

## GENERAL DESCRIPTION

The Verify Bowie-Dick Test Pack consists of a series of steam penetration (air removal) barriers in the center of which is a chemical indicator sheet. The test pack is placed directly into an otherwise empty steam sterilizer chamber, with no retaining devices required. During processing, the cycle must remove or displace the air from the barrier material and replace it with steam throughout the pack. A uniform change from yellow to blue/purple indicates adequate steam penetration. The thermochromic ink formulation detects problems with steam quality, and is free of lead and other heavy metals.

## APPLICATION

Performed after a warm-up cycle at the beginning of every day, the prevacuum steam sterilizer is in operation, the Bowie-Dick (Air Removal) Test verifies the prevacuum sterilizer effectively removes air. Equivalent in performance to the AAMI Bowie-Dick Test Pack, the Verify Bowie-Dick Test Pack provides reliable performance and accurate results.

## FEATURES BENEFITS

Disposable Single Use Pack	Eliminates the need to construct test packs
Abrupt and distinctive total color change from yellow to blue/purple instead of a tonal color change of yellow or white to black	Does not lead to misinterpretation as other test packs with black endpoints which must exhibit a uniform change over the entire indicator black endpoint pattern
No lead or other heavy metals	No concerns over exposure to lead or other heavy metals
Indicator sheet can be kept as a permanent record	Documentation of the efficacy of the sterilizer to record removed air from the pack
Lot number and expiration on each pack	Traceability and recognition of expired packs at time of use

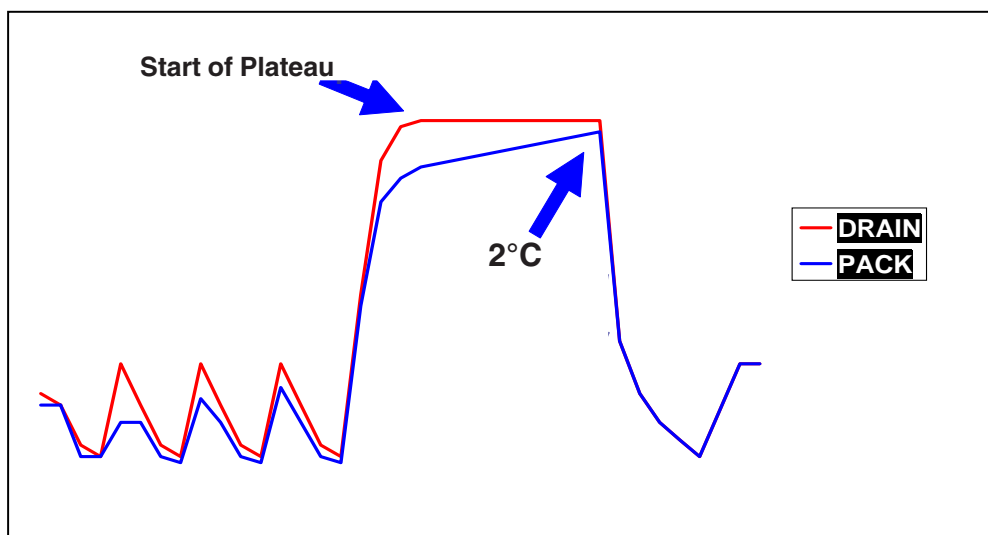
## TECHNICAL PROPERTIES

Test data demonstrates that, in a steam sterilizer in the presence of saturated steam at 270°F (132°C), 273°F (134°C) or 275°F (135°C) for three to four minutes, the sensitivity of the test pack is sufficient to detect a 2°C temperature depression between the center of the test pack and the drain temperature as specified in ANSI/AAMI ST66<sup>1</sup> (Figure 1).

The environmentally friendly Verify Bowie-Dick Test Pack is made of 100% recycled paper. The integrator ink contains no lead or other heavy metals known to be toxic to humans and the environment.

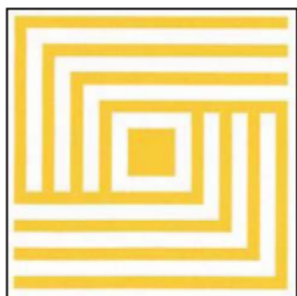
The Verify Bowie-Dick Test Pack detects problems with steam quality and may serve as a diagnostic tool when reviewed by a STERIS service expert. Maintain all failed indicator sheets when reporting a sterilizer failure.

**Figure 1: Cycle Temperature Profile Demonstrating 2°C Temperature Depression Required by ANSI/AAMI ST66**



## **DIRECTIONS FOR USE**

Pre-heat the sterilizer by running one complete cycle with an empty chamber. It is important to include all shelving and racks in the preheat cycle. After preheat cycle completion place the Verify Bowie-Dick Test Pack 4 - 8" (100 – 200 mm) above the chamber drain or as near as is practically possible, without obstructing the drain. Do not place on the chamber floor. Perform a prevacuum cycle with a programmed 3 ½ - 4 minute exposure cycle at a set temperature of 270°F (132°C), 273°F (134°C) or 275°F (135°C). Exposure to 270°F (132°C), 273°F (134°C) or 275°F (135°C) for longer than four minutes invalidates the test. Upon completion of the test cycle, remove and open the test pack. If air removal was sufficient to allow even steam penetration, the entire indicator ink figure on the indicator test sheet changes color from yellow to blue/purple.



**Figure 2: Yellow – Unused**

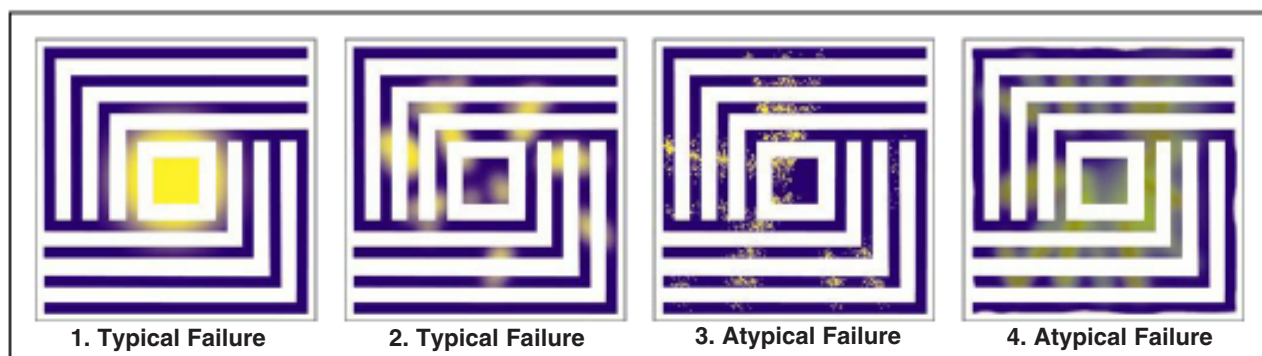


**Figure 3: Blue/Purple – Pass**

**Colors are an approximation.**

If residual air was present in the chamber and steam penetration was not achieved, the indicator ink color remains yellow toward the center. See Image 1 of Figure 4.

**Figure 4: Typical and Atypical Failures**



Colors are an approximation.

## STORAGE CONDITIONS

Store unused integrators at 32-86°F (0-30°C) and 30-60% relative humidity (RH) away from direct sunlight. Do not store the integrators near steam sterilizers or near strong alkaline or acidic products such as cleaning/disinfecting agents.

*These storage conditions should be maintained after use, e.g., when the indicator strips is filed.*

## SERVICE

### Sales

Service is one of the most important ways to verify consistent quality of the facility's performance and operation. A tailored service program by STERIS provides effective, trouble-free operations.

### Technical

STERIS is pleased to provide a completely staffed and equipped technical service laboratory capable of performing needed tests and providing both telephone and on-site assistance when needed. More details on how this service can benefit a facility's particular situation can be provided upon request.

## ORDERING INFORMATION

Description	Quantity	Reorder Number
Verify Bowie-Dick Test Pack	Box (20 packs)	EQC009
Verify Bowie-Dick Test Pack	Case (Two boxes)	EQC010

## References

<sup>1</sup> Association for the Advancement of Medical Instrumentation (AAMI). *Sterilization of health care products – Chemical Indicators – Part 2: Class 2 Indicators for Air Removal Test*. ANSI/AAMI ST-66

---

**For further information, please contact:**

STERIS®



STERIS Corporation  
5960 Heisley Road  
Mentor, OH 44060-1834 ■ USA  
440-354-2600 ■ 800-444-9009  
[www.steris.com](http://www.steris.com)