

# NATIONAL STANDARD OF UKRAINE

# **QUICKLY COOKED GRAINS**

# **Specifications**

DSTU 1055:2006

The publication is official

Kyiv STATE CONSUMER STANDARD OF UKRAINE 2007

## PREFACE

1 DEVELOPED: Spektr Open Joint Stock Company of the Ministry of Agrarian Policy of Ukraine (JSC "Spectr")

#### DEVELOPERS: O. Marchenko; M. Barska; I. Lakhno

2 ADOPTED AND GRANTED INTO EFFECT: order of the Derzhspozhivstandard of Ukraine dated August 15, 2006. No. 242 of 2007-07-01

3 TO REPLACE DSTU 1055-91

#### CONTENT

		WITH.
1 Scope of application	1	
2 Normative references	1	
3 Classification	4	
4 Technical requirements	4	
5 Safety requirements	6	
6 Requirements for environmental protection		6
7 Marking	6	
8 Packaging	7	
9 Transportation and storage	9	
10 Methods of control	9	
11 Acceptance rules	10	
12 Manufacturer's guarantees	10	
Appendix A Informational data on the nutritional and energy value of 100 g of the product	10	
Appendix B Bibliography	11	

Machine Translated by Google

### NATIONAL STANDARD OF UKRAINE

# QUICKLY COOKED GRAINS Technical conditions

QUICKLY DISSOLVING GROUNDS Technical conditions FAST BOILED SOFT GROATS

Specifications

Valid from 2007-07-01

#### **1 SCOPE OF APPLICATION**

This standard applies to quick-cooking cereals (hereinafter referred to as cereals), which are obtained by the method of hydration or flattening of cereals, followed by drying to the specified moisture content and bringing to full culinary readiness. Cereals are intended for the preparation of the first

lunch dishes, cereals or side dishes for meat or fish dishes with the addition of food additives of different tastes (salt, sugar, milk, fat, sauce, etc.) in the restaurant system and for sale through retail trade network. Product safety requirements are set out in 4.2.2, 4.2.3 and sections 5 and 6.

#### **2 NORMATIVE REFERENCES**

This standard contains references to the following regulatory documents:

DSTU GOST 745:2004 Aluminum foil for packaging. Technical conditions DSTU

3748–98 Bags for sugar. Technical conditions DSTU EN

12824:2004 Microbiology of food products and animal feed. Horizontal me-

detection of Salmonella GOST

12.1.004–91 SSBT. Fire safety. General requirements (SSBP. Fire safety. General requirements) GOST 12.1.005– 88 SSBT. General

sanitary and hygienic requirements for the air of the working area

(SSBP. General sanitary and hygienic requirements for the air of the working area)

GOST 12.2.003–91 SSBT. Production equipment. General safety requirements (SSBP.

Production equipment. General safety requirements)

GOST 12.3.002–75 SSBT. Production processes. General safety requirements (SSBP.

Production processes. General safety requirements)

GOST 17.2.3.02–78 Nature protection. Atmosphere. Rules for establishing permissible emissions of harmful substances by industrial enterprises (Nature protection. Atmosphere. Rules for establishing permissible emissions of harmful substances by industrial enterprises) GOST 276–60 Wheat groats ("Poltavskaya",

"Artek"). Technical conditions (Wheat groats ("Poltava", "Artek"). Technical conditions) GOST 572–60 Ground wheat groats. Technical conditions (grit millet. Technical

conditions) GOST 1341–97 Vegetable parchment. Technical conditions (Vegetable parchment. Technical conditions) GOST

1760-86 Parchment. Technical conditions (Parchment. Technical conditions)

GOST 2226–88 (ISO 6590-1–83, ISO 7023–83) Paper bags. Technical conditions (Paper bags. Technical conditions)

GOST 2228-81 Bag paper. Technical conditions (Bag paper. Technical conditions) GOST

2874–82 Drinking water. Hygienic requirements and quality control (Drinking water. Hygienic requirements and quality control)

GOST 3034–75 Oat groats. Technical conditions (Oat groats. Technical conditions) GOST 5550–74 Buckwheat groats. Technical conditions (Buckwheat groats. Technical conditions) GOST 5784–60 Barley groats. Technical conditions (Barley groats. Technical conditions) GOST 6002–69 Corn groats. Technical conditions (Corn groats. Technical conditions) GOST 6201–68 Ground peas. Technical conditions (Grounded peas. Technical conditions) GOST 6292–93 Rice groats. Technical conditions (Rice grains. Technical conditions) GOST 6309–93 Cotton and synthetic sewing threads. Technical conditions (Threads sewing cotton and synthetic. Specifications)

GOST 7247–90 Paper for packaging food products on machines. Technical conditions (Paper for packaging food products in vending machines. Technical conditions)

GOST 7625–86 Label paper. Technical conditions (Label paper. Technical conditions) GOST 7730–89 Cellulose film. Technical conditions (Cellulose film. Technical conditions) GOST 8273–75 Wrapping paper. Technical conditions (Wrapping paper. Technical conditions) GOST 9078–84 Flat pallets. General technical conditions (Flat pallets. General technical conditions) GOST 9569–79

Paraffinized paper. Technical conditions (Paraffinized paper. Technical conditions) GOST 10131–93 Boxes made

of wood and wood materials for the production of food industries, agriculture and matches. Technical conditions (Boxes made of wood and wood materials for products of the food industry, agriculture and matches. Technical conditions) GOST 10354–82 Polyethylene film. Technical conditions (Polyethylene film.

Technical conditions) GOST 10444.8–88 Food products. Method for determining *Bacillus cereus* (Food products. Me-

tod determination of Bacillus

*cereus)* GOST 10444.12–88 Food products. Method for determining yeast and mold fungi (Food products. Method for determining yeast and mold fungi)

GOST 11354–93 Multi-turn boxes made of wood and wood materials for the production of food industries and agriculture. Technical conditions (Boxes made of wood and wood materials are multi-use for products of the food industry and agriculture. Technical conditions) GOST 12303–80 Packs of cardboard, paper and combined

materials. General technical equipment

loviya (Packs of cardboard, paper and combined materials. General technical conditions)

GOST 13511–91 Corrugated cardboard boxes for food products, matches, tobacco and detergents. Technical conditions (Corrugated cardboard boxes for food products, matches, tobacco and detergents. Technical conditions) GOST 13512–91

Corrugated cardboard boxes for confectionery products. Technical conditions (Corrugated cardboard boxes for confectionery products. Technical conditions) GOST 13515–91 Boxes

made of flat glued cardboard for butter and margarine. Technical specifications (Boxes made of flat glued cardboard for butter and margarine) GOST 13516–86 Corrugated cardboard boxes for canned goods, preserves

and food liquids (Corrugated cardboard boxes for canned goods, preserves and food liquids) GOST 14192–96 Marking of goods ( Cargo marking) GOST 14961–91 Linen and

linen threads with chemical fibers. Technical conditions (Linen

and linen threads with chemical fibers. Technical conditions) GOST 15113.0–77 Food concentrates. Rules of acceptance, selection and preparation of

samples (Food concentrates. Rules of acceptance, selection and preparation of samples)

GOST 15113.1–77 Food concentrates. Methods of determining the quality of packaging, net weight, volumetric mass, mass fraction of individual components, size of individual types of product and grinding coarseness (Food concentrates. Methods of determining the quality of packaging, net mass, mass fraction individual types of product and grinding size)

GOST 15113.2–77 Food concentrates. Methods of determining impurities and pests of bread stocks (Food concentrates. Methods of determining mixtures and contamination by pests arain stocks)

GOST 15113.3–77 Food concentrates. Methods of determining organoleptic indicators, readiness of concentrates for use and evaluation of suspension dispersion (Food concentrates. Methods of determining organoleptic indicators, readiness of concentrates for consumption and evaluation of suspension dispersion)

GOST 15113.4–77 Food concentrates. Moisture determination methods (Food concentrates. Methods moisture determination)

GOST 16337–77 Polyethylene of high pressure. Technical conditions (High-pressure polyethylene. Specifications)

GOST 17308-88 Twine. Technical conditions (Twins. Technical conditions)

GOST 19360–74 Film liner bags. General technical conditions (Film liner bags.

General technical conditions)

GOST 23285–78 Transport packages for food products and glass containers. Technical conditions (Transport packages for food products and glass containers. Technical conditions)

GOST 24370–80 Packages made of paper and combined materials. General technical conditions

(Packages made of paper and combined materials. General technical conditions)

GOST 24508–80 Food concentrates. Packaging, labeling, transportation and storage (Food concentrates. Packaging, labeling, transportation and storage)

GOST 26663–85 Transport packets. Formation using packaging tools.

General technical requirements (Transport packages. Forming using packaging tools)

GOST 26668–85 Food and flavor products. Sampling methods for microbiological analysis lyzov (Food and flavor products. Methods of sampling for microbiological analysis)

GOST 26669–85 Food and flavor products. Preparation of samples for microbiological analysis

(Food and flavor products. Preparation of samples for microbiological analysis)

GOST 26670–91 Food products. Methods of cultivation of microorganisms (Food products.

Methods of cultivation of microorganisms)

GOST 26927–86 Raw materials and food products. Mercury determination method (Raw materials and food products. Mercury determination method)

GOST 26929–94 Raw materials and food products. Sample preparation. Mineralization for determination

content of toxic elements (Raw materials and food products. Preparation of samples. Mineralization to determine the content of toxic elements)

GOST 26930–86 Raw materials and food products. Method for determining arsenic (Raw materials and food products. Method for determining arsenic)

GOST 26932–86 Raw materials and food products. Lead determination methods (Raw materials and products food Lead determination methods)

GOST 26933–86 Raw materials and food products. Cadmium determination methods (Raw materials and products food Methods for determining cadmium)

GOST 26972–86 Grain, groats, flour, bran for baby food products. Methods of microbiological analysis (Grains, cereals, flour, bran for baby food products. Methods of microbiological analysis)

GOST 27543–87 Confectionery products. Equipment, materials, reagents and nutrient media microbiological analyzes (Confectionery products. Equipment, materials, reagents and nutrient media for microbiological analysis)

GOST 30178–96 Raw materials and food products. Atomic absorption method for determination of toxic elements (Raw materials and food products. Atomic absorption method for determination of toxic elements).

#### **3 CLASSIFICATION**

3.1 Depending on the type of raw material, cereals are produced under the following names:

- oatmeal;
- peas;
- buckwheat;
- corn;
- pearls;
- wheat;
- millet;
- rice:
- barley

**3.2** Buckwheat and millet groats are produced by the hydration method; pea, corn, oat, perrye, wheat, rice, barley - by the flattening method.

#### **4 TECHNICAL REQUIREMENTS**

**4.1** Cereals are manufactured in accordance with the requirements of this standard in accordance with the recipes and technological instructions approved in accordance with the established procedure, in compliance with sanitary rules for enterprises of the food concentrate industry operating in Ukraine.

#### 4.2 Characteristics

4.2.1 According to organoleptic indicators, cereals must meet the requirements specified in table 1.

Indicator	Characteristic
Appearance of cereals: -	
peas, buckwheat	<ul> <li>crumbly mass, characteristic of this type of cereals. They allow the presence of finely chopped cereals no more than 3.0% by weight;</li> </ul>
<ul> <li>oat, corn, pearl,</li> <li>wheat, millet, rice, barley</li> </ul>	crumbly mass, characteristic of this type of cereals. Individuals are allowed loosely packed lumps
Cereal color:	
- peas	— from yellow to yellow-green of various shades; —
— the Greeks	yellow-brown of various shades; — yellow-
— corn, oat	cream of various shades; — yellow of
— pearl, wheat, millet	various shades; — from
— rice, barley	white to light cream of various shades
Taste and smell	This type of cereal has no extraneous taste or smell and signs of mustiness and mold
Consistency after cooking	Properties of ready-made second courses, cooked to full culinary readiness. Slight overcooking of cereals is allowed

Table 1 — Organoleptic indicators of cereals

4.2.2 In terms of physical and chemical parameters, cereals must meet the requirements specified in Table 2.

Indicator	Norm	Control method
Mass fraction of moisture, %, not more than	10.0	According to GOST 15113.4
The mass fraction of a metallomagnetic impurity (particles no more than 0.3 mm in the largest linear dimension, and the mass of its individual particles should not exceed 0.4 mg), %, not more than	3.10–4	According to GOST 15113.2
Readiness of a cereal dish for consumption, min, no more than: — peas - buckwheat, oat, millet, rice, barley	15 20	According to GOST 15113.3
- wheat	25	

4

End of table 2

Indicator	Norm	Control method
— wheat — corn, pearl	25 30	According to GOST 15113.3
The presence of side and mineral impurities (sand), contamination pests of grain stocks	Is not allowed	According to GOST 15113.2

#### 4.2.3 The content of toxic elements, mycotoxins in cereals should not exceed permissible levels,

provided by the Ministry of Internal Affairs and Communications No. 5061 [1] and listed in Table 3.

Table 3 — Safety	indicators	in	cereals
------------------	------------	----	---------

Name indicator	The permissible level, mg/kg, is not more than	Control method
Lead content	0.5	According to GOST 26932, GOST 30178
Cadmium content	0.1	According to GOST 26933, GOST 30178
Arsenic content	0.2	According to GOST 26930
Mercury content	0.03	According to GOST 26927
Mycotoxin content:		
— aflatoxin B1	0.005	According to the methodological recommendations specified in MR 2273 [2], MU 4082 [3]
— zearalenone for wheat, corn, barley	0.2	According to the methodological instructions specified in MU 5177 [4]
— T-2 toxin	0.1	According to the methodological instructions specified in MU 3184 [5]
— deoxynivalenol for:		According to the methodological instructions specified
wheat	0.7	in MU 5177 [4]
barley	1.0	

4.2.4 According to microbiological indicators, cereals must meet the requirements specified in table 4.

#### Table 4 — Microbiological indicators of cereals

Indicator	Norm	Control method
Number of mesophilic aerobic and facultative anaerobic microorganisms, CFU in 1 g, not more than	5.103	According to GOST 10444.15
Bacteria of groups of coliforms (coliforms) in 0.01 g of the product	ls not allowed	According to GOST 26972
Pathogenic microorganisms, in particular bacteria of the genus <i>Salmonella</i> , in 25 g of the product	Is not allowed	According to DSTU ISO 12824
B. <i>cereus</i> , in 0.1 g of the product	ls not allowed	According to GOST 10444.8
Mold mushrooms, CFU in 1 g, not more than	50	According to GOST 10444.12

#### 4.3 Requirements for raw materials

- **4.3.1** The following main types of raw materials should be used to prepare dishes from cereals:
- shelled peas not lower than the first grade according to GOST 6201;
- buckwheat groats of the first grade according to GOST 5550;
- ground corn grits No. 1-3 in accordance with GOST 6002;
- steamed uncrushed oat groats of the highest grade according to GOST 3034;
- pearl barley No. 1-2 according to GOST 5784;

- "Poltavski" wheat groats No. 1-3, "Artek" according to GOST 276;
- ground millet groats of the highest grade according to GOST 572;
- polished rice grains not lower than the first grade in accordance with GOST 6292;
- barley groats No. 1 according to GOST 5784;
- drinking water according to GOST 2874.

You can use other types of raw materials allowed by the central executive authority

in the field of health care of Ukraine, in accordance with current regulatory documents.

**4.3.2** The raw materials used for the production of cereals must meet the requirements according to MBV No. 5061 [1] in terms of the content of toxic elements, mycotoxins, and pesticides - according to DSanPyN 8.8.1.2.3.4-000 [6].

**4.3.3** The raw material that is supplied for the production of cereals must have a hygienic conclusion of the central executive authority in the field of health care of Ukraine and (or) a quality document specifying safety indicators.

4.3.4 The content of radionuclides in raw materials should not exceed the levels established in DR [7].

#### **5 SECURITY REQUIREMENTS**

5.1 During the production of cereals, it is necessary to follow the requirements stipulated by sanitary regulations [8].

5.2 Technological production processes must meet the requirements of GOST 12.3.002.

5.3 Safety requirements for technological equipment are established in accordance with GOST 12.2.003.

**5.4** The air in the working area must meet the requirements of GOST 12.1.005. The microclimate of industrial premises must meet the requirements of DSN 3.3.6.042 [9].

5.5 The lighting of the premises must meet the requirements of SnyP P-4 [10].

**5.6** The equivalent noise level at workplaces should not exceed 80 dB, and it is determined in accordance with DSN 3.3.6.037 [11] at least once a year.

5.7 General requirements for fire safety - according to GOST 12.1.004.

#### **6 ENVIRONMENTAL PROTECTION REQUIREMENTS**

**6.1** Waste water generated during the production of cereals must be cleaned, and it must comply with the requirements of SanPiN 4630 [12].

**6.2** Atmospheric air in populated areas must be protected in accordance with the requirements of GOST 17.2.3.02 and DSP 201 [13].

**6.3** The soil is protected from contamination by household and industrial waste in accordance with the requirements of SanPiN 42-128-4690 [14].

#### 7 MARKING

7.1 Each unit of consumer packaging with cereals must be labeled in the state language, which contains:

- the name of the food product;

- the name and full address and phone number of the manufacturer, the address of the production facilities (facility), and for imported food products - the name, full address and phone number of the importer;

- the net amount of the food product in the established units of measurement (weight, volume or piece);

- the composition of the food product in the order of priority of the components, in particular food additives and flavors traffic jams used in its production;

- caloric content and nutritional value with an indication of the amount of protein, carbohydrates and fats in the established units of measurement per 100 g of food product;

- final consumption date "Use by" or production date and expiration date;

production lot number;

- conditions of storage and use, if the food product requires certain conditions of storage and use to ensure its safety and quality.

**7.2** Marking is performed by applying lithographed or offset printing, or embossing, or in any other way that ensures clear reading, on the side surface of the bundle, package, or pasting an artistically decorated color label.

7.3 Paints used for marking must be durable, do not wash off, have no extraneous odor and be approved by the central executive authority in the field of health care

of Ukraine for use in the labeling of food products.

**7.4** Transport marking must be carried out in accordance with GOST 14192 with the application of manipulation these signs: "Keep away from moisture", "Keep away from heat".

Marking is applied to each unit of transport container, which characterizes the product:

- name of the product;

- the name and address of the manufacturer and the place of manufacture;

- net and gross mass in kilograms;

- the number of packaging units and the net mass of the packaging unit (for packaged products);

- the final date of sale or the date of manufacture and the date of suitability for consumption;

- storage conditions;

- designation of this standard.

**7.5** Transport marking is applied by pasting a label or applying a distinctive print with a stencil or stamp-paint that does not wash off and does not have an odor.

#### **8 PACKAGING**

8.1 Cereals are released packaged.

8.2 Cereals packed in accordance with GOST 24508 with a net weight from 0.300 kg to 1.000 kg are produced in:

— bundles according to GOST 12303 from paper according to GOST 7247 or from paper for automatic packaging of grocery products weighing 1 m not less than 220 g with an inner package made of parchment acc from GOST 1341 or parchment according to GOST 1760;

— bundles according to GOST 12303 from paper according to GOST 7247 or from paper for automatic packaging of grocery products weighing 1 m not less than 220 g with an internal package made of heat-welded polymer materials in accordance with current regulatory documents:

- packages in accordance with GOST 24370 from polyethylene food film in accordance with GOST 10354;

— bags according to GOST 24370 made of sack paper according to GOST 2228 with an inner package

from parchment according to GOST 1760;

- packages according to GOST 24370 made of sack paper according to GOST 2228 with an inner package made of waxed paper according to GOST 9569;

- packages according to GOST 24370 made of labeling paper weighing 1 m <sup>2</sup> not less than 80 g according to from GOST 7625 with an inner package made of parchment according to GOST 1341 or sub-parchment according to GOST 1760;

- packages according to GOST 24370 made of labeling paper weighing 1 m <sup>2</sup> not less than 80 g according to from GOST 7625 with an inner package made of waxed paper in accordance with GOST 9569;

- packages according to GOST 24370 made of paper weighing 1 m<sup>-</sup> not less than 90 g according to GOST 7247 from polydimensional coating according to GOST 16337;

- packages in accordance with GOST 24370 from combined heat-welded polymer materials based on aluminum foil in accordance with DSTU GOST 745;

- packages in accordance with GOST 24370 from multilayer polymer materials in accordance with current regulatory documents;

— packages in accordance with GOST 24370 from combined materials based on paper, heat-sealed materials in accordance with current regulatory documents or from other materials approved for use by the central executive authority in the field of health care of Ukraine.

**8.3** Cereals, packaged in bundles, bags, are packed in boxes made of wood and wooden materials according to with GOST 10131, multi-turn according to GOST 11354 with a total net weight of no more than 25 kg, boxes from corrugated cardboard in accordance with GOST 13511, GOST 13512, GOST 13516 with a total net weight of no more than 20 kg, cardboard boxes according to GOST 13515 with a total net weight of no more than 20 kg.

**8.4** Before packing prepackaged cereals, the boxes are lined with wrapping paper in accordance with with GOST 8273 or parchment according to GOST 1341, under-parchment according to GOST 1760, cellophane according to with GOST 7730, waxed paper according to GOST 9569. Free spaces in boxes must be filled paper or paper shavings.

8.5 It is allowed for restaurant enterprises to pack packets of cereals in boxes without styling with wrapping paper.

8.6 Cereals of the same type must be packed in each transport packaging unit.

**8.7** For intra-city transportation, it is allowed to pack bundles and bags of cereals in return corrugated cardboard boxes.

8.8 Cereals intended for industrial use are packed in:

— packages in accordance with GOST 24370 from polyethylene film of the "M" brand in accordance with GOST 10354, from unstabilized polyethylene of basic brands, allowed to come into contact with food products, in accordance with with GOST 16337 net weight from 5 kg to 10 kg;

- packages in accordance with GOST 24370 made of sack paper in accordance with GOST 2228 with an inner package with parchment in accordance with GOST 1341 or parchment in accordance with GOST 1760 with a net weight of 5 kg to 10 kg;

- four-layer paper bags of the "NM", "VM", "VMP" or "PM" brands in accordance with GOST 2226 by mass net not more than 20 kg;

- fabric bags in accordance with DSTU 3748 with an inner polyethylene bag-insert in accordance with with GOST 19360 with a net weight of no more than 30 kg;

— polypropylene bags in accordance with DSTU 3748 or other, equivalent in terms of quality indicators, polypropylene bags of domestic or foreign production, which are allowed by the central executive authority in the field of health care of Ukraine for packaging food products, with a net weight of more than 30 kg.

**8.9** Packages with cereals are heat-sealed or sealed with adhesive tape in accordance with current regulations tive documents.

**8.10** Bags with cereals are machine-stitched with linen threads in accordance with GOST 14961, cotton threads - in accordance with GOST 6309, synthetic or other threads - in accordance with current regulatory documents, which ensure the mechanical strength of stitching.

The distance from the seam to the edge of the neck of the bag should be at least 20 mm.

Manual sewing of the bag with twine according to GOST 17308 or synthetic threads is allowed

in accordance with current regulatory documents.

The strength of the seam must ensure full preservation of the amount of product.

8.11 The neck of polyethylene bags-tabs can be wrapped, tied or heat-welded.

8.12 Fabric bags must be new or reusable of the first or second category.

**8.13** It is allowed to pack cereals in containers of other types in accordance with current regulatory documents, made of materials that ensure the preservation of product quality and are approved by the central executive authority in the field of health care of Ukraine for contact with food products.

8.14 Containers and packaging materials used for packing cereals must be clean, dry, without extraneous smell.

8.15 The net mass of cereals must correspond to the mass indicated in the labeling of the consumer container.

The value of permissible deviations of the number of packaged products in a packaging unit filled with mass from the nominal amount, should not be greater than the limit of permissible minus deviations T1 according to P 50-056 [15], the values of which are given in table 5.

in a paokaging anit			
The nominal value of the number of products in the packaging unit, g	Value of the limit of permissible minus deviation of T from the nominal value		
	%	Mr	
up to 300 incl.	—	9.0	
Over 300 » 500 »	3.0		
» 500 » 1000 »	_	15.0	
» 1000 » 10000 »	1.5	—	
Note 1. The value of the limits of permissible positive deviations is not standardized.			

**Table 5** — Limits of permissible negative deviation of the number of products in a packaging unit

**8.16** Packaging requirements may be changed in accordance with the contract or agreement, subject to quality assurance and product preservation.

#### **9 TRANSPORTATION AND STORAGE**

**9.1** Groats are transported by all types of transport in covered vehicles in accordance with the rules cargo transportation laws applicable to this mode of transport.

Vehicles must be dry, clean, without extraneous odor and not infected with pests grain stocks.

It is not allowed to use vehicles used to transport poisonous and strongly smelling substances cargo, as well as to transport cereals together with products that have a specific smell.

Packaging of goods must be carried out in accordance with GOST 23285, GOST 26663.

**9.2** During loading, transportation and unloading, cereals must be protected from precipitation and direct sunlight.

**9.3** Cereals must be stored in dry, clean, well-ventilated rooms that do not have a foreign smell, are not infected with pests of grain stocks, at a temperature of  $(18 \pm 3)$  oC and a relative humidity of air that does not exceed 75%.

It is not allowed to store cereals under the influence of direct sunlight, as well as together with products that have a specific smell.

**9.4** Bags and boxes with products in warehouses with cement or asphalt floors Goya must be placed on pallets in accordance with GOST 9078.

In the case of storing cereals for more than 10 days, the pallets are covered with a tarpaulin or polymer films of such a size that they can be wrapped on the first lower row - to prevent contamination and moistening of products.

**9.5** During the storage of cereals, the distance from the heat source, water supply and sewage pipes is not should be less than 1 m.

#### **10 CONTROL METHODS**

10.1 Samples must be selected and prepared in accordance with GOST 15113.0.

**10.2** It is necessary to determine the quality of packaging and labeling, the net mass in accordance with GOST 15113.1, organoleptic indicators - according to GOST 15113.3, physical and chemical indicators - according to the standards listed in Table 2.

**10.3** Samples for the determination of toxic elements must be mineralized in accordance with GOST 26929, it is necessary to determine toxic elements according to the standards given in table 3, mycotoxins — in accordance with methodological recommendations of MR 2273 [2], methodological guidelines of MU 4082 [3], MU 5177 [4], MU 3184 [5].

**10.4** Select and prepare samples for microbiological analysis in accordance with GOST 26668, GOST 26669, methods of cultivation of microorganisms must be carried out in accordance with GOST 26670, apparatus

culture and nutrient media — in accordance with GOST 27543, microbiological control — in accordance with GOST 26972, DSTU ISO 12824 and SanPiN 42-123-4940 [16].

**10.5** Analysis for the detection of pathogenic microorganisms is carried out in accordance with the procedure of the State nitary supervision according to the instructions [17].

#### **11 RULES OF ACCEPTANCE**

**11.1** The rules of acceptance, batch determination, sample volume, sampling must be carried out according to GOST 15113.0.

**11.2** Each batch of cereals is accompanied by a document confirming their quality and safety, stating therein:

- names and addresses of the manufacturer and place of manufacture;
- product names;
- date of manufacture and expiration date;
- storage conditions;
- the number of packaging units and the net weight of the packaging unit;
- party mass and number of seats;
- batch numbers and shipment dates;
- monitoring results;
- designation of this standard.

**11.3** To check the quality of cereals, the manufacturer conducts acceptance and acceptance tests according to 11.4 and periodic tests according to 11.5, 11.6.

11.4 During acceptance tests, the state of packaging and labeling is checked,

net mass, organoleptic and physicochemical indicators for compliance with the requirements of table 1 and table 2.

**11.5** The periodicity of monitoring for the content of toxic elements is established according to the method by wild recommendations MR 4.4.4-108 [18].

**11.6** The periodicity of microbiological monitoring is determined in accordance with methodological recommendations by MR 4.4.4-108 [18], and it must guarantee the epidemiological safety of products.

#### **12 MANUFACTURER'S WARRANTIES**

12.1 The manufacturer guarantees the compliance of cereals with the requirements of this standard, subject to compliance with the requirements transportation and storage.

12.2 The shelf life of cereals from the date of their manufacture is no more than 1 year.

#### APPENDIX A

(reference)

#### FOOD INFORMATION AND THE ENERGY VALUE OF 100 G OF THE PRODUCT

	Carbohydrates, g	Vitamins, mg		Energetic
The name of the cereal		B1	RR	value, kcal
Peas	50.8	0.90	2.37	329
Greeks	62.1	0.43	4.19	350
Corn	71.6	0.13	1.10	353
Oatmeal	49.7	0.49	1.10	318
pearls	66.5	0.12	2.00	335
Wheat	63.1	0.30	1.40	331
Millet	66.5	0.42	1.55	364
Barley	66.3	0.27	2.74	339

#### APPENDIX B

(reference)

#### **BIBLIOGRAPHY**

1 Medico-biological requirements and sanitary standards for the quality of food raw materials and food products (Medical-biological requirements and sanitary standards for food raw materials and food products), approved by the Ministry of Health of the USSR dated 08.01.89, No. 5061–89

2 MP 2273–80 Methodological recommendations for the detection, identification and determination of aflatoxin content in food products (Methodological guidelines for the detection, identification and determination of aflatoxin content in food products), approved by the Ministry of Health of the USSR dated 10.12.80

3 ÿÿ 4082–86 Methodological instructions for the detection, identification and determination of aflatoxin content in food raw materials and food products using high-performance liquid chromatography ), approved by the Ministry of Health of the USSR dated 20.03.86 4 MU 5177–90 Methodological instructions for the identification and determination of the content of deoxynivalenone (vomitoxin) and zearalenone in grain and grain products (Methodical instructions for the identification and

determination of the content of deoxynivalenone (vomitoxin) and zearalenone in grain and grain products

5 ÿÿ 3184–84 Methodological instructions for detection, identification and determination of T-2 toxin in food products and food raw materials (Methodical instructions for detection, identification and determination of T-2 toxin in food products and food raw materials) 6 DSanPiN 8.8.1.2.3.4 -000–2001

Permissible doses of concentrations, quantities and levels of pesticide content in agricultural raw materials, food products, air of the working area and atmospheric air, water of reservoirs, soil 7 DR–97 Permissible levels of content of radionuclides

137Cs and 90Sr in food and drinking water 8 Rules technics of safety and production sanitation at enterprises of the food concentrate industry (Rules of safety and industrial sanitation at enterprises of the food concentrate industry) dated 05.10.76 No. 1408–76

9 DSN 3.3.6.042–99 Sanitary norms of the microclimate of production premises (Sanitary norms of the microclimate of industrial premises)

10 SnyP P-4 Natural and artificial lighting (Natural and artificial lighting) 11 DSN 3.3.6.037–99 Sanitary standards for industrial noise, ultrasound and infrasound 12 SanPiN 4630–88 Sanitary rules and norms for the protection of surface waters from pollution (Sanitary rules and norms on the protection

of surface waters from pollution) 13 DSP 201–97 State sanitary rules for the

protection of atmospheric air in populated areas (against pollution by chemical and biological substances), approved by the Ministry of Health of Ukraine dated 07.09.97, No. 201 14 SanPiN 42-128-4690 –88 Sanitary rules for the maintenance

of territories of inhabited places (Sani-

tary rules for maintaining the territories of populated areas)

15 R 50-056–96 The product is packed in a package. General requirements for quantity

16 SanPiN 42-123-4940–88 Microbiological standards and methods of analysis of products of children's, medical and dietetic nutrition and their components (Microbiological standards and methods of analysis of products of children's, medical and dietetic food and their components)

17 Instruction "On the procedure of investigation, accounting and conducting of laboratory tests in the establishments of the sanitary-epidemiological service in the case of food poisoning" No. 1135–73, M., 1975 18 MR 4.4.4-108–2004 "Periodicity of control of food raw materials and food products according to

safety indicators", approved by the Ministry of Health of Ukraine dated July 2, 2004, No. 329.

#### UKND code 67.060

**Key words:** quick-boiling cereals, organoleptic indicators, physico-chemical indicators, microbiological indicators, toxic elements, requirements for raw materials, packaging, labeling, acceptance rules, control methods, safety requirements.

Editor **O. Bindas** Technical editor **O. Marchenko** Proofreader **O. Pisarenko** Editor **S. Pavlenko** 

Signed for printing on September 10, 2007. Format 60 84 1/8. Mind. printing. sheet 1.86. Deputy The price is negotiable.

Department of Scientific Editing of Regulatory Documents of SE "UkrNDNC" 03115, Kyiv, str. Svyatoshynska, 2