells of various designs and depth, as well as kaptazi springs (keys).

3.3. Requirements for device wells

3.3.1. Shaft wells are designed to get groundwater from first from the surface of the unconfined aquifer. These wells represent mine round or square shape and consist of top, trunk and polyethylene parts.

If you cannot comply with this location distance water diversion structures in each case consistent with the Centre for state sanitary and epidemiological surveillance.

3.3.2. Headstall (overground part of the well) serves to protect the mine from littering and pollution, as well as for monitoring water intake, water pumping systems and must be not less than 0.7-0.8 m above the surface of the Earth.

3.3.3. the well Cap must have a lid or ferroconcrete with Luke, also lockable lid. Top head cover with a canopy or placed in a booth.

3.3.4. tip along the perimeter of the well should be "Castle" from good promâtoj and thoroughly compacted clay or loam fat depth of 2 m and a width of 1 m, as well as horticultural landscape of stone, brick, concrete or asphalt to a radius of not less than 2 m with a slope of 0.1 m from the well to the side of the ditch (tray). Around the well must be a fence, and some well arranged bench for buckets.

3.3.5. barrel (mine) serves for the passage of water-lifting devices (buckets, badei, buckets, etc.), as well as, in some cases, to accommodate water-lifting mechanisms. The walls of the shaft should be thick, well insulated well against the infiltration of runoff, as well as a perched water.

3.3.6. For wall claddings wells primarily recommended concrete or Ferro-concrete rings. In their absence allowed the use of stone, brick, and wood. Stone cladding (brick) wall of the well should be as strong without cracks, neokrašivaûšim water and packed as well as concrete or Ferro-concrete rings on a cement mortal (cement high marks, not containing impurities).

3.3.7. If device log should be used a certain type of wood in the form of logs or bars: for above-water part of the shrouds carcass-spruce or pine, for polyethylene part sruba-larch, alder, Elm, and oak. Timber must be of good quality, purified from the crust, straight, healthy, without deep cracks and wormhole, not infected by a fungus, prepared for 5-6 months.

3.3.8. Intake part of the well serves to inflow and groundwater accumulation. It should be planted in the aquifer for better formation and intrusion of increasing yield. To ensure a large flow of water in the well of the lower part of its walls can have holes or in the form of a tent.

3.3.9. To prevent soil from the bottom of the well vypiraniâ rising groundwater flows, muti in water and facilitate cleaning at the bottom of a well must be otsypan a reverse filter.

3.3.10. For descent into the well in the repair and cleaning of the walls must be incorporated cast iron clamps that are staggered at a distance of 30 cm from each other.

3.3.11. lifting water from wells is carried out using various devices and mechanisms. The most acceptable hygienic point of view is to use pumps of various designs (manual and electric). In case of impossibility of equipment well pump device allowed gates with one or two handles, gate wheel for one or two badei, "crane" with permanently attached tub etc. The size of the buckets must approximate the volume of buckets to water transfusion in buckets was not straightforward.

3.4. Requirements for device tube wells (wells)

3.4.1. Tubular wells are designed to get groundwater from aquifers occurring at different depths, and there are small (up to 8 m) and deep (up to 100 m and more). Tubular wells consist of a casing (pipes) of various diameter, pump and filter.

3.4.2. shallow tube well (Abyssinian) can be individual and public use; deep (artesian wells), usually by the general public.

Device and equipment of artesian wells is carried out in accordance with the construction standards and regulations.

3.4.3. when installing tube wells (filters, protective netting, pump parts, etc.) used materials, reagents and small sewage treatment device is FDA approved for use in the practice of drinking-water supply.

3.4.4. Head tube wells should be above the Earth's surface on a 0.8-1.0 m, hermetically closed, have a cover and the drain pipe, [supplied with](#) hook for hanging buckets. Tip around the well arranged otmostki (see subchapter 3.3.4) and bench for buckets.

3.4.5. the rise of water from the well pipe is produced using manual or electric pumps.

3.5. Requirements for device captation springs

3.5.1. Kaptazi designed to collect on the surface of the lens out groundwater from ascending or descending springs (keys) and represent a specially engineered drainage Chambers of various designs.

3.5.2. Water abstraction from ascending Springs is carried out through the bottom of the meter Chamber from top-down through the holes in the wall of the Chamber.

3.5.3. Kaptaznye camera descending Springs must have watertight wall (with the exception of the wall from the aquifer) and bottom, which is established by the "lock" device from the Mint, stamped clay. The camera is equipped with springs bubbling clay "lock" on all Perimetre of walls. Material of walls can be concrete, brick or wood of certain species (see clauses 3.3.6, and 3.3.7).

3.5.4. Kaptaznye camera must have a neck with hatch and lid, equipped with water and overflow pipes, have a tube discharge diameter not less than 100 mm, the ventilation pipe and must be placed in special land constructions in the form of a Pavilion or booths. The area around the capping must be fenced.

3.5.5. Water pipe must be fitted with a crane with hook for hanging buckets and output to 1-1.5 m from the tap. Under the tap gets bench for buckets. On Earth at the end of the water intake and overflow pipes gets paved drainage tray condensation drain excess water to a ditch.

3.5.6. Orifice meter Chamber must be insulated and tower above the ground not less than 0.8 m to protect meter from surface water flooding the Chamber must be equipped with blind area of brick, concrete or asphalt with sloping towards the drain gutter.

3.5.7. in order to protect the camera from the meter drift sand arranged a reverse filter from the water flow and to release water from mist kaptaznu camera share two wall overflow offices: one for defending water and then clean the sludge, the second for the clarified water intake.

3.5.8. For the purpose of inspecting, cleaning and disinfection of tap in the wall of the Chamber shall be fitted doors and hatches, as well as steps or staples. The entrance to the Chamber should not hold above the water and make it to pollution with threshold or feet do not fall into the water. Doors and hatches shall be of sufficient height and dimensions to allow for comfortable penetration in kaptaznu camera.

4. Requirements for water quality non-centralized water supply

4.1. The composition and properties of non-centralized water supply water must meet the standards described in the table below.

| Indicators | Units of measurement | Norm |
|---|---|-------------------|
| 1 | 2 | 3 |
| <i>Organoleptic</i> | | |
| Smell | points | no more than 2-3 |
| Smack | points | no more than 2-3 |
| Chromaticity | degrees | no more than 30 |
| Turbidity | SMF (units of turbidity on formazine) | within 2.6-3.5 |
| | or mg/l (koalinu) | within 1.5-2.0 |
| <i>Chemical</i> | | |
| PH value | PH units | within 6-9 |
| Total hardness | MEQ./l | within 7-10 |
| Nitrate (NO ₃ ⁻) | mg/l | no more than 45 |
| Total dissolved solids (dry matter) | mg/l | within 1000-1500 |
| Okislâmost' permanganatnaâ | mg/l | within 5-7 |
| Sulfates (SO ₄ ²⁻) | mg/l | not more than 500 |
| Chloride (CL ⁻) | mg/l | not more than 350 |
| Chemicals inorganic and organic nature** | mg/l | MPC |
| <i>Microbiological</i> | | |
| Total coliform bacteria * | the number of bacteria per 100 ml | the absence of |
| Total Microbe number | the number of colony-forming microbes in 1 ml | 100 |
| Termotolerantnye coliform bacteria** | the number of bacteria per 100 ml | the absence of |

| Indicators | Units of measurement | Norm |
|---|---|----------------|
| 1 | 2 | 3 |
| Coliphage** | the number of plaque-forming units per 100 ml | the absence of |
| * -in the absence of common coliforms bacteria coliform bacteria glükózopoložitel'nyh definition is performed (COLIBACILLUS) with oksidaznogo test; | | |
| ** -additional indicators in accordance with clause 4.2 | | |

4.2. Depending on local environmental and health conditions, as well as the epidemic situation in a populated place, the list of controlled [quality indicators](#), water listed in clause 4.1 is expanded by order of the Chief State sanitary doctor of the territory concerned with the inclusion of supplementary microbiological and/or chemical indicators.

In the territories, officially recognized zones of radioactive contamination, [the quality of](#) water in the non-centralized water supply sources for indicators of radiation safety shall be assessed according to sanpin 2.1.4.1074-01 (registered in Ministry of Justice of the Russian Federation October 31, 2001 registration No. 3011).

5. Requirements to the content and operation of non-centralized water supply intakes

5.1. proper maintenance and operation of water structures and devices is crucial in the prevention of microbial and chemical contamination of drinking water.

5.2. Within a radius of 20 meters from the closest well (tap) is not allowed to wash vehicles, watering place animals, wash and rinse clothes, as well as other activities contributing to water pollution.

5.3. the most rational way of water withdrawal from wells (captation) is the rise of water pump, in a pinch, using public buckets (buckets). It is not permitted to lift it from the well water (damming) buckets from the population, as well as excavation work on grown soil water from public buckets from from home buckets.

5.4. For insulation and protection from freezing water diversion structures, you should use a clean pressed straw, hay, shavings or filings that must not fall into the well (capture). It is not allowed to use the glass wool or other synthetic materials, not included in the list of materials, reagents and small wastewater treatment plants, the Ministry allowed Russia to apply in practice, domestic water supply.

To protect from freezing electric pumps, provision must be made for their heating.

5.5 cleaning the well (tap) must be carried out by users on demand Center for state sanitary and epidemiological surveillance, but at least once a year with simultaneous maintenance equipment and tie-down attachments.

5.6. After each cleaning or repair should be disinfected with chlorinated water intake constructions reagents and their subsequent flushing.

5.7. Cleaning, disinfecting and flushing of water diversion structures and devices is made at the expense of the local authorities, collective and individual users.

5.8. When equipment wear (corrosion of pipes, fouling filters, collapse of log cabins, etc.), a sharp decrease in flow or obmelenii, the most unavoidable deterioration of water quality, which has become unfit for drinking and household needs, the owner of the water diversion structures must eliminate them. After the dismantling of the ground-based equipment for filling (oil) well should be done with clean soil, preferably clay with dense utrambovkoj. Over liquidated well given the shrinkage of soil should overtop a hillock of the Earth with a height of 0.2-0.3 m.

6. Water quality monitoring non-centralized water supply

6.1. monitoring water quality must meet the local epidemiological situation and be closely linked to ongoing in place sanitary activities.

6.2. in order to ensure the permanence of water quality, safety, and acceptability of the public water supply control should include systematic health examination not only water source, equipment and devices, but also the territory adjoining to vodozabornym structures (app. 3, 4, 5).

6.3. state sanitary-and-epidemiologic supervision exercise routine or [selective control](#) over the quality of water wells and intakes of general use, as well as control on one-off requests from individual users.

6.4. For newly built or reconstructed water diversion structures and devices General or individual use it is necessary to conduct a study of water quality within the indicators table. p. 4.1.

6.5. If you control the quality of the water in the well, well, kaptaze pointed out the excess microbiological and/or chemical indicators as compared to the table. p. 4.1, you should perform a repeated [sampling](#) water and conduct additional research into the extent of microbial and/or chemical indicators, for which the observed excess rate. Persistent deterioration of water quality in microbiological and (or) chemical indicators in a number of selected samples again requires the setting of its causes and remedy.

6.6. the arrangements for addressing deteriorating water quality include cleaning, rinsing and, if necessary, preventive disinfection (app. 1) followed by the drafting of the Act (app. 2).

6.7. If unable to identify or eliminate the cause of the deterioration of water quality, or activities to address the deteriorating water quality did not lead to permanent quality improvement for microbiological indicators, water in the well (kaptaze) must be constantly obezzaraživat'sâ chlorine-containing drugs.

The steady chemical contamination of water should take a decision on the liquidation of the water intake structures or devices.

6.8. When adverse epidemic situation in a populated place or if you want to use on the local conditions of groundwater, surface-protected are not enough, as evidenced by the substantial increase in the flow of the well (captation) in a short time after a rainfall, the water in the well (kaptáže) should be subjected to decontamination or at a specific, coordinated with the center of the state sanitary-and-epidemiologic supervision period.

6.9. Control over the efficiency of disinfection of water in the well (kaptáže) is the Center for state sanitary and epidemiological surveillance within the prescribed deadlines.

Bibliographic data

1. the Federal law on sanitary-epidemiological welfare of population "from March 30, 1999 No. 52-FZ.
2. the water code of the Russian Federation dated November 16, 1995 No. 167-FZ.
3. Provision of State sanitary-epidemiological service, approved by the Government of the Russian Federation dated July 24, 2000 No. 554.
4. Statute of the state sanitary and epidemiological standardization, approved by the Government of the Russian Federation dated July 24, 2001 No. 554.
5. Building regulations "external networks and water supply and sanitation. Snip 3.05.04-85 ".
6. List of materials, reagents and small wastewater treatment plants allowed epidemiological supervision of RF for application in the practice of the domestic water supply no. 01-19/32-11 from 23.10.92.
7. lists of domestic and foreign disinfectants approved for use, the MINISTRY OF HEALTH of the USSR, the RUSSIAN FEDERATION and the Ministry of health of the RUSSIAN FEDERATION had HESC.

Annex 1

Requirements for disinfection of wells and water decontamination

1. Disinfection of wells

The need for disinfection of wells installed centers of State sanitary-epidemiological supervision and is carried out:

- as per epidemiological indices (when an outbreak of intestinal infections in place or when you hit the water wells of wastewater, faeces, corpses of animals, etc.);
- with prophylactic purpose (on completion of new or after cleaning and repair existing wells).

For disinfection of Wells you can use any suitable for this purpose [disinfecting](#) preparations authorized for use by the Ministry of health of Russia. For these purposes often use chlorinated drugs-chloric izvest or dvutret'osnovnuû salt of calcium hypochlorite (DTSGK).

1.1. Disinfection of wells on epidemic indications

Disinfecting wells on epidemic indications include:

- preliminary disinfection of the well;
- clean up well;
- Re disinfection of the well.

1.1.1. Preliminary disinfection of the well

Before disinfection of the well calculation method determines the amount of water in it (in m^3) by multiplying the square section of the well (in m^2) on water column height (in m).

1.1.1.1. Carry out irrigation atomizer outer and inner part of the trunk of mine 5%-s ' solution of bleach or 3%-s ' solution of DTSGK at the rate of 0.5 liters per $1 m^2$ surface.

1.1.1.2. Knowing the volume of water in the well, carry out disinfection of the bottom (aqueous) part of it by depositing chlorine-containing drugs at a rate of 100-150 mg (g) active chlorine at $1 l (m^3)$ of water in the well.

Water carefully mix, well close lid and leave for 1.5-2:0, preventing water from it.

1.1.1.3. the calculation of the amount of bleach or DTSGK required to create a water well specified dose of active chlorine (100-150 mg (g) to 1 litre (m^3), using the formula:

where

R -number of bleach or DTSGK, g;

$With$ is the specified dose of chlorine in water wells, mg/l (g/m^3);

(E) -the volume of water in the well, m^3 ;

N active chlorine content in the product,%;

100-numerical factor.

1.1.2. cleaning well

Cleaning is performed through 1.5-2:0 after preliminary disinfection of the well.

1.1.2.1. The well is fully exempt from water, purify it from foreign objects and accumulated silt. The walls of the mine cleaned mechanically from fouling or contamination.

1.1.2.2. Selected from the well in the mud and silt are transported to a landfill or immerse in the excavated at a distance of at least 20 m from the well hole to a depth of 0.5 m and buried, previously Bay pit content 10%-s ' solution chloric to exhaust or 5%-s ' solution of DTSGK.

1.1.2.3. The walls of mines cleared well repair if necessary, then external and internal part of the mine water atomizer 5%-s ' solution of bleach or 3%-s ' solution of DTSGK at the rate of $0.5 l/m^3$ of mine.

1.1.3. Repeated disinfection of the well

After cleaning, repair and disinfection of walls of the mine start to repeated disinfection of the well.

1.1.3.1. Withstand the time within which a well is filled up with water again, again define the volume of water in it (in m^3) and make estimated the amount of solution of bleach or DTSGK at the rate of 100-150 mg (g) active chlorine at 1 l (m^3) of water in the well.

1.1.3.2. the disinfectant solution, the water in the well is stirred for 10 minutes, well close lid and leave for 6:0, not allowing withdrawals from it.

1.1.3.3. After expiration of the presence of residual chlorine in water to determine the qualitative-by smell or by using the iodometričeskogo method. In the absence of residual chlorine in water add 0.25-0.3 of the initial quantity of disinfectant drugs and stand still 3-4:0.

1.1.3.4. After re-checking the presence of residual chlorine and positive results of that test, conduct pumping water to the disappearance of the pungent smell of chlorine. And only after that you can use the water for drinking and household purposes.

1.2. Disinfection of wells with prophylactic purpose

1.2.1. If disinfection of wells with preventive chain provisional disinfection does not hold.

1.2.2. Cleanup and repair wells, as well as newly constructed wells disenfection complete disinfection of the well by volumetric method (see section 1.1.3).

2. Disinfection of water in Wells

The need for disinfection of water in Wells set the Center for state sanitary and epidemiological surveillance to prevent the spread of infection among the population through kolodeznuû water and conducted:

“ as a temporary preventive action in areas of intestinal infections;

“ When water wells does not meet the requirements to the quality of non-centralized water supply water for microbiological indicators.

2.1. Disinfection of water in the well after the disinfection of the well using a variety of techniques and methods, but more often through the metering of the cartridge, usually filled with chlorinated products.

2.2. the process of disinfection of water in the well chlorinated drugs (active) residual amount of chlorine should be at the level of 0.5 mg/l reaching this level depends on a number of factors, Chief of which is the amount of disinfectant drug dosing needed to fill a cartridge whereby and conducted water disinfection.

2.3. To calculate the quantity of disinfectant drugs in metering Chuck (*a*) define the following parameters:

(*A*)₁ -the volume of water in the well, m^3 ;

*And*₂ -flow well, m^3/h ;

*And*₃ -the amount of water intake, m^3/day . (define by the survey population);

*And*₄ -hlorpoglošaemost' water.

Calculation on the formula:

$$A = 0.07 A_1 + 0.08 A_2 + 0.02 A_3 + 0.14 A_4$$

The notes.

a) and Dana) formula to calculate the number of DTSGK containing 52% active chlorine, water temperature of 17-18° c.

b) bleach containing 25% of active chlorine, calculation produces the same formula, but the estimated number of drug increased in 2 times.

c) the content of active chlorine) in DTSGK or other chlorine-make a recalculation.

d) g) water temperature 4-6° c (in winter) of the drug, some calculation, increase in 2 times.

e) d) definition of the flow of the well and the water hlorpoglošaemosti is given below.

2.4. For the number of selected suitable cartridge capacity (or several smaller cartridges), fill it, add water while mixing before formation kashitsy uniform, close the plug and immersed in water wells from 20 to 50 cm from the bottom depending on the height of the water column, and the free end of the rope (Twine) fixed on the shaft head.

2.5. The efficiency of the disinfection of water in the well set by determining the amount of residual chlorine (0.5 mg/l) and common coliform bacteria, the frequency of repeated definitions should not be less 1 times per week.

2.6. At the same time reducing the magnitude of residual chlorine or its disappearance (approximately 30 days), the cartridge is extracted from the well, exempt from the contents, washed and once again fill the disinfectant drug. When you do this, make the necessary adjustments, based on the initial experience of disinfection of water in the well.

Determination of yield of wells

Measure the amount of water in the well, pumping water fast for a certain period of time (3-10 min) and note the time during which recovered the water level in the well.

Calculation on the formula:

where

D -the well flow rate l/h;

V -the volume of water in the well to pumping, l;

t -time in minutes, for which the recovered water level plus the time during which water was pumped;

60-numerical factor.

Definition of the hlorpoglošaemosti water wells

The vessel selected 1 l well water, add 1%-s ' solution of bleach or DTSGK at a rate of 2 mg/l of active chlorine (with transparent water) or 3-5 mg/l (in murky water). The contents are

mixed well, close the CAP, leave it for 30 minutes and determine the amount of residual chlorine in the water.

Hlorpoglošaemost' calculate the water by determining the difference between a vessel and its number of active chlorine in the water after 30 minutes of contact.

Annex 2 (sample)

ACT washing, cleaning and disinfecting wells (captation)

Locality _ " _ " _ 200 _ g.

Commission composed of representatives of:

The Center for state sanitary and epidemiological surveillance in

(city, district)

(position, name, surname)

Business entity comes

(hozsub"ekta name, title, surname, name, patronymic, representative)

accounted for this Act that well, capture, spring

(strike out what does not apply)

(location, technical data-depth, volume, etc.)

subjected to cleaning, washing and disinfection of chlorine _

(specify which reagent)

When the concentration of active chlorine _ mg/DM³ (g/m³),

duration of contact _ hour " _ " _ 200 _ g.

The results of physico-chemical and bacterial analysis after completing disinfection _ sheets are attached.

The representative of the State

Sanitary-and-epidemiologic supervision _____

The representative of the business entity _____

Annex 3

PROGRAM

hygienic survey of mine well

1. Region, district, city, street, well no., date of examination.
2. The location of the well:
 - 2.1. In the territory of the village locations-on the streets, squares, in between homes, Garden, a kitchen garden.
 - 2.2. Outside the populated places-on the territory of the farm, House, household courtyard, Enterprise (institution), etc.
 - 2.3. On level ground, on an elevated, on a slope, in the Hollows, in a ravine or around a ravine, in the Meadow, on the shore of the pond.
 - 2.4. Fills does well during snowmelt, heavy rains, floods.
3. How many houses and residents serves well, RADIUS service.
4. When is built well. When was the last time has been cleared, dezinficirovalsâ.
5. type well: srubovoj, concrete, masonry, from another material.
 - 5.1. carcass Material: oak, pine, alder, etc.
 - 5.2. The height of walls above ground level.
 - 5.3. the well Depth from the surface to the bottom and to [a mirror](#) of water.
 - 5.4. The volume of water in the well.
 - 5.5. does a clay Castle, at what depth and thickness.
6. Which horizon is going to water.
7. status of internal surfaces of the walls of the well.

8. Surface condition of the soil around the well:
 - 8.1. presence of tiling, at what distance.
 - 8.2. the existence of a stingray, drain ditches and fences.
 - 8.3. Whether there is a trough for watering cattle, at what distance from the well.
9. Method of lifting water from wells: pump, collar, pie.
10. is there a tub or bucket (public, individual), stand for buckets.
11. availability covers, canopy or booth, their condition.
12. Distance from residential buildings, [carriageway](#) road from pit latrines and garbage pits, silos, other sources of pollution.
13. Sources of pollution are located above or below on a relief well.
14. the nature of the soil structure and source of pollution (Sandy, clayey, black).
15. water consumption per day, in the well water is bailed out completely or not.
16. Fluctuations in water level in the well (the seasons, depending on the rains, melting snow).
17. water quality and laboratory findings.
18. When and by whom was held the last analysis.
19. Data about the spread of infectious diseases in the territory of populated places.
20. information on other diseases the population that can be associated with a water factor (intoxication).
21. data on epizootics of rodents and pets in an area on the territory of populated places.
22. who conducts supervision structure and is responsible for his health.
23. the overall [conclusion](#) of sanitary-and-hygienic condition and necessary activities.

Annex 4

PROGRAM

hygienic survey of tube wells

1. Region, district, city, street, House No., well no., date of examination.
2. the location of the well: outside the village where territory inhabited places within the building.
3. Who owns the well (the owner).
4. How many houses and residents serves well, RADIUS service.

5. When is built well, when repaired.
6. Method of sinking: drilling, driving, digging with doburivaniem, etc.
7. the depth of the well from which the aquifer water is extracted.
8. the depth of standing water level in the well from a surface.
9. Performance of the well (debit), samoizlivaûsîjsâ or not.
10. water level changes over time, the nature, magnitude and possible causes of changes.
11. material of the walls of the tube wells, the presence of a filter, protective nets, mesh material.
12. the device, the presence of the booths or head Pavilion.
13. water lifting Method (manual or electric pump).
14. protection from freezing (type and nature of thermal insulation, insulating material, the electric pump).
15. The presence of a clay Castle ditches drain tiling, stands for buckets.
16. the sources of possible contamination, their distance from the well.
17. these laboratory analyses of water.
18. When and by whom was held the last analysis.
19. who is responsible for the sanitary condition of the well.
20. The General conclusion of sanitary-hygienic condition of tube wells and the necessary arrangements.

Annex 5

PROGRAM

hygienic survey of damming a spring

1. Region, district, locality.
2. tap the location. Do not fill does capture during flood, heavy rain, snow melt.
3. Who owns the capture.
4. How many houses and residents capture RADIUS service serves.
5. the nature of the spring.
 - 5.1. Spring of ascending or descending the aquifer from which the vyklinivaetsâ spring, the degree of protection against surface contamination.
 - 5.2. Amount of water obtained by damming a day.

- 5.3. Whether water level fluctuation on seasons, during floods, heavy rains.
6. year of construction.
7. year of last renovation.
8. When and by whom the last time and cleared dezinficirovalsâ, capture.
9. Surface condition the soil around the damming (tiling drain ditches, fences).
10. availability of the Pavilion or booths.
11. the capping Device:
 - 11.1. The design of the camera meter, wall material, tightness, the presence of clay walls of the Castle.
 - 11.2. the possibility of clarification of water (overflow wall).
 - 11.3. the presence of overflow pipes and mud; place water draining from overflow pipes and mud, coating it, the presence of the tray.
 - 11.4. the availability of ventilation pipe, its height above the ground, protecting the ventilation pipe.
 - 11.5. the presence of doors and hatch with cover, cleaning.
12. protection from freezing (insulation type and nature).
13. the sources of possible contamination, their distance from the captation, location on a relief in relation to kaptažu.
14. water and laboratory findings. When and by whom was held the last analysis.
15. Data about the spread of infectious diseases in a populated place.
16. data on other diseases the population associated with the water factor (intoxication).
17. data on epizootics of rodents and pets in an area on the territory of populated places.
18. who carries sanitary supervision and is responsible for the sanitary condition of the capping.
19. General conclusion about the hygiene condition of captation and necessary activities.

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