

## Rapid Readout Biological Indicators

### Biological Indicators for sterilization

Axis Rapid Readout self contained biological indicators were developed to control steam and ethylene oxide sterilization processes. The biological indicators contain bacterium spores soaked in a filter paper placed inside a plastic tube.

Inside the tube there is a glass ampoule with culture medium containing a color indicator specially developed for the bacterial growth.

The innovative characteristic of this system is the rapid readout that can be obtained thanks to the culture medium formulation that permits a rapid detection of a fluorescent product, generated by the activity of the enzyme glucosidase that catalyzes the modification of a non fluorescent substrate. This enzyme is synthesized during the *Bacillus atrophaeus* y *Geobacillus stearothermophilus* (ATTC 7953) spore germination. The fluorescent product generated by this enzyme can be detected with high sensibility in the reader/incubator IC1020F or in any fluorescent reader which complies with the described specifications for each product.

The fluorescent readout must be done within 3 hours of incubation at 60°C for the AX220 indicator and within 4 hours of incubation for the AX110 ethylene oxide sterilization control processes. The coloration of the culture medium allows reconfirmation of the result obtained with the reader at 3 and 4 hours respectively. After the incubation, a color change of the indicator media to yellow indicates that the sterilization process failed and so the sterilization machine or the sterilization conditions have to be reviewed. A positive control ensures that the incubation conditions have been reached. The biological indicators can be placed inside the sterilization chamber with the materials for sterilization in an appropriated package according to the usual sterilization practices.

The Axis biological indicators are certified by specie, population, resistance (D value, Z value and survival/death).



Axis Self-Contained Biological Indicators are tested in Biological Indicators Evaluator Resistometers (BIERs), compliance with the international standards ISO11138 (Parts 1,2,3,4, y 5).



Fluorescence Incubator



Code	Organism	Process	Packing
AX 110	<i>B. atrophaeus</i>	Ethylene Oxide	50 pcs.
AX 220	<i>G. stearothermophilus</i>	Steam	50 pcs.