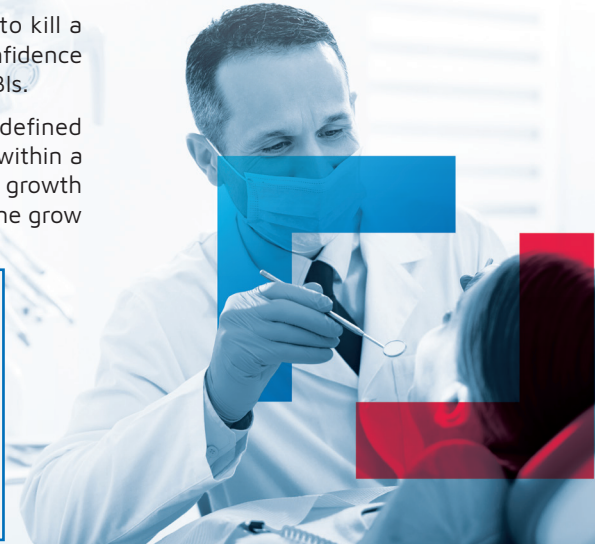


# What are biological indicators and why are they used?

A biological indicator provides information on whether necessary conditions were met to kill a specified number of microorganisms for a given sterilization process, providing a level of confidence in the process. Endospores, or bacterial spores, are the microorganisms primarily used in BIs.

A biological indicator is made up of a carrier material, on which bacterial spores with a defined resistance to the sterilization process have been applied. The carrier material is enclosed within a glassine vial. The BI is exposed to the sterilization process and then incubated under defined growth conditions to determine whether any spores survived the process. If no spores survive, none grow and the test is a pass. If growth is detected, the test is a fail.



## Why choose Tuttnauer BI's?

- Tuttnauer has the fastest 20 minute BI in the market.
- Tuttnauer biological readers can read different indicators in the same machine.
- Tuttnauer readers will do the job right in your office, where as using a mailing provider will take a week.
- Tuttnauer allows your office to save time and money!
- Tuttnauer biological indicators support gravity or pre/post vacuum autoclaves.

## Tuttnauer Biological Readers: Tuttnauer offers 2 biological readers:

The MiniBio is a small compact reader which holds 3 indicators, this reader allows each slot to read a different indicator.

The BioNova is a larger reader which holds 12 indicators, this reader allows 2 simultaneous programs with 6 indicators in each program.



### WTL198-0057

#### MiniBio Auto reader

Compact design, Allows incubating 3 indicators simultaneously, in different incubation times, at the same temperature.



### WTL198-0079

#### BioNova Incubator

Optimization of incubation times (2 simultaneous programs)



### WTL198-0147

#### Thermometer

Temperature calibration control for the readers

## Tuttnauer Biological Indicators: Tuttnauer offers Biological Indicators and PCD's:

20 minute and 1 hour biological indicators, 20 minute is the fastest in the market. Both indicators can be used in gravity and pre/post vacuum autoclaves at any temperature.

In addition to the indicators, Tuttnauer offers process challenge devices available in 20 minute and 1 hour. As per AAMI ST79, PCDs containing biological indicators should be used for routine monitoring of steam sterilization cycles at least weekly, preferably daily, and in every load containing implants.



20 MIN

### WTL198-0072

#### Steam, Ultra Rapid 20 minute

Biological indicator can be used in gravity or pre/post vacuum autoclave



1 HOUR

### WTL198-0058

#### Steam, Rapid 1 hour

Biological indicator can be used in gravity or pre/post vacuum autoclave

20 MIN



### WTL198-0077

#### Process Challenge Device (PCD) 20 minute

PCD's can be used in gravity or pre/post vacuum autoclave

1 HOUR



### WTL198-0075

#### Process Challenge Device (PCD) - 1 hour

PCD's can be used in gravity or pre/post vacuum autoclave



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# What are chemical indicators and why are they used?

Chemical indicators (CIs), as defined by the Association for the Advancement of Medical Instrumentation (AAMI) and International Organization for Standardization (ISO), are devices used to monitor the presence or attainment of one or more of the parameters required for a satisfactory sterilization process or used in a specific test of sterilization equipment. For example, when placed inside packs, chemical indicators are used to confirm that sterilant achieved good penetration in the items being sterilized.

When chemical indicators are used as part of a comprehensive quality control program, they can capture failures, such as malfunctioning equipment and technician errors, that could result in a non-sterile device. The use of chemical indicators in sterilization provides confidence in the effective reprocessing of medical devices.

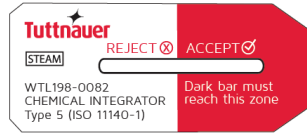


## Tuttnauer Chemical Indicators:



### WTL198-0081 Multi-Variable Indicator/Type 4

Tuttnauer Multi-variable Indicators have been designed to react to Steam sterilization processes within loads, ensuring an adequate control of the effectiveness of sterilization processes (temperature, time and steam quality).



### WTL198-0082 Integrators/Type 5

Tuttnauer integrator indicators were developed for monitoring Steam sterilization processes between 244°F and 280°F and ensure an adequate control of the effectiveness of sterilization processes by monitoring all critical parameters of steam sterilization (temperature, time, steam quality).



### WTL198-0053 Self-Adhesive Tape/Type 1

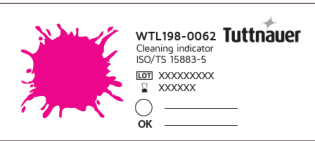
Tape surface treated with covering materials that allow an easy and continuous writing. Super adhesive capable of adhering to wrap cloth, paper and plastic. Designed with advanced technologies to ensure that the tape remains strongly adhered to the surface after sterilization and leaves no trace of adhesive on the surface of the materials after removal.

## Tuttnauer Ultrasonic Indicators:



### WTL198-0086 Ultrasonic Vials

Tuttnauer ultrasonic vials are designed to monitor the cavitation process. It allows testing the operation of ultrasonic washing machines with different washing configurations by measuring the generated cavitation energy. The Tuttnauer indicator consists of a clear vial, with a reactive blue-colored solution and glass beads immersed in it. When the cavitation energy is adequate, vibration of the glass pearls triggers a color change in the solution, from blue to yellow, through a range of green color intermediates.



### WTL198-0062 Cleaning Indicator (high level)

Tuttnauer cleaning indicators can be used for routine control of cleaning processes and allow monitoring of washing effectiveness in ultrasonic washing machines. The cleaning indicators also monitor the efficacy of enzymatic fluid which ensures instruments have been exposed to proper level of enzymatic.



### WTL198-0085 Cleaning indicator holder

Cleaning indicator holder is used with cleaning indicators. One of the indicators goes inside the holder then gets clipped onto the ultrasonic cleaner.

