



Technical Data Sheet



BOWIE DICK TEST SHEET For Monitoring Air Removal / Steam Penetration in Porous Loads ISO 11140-1 Type 2, Compliant with ISO 11140-3

True Indicating Code: A4TS

Product Description

True Indicating Bowie Dick (BD) Test Sheets contain no lead or other toxic heavy metals and are made of recyclable materials. The Test Sheets are used to evaluate the efficacy of air removal and steam penetration in pre-vacuum sterilizers. A uniform color change of the Indicating Ink to Pink provides evidence that the sterilizer has successfully removed air and can allow steam to penetrate a load placed in the chamber. The Test Packs are for use in pre-vacuum steam sterilizers operating at 121°C and 134°C. The Test Sheets are designed and comply with ISO 11140-1:2014, ISO11140-3:2007 and are classified as Type 2.

Physical Properties

Monitor For	Pre-vacuum Steam Sterilizers
Test Sheet Dimensions	L: 210 mm x W: 297 mm
Packaging	50 Test Sheets / Box
Chemical Indicator	Initial Color: Blue Signal Color: Pink

Intended Use

The Bowie Dick Test Sheets detect sterilization temperatures which are too low, sterilization holding time which is too short, insufficient vacuum depth and number of vacuum pulses, insufficient air removal from porous loads, insufficient steam penetration in the presence of residual air in pre-vacuum steam sterilizers operating at 134°C for 3.5 or 121°C for 15 minutes. The internal Indicator sheet will demonstrate a uniform color change from Blue to Pink when proper conditions as identified in ISO 11140-3 for Sub-atmospheric pulsing have been met. If insufficient steam penetration occurs during the exposure cycle, the Indicator sheet will yield an inconsistent color change which is not uniformly Pink.

Indications for Use — Type 2 Indicator

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

Instructions for Use

- 1) Each morning, place the Test Sheet into a towel pack in accordance with ISO 11140-3. Locate the towel 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 or 121°C for 15 minutes exposure time.
- 3) After processing, carefully remove the Test Sheet.
- 4) The Indicator Sheet should be a uniform Pink color. If passing, complete the information on the Indicator sheet and retain as permanent record. The chemical reaction which causes the color transition is a steam specific reaction and is irreversible.

Inconsistent or a color change which is not uniform may indicate sterilizer malfunction. It is recommended to repeat the test once more with a new Test Sheet and towel pack. If a failing test occurs a second time, the sterilizer should be checked by technical staff and not used until sterilizer is confirmed to be performing effectively with a passing Bowie Dick Test.



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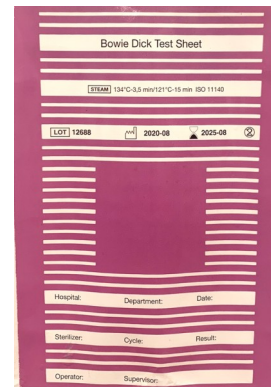
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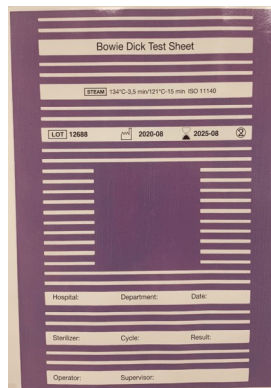
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Performance Characteristics

Result Availability	Immediately following exposure to high temperature steam processes
Unexposed	Exposed to steam 121°C, 15 minutes



Failure—Residual Air



Colors shown are representations of printed ink initial and signal colors but may vary from actual use.



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

Compliance

ISO 11140-1 Sterilization of health care products - Chemical indicators - Part 1: General requirements

ISO 11140-3 Sterilization of health care products - Chemical indicators - Part 3: Class 2 indicator systems for use in the Bowie and Dick-type steam penetration test





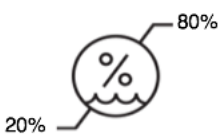



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Storage and Shelf Life

	10°C to 40°C		Keep away from sunlight
	20% to 80% Relative Humidity		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		Do not reuse
	Keep away from sterilants. Do not use after expiration date.		

Disposal

Discard as general waste.

