



**Developing and  
manufacturing  
since 1992**

Research and Production Company "VINAR" was founded in 1992 and became the first Russian manufacturer and supplier of disposables for sterilization and disinfection. VINAR is a respected, professional family, owned and operated organization with headquarters in Moscow.

We are proud to keep our facilities with certified equipment in several Russian regions. Our knowledgeable team continuously maintains quality control at its highest level. Only the best materials are approved for VINAR products that comply with national and international standards.

The company started with chemical sterilization indicators and today our product range includes but is not limited to the following:

- Packaging materials for all types of sterilization.
- Chemical type 1, type 4 indicators, integrators, emulators.
- Bowie and Dick type test packs, Helix-test.
- Biological indicators.
- Disinfectants.
- Chemical indicators to control disinfectant solutions concentration.
- Wash monitoring and pre-cleaning tests.
- Protein tests.
- Electronic indicators for «cold chain» control.
- Process challenge devices (PCD).

In our laboratories new ideas are constantly generated and our highly qualified and customer-oriented professionals transform them into reality.

More than 200 employees are involved in production, distribution and service of VINAR products.

We present ourselves as experts in sterilization and sterility. Our core principles are professionalism, integrity and determination. We are flexible, involved and always open to innovations and new partnerships around the world.

### Disinfectant ДезИД Универсал (DesID Universal)

A highly concentrated, low-toxicity, and low-allergenicity disinfectant with a wide range of applications - from professional medical disinfection to household use. It possesses good cleaning and deodorizing properties, and does not cause corrosion of items.

It retains its properties through freezing and thawing.

Shelf life: 5 years

Shelf life of prepared solutions: 28 days

Use DesiKONT DesID Universal indicator to control the concentration of the disinfectant.

**Composition:** Water, a mixture of quaternary ammonium salts (QAS) 60%, non-ionic surfactants, auxiliary components. pH of a 1% solution: 8.0–9.0.

#### Characteristics:

- tuberculosis, plague, cholera pathogens;
- viruses, including adenoviruses and influenza viruses;
- parenteral hepatitis (including A, B, C, D);
- HIV, poliomyelitis, herpes;
- coronaviruses (including COVID-19) and others;
- Candida, Trichophyton, and mold fungi.

#### Application Areas:

- disinfection of instruments, including flexible and rigid endoscopes;
- pre-sterilization cleaning;
- disinfection of surfaces and cleaning equipment;
- disinfection and laundry of clothes and special clothing;
- air disinfection by spraying;
- disinfection of ventilation and air conditioning systems;
- disinfection of blood and biological secretions;
- disinfection of medical and food waste;
- surface disinfection.

#### Application Sectors:

- various medical organizations;
- microbiological laboratories;
- beauty salons;
- childcare institutions;
- pharmaceutical and biotechnological production facilities;
- office spaces;
- public and medical transport, including underground;
- sports and cultural facilities;
- food production, cafes, restaurants;
- waste bins, waste collection equipment;
- self-contained toilets.



### Disinfectant ДезИД Про (DesID Pro)

A highly concentrated solution suitable for disinfection and sterilization. It is compatible with a wide range of materials, does not cause corrosion to stainless steel, non-ferrous metals, titanium, and other alloys, does not damage plastic, glass (optics), and thermolabile materials.

It retains its properties through freezing and thawing.

Shelf life: 3 years.

Shelf life of prepared solutions: 14 days.

Use DesiKONT DesID Pro indicator to control the concentration of the disinfectant.

**Composition:** Water, quaternary ammonium salts (QAS) 14.4%; oxalaldehyde 4.4%; glutaraldehyde 8.8%. pH of 1% solution: 3.5–4.5.

#### Characteristics:

Active against gram-negative and gram-positive microorganisms, including:

- tuberculosis, plague, cholera, anthrax pathogens;
- pathogens of nosocomial infections;
- all known human pathogenic viruses;
- parenteral hepatitis (including A, B, C, D);
- HIV, poliomyelitis;
- coronaviruses (including COVID-19) and others;
- Candida, Trichophyton, and mold fungi.

#### Application Areas:

- disinfection of instruments, including flexible and rigid endoscopes;
- high-level disinfection of endoscopes and associated equipment;
- disinfection of surfaces and cleaning equipment;
- disinfection of blood and biological secretions;
- disinfection of medical waste, also in highly contagious diseases wards;
- disinfection of food waste.

#### Application Sectors:

- various medical organizations;
- beauty salons, cosmetology clinics;
- microbiological laboratories;
- pharmaceutical and biotechnological production facilities;
- public and medical transport;
- saunas, swimming pools;
- prisons and detention facilities
- waste bins, waste collection equipment;
- self-contained toilets;
- cleaning in morgues, columbaria, crematoria.



## Disinfectant Solutions Concentration Control: ДезиКОНТ («DesiKONT») Series

DesiKONT indicators are designed for rapid determination of concentrations in prepared solutions of disinfectants and sterilizing agents.

Each indicator is specifically developed for a particular disinfectant.

Concentration of the solution can be determined in no more than 3 minutes.

**Application of these indicators allows to:**

- identify incorrectly prepared solutions of disinfectants;
- detect improper storage conditions of solutions;
- enhance reliability of disinfection procedures;
- optimize disinfectant usage.

We have developed and produced over 200 types of DesiKONT indicators and are able to develop indicators to control concentration of most disinfectants.



## Detection of protein residue

Test kits **ЗомиТЕСТ Белок (EomiTEST Belok)** are designed for detection of protein residue on instruments and surfaces, routine monitoring and validation of cleaning efficacy, also detection of protein residue in endoscopes channels. The test kit can detect 1 µg of protein.

### Product characteristics:

- different product forms for comfortable use;
- quick detection of insoluble protein residue;
- contrast colour change in case of a positive result;
- dye-binding method for a detection limit of 1 µg.



## Detection of alkaline detergent residue

Test kits **ЗомиТЕСТ® Фенолфталеин (EomiTEST Phenolphthalein)** are designed for detection of alkaline detergent and disinfectant residues on instruments. It is used to monitor the efficacy of cleaning of items from detergents that can cause allergic, pyrogenic reactions, erythrocyte hemolysis.

### Product characteristics:

- liquid and powder forms for comfortable use;
- contrast colour change in case of a positive result.



## Detection of blood residue

Test kits **ЭомиТЕСТ Хема (EomiTEST Hema)** are designed for detection of blood residue on instruments and surfaces, routine monitoring and validation of cleaning efficacy, also detection of blood protein residue in endoscopes channels. Test kits are based on chemical reaction of tetramethylbenzidine oxidation by peroxide compounds catalyzed by blood hemoglobin. Due to the high content of peroxidases in blood an enzymatic reaction is used for detection of blood residue.

The test kit can detect 0,1 µg of hemoglobin.

### Product characteristics:

- different product forms for comfortable use;
- quick detection of insoluble blood residue;
- contrast colour change in case of a positive result;
- dye-binding method for a detection limit of 0,1 µg.



## Detection of blood residue

Test kits **ЭомиТЕСТ Азопирам (EomiTEST Azopiram)** are designed for detection of blood residue on instruments and surfaces. It is a simple qualitative test that consists of amidopyrine and aniline hydrochloride. The test allows to detect such residues as: blood, rust, soap residues, chloramine, oxidants.

### Product characteristics:

- different product forms for comfortable use;
- quick detection of insoluble blood residue;
- contrast colour change in case of a positive result;
- wide range of detectable residues.



## Monitoring of the energy of ultrasonic bath for cleaning of instruments

**ЭомиТЕСТ Ультразвук (EomiTEST Ultrazvuk)** is used to monitor the efficiency of ultrasonic washers.

Pre-sterilisation cleaning should be performed on all products prior to sterilization to remove blood, protein, fat and mechanical contaminants as well as drugs.

The use of the Eomitest Ultrasonic indicator allows to achieve the timely detection of possible violations in the process of pre-sterilization cleaning of medical devices in ultrasonic washers.

### Product characteristics:

- detects sufficient energy for cavitation;
- a pre-prepared test showing immediate result;
- colour change from green to yellow indicating a positive result;
- easy evaluation.



## Monitoring of the cleaning efficiency of washer-disinfectors

Test objects **ТомиТЕСТ (TomiTEST)** are designed to determine the effectiveness of cleaning of medical instruments in automatic washing machines`.

The indicators simulate tubular instruments and instruments with locking parts.

Ready tests for instant check of cleaning results.

**ТомиТЕСТ-ИО-ВИНАР (TomiTEST-IO-VINAR)** for monitoring the effectiveness of cleaning of instruments with locking parts in automatic washing machines:

### Product characteristics:

- a ready test that provides accurate and consistent results;
- user friendly and disposable design;
- transparent cover for visual inspection;
- the crevice simulates the joint of an instrument;
- clips for a quick and reproducible fixation.



**ТомиТЕСТ-ТМ-ВИНАР (TomiTEST-TM-VINAR)** for monitoring the effectiveness of cleaning of tubular medical devices, including flexible endoscopes, in automatic washing machines:

- simulates contaminated tubular medical instruments, including flexible endoscopes;
- ready-to-use indicator for 50 cycles;
- luer-lock fitting for connection to the machine's irrigation system.



## Self-sealing kraft paper pouches

### Product characteristics:

- suitable for STEAM, EO, FORM, IRRAD and DRY HEAT sterilization;
- comply with ISO 11607-1;
- permeable to particular sterilizing agents, impermeable to microorganisms while sealed;
- each unit contains STEAM and DRY HEAT process indicators that help to distinguish between the sterilized and unsterilized items;
- do not require additional equipment for sealing;
- wide size range.



## Self-sealing white paper pouches

### Product characteristics:

- suitable for STEAM, EO, FORM, IRRAD and DRY HEAT sterilization;
- comply with ISO 11607;
- permeable to particular sterilizing agents, impermeable to microorganisms while sealed;
- each unit contains STEAM and DRY HEAT process indicators that help to distinguish between the sterilized and unsterilized items;
- do not require additional equipment for sealing;
- wide size range.



## Heat-sealing gusseted paper pouches

### Product characteristics:

- suitable for large objects;
- suitable for STEAM, EO, FORM, IRRAD and DRY HEAT sterilization;
- comply with ISO 11607;
- permeable to particular sterilizing agents, impermeable to microorganisms while sealed;
- each unit contains STEAM and DRY HEAT process indicators that help to distinguish between the sterilized and unsterilized items;
- wide size range.



## Self-sealing paper-plastic sterilization pouches

### Product characteristics:

- suitable for STEAM, EO, FORM, and IRRAD sterilization methods;
- comply with ISO 11607;
- permeable to particular sterilizing agents, remain a reliable microbial barrier during storage after sterilization;
- each unit contains STEAM, EO, FORM process indicators that help to distinguish between the sterilized and unsterilized items;
- transparent film provides easy recognition of the contents;
- durable, resistant to puncture and tearing;
- do not require additional equipment for sealing;
- wide size range.



## Heat-sealing flat paper-plastic sterilization pouches

### Product characteristics:

- suitable for STEAM, EO, FORM, and IRRAD sterilization methods;
- comply with ISO 11607;
- permeable to particular sterilizing agents, remain a reliable microbial barrier during storage after sterilization;
- each unit contains STEAM, EO, FORM process indicators that help to distinguish between the sterilized and unsterilized items;
- transparent film provides easy recognition of the contents;
- durable, resistant to puncture and tearing;
- wide size range.



## Heat-sealing gusseted paper-plastic sterilization pouches

### Product characteristics:

- suitable for STEAM, EO, FORM, and IRRAD sterilization methods;
- suitable for large objects;
- comply with ISO 11607;
- permeable to particular sterilizing agents, remain a reliable microbial barrier during storage after sterilization;
- each unit contains STEAM, EO, FORM process indicators that help to distinguish between the sterilized and unsterilized items;
- transparent film provides easy recognition of the contents;
- durable, resistant to puncture and tearing;
- wide size range.



## Sterilization reels

### Product characteristics:

- suitable for STEAM, EO, FORM, and IRRAD sterilization methods;
- comply with ISO 11607;
- permeable to particular sterilizing agents, remain a reliable microbial barrier during storage after sterilization;
- each unit contains STEAM, EO, FORM process indicators that help to distinguish between the sterilized and unsterilized items;
- transparent film provides easy recognition of the contents;
- durable, resistant to puncture and tearing;
- wide size range.



## Polyamide flat sterilization reels

### Product characteristics:

- suitable for DRY HEAT and IRRAD sterilization methods;
- comply with ISO 11607;
- permeable to particular sterilizing agents, remain a reliable microbial barrier during storage after sterilization;
- polyamide transparent film provides easy recognition of the contents;
- durable, resistant to puncture and tearing;
- wide size range.



### Tyvek® pouches for low-temperature sterilization (Plasma)

#### Product characteristics:

- heat-sealing pouches;
- self-sealing pouches;
- suitable for VH202 sterilization;
- comply with ISO 11607;
- permeable to particular sterilizing agent, remain a reliable microbial barrier during storage after sterilization;
- each unit contains VH202 process indicator that helps to distinguish between the sterilized and unsterilized items;
- transparent film provides easy recognition of the contents;
- extremely durable, resistant to puncture and tearing;
- wide size range.



### Tyvek® reels for low-temperature sterilization (Plasma)

#### Product characteristics:

- suitable for VH202 sterilization;
- comply with ISO 11607;
- permeable to particular sterilizing agent, remain a reliable microbial barrier during storage after sterilization;
- each unit contains VH202 process indicators that help to distinguish between the sterilized and unsterilized items;
- transparent film provides easy recognition of the contents;
- extremely durable, resistant to puncture and tearing;
- wide size range.

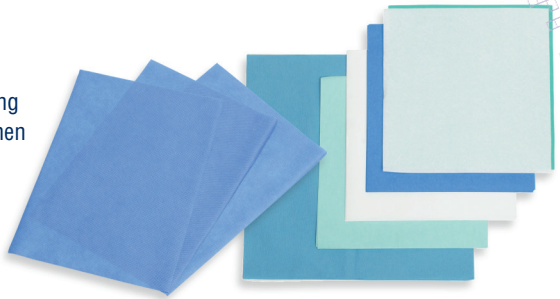


## Sheet paper wrapping materials for sterilization

The packaging material is used for packaging medical and other items to be sterilized maintaining their sterility during storage and transportation until use, as well as for their steam or steam formaldehyde disinfection and decontamination.

Comply with ISO 11607.

The packaging material is permeable to sterilizing agents and impermeable to microorganisms when the items are packaged, sterilized and stored according to the instructions. It maintains integrity during and after sterilization.



### Main sheet dimensions:

- Width from 50 mm to 2200 mm, in 5 mm increments;
- Length from 50 mm to 2200 mm, in 5 mm increments.

### Main roll dimensions:

- Width from 50 mm to 2200 mm, in 5 mm increments;
- Length from 1 m to 3000 m, in 0.5 m increments.

Type	Characteristics			Permitted Application							
	Colour	Density (g/ml)	Composition	Sterilization						Disinfection and decontamination	
				STEAM	DRY HEAT	EO	FORM	RAD	PLASMA	STEAM	FORM
Craftpaper	brown	50-80	cellulose	+	+	+	+	+	-	+	+
Crepe paper	white, blue, green, purple, orange	40-140	cellulose	+	+	+	+	+	-	+	+
Non-woven material (SMS; SMMS; SMMMS)	white, blue, green	10-250	polypropylene	+	-	+	+	+	+	+	+

## Self-adhesive sterilization tape

### Product characteristics:

- suitable for STEAM, DRY HEAT, EO, FORM, IRRAD and PLASMA sterilization methods;
- keeps durability and integrity of sterilization package during and after sterilization;
- type 1 process indicators comply with ISO 11140-1, BS EN 867;
- indicator mark doesn't blur or penetrate the load during and after sterilization.



## Disposable Sterilization Tray

A rectangular tray made of cellulose-paper materials.

Convenient for placing items and instruments in them before, during and after sterilization.

Suitable for STEAM, EO, FORM, IRRAD sterilization.

Non-toxic and environmentally friendly.



## Safety items

### Product characteristics:

- protect packaging material from damage by sharp instruments;
- ensure protection of instruments (e.g. scissors, chisels, etc);
- suitable for STEAM, DRY HEAT, EO, FORM, IRRAD and PLASMA sterilization methods.



## Identification label

### Product characteristics:

- for multiple recording of information on sterilization load (composition, date, etc.);
- suitable for STEAM, DRY HEAT, EO, FORM, IRRAD and PLASMA sterilization methods;
- can be reused up to 20 times;
- indicator fixing option;
- for labelling any containers and other receptacles that are not sterilized.



## Process indicators И3-02 (IE-02)

Process indicators (type 1) are designed to indicate that a sterilization package has been exposed to a sterilization process and to distinguish between processed and non-processed sterilization package. Therefore, the risk of mixing sterile and non-sterile items is reduced.

Process indicators are placed on the outside of sterilization packages.

### Product characteristics:

- suitable for all cycles of steam and dry heat sterilization;
- compliant with ISO 11140-1;
- contrast colour change from initial green to pink when exposed to steam sterilization, to brown – when exposed to dry heat sterilization;
- adhesive layer on the indicators back side makes their placement easy on sterilization packaging;
- non-toxic and environmentally friendly.



## Indicators MedIC (MedIS)

Indicators **MedIC-120/45 (MedIS-120/45)** and **MedIC-132/20 (MedIS-132/20)** are designed to respond to the chosen critical process variables (temperature, time and saturated steam) and to indicate exposure to a steam sterilization cycle at stated values of the chosen variables in gravity sterilizer chamber.

### Product characteristics:

- type 4, compliant with ISO 11140-1;
- should be placed inside the sterilizer chamber on the outside of the sterilization packages;
- adhesive layer on the indicators back side makes their placement easy on sterilization packages and at control points in the sterilizer chamber;
- non-toxic and environmentally friendly.

### Parameters of sterilization cycles and corresponding stated values of the indicators:

Indicator name	Process parameters	
	Temperature, °C	Time, min
MedIS-120/45	120 <sup>±2</sup>	45 <sup>+3</sup>
MedIS-132/20	132 <sup>±2</sup>	20 <sup>+2</sup>



## Indicators СтериКОНТ-П (SteriCONT-P)

Indicators are designed to react to the chosen critical process variables (temperature, time and saturated steam) and are intended to indicate exposure to a steam sterilization cycle at stated values of the chosen variables **in gravity sterilizer chamber**.

### Product characteristics:

- type 4, compliant with ISO 11140-1;
- should be placed inside the sterilizer **chamber on the outside of the sterilization packages**;
- indicator ink is sealed in steam-permeable polymer film so that indicators do not stain the items in contact;
- adhesive layer on the indicators back side makes their placement easy on sterilization packages and at control points in the sterilizer chamber;
- non-toxic and environmentally friendly.



### Parameters of sterilization cycles and corresponding stated values of the indicators:

Indicator name	Process parameters	
	Temperature, °C	Time, min
SteriCONT-P	120 <sup>+2</sup>	45 <sup>+5</sup>
	126 <sup>±2</sup>	30 <sup>+3</sup>
	132 <sup>±2</sup>	20 <sup>+2</sup>

## Indicators СтериТЕСТ-П (SteriTEST-P)

Indicators are designed to react to the chosen critical process variables (temperature, time and saturated steam) and are intended to indicate exposure to a steam sterilization cycle at stated values of the chosen variables **inside sterilization packages in gravity sterilizer**.

### Product characteristics:

- type 4, compliant with ISO 11140-1;
- should be placed inside sterilization packages;
- indicator ink is sealed in steam-permeable polymer film so that indicators do not stain the items in contact;
- non-toxic and environmentally friendly.



Indicator name	Process parameters	
	Temperature, °C	Time, min
SteriCONT-P	120 <sup>+2</sup>	45 <sup>+5</sup>
	126 <sup>±2</sup>	30 <sup>+3</sup>
	132 <sup>±2</sup>	20 <sup>+2</sup>

## Indicators ИНТЕСТ-П (InTEST-P)

Indicators are designed to react to the chosen critical process variables (temperature, time and saturated steam) and are intended to indicate exposure to a steam sterilization cycle at stated values of the chosen variables **in gravity steam sterilizers**.

### Product characteristics:

- type 4, compliant with ISO 11140-1;
- can be placed inside the sterilizer chamber, on the outside of the sterilization packages, and/or inside sterilization packages;
- **contrast indicator «B» - control of sterilization parameters inside the package;**
- **contrast indicator «H» control of sterilization parameters in the sterilizer chamber;**
- indicator ink is sealed in steam-permeable polymer film so that indicators do not stain the items in contact;
- adhesive layer on the indicators back side makes their placement easy on sterilization packages and at control points in the sterilizer chamber;
- non-toxic and environmentally friendly.



Indicator name	Process parameters	
	Temperature, °C	Time, min
InTEST-P	120 <sup>+2</sup>	45 <sup>+5</sup>
	126 <sup>±2</sup>	30 <sup>+3</sup>
	132 <sup>±2</sup>	20 <sup>+2</sup>

## Indicators ИНТЕСТ-П-121/20 (INTEST-P-121/20)

## Indicators ИНТЕСТ-П-134/5 (INTEST-P-134/5)

Indicators INTEST-P-121/20 and INTEST-P-134/5 are designed to monitor the critical variables for steam sterilization processes – temperature and exposure time in saturated steam.

Are intended to indicate exposure to a steam sterilization cycle at stated values of the chosen variables in steam sterilizers with vacuum-assisted cycles.

### Product characteristics:

- type 4, compliant with ISO 11140-1;
- can be placed inside the sterilizer chamber, on the outside of the sterilization packages, and/or inside sterilization packages;
- indicator ink is sealed in steam-permeable polymer film so that indicators do not stain the items in contact;
- adhesive layer on the indicators back side makes their placement easy on sterilization packages and at control points in the sterilizer chamber;
- non-toxic and environmentally friendly.



Indicator name	Process parameters	
	Temperature, °C	Time, min
INTEST-P-121/20	121 <sup>+3</sup>	20 <sup>+2</sup>
INTEST-P-134/5	134 <sup>+3</sup>	5 <sup>+1</sup>

## Indicators ИНТЕСТ-ПФ (InTEST-PF)

Indicators are designed to react to the chosen critical process variables (temperature, time and saturated steam) and are intended to indicate exposure to a steam sterilization cycle at stated values of the chosen variables in steam sterilizers with vacuum-assisted cycles.

### Product characteristics:

- type 4, compliant with ISO 11140-1;
- can be placed inside the sterilizer chamber, on the outside of the sterilization packages, and/or inside sterilization packages; ИНТЕСТ-ПФ-В (InTEST-PF-V) should be placed inside sterilization packages;
- indicator ink is sealed in steam-permeable polymer film so that indicators do not stain the items in contact;
- adhesive layer on the indicators back side makes their placement easy on sterilization packages and at control points in the sterilizer chamber;
- non-toxic and environmentally friendly.



Each of InTEST-PF is suitable for several different steam sterilization cycles

Indicator name	Process parameters	
	Temperature, °C	Time, min
InTEST-PF	121 <sup>+3</sup>	20 <sup>+2</sup>
	126 <sup>+3</sup>	10 <sup>+1</sup>
	134 <sup>+3</sup>	5 <sup>+1</sup>
InTEST-PF 1	121 <sup>+3</sup>	20 <sup>+2</sup>
	134 <sup>+3</sup>	4 <sup>+1</sup>
InTEST-PF 2	121 <sup>+3</sup>	25 <sup>+2</sup>
	134 <sup>+3</sup>	5 <sup>+1</sup>
InTEST-PF 3	121 <sup>+3</sup>	35 <sup>+3</sup>
	126 <sup>+3</sup>	20 <sup>+2</sup>
	134 <sup>+3</sup>	7 <sup>+1</sup>
InTEST-PF-V	All steam sterilization modes (inside sterilization packages)	



### Indicators for Steam Sterilization Control VINAR 6 class-M1 Indicators for Steam Sterilization Control VINAR 6 class-M2

Indicators ВИНАР 6 класс-M1 (VINAR 6 class-M1) and ВИНАР 6 класс-M2 (VINAR 6 class-M2) are designed to monitor the critical variables for steam sterilization processes – temperature and exposure time in saturated steam.

#### Product characteristics:

- type 6, compliant with ISO 11140-1;
- indicator ink is sealed in steam-permeable polymer film so that indicators do not stain the items in contact;
- can be placed inside the sterilizer chamber, on the outside of the sterilization packages, and/or inside sterilization packages;
- adhesive layer on the indicators back side makes their placement easy on sterilization packages and at control points in the sterilizer chamber;
- non-toxic and environmentally friendly.



Indicator name	Process parameters	
	Temperature, °C	Time, min
INTEST-P-121/20	121 <sup>+3</sup>	20 <sup>+2</sup>
INTEST-P-134/5	134 <sup>+3</sup>	5 <sup>+1</sup>

### Indicators for Steam and DRY HEAT Control ВИНАР 5 класс-7 (VINAR 5 class-7)

Integrating indicators VINAR 5 class-7 are designed to respond to all critical process variables in steam sterilization, dry heat sterilization, decontamination in autoclave processes. The stated values of process variables are generated to be equivalent to, or exceed, the performance requirements given in the ISO 11138-series for biological indicators.

#### Product characteristics:

- suitable for all cycles of steam sterilization, dry heat sterilization, steam decontamination;
- can be placed inside the sterilizer chamber, on the outside of the sterilization packages, and/or inside sterilization packages;
- indicator ink is sealed in steam-permeable polymer film so that indicators do not stain the items in contact;
- adhesive layer on the indicators back side makes their placement easy on sterilization packages and at control points in the sterilizer chamber;
- non-toxic and environmentally friendly.



Saving resources and training time – one chemical indicator for two types of sterilization.

### Chemical Indicators for evaluation of the performance of prevacuum sterilizers

**Тест-пакет Бови-Дик-ВИНАР (Bowie-Dick Test Pack)** is designed to evaluate the efficacy of air removal and steam penetration in prevacuum sterilizers.

A Bowie-Dick Test passing result indicates that the sterilizer has successfully removed air and can allow steam to penetrate a load placed in the chamber.

Intended for use in a specific Bowie-Dick test cycle.

#### Product characteristics:

- type 2, compliant with ISO 11140-4;
- STEAM process indicator helps to distinguish between the sterilized and unsterilized items;
- contrast total colour change from initial light-blue to pink provides clear indication of a successful test;
- the adhesive layer on the back of the indicator sheet makes it possible to archive the result;
- non-toxic and environmentally friendly.



**Карта Бови-Дик-ВИНАР (Bowie-Dick-VINAR Card)** is designed for verifying conditions in the steam pre-vacuum sterilizer chamber during the sterilization of porous loads, such as textiles.

Bowie-Dick-VINAR Card detects inadequate air removal and steam penetration in prevacuum sterilizers.

The Bowie-Dick-VINAR Card is used without the standard test pack, utilizing a holder (included in the kit).

Intended for use in a specific Bowie-Dick test cycle. Based on the test results, sterilizers are approved for daily use.

#### Product characteristics:

- type 2, compliant with ISO 11140-4;
- a distinct total colour change from initial pink to dark brown (or black) provides a clear indication of a successful test;
- non-toxic and environmentally friendly.



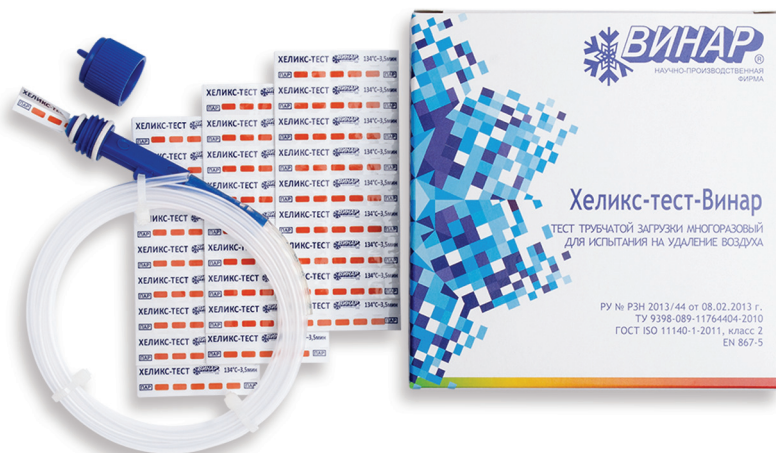
**Хеликс-тест-Винар (Helix-Test-VINAR)** is designed to verify air removal, steam penetration, exposure levels and deep vacuum achievement necessary for sterilization of hollow loads. The test is designed to be used in a specific Helix-test sterilization cycle.

Carrying out a Helix Test on a daily basis provides with timely and accurate information regarding autoclave performance and how effectively instruments are sterilized.

**Хеликс-тест-Винар (Helix-Test-VINAR)** is a reusable device accompanied with disposable chemical indicator strips. The indicator strips will change colour from russet to dark-blue when exposed to appropriate steam sterilization conditions. The adhesive indicator strips can be used for record keeping.

### Product characteristics:

- type 2, compliant with ISO 11140-5;
- the result is easy to interpret;
- indicator ink is sealed in steam-permeable polymer film so that indicators do not stain the items in contact;
- the test may be used 200 times and contains 200 indicator strips;
- non-toxic and environmentally friendly.



## Process indicators ИЗ-02 (IE-02)

Process indicators (type 1) are designed to indicate that the item has been exposed to a sterilization process and to distinguish between processed and non-processed items. Therefore, the risk of mixing sterile and non-sterile items is reduced.

Process indicators are placed on the outside of sterilization packages.

### Product characteristics:

- suitable for all cycles of steam and dry heat sterilization;
- compliant with ISO 11140-1;
- contrast colour change from initial green to pink when exposed to steam sterilization, **to brown – when exposed to dry heat sterilization**;
- adhesive layer on the indicators back side makes their placement easy on sterilization packaging;
- non-toxic and environmentally friendly.



## Indicators МедИС (MedIS)

Indicators МедИС-B-180/60 (MedIS-V-180/60) and МедИС-B-160/150 (MedIS-V-160/150) are designed to monitor the critical variables for dry heat sterilization processes (temperature and exposure time) **in dry heat sterilizer chambers**.

### Product characteristics:

- type 4 indicator mark, compliant with ISO 11140-1;
- should be placed inside the sterilizer chamber on the outside of the sterilization packages;
- adhesive layer on the indicators back side makes their placement easy on sterilization packages and at control points in the sterilizer chamber;
- non-toxic and environmentally friendly.



Indicator name	Process parameters	
	Temperature, °C	Time, min
MedIS-V-180/60	180 <sup>±3</sup>	60 <sup>±5</sup>
MedIS-V-160/150	160 <sup>±3</sup>	150 <sup>±5</sup>

### Indicators ИНТЕСТ-B4 (InTEST-V4)

Indicators are designed to respond to the chosen critical process variables (temperature and time) and to indicate exposure to a dry heat sterilization cycle at stated values of the chosen variables in dry heat sterilizers.

Can be placed inside the sterilizer chamber, on the outside of the sterilization packages, and inside sterilization packages.

#### Product characteristics:

- type 4 indicator mark, compliant with ISO 11140-1;
- can be placed inside the sterilizer chamber, on the outside of the sterilization packages, and/or inside sterilization packages;
- stated value: external (H) 180°C, 60 minutes; internal (B) all cycles;
- indicator ink is sealed in steam-permeable polymer film so that indicators do not stain the items in contact;
- adhesive layer on the indicators back side makes their placement easy on sterilization packages and at control points in the sterilizer chamber;
- non-toxic and environmentally friendly.



### Indicators for Steam and DRY HEAT Control ВНАР 5 класс-7 (VINAR 5 class-7)

Integrating indicators VINAR 5 class-7 are designed to respond to all critical process variables in steam sterilization, dry heat sterilization, decontamination in autoclave processes. The stated values of process variables are generated to be equivalent to, or exceed, the performance requirements given in the ISO 11138-series for biological indicators.

#### Product characteristics:

- suitable for all cycles of steam sterilization, dry heat sterilization, steam decontamination;
- can be placed inside the sterilizer chamber, on the outside of the sterilization packages, and/or inside sterilization packages;
- indicator ink is sealed in steam-permeable polymer film so that indicators do not stain the items in contact;
- adhesive layer on the indicators back side makes their placement easy on sterilization packages and at control points in the sterilizer chamber;
- non-toxic and environmentally friendly.



Saving resources and training time – one chemical indicator for two types of sterilization.

## Process indicators 30-1 (EO-1)

Process indicators (type 1) are designed to indicate that the item has been exposed to a sterilization process and to distinguish between processed and non-processed items. Therefore, the risk of mixing sterile and non-sterile items is reduced.

Process indicators are placed on the outside of sterilization packages.

### Product characteristics:

- suitable for all cycles of ethylene oxide sterilization;
- type 1, compliant with ISO 11140-1;
- contrast colour change from initial green to brown;
- adhesive layer on the indicators back side makes their placement easy on sterilization packaging;
- non-toxic and environmentally friendly.



## Indicators СтерикОНТ – 30 (SteriCONT-EO)

Indicators СтерикОНТ-30 (SteriCONT-EO) are designed to react to the chosen critical process variables (time, temperature, relative humidity and ethylene oxide concentration) and are intended to indicate exposure to ethylene oxide sterilization cycle at stated values of the chosen variables in ethylene oxide sterilizer chamber.

### Product characteristics:

- type 4, compliant with ISO 11140-1;
- should be placed inside the sterilizer chamber on the outside of the sterilization packages;
- indicator ink is sealed in steam-permeable polymer film so that indicators do not stain the items in contact;
- adhesive layer on the indicators back side makes their placement easy on sterilization packages and at control points in the sterilizer chamber;
- non-toxic and environmentally friendly.



### Available in three modifications:

Indicator name	Process parameters			
	Time, min	T°, C	Relative humidity, %	Gas concentration, mg/l
SteriCONT-EO-1	180 <sup>+10</sup>	37±3	60±10	600±30
SteriCONT-EO-2	60 <sup>+5</sup>	54±3	60±10	600±30
SteriCONT-EO	60 <sup>+5</sup>	54±3	60±10	600±30
	180 <sup>+10</sup>	37±3		

## Indicators ИНТЕСТ-30 (InTEST-EO)

Indicators are designed to react to the chosen critical process variables (time, temperature, relative humidity and ethylene oxide concentration) and are intended to indicate exposure to ethylene oxide sterilization cycle at stated values of the chosen variables in ethylene oxide sterilizer chamber and inside sterilization packages.

### Product characteristics:

- type 4 indicator mark, compliant with ISO 11140-1;
- can be placed inside the sterilizer chamber, on the outside of the sterilization packages, and/or inside sterilization packages;
- **contrast indicator «B» - control of sterilization parameters inside the package;**
- **contrast indicator «H» - control of sterilization parameters in the sterilizer chamber;**
- indicator ink is sealed in steam-permeable polymer film so that indicators do not stain the items in contact;
- adhesive layer on the indicators back side makes their placement easy on sterilization packages and at control;
- non-toxic and environmentally friendly.



Indicator name	Process parameters			
	Time, min	T°, C	Relative humidity, %	Gas concentration, mg/l
<b>InTEST-EO:</b>				
contrast indicator «H»	60 <sup>+5</sup> 180 <sup>+10</sup>	54±3 37±3	60±10	600±30
contrast indicator «B»	all ethylene oxide sterilization modes (inside sterilization packages)			

## Indicators ВНАР-30-5Класс (VINAR-EO-5Class)

Integrating indicators are designed to react to all critical process variables of ethylene oxide sterilization. The stated values of process variables are generated to be equivalent to, or exceed, the performance requirements given in the ISO 11138-series for biological indicators.

### Product characteristics:

- type 5 integrators, compliant with ISO 11140-1;
- suitable for all cycles of ethylene oxide sterilization;
- should be placed inside sterilization packages;
- indicator ink is sealed in steam-permeable polymer film so that indicators do not stain the items in contact;
- non-toxic and environmentally friendly.



### Process indicators ПЛАЗМА-1 (PLASMA-1)

Process indicators (type 1) are designed to indicate that the item has been exposed to a sterilization process and to distinguish between processed and non-processed items. Therefore, the risk of mixing sterile and non-sterile items is reduced.

Process indicators are placed on the outside of a sterilization packages.

#### Product characteristics:

- suitable for all cycles of hydrogen peroxide sterilization
- type 1, compliant with ISO 11140-1;
- contrast colour change from initial to yellow;
- adhesive layer on the indicators back side makes their placement easy on sterilization packaging
- non-toxic and environmentally friendly.



### Indicators «INTEST-PLASMA»

Indicators ИНТЕСТ-ПЛАЗМА (INTEST-PLASMA) are designed to respond to all critical process variables of hydrogen peroxide sterilization inside sterilization packages. The indicator values for these variables are generated to be equivalent to, or exceed, the performance requirements outlined in the ISO 11138-series for biological indicators.

Indicators ИНТЕСТ-ПЛАЗМА (INTEST-PLASMA) also respond to the chosen critical process variables (time, temperature and hydrogen peroxide concentration) and are intended to indicate exposure to a plasma sterilization cycle at stated values of the chosen variables outside sterilization packages in the chamber of plasma sterilizers.

#### Product characteristics:

- type 4, compliant with ISO 11140-1;
- contains 4 indicator marks – the label «INSIDE THE PACKAGE» corresponds to a type 5 indicator;
- controls parameters of all plasma sterilization modes;
- can be placed inside the sterilizer chamber, on the outside of the sterilization packages, and/or inside sterilization packages;
- adhesive layer on the indicators back side makes their placement easy on sterilization packages and at control points in the sterilizer chamber;
- non-toxic and environmentally friendly.



## Indicators SteriCONT-PLASMA

Indicators СтериКОНТ-ПЛАЗМА (SteriCONT-PLASMA) are designed to react to the chosen critical process variables (time, temperature and hydrogen peroxide concentration) and are intended to indicate exposure to a hydrogen peroxide sterilization at stated values of the chosen variables outside the items or packages in the chamber of plasma sterilizer.

Available in two modifications:

СтериКОНТ-ПЛАЗМА-1 (SteriCONT-PLASMA-1) for standard sterilization cycles

СтериКОНТ-ПЛАЗМА-2 (SteriCONT-PLASMA-2) for "intensive" sterilization cycles (for hollow loads).

### Product characteristics:

- type 4, compliant with ISO 11140-1;
- should be placed inside the sterilizer chamber on the outside of the sterilization packages
- indicator ink is sealed in steam-permeable polymer film so that indicators do not stain the items in contact;
- adhesive layer on the indicators back side makes their placement easy sterilization packages and at control points in the sterilizer chamber
- non-toxic and environmentally friendly.

Indicator name	Sterilization cycle	Process parameters		
		T°, C	Time, min	Concentration of peroxide, mg/l
SteriCONT-PLASMA-1	standard	10	50	2,3
SteriCONT-PLASMA-2	intensive	20	50	2,3



### Process indicators ФОРМ-1 (FORM-1)

Process indicators (type 1) are designed to indicate that the item has been exposed to a sterilization process and to distinguish between processed and non-processed items. Therefore, the risk of mixing sterile and non-sterile items is reduced.

Process indicators are placed on the outside of a sterilization packages.

#### Product characteristics:

- type 1, compliant with ISO 11140-1;
- suitable for all cycles of formaldehyde sterilization;
- contrast colour change from initial to green;
- adhesive layer on the indicators back side makes their placement easy on sterilization packaging;
- non-toxic and environmentally friendly.



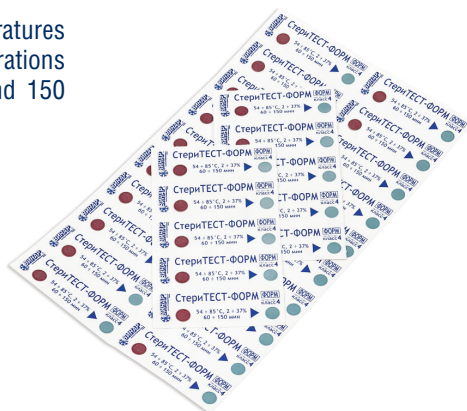
### Indicators СтерiTЕСТ-ФОРМ (SteriTЕСТ-FORM)

Indicators are designed to react to the chosen critical process variables (time, temperature, and formaldehyde vapor concentration) during formaldehyde sterilization (LTSF) inside sterilization packages.

It is intended for sterilization processes at temperatures ranging from 54 to 85°C, with formaldehyde concentrations of 2 to 37%, and exposure times between 60 and 150 minutes.

#### Product characteristics:

- type 4, compliant with ISO 11140-1;
- should be placed inside sterilization packages;
- non-toxic and environmentally friendly.



Biological indicators are systems containing viable test microorganisms that allow to evaluate the effectiveness of the sterilization process.

Using biological indicators to continuously monitor sterilizers offers confidence in the effectiveness of the sterilization process.

Biological indicators must align with the sterilization method.

Vinar offers two types of biological indicators:

**Self-contained indicators:** a carrier with spores and an ampoule with nutrient (indicator) medium are in a single vial. No aseptic conditions are required for combination.

**Non-Self-contained indicators:** a carrier with spores and a nutrient (indicator) medium are in separate vials. Aseptic conditions are required for combination.

Biological indicators are compliant with ISO 11138-1 and ISO 11138-3.

### Biological indicators for steam sterilization

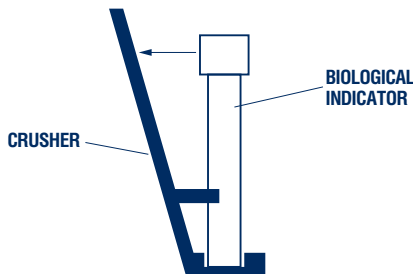
Self-contained indicators БиотЕСТ-П-ВИНАР (BioTEST-P-VINAR) are used for validation and assessment of steam sterilization process. BioTEST-P-VINAR is made as a plastic test tube that contains dry spores of bacteria and a sealed glass ampoule with sterile indicator medium. For effective sterilization each test tube is covered with a holed cap that allows easy penetration of sterilizing agent while hydrophobic filter works as a bacterial barrier to prevent contamination. To distinguish between the sterilized and unsterilized biological indicators STEAM process indicators are printed on each test tube label.



#### Product characteristics:

- contain *Geobacillus stearothermophilus* BKM B-718,  $n \times 10^5$ ;
- suitable for gravity and vacuum-assisted steam cycles;
- easy indicator activation by special crusher;
- incubation time – 48 hours;
- contrast colour change from blue-violet to yellow indicates spore survival, hence, a positive result;
- compliant with ISO 11138-1, ISO 11138-3;

#### Indicator activation by special crusher



## Biological indicators for steam sterilization of liquids and solutions

Self-contained indicators БиоТЕСТ-ПР-ВИНАР (BioTEST-PR-VINAR) are used for validation and assessment of lower temperature steam sterilization of liquids and solutions. BioTEST-PR indicators are made as a plastic test tube that contains dry spores of bacteria and a sealed glass ampule with sterile indicator medium. For effective sterilization each test tube is covered with a holed cap that allows easy penetration of sterilizing agent while hydrophobic filter works as a bacterial barrier to prevent contamination. To distinguish between the sterilized and unsterilized biological indicators STEAM process indicators are printed on each test tube label.

**The indicators are activated with a crusher before being placed in the sterilizer chamber.**

### Product characteristics:

- microorganism strain and number of spores depend on sterilization cycle parameters;
- easy indicator activation by special crusher;
- incubation time – 48 hours;
- contrast colour change indicates spore survival, hence, a positive result;
- compliant with ISO 11138-1, ISO 11138-3.

Indicator name	Microorganism strain	Number of spores	Process parameters		Incubation time, hours	Colour of nutrient solution	
			Time, min	T°, C		initial	final
BioTEST-PR-2	<i>Bacillus subtilis</i> BKM B-911	$n \cdot 10^5 - n \cdot 10^6$	112 <sup>+2</sup>	10	24-48	blue-violet	yellow
			112 <sup>+2</sup>	15			
			110 <sup>+2</sup>	20			
			112 <sup>+2</sup>	20			
			110 <sup>+2</sup>	30			
			112 <sup>+2</sup>	30			
BioTEST-PR-3	<i>Geobacillus stearothermophilus</i> BKM B-718	$n \cdot 10^3 - n \cdot 10^4$	120 <sup>+2</sup>	8	24-48	blue-violet	yellow
			121 <sup>+1</sup>	8			
			120 <sup>+2</sup>	12			
			121 <sup>+1</sup>	12			
			120 <sup>+2</sup>	15			
BioTEST-PR-4	<i>Geobacillus stearothermophilus</i> BKM B-718	$n \cdot 10^3 - n \cdot 10^6$	120 <sup>+2</sup>	20	24-48	blue-violet	yellow
			121 <sup>+1</sup>	20			
			120 <sup>+2</sup>	30			
			121 <sup>+1</sup>	30			



## Biological Indicators for dry heat sterilization.

Non-Self-contained biological indicators БиоТЕСТ-В-ВИНАР (BioTEST-V-VINAR) and БиоТЕСТ-В1-ВИНАР (BioTEST-V1-VINAR) are designed for monitoring the effectiveness of dry heat sterilization.

The indicator label is covered with a type 1 chemical indicator, enabling the differentiation between biological indicators that have undergone sterilization and those that have not been processed in the sterilizer.

### Product characteristics:

- aseptic conditions are required for combination;
- incubation time – 48 hours;
- contrast colour change indicates spore survival, hence, a positive result;
- compliant with ISO 11138-1, ISO 11138-3.

Indicator name	Microorganism strain	Number of spores	Process parameters		Incubation time, hours	Contents
			Time, min	T°, C		
BioTEST-V-VINAR	<i>Bacillus licheniformis</i> G ВКМ В-1711Д	n * 10 <sup>6</sup>	160 <sup>+2</sup> -10	150 <sup>+5</sup>	48	1. Vials with spores packed in sterilization packaging - 6 pieces 2. Vial with sterile indicator medium - 1 piece 3. Sterile rubber stoppers - 7 pieces 4. Vial without spores - 1 piece 5. Sterile syringe - 1 piece
			160 <sup>+3</sup>	150 <sup>+5</sup>		
			180 <sup>+3</sup>	45 <sup>+5</sup>		
			180 <sup>+3</sup>	60 <sup>+5</sup>		
			180 <sup>+2</sup> -10	60 <sup>+5</sup>		
			200 <sup>+3</sup>	30 <sup>+3</sup>		
BioTEST-V1-VINAR	<i>Bacillus licheniformis</i> G ВКМ В-1711Д	n * 10 <sup>6</sup>	160 <sup>+2</sup> -10	150 <sup>+5</sup>	48	1. Vials with spores closed with stoppers - 6 pieces. 2. Vial with sterile indicator medium - 1 piece 3. Sterile vial closed with a stopper - 1 piece 4. Sterile syringe - 1 piece
			160 <sup>+3</sup>	150 <sup>+5</sup>		
			180 <sup>+3</sup>	45 <sup>+5</sup>		
			180 <sup>+3</sup>	60 <sup>+5</sup>		
			180 <sup>+2</sup> -10	60 <sup>+5</sup>		
			200 <sup>+3</sup>	30 <sup>+3</sup>		



### Indicators for hydrogen peroxide sterilization

Self-contained indicators БиоТЕСТ-ПЛАЗМА-ВИНАР (BioTEST-PLASMA-VINAR) are used for validation and assessment of hydrogen peroxide sterilization process. BioTEST-PLASMA indicators are made as a plastic test tube that contains dry spores of bacteria and a sealed glass ampoule with sterile indicator medium. For effective sterilization each test tube is covered with a holed cap that allows easy penetration of sterilizing agent while hydrophobic filter works as a bacterial barrier to prevent contamination. To distinguish between the sterilized and unsterilized biological indicators VH202 process indicators are printed on each test tube label.

#### Product characteristics:

- contain *Geobacillus stearothermophilus* BKM B-718,  $n \cdot 10^5$  -  $n \cdot 10^6$ ;
- suitable for all cycles of vaporized hydrogen peroxide sterilization;
- easy indicator activation by special crusher;
- incubation time – 24-72 hours;
- contrast colour change from blue-violet to yellow indicates spore survival, hence, a positive result;
- compliant with ISO 11138-1.



### Indicators for ethylene oxide sterilization

Self-contained indicators БиоТЕСТ-ЭО-ВИНАР (BioTEST-EO-VINAR) are used for validation and assessment of ethylene oxide sterilization process. BioTEST-EO is made as a plastic test tube that contains dry spores of bacteria and a sealed glass ampoule with sterile indicator medium. For effective sterilization each test tube is covered with a holed cap that allows easy penetration of sterilizing agent while hydrophobic filter works as a bacterial barrier to prevent contamination. To distinguish between the sterilized and unsterilized items EO process indicators are printed on each test tube label.

#### Product characteristics:

- contain *Bacillus atrophaeus* ATCC 9372,  $n \cdot 10^6$ ;
- suitable for all cycles of ethylene oxide sterilization;
- easy indicator activation by special crusher;
- incubation time – 24-48 hours;
- contrast colour change from blue-violet to yellow indicates spore survival, hence, a positive result;
- compliant with ISO 11138-1.



## VINAR Process Challenge Devices of steam sterilization

Sterilization Process Control Devices (PCDs) are modern compact devices designed to simulate complex porous, hollow, tubular loads to be sterilized. PCDs are used to assess parameters (with chemical indicators) or the effectiveness (with biological indicators) of steam sterilization.

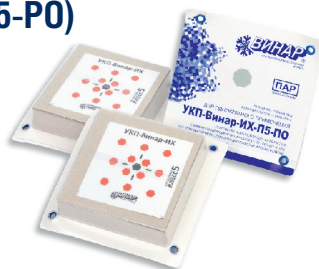
The purpose of PCDs is to simulate a load for the sterilization process that equals or exceeds the complexity of sterilizing instruments.

PCDs represent a modern and more stringent approach to monitoring the sterilization processes of high epidemiological risk items, serving to control the operation of sterilizers.

## Chemical Porous Disposable Steam Sterilization Process Challenge Device УКП-Винар-ИХ-П5-ПО (UKP-Vinar-ИХ-П5-ПО)

A disposable device for monitoring the parameters of steam sterilization of porous items, the UKP-Vinar-ИХ-П5-ПО comprises a stack of inert porous material with a type 5 chemical indicator arranged within a polymer tray sealed on top with thick paper.

The device can be used for verification (daily, weekly), validation, and regular monitoring of steam sterilization cycles, particularly when sterilizing items of high epidemiological risk.



## Chemical Porous Reusable Steam Sterilization Process Challenge Device УКП-Винар-ИХ-П5-ПМ (UKP-Vinar-ИХ-П5-ПМ)

A reusable device for monitoring the parameters of steam sterilization of porous items, the UKP-Vinar-ИХ-П5-ПМ consists of two flat plates with locks on both sides, with a disposable loading module made of inert porous material with a type 5 chemical indicator clamped in between.

It simulates a complex porous item. Before each use, a new disposable porous module needs to be placed between the plates. The device can be used for verification (daily, weekly), validation, and regular monitoring of steam sterilization cycles, particularly when sterilizing items of high epidemiological risk.



## Biological Porous Disposable Steam Sterilization Process Challenge Device УКП-Винар-ИБ-ПА-ПО (UKP-Vinar-ИБ-ПА-ПО)

A disposable device designed for monitoring effectiveness of steam sterilization processes the UKP-Vinar-ИБ-ПА-ПО comprises a stack of inert porous material with five biological indicators arranged within a polymer tray sealed on top with thick paper. It simulates a complex porous item.

The device serves as a tool for periodic control and validation of steam sterilization.

Usage of the UKP-Vinar-ИБ-ПА-ПО allows to promptly identify ineffective sterilization of complex items and malfunction of the sterilizer.



### Indicators ИHХим-УФ (InKhim-UF)

Designed for monitoring ultraviolet germicidal irradiation.

Available in two modifications:

**ИHХим-УФ1 (InKhim-UF1)** - control of operation of High intensity open-field UVC devices

**ИHХим-УФ2 (InKhim-UF2)** - for visual control of ultraviolet (UV) irradiation in bactericidal storage chambers for sterile medical devices

**The use of these indicators allows to:**

- ensure real-time visual monitoring of ultraviolet germicidal exposure;
- conduct express diagnostics of UV irradiators and UV chambers for maintaining sterility;
- detect malfunctions in the operation of germicidal installations;
- timely adjust the exposure time, taking into account the decrease in germicidal flux;
- identify counterfeit products (lamps) that do not possess germicidal properties.

Indicators must not be stored in the light. Store in the manufacturer's packaging.



### Disposable Indicator for «Cold Chain» Monitoring ТестТЕРМ (TestTERM)

TestTERM is designed to monitor compliance with temperature-time conditions during the storage and transportation of medical immunobiological products, blood and its derivatives, transplants, diagnostic test systems, food products, etc., from the moment the product is packed until the delivery of these products to their destination.

The indicator is used to prevent, detect, and address deviations in the «cold chain» operation.

It is intended for monitoring temperature-time conditions from -20 °C to +80 °C.

Additionally, it warns of a 75% «OVERHEATING» and the onset of the freezing of the product!

The temperature indicator is a hermetic package with a plastic case, containing a printed circuit board with a microprocessor, a temperature sensor, and LEDs.

The operating principle of the TestTERM indicator is based on measuring the ambient temperature and signaling the results of its comparison with the temperature-time norm.



### Express Control Indicator Strips for Secondary Oxidation Products in Frying Oils Фритюр-ОКСИ (Fritur-OXI)

Deep fat frying process is potentially hazardous, as intensive hydrolytic and oxidative processes lead to both physical and chemical changes in frying oils (shortening).

Improper control of the replacement of frying oil in restaurants and catering establishments either jeopardizes the health of customers or results in financial losses.

Express control with Fritur-OXI strips provides visual monitoring of the concentration of secondary oxidation products in frying oil within 1 minute:

- simple procedure that does not require special skills
- reduces the risk of premature oil replacement and overconsumption
- minimizes the risk of using degraded oil
- includes 300 indicator strips
- comparative element on the packaging



### Water Hardness Disposable Express Control Indicator Ликонт Аква (LiKONT Akva)

Disposable indicator LiKONT-Akva will show the water hardness level on a clear colour scale within 1 minute.

LiKONT Akva is a simple and accurate way to control water quality:

- in medical institutions when preparing steam sterilizers and washing equipment for operation;
- to determine the need to descale the equipment;
- for preventing premature wear of equipment (dishwashers, coffee machines, etc.)
- in preparing water for pools, spa salons, etc.;
- in aquariums for fish maintenance;
- for assessing water purification quality achieved by filters.

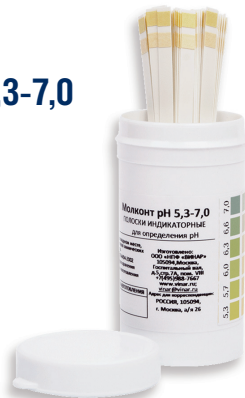


### Indicator Strips for pH Determination Молконт-pH 5,3-7,0 (Molkont-pH 5.3-7.0)

Indicator strips for determining the active acidity (pH) of milk give a quick and reliable assessment of milk acidity in the production processes of milk and dairy products processing.

The simple test procedure takes 30 seconds.

It allows to perform measurements in the field, on the production floor, in the laboratory, at home.



## Water-Soluble Bags СтериТ (SteriT) with Tape for Washing in Warm Water

Suitable for use in medical institutions, hotels, beauty salons, etc.

Composition: a polymer film that dissolves in water at a temperature of 45°C.

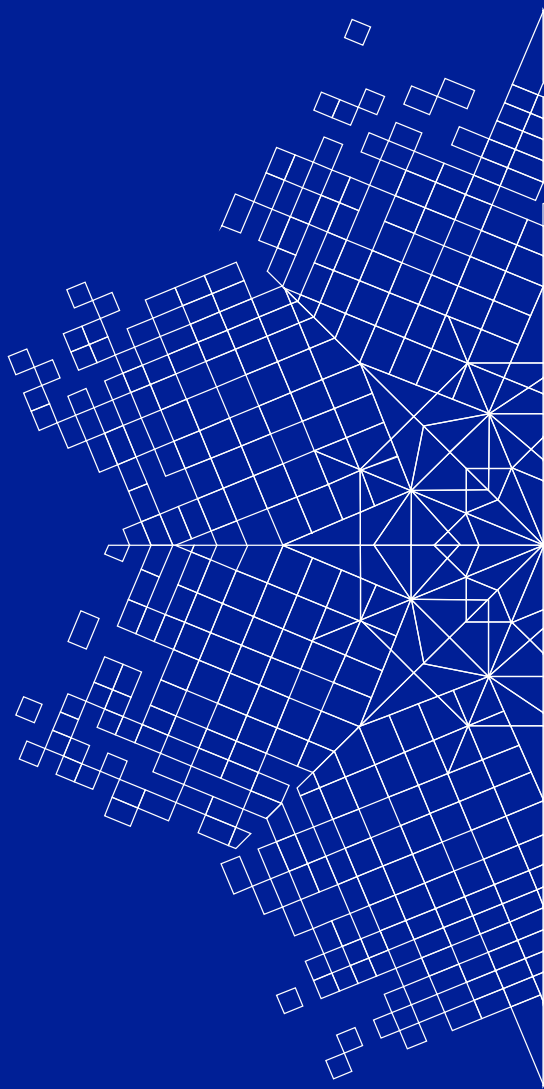
### Have numerous advantages:

- minimize contact with «soiled» textile items;
- help prevent the spread of viruses and infections from workstations;
- dissolve completely without leaving traces - no costs for packaging disposal and recycling;
- do not damage laundry equipment;
- environmentally friendly.









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