

KONSTANTA GROUP OF COMPANIES

SCIENCE. TECHNOLOGIES. INNOVATION



**READY SOLUTIONS
FOR BREWING COMPANIES
AND KVASS PRODUCTION**

Sk
Skolkovo

About the Company

The KONSTANTA Company is a developer and manufacturer of its own line of complex food additives and technological aids.

The Company's key area is designing new ways to disable development of harmful microorganisms in food (bacteria, including coliforms, fungi, viruses, various types of mold, etc.), and giving traditional products additional useful properties.

All additives are made on the base of the innovation technology for modifying natural cellulose fibers, resulting in acquiring antimicrobial properties. The additives efficiency is caused not by the chemical effect on harmful microorganisms, but by the physical one. The charged fibers bind to pathogenic microflora, and block its nutrition, respiration and reproduction processes. Thus, the microorganisms development gets suppressed, and the products shelf life significantly increases.

The additives are unique and adapted to tasks of beer and kvass productions. The main properties are extension of the finished products shelf life and efficient precipitation of "live" yeast.

The additives do not contain toxic components, carcinogens, antibiotics, genetically modified organisms, preserving agents, do not affect organoleptic properties, keeping the products eco-friendly and safe for humans.

BOOSTING OF THE PRODUCTS SHELF LIFE WITH NO STANDARD ANTIBIOTICS, PRESERVATIVE AGENTS AND OTHER CHEMICALS

NOT PASTEURIZED (LIVE) BEER



up to 90 days

KVASS OF NATURAL FERMENTATION



up to 35 days

“Konstanta” Complex food additive (concentrate)

Complex food additive “Konstanta” (concentrate) is designed to solve current problems in beer and kvass productions:

- Improving durability of live beer and kvass after opening the package (keg), compared to standard shelf life.
- Preserving the quality of live beer and kvass in extreme storage conditions (in summer).

Product	Task	Dosage
Not pasteurized (live) beer	Suppressing development of pathogenic microflora. Improving the quality of filtration and “surface tension”	0.2 g per 1 l of the product
Kvass of natural fermentation	Suppressing development of pathogenic microflora. Improving the quality of filtration and “surface tension”	0.2 g per 1 l of the product

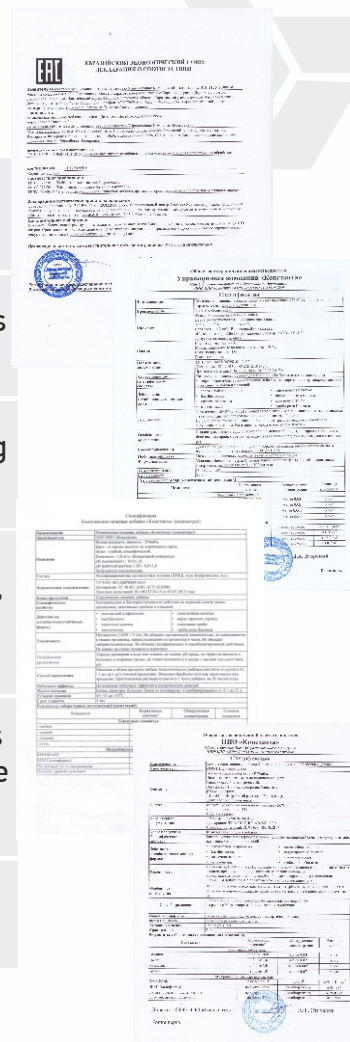


INGREDIENTS: water, modified cellulose fibers, iodized salt.

PACKAGING: 1 kg / 5 kg / 10 kg / 25 kg

“Konstanta” Advantages of additive

- 1** Reduces the beverages production time due to efficient precipitation (flocculation) of yeast, as well as filtration time reduction.
- 2** Facilitates the process and improves the quality of filtration (reduces the “slip” of filtration systems, and decreases costs for filtration)
- 3** Improves the “surface tension” of the product, which results in giving up foaming agents.
- 4** Does not affect bread and beer yeast. Provides the option to avoid pasteurization of the finished product, and preserve the yeast “alive” in the final product (in their “dormant” state)
- 5** Eco-friendly product; neither antibiotic nor enzyme preparation; does not contain GMOs; no harm to humans and animals; easily removable from the gastrointestinal tract within 24 hours
- 6** Effective at cooling and heating (from -20°C to $+180^{\circ}\text{C}$).



Complex food additive “Deztin”

In food production, in course of the process cycle, it is important to adequately follow sanitary standards to avoid of re-transferring pathogenic microflora from surfaces in working premises to the final product, which directly affects its microbiological purity and shelf life.

Product	Task	Dosage
Treatment of equipment, premises, boxes (door joints, seals), packaging lines, etc.)	Prevention of external transfer of pathogenic microflora to the finished product	Cold mist or fine mist irrigation with the concentrate solution in the ratio of 1:50 (1 kg of the concentrate per 50 l of water)
Treatment of surfaces in contact with the product in course of the technical process (e.g. gloves of employees involved in manual sorting)	Prevention of external transfer of pathogenic microflora to the finished product	Dipping into the concentrate solution in the ratio 1:50 (1 kg of the concentrate per 50 l of water)
Disinfection of drinking / process water	Suppressing pathogenic microflora	Adding to the water tank in the ratio of 1 l of the concentrate per 20 t of water

INGREDIENTS: water, modified cellulose fibers, iodized salt.

PACKAGING: 1 kg / 5 kg / 10 kg / 25 kg



Use of food additive “Deztin”

Treatment method	Description
Cold mist (generator or cold mist chambers)	With the fraction size of 5-10 µm, consumption is 50 ml of solution per 1 m ³ of the premises. No need for drops to appear on the surfaces.
Fine mist irrigation	Irrigation from: - technical spray gun - high-pressure washers (e.g. Kärcher) - adding to the water for showering
Dipping	Working solution can be used in “closed” working systems and during one shift.
Disinfection of drinking / process water	Dosage for disinfection of drinking / process water: 1 kg of the concentrate per 20 t of water



Advantages of additive “Deztin”

- 1 Effective at cooling and heating (from -20°C to $+180^{\circ}\text{C}$).
- 2 Washing off from the surface treated is not required. Neither disinfectant nor antiseptic; does not contain free chlorine or PAA
- 3 Forms a nanoscale polymer film on the surface that disables development of microorganisms, due to which it has the prolonged effect.
- 4 When treating premises and equipment, the antimicrobial property is effective within the period from 36 hours to 7 days, under significant physical exposure – within 1 shift or 8 hours.
- 5 Eco-friendly product; neither antibiotic nor enzyme preparation; does not contain GMOs; no harm to humans and animals; easily removable from the gastrointestinal tract within 24 hours
- 6 Low cost of use in terms of area units of the surface treated.

The image displays several official documents and forms related to the use of 'Deztin' disinfectant. At the top is a certificate of registration (Сертификат государственного образца) for the disinfectant. Below it is a technical specification (Техническое задание) for the disinfectant. The bottom section contains a detailed application form (Лист учета обработки) with tables for recording treatment results, including columns for the date, time, area, and the person performing the treatment. The documents are in Russian and feature official stamps and logos.



GROUP OF COMPANIES

KONSTANTA

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Contact telephone: 8 800 250 9291
(free, multi-channel)

Website: www.gk-konstanta.ru
www.gk-konstanta.com

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