

# Chemical Indicators for Steam Sterilization

6 ISO Types for Typical Life Science Applications

TYPES	WHAT THEY INDICATE		APPLICATION EXAMPLE	STERIS LIFE SCIENCES PRODUCTS
<b>TYPE 1: Process</b>	One or more critical variables in the sterilization process	The unit has been directly exposed to the sterilization process	Autoclave tape or chemical indicator strips  Located inside or attached to the outside of packs  Provide visual confirmation of exposure to sterilization process	<a href="#">VERIFY™ Valueline Class 1 Steam Chemical Indicator (PCC009)</a>  <a href="#">Steam Indicator Tape (260010)</a>
<b>TYPE 2: Specific-Use</b>	Defined in relevant sterilization standards for specific test procedures		Bowie-Dick test packs  Test air removal in a prevacuum steam sterilization cycle	<a href="#">Steraffirm® Bowie-Dick Test Pack (EQC003)</a>  <a href="#">VERIFY™ Bowie-Dick Test Packs (EQC009, EQC010)</a>  <a href="#">Daily Air Removal Test-DART® (NB113, NB215)</a>  <a href="#">VERIFY™ Bowie-Dick Test Card (S3095)</a>
<b>TYPE 3: Single-Variable</b>	One critical variable in the sterilization process	Exposure to a sterilization process at a stated value (SV) of the variable	Chemical pellet  Melts at a specified temperature  Demonstrates the steam sterilization process has achieved a specified temperature	Not currently available
<b>TYPE 4: Multi-Variable</b>	Two or more critical variables in the sterilization process	Exposure to a sterilization cycle at stated values (SVs) of the variables	Chemical indicator tubes  Change color only when exposed to a given temperature for a specified time in a steam sterilization	<a href="#">Steraffirm™ Sterilizer Control Tube Steam at 121°C/250°F for:</a> -15 minutes (PCC024) -12 minutes (PCC025)
<b>TYPE 5: Integrating (Integrators)</b>	All critical variables in the sterilization process	Stated values (SVs) meet or exceed performance requirements in the ISO 11138 series for biological indicators	Moving front indicators  Respond to all critical process parameters	<a href="#">VERIFY™ Steam Integrating Indicator (PCC065B, PCC065, PCC064)</a>
<b>TYPE 6: Emulating (Cycle Verification)</b>	All critical variables for specified sterilization cycles	Stated values (SVs) are generated from the critical variables of the specified sterilization process	Cycle-specific indicators  Typically placed in the pack, pouch or container  Respond to all critical process parameters for a specified sterilization cycle	<a href="#">Steraffirm™ Steam Class 6 Emulating Indicators -121°C/250°F for 15 minutes (PCC012)</a>

## Critical Variables in Steam Sterilization



TIME



TEMPERATURE



STEAM