# BOWIE-DICK TEST PACKS For Monitoring Air Removal / Steam Penetration (CLASS / TYPE 2)

Excelsior Code: BD-1XCSE

### **Product Description**



Excelsior Bowie-Dick (BD) Test Packs contain no lead or other toxic heavy metals. The Indicators are manufactured to evaluate the efficacy of air removal and steam penetration in pre-vacuum sterilisers. A Bowie-Dick Test passing result indicates that the steriliser has successfully removed air and can allow steam to penetrate a load placed in the chamber. The indicators are designed for use in pre-vacuum steam sterilizers operating at 121°C and 134°C. The BD Test Packs are designed for simulating 7kg cotton pack according to ISO 11140-4 Type 2 & EN 867-4 Class B.

#### **Physical Properties**

| Process              | Steam  |  |  |
|----------------------|--|--|--|
| Test Pack Dimensions | L: 123mm x W: 123mm x H 16mm   |  |  |
| Packaging            | 20 Test Packs / Box or Individual  |  |  |
| Chemical Indicator   | Initial Colour: Blue<br>Signal Colour: Pink<br>Chemical Indicator Inks contain no lead or other toxic heavy metals |  |  |

#### **Intended Use**

The Bowie-Dick Test Pack is designed to detect the presence of residual air in pre-vacuum steam sterilisers operating at 134°C for 3.5 minutes. The indicator sheet within the Bowie-Dick Test Pack will demonstrate a uniform colour change from blue to dark brown/black when proper sterilisation conditions are met as identified in ISO 11140-4 for Sub-atmospheric pulsing. If insufficient steam penetration occurs during the exposure cycle, the Bowie-Dick Test Pack will demonstrate a non-uniform colour change.

The Bowie-Dick Test Packs are labelled "NOT FOR RESALE IN THE U.S."

#### Indications for Use

Class 2 Indicator

- 121°C, 15 minutes (pre-vacuum)
- 134°C, 3-3.5 minutes (pre-vacuum)

#### Instructions for Use

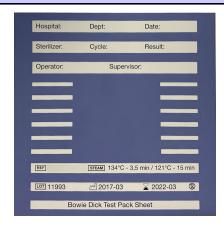
- 1) Daily, place the test pack on the bottom shelf, over the drain closest to the door, in an otherwise empty chamber.
- 2) Process in a pre-vacuum cycle of 134°C for 3.5 minutes exposure time.
- 3) After processing, carefully remove the test pack and allow to cool.
- 4) Confirm that the indicator label on the test pack box has changed colour from blue to Pink and then remove the indicator test sheet from the centre of the test pack.
- 5) The indicator test sheet should show a uniform Pink colour change. Any non-uniform colour change may indicate steriliser malfunction and should be immediately reported.
- 6) Complete the information on the test sheet and retain as permanent record.

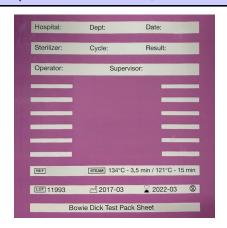
### **Performance Characteristics**

Result Availability Immediately following exposure to high temperature steam processes

Unexposed\*

Exposed to steam 121°C, 15 minutes





Failure—Residual Air



\*Colours shown are representations of printed ink initial and signal colours but may vary from actual use.



The signal colour achieved from exposure to steam may vary from the example above due to differences in processing parameters (i.e. cycle time, temperature, brand of steriliser etc.).

#### Compliance

ISO 11140-1:2007 Sterilization of health care products - Chemical Indicators- Part 4:Class 2 indicators as an alternative the Bowie and Dick-type test for detection of steam penetration.

## Storage and Shelf Life

| +15°C      | 15°C to 30°C   | 类            | Keep away from sunlight |
|------------|--|--------------|-------------------------|
| 20%        | 20% to 80% relative humidity   | <del>*</del> | Keep dry                |
| Shelf Life | 5 years from the date of manufacture.  The date of manufacture is based on the date of manufacture. The remaining shelf life upon receipt will be shorter than 5 years | $\otimes$    | Do not reuse            |
| Ţ          | Keep away from sterilants. Do not use after expiration date.   |              |                         |

## Disposal

Discard as general waste.

