



Let's work together
to create a better future

Recommended Products for Infection Prevention

Rev. 0 | November 2021 | FDA



Let's work together
to create a better future

What we do?

At Terragene® we develop and manufacture a vast range of infection prevention products adapted to current technologies, user's guidelines, international and local regulations and market demands.

The following catalogue will display core products for those who are taking their first steps towards infection control excellence in Healthcare and other industries.

Applications

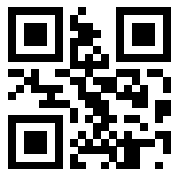
✓ **Healthcare**

Hospital, Clinics, Surgery Centers, Dental Clinics.

✓ **Industry**

Food, Cosmetics, Pharmaceutical, Medical Devices, Others.

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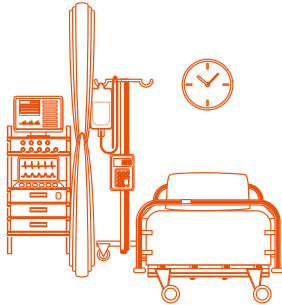
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Sterilization Monitoring

Sterilization procedures should be monitored using biological and chemical indicators. Biological indicators, or spore tests, are the most accepted means of monitoring sterilization because they assess the sterilization process directly by killing known highly resistant microorganisms. Chemical indicators do not guarantee sterilization; however, they help detect procedural errors (e.g., overloaded sterilizer, incorrect packaging) and equipment malfunctions. On the other hand, some chemical indicators should be used inside a package to verify that the sterilizing agent has penetrated it and reached the instruments inside.

Biological Indicators



Check out our Biological Indicators available here
terragine.com

Ultra Rapid, Super Rapid & Rapids Biological Indicators



Their innovative technology allows you to get reliable results in record time and speed up your workflow.

With increasing demands for faster sterile instruments turnaround in healthcare facilities, sterilization results need to be available as soon as possible to verify the sterility of the load. To fulfil these needs, Terragene® offers a broad portfolio of fluorescence biological indicators for sterilization monitoring.

- BT224 for Steam.
- BT96 for VH202.
- BT222 for Steam.
- BT95 for VH202.
- BT220 for Steam.
- BT110 for Ethylene Oxide.

Ultra Rapid

20'



STEAM
BT224

Super Rapids

30'



VH202
BT96

1h



STEAM
BT222

Rapids

2h



VH202
BT95

3h



STEAM
BT220

4h



EO
BT110



Learn more and check the related products
terrogene.com

Bionova® BT224, BT96, BT222, BT95, BT220 and BT110 are FDA Cleared.



Fluorescence-based Process Challenge Device for Steam Sterilization

Steam PCDs

Process Challenge Devices are designed to simulate a biological indicator (BI) placed in a large hospital pack and emulate the 16 towel pack PCD described in AAMI-ST79. Bionova® PCD pre-assembled disposable test packs consists of a SCBI, a Type 5 Integrator Indicator and a self-adhesive Record Card, held within a stack of porous cards that poses resistance to steam penetration. The whole ensemble is contained within a cardboard box with a Type 1 Process Indicator that changes color when exposed to steam.



**KPCD224-C
UNPROCESSED**



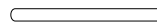
NEGATIVE



POSITIVE



**KPCD224-C
UNPROCESSED**



REJECTED



ACCEPT



Code

Readout

SCBI

KPCD220-2	3 hs at 60 °C	BT220
KPCD220-C	3 hs at 60 °C	BT220
KPCD222-2	1 hour at 60 °C	BT222
KPCD222-C	1 hour at 60 °C	BT222
KPCD224-2	20 min. at 60 °C	BT224
KPCD224-C	20 min. at 60 °C	BT224

Bionova® PCD220-2, PCD220-C, PCD222-2, PCD222-C, PCD224-C and PCD224-C are FDA Cleared.



Compact Fluorescence Auto-reader

for Rapid, Super Rapid & Ultra Rapid Biological Indicators



MINIBIO



Easy to use

Allows quick, accurate and reliable detection of positive and negative BIs, providing results in short times.



Compact design

Bionova® MiniBio is a compact table-top auto-reader that can be placed anywhere in your facility thanks to its small size.



Automatic readout

Bionova® MiniBio Auto-reader detects when a BI is placed in an incubation position and automatically starts a readout.



One Auto-reader for every process monitoring

Bionova® MiniBio allows to simultaneously incubate with different incubation times. 3 positions, 3 incubation times.



Bionova® Cloud Reading & Traceability software system

USB connection for PC record keeping through Bionova® Cloud Reading and Traceability software.



Built-in Thermal Printer

A thermal printer delivers a ticket showing the final result of each active readout position. This allows recording of each sterilization result in a record keeping book.



No maintenance required

The device does not need any kind of routine maintenance.



Temperature calibration

The device has an opening on its side to insert a thermometer, which allows temperature calibration control.



Touchscreen Fluorescence Auto-reader

for Rapid, Super Rapid & Ultra Rapid Biological Indicators



IC10/20FRLCD



Touchscreen

Bionova® IC10/20FRLCD has a 3,5" LCD touchscreen.



Workflow optimization

Bionova® IC10/20FRLCD has 12 positions to simultaneously incubate all different Bionova® SCBI and 1 position for incubating and quantifying Protein Pen (Hygiene Monitoring System). Furthermore, remaining incubation time at each position is displayed on the screen.



Automatic readout

Bionova® IC10/20FRLCD automatically reads the results of the incubation, displaying icons corresponding to each BI position when the final result is obtained.



Bionova® Cloud Reading & Traceability software system

USB, Wi-Fi & Ethernet connection for PC record keeping through Bionova® Cloud Reading and Traceability software.



Remote access

Remote display of each reading status in PC and Smartphones.



Result recording

The device automatically records the last 208 reading results. Remote viewing on the computer through the Embedded Web Server.



No maintenance required

The device does not need any kind of routine maintenance.



Temperature calibration

The device has an opening on its side to insert a thermometer, which allows temperature calibration control.

Bionova® IC10/20FRLCD Auto-reader is FDA Cleared.



Fluorescence Auto-reader

for Rapid, Super Rapid & Ultra Rapid Biological Indicators



IC10/20FR



Multiple positions

12 positions for incubating Rapid, Super Rapid and Ultra Rapid Fluorescence Readout SCBIs. 1 position for incubating and quantifying Protein Pen (Hygiene Monitoring System).



Different reading programs

Bionova® IC10/20FR allows to simultaneously incubate biological indicators with different incubation times.



Automatic readout

Bionova® IC10/20FR automatically reads the results of the incubation, showing specific led color lights corresponding to each BI position when the final result is obtained.



Bionova® Cloud Reading & Traceability software system

USB connection for PC record keeping through Bionova® Cloud Reading and Traceability software.



Result recording

The device automatically records the last 12 reading results. Remote viewing on the computer through the Embedded Web Server.



No maintenance required

The device does not need any kind of routine maintenance.



Temperature calibration

The device has an opening on its side to insert a thermometer, which allows temperature calibration control.

Biological Indicators & Incubators Compatibility Chart

				
		MINIBIO	IC10/20FR	IC10/20FRLCD
	BT95	✓	✓	✓
	BT96	✓	✓	✓
	BT110	✓	✓	✓
	BT220	✓	✓	✓
	BT222	✓	✓	✓
	BT224	✓	✓	✓



Chemical Indicators



Check out our Chemical Indicators available here
terrakene.com



Test pack for Steam sterilization processes

Process Challenge Devices PCD26-2 | PCD26-C

Integron® PCD26-2 and PCD 26-C Process Challenge Device (PCD) Test Packs have been designed to simulate a load to be sterilized and to pose a challenge to the sterilization process.



**PCD26-C
UNPROCESSED**

REJECTED

ACCEPT



**PCD26-2-RC
UNPROCESSED**

FAILURES

PROCESSED AND CORRECT

They are used to evaluate the effective performance of the process by detecting inadequate air removal and steam penetration. Furthermore, they allow to perform the routine monitoring and periodic validation of the sterilizers (after repair, installation, relocation).

Integron® PCD26-2 and PCD26-C are FDA Cleared.



Bowie-Dick Test Packs

Bowie-Dick Test Pack BD125X/1

Chemdye® Bowie-Dick Test Pack was developed to control air removal and steam penetration performance in vacuum-assisted steam sterilizers. They are single-use devices that consist of a lead free chemical indicator, BD Test Sheet, placed between porous sheets of paper, wrapped with crepe paper, with a Steam indicator label on the top of the package. Product BD125X/1 also has a Warning Sheet which contains a circular lead free chemical indicator, thus allowing an early detection of air removal failures before they appear on the central chemical indicator.

Bowie-Dick Test Sheet BDA4-1

Chemdye® Bowie-Dick Test Sheet is sized A4 air-removal indicator in a concentric pattern to be used to evaluate the effectiveness of air removal during pre-vacuum steam sterilization cycles operating at 134 °C, 3.5 minutes / 132 °C, 4 minutes. The sheets are designed to be used in standard ANSI/AAMI ST79 Bowie-Dick test packs. Homogenous color change from yellow to uniform dark brown/black color when processed indicates adequate air-removal and steam penetration. An air removal failure is indicated as a lighter-colored area in the center of the sheet (a non-uniform color change) indicating sterilizer malfunction.

Bowie-Dick Test Cards BD8948X/1

Chemdye® Bowie-Dick Test Card has been designed to monitor the effectiveness of air removal in vacuum-assisted steam sterilizers at 132 °C, 4 min and at 134 °C, 3.5 minutes. Chemdye® Bowie-Dick Test Card consists of a Type 2 metal free chemical indicator printed on one side of the card. Chemical indicator changes from purple to green when processed. Non-uniform color change indicates presence of an air pocket during the sterilization cycle thus indicating sterilizer malfunction.



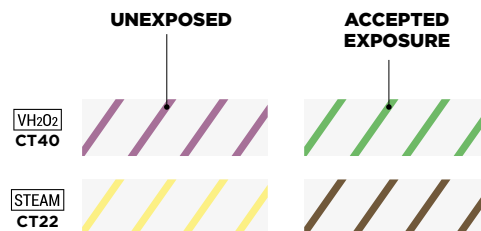
Chemdye® BD125X/1, BD8948X/1 and BDA4-1 are FDA Cleared.

Process Indicators



Tapes TYPE 1

Cintape® Self-adhesive tapes have been designed to wrap and seal sterilization packages as well as to distinguish between items that have been exposed to sterilization processes from those that have not.



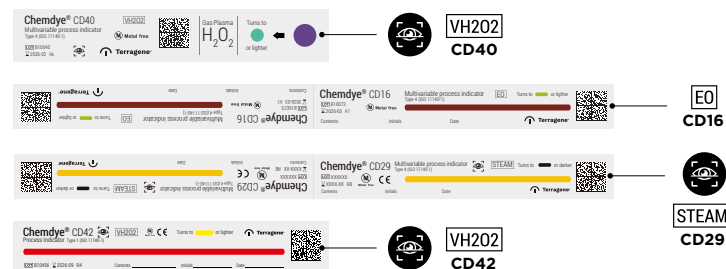
Cintape® CT22 and CT40 are FDA Cleared.



Multivariable Indicators

Single and double strips TYPE 4

Chemdye® Type 4 internal control strips are multivariable indicators that rapidly shows if critical parameters of the sterilization process have been reached, ensuring appropriate penetration of the sterilizing agent inside the packages. These chemical indicators offers a distinct color change when exposed to the stated values (SVs) of the critical process variables.



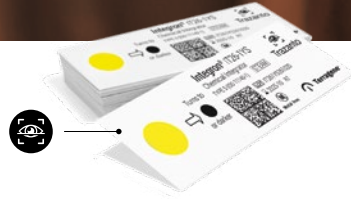
Learn more and check the related products
terrargene.com

Chemdye® CD16, CD29, CD40 and CD42 are FDA Cleared.

Integrator Indicators

IT26-1YS Unique point Integrator TYPE 5

It was developed for verification of Steam sterilization cycles between 121 °C and 135 °C. These products ensure an adequate control of the effectiveness of sterilization processes (temperature, time, steam quality). The accepted final color is reached when a theoretical spore population reaches its kill time, indicating integration condition has been reached.



IT12 EO Two level Integrator TYPE 5

It was developed to control Ethylene Oxide sterilization processes. It is a two-level indicator: Level 1 is the exposure level, which indicates exposure to Ethylene Oxide, while Level 2 is the integration level. This second level consists of a purple/brown ink dot that turns to green as it integrates all critical parameters of the sterilization process (time, temperature, humidity and Ethylene Oxide concentration). This indicator mimics the death curve of a theoretical *Bacillus atrophaeus* spore population.



IT26-C with and without extender Moving front Integrator TYPE 5

It was developed for monitoring Steam sterilization processes between 118 °C and 138 °C and to ensure an adequate control of the effectiveness of sterilization processes by monitoring all critical parameters of steam sterilization (temperature, time, steam quality). Chemical pellet melts and migrates as a dark bar along the paper wick. Migration occurs through a zone marked as accept or reject, thus indicating whether sterilization conditions were met or not. The accept result is reached when a theoretical spore population reaches its kill time, indicating integration condition has been reached.

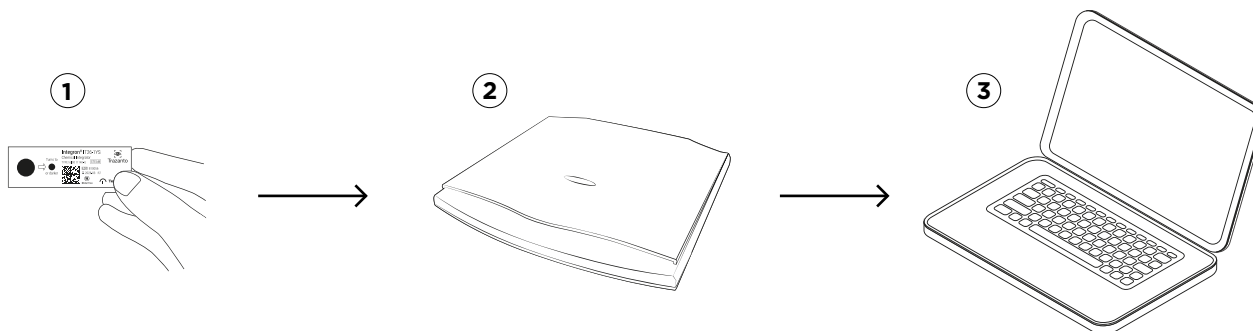


Trazanto[®] Analyzer



Check out Trazanto[®] and Compatible Indicators here
terragine.com

Automatic System for Quality & Traceability Control of Washing & Sterilization processes



This innovative and unique system consists of a highly sensitive scanner associated to Bionova® Cloud Traceability Software and in conjunction with Trazanto®, which is our scanner. The scanner along with our traceability software are capable of analyzing and interpreting the results of Chemdye® and Integron® Cleaning and Sterilization Chemical Indicators. In this way, the user is able to collect the results of all the chemical indicators used in all the packs of the same sterilization cycle, or those used in different locations in a cleaning cycle, and to digitally store that information.

Trazanto® System interprets the results in a sensitive and reliable way, thus avoiding possible failures in the operator's visual interpretation. The recording of such results, through the usage of Bionova® Cloud Traceability Software, supports and protects them, by optimizing the results' traceability and availability, generating reports alerts if there are failures in the performance of certain cleaning or sterilization cycles and/or equipment.

Advantages

- ✓ Artificial intelligence reading system.
- ✓ Automatic recognition of product code and lot number.
- ✓ Highly sensitive and easy-to-use scanner.
- ✓ Associated with Bionova® Cloud Traceability Software that allows the registration and monitoring of results, and the generation and printing of reports.
- ✓ Prevents possible failures in the operator's visual interpretation.



Trazanto® Compatible Indicators

Sterilization



CD29 For Steam



CD40 For Hydrogen Peroxide



CD42 For Hydrogen Peroxide



BD125X/1 Bowie-Dick Test Pack for 3.5 min at 134 °C



IT26-1YS For Steam processes between 121-135 °C



IT26-C For Steam processes between 118-138 °C

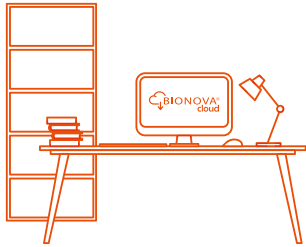


PCD20-2 | PCD20-C For Steam processes
PCD220-2 | PCD220-C
PCD222-2 | PCD222-C
PCD224-2 | PCD224-C
PCD225-2 | PCD224-C



PCD26-2 | PCD26-C For Steam processes





Bionova[®] Cloud

At Terragene[®] we have developed a complete traceability system for monitoring processes in sterilization departments. You can now have access to a complete solution associated with Terragene's disposables. Streamline and automate the traceability associated with washing tests, chemical indicators (including the Bowie-Dick test), quantitative protein-based hygiene monitoring tests, and for any Bionova[®] fluorescence readout biological indicator.



Digital workflow solutions for the Sterile Processing Department

Get full SPD Quality Control & Traceability!

Advantages

✓ Get a full and automatic traceability system for all your monitoring processes: washing, hygiene, chemical monitoring and biological monitoring all together.

✓ Avoid human error.

✓ Instant online results.

✓ Speed up all your processes: agile workflow and less time-demanding activities.

✓ Monitor the historical performance of every equipment inside the SPD independently.

✓ Accuracy and efficacy.

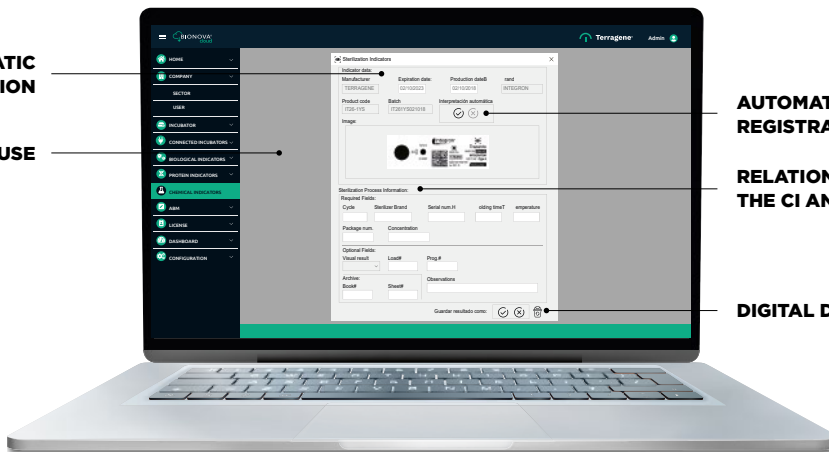
**AUTOMATIC
INTERPRETATION**

EASY TO USE

**AUTOMATIC
REGISTRATION**

**RELATIONSHIP BETWEEN
THE CI AND THE STERILIZER**

DIGITAL DATABASE



Bionova® Cloud Compatible Products

Sterilization

BOWIE-DICK TEST



BD125X/1

BIOLOGICAL INDICATORS



BT95 | BT96 | BT110 | BT220 | BT222 | BT224

CHEMICAL INDICATORS



PROCESS CHALLENGE DEVICES



PCD20-2 | PCD20-C
PCD220-2 | PCD220-C
PCD222-2 | PCD222-C
PCD224-2 | PCD224-C
PCD225-2 | PCD225-C

PCD26-2 | PCD26-C

AUTO-READER INCUBATORS



MINIBIO

ICI020FR

ICI020FRLCD

INDICATORS ANALYZER



TRAZANTO®

Let's work together
to create a better future.

