

SPORE SUSPENSIONS

For Monitoring Ethylene Oxide (EO) & Dry Heat

Excelsior Code: SUN-02E, SUN-03E, SUN-04E, SUN-05E , SUN-06E
SUN-07E, SUN-08E & SUN-09E



Product Description

Spore suspensions for monitoring EO and Dry Heat processes consist of pure suspensions of *Bacillus atrophaeus* (Cell Line 9372) with a known population and resistance to EO and dry heat sterilisation processes.

Indications for Use

Excelsior Spore Suspensions are standardised suspensions of spores appropriate for direct inoculation onto samples for sterility , bio burden and bacteriostasis testing.

Instructions for Use

1. Perform inoculation operations in a clean area which is remote from the sterility testing area.
2. Samples to be inoculated should be representative of product being sterilised.
3. For most purposes, inoculation of product with targeted population level of spores to provide a suitable challenge. Note: Suspensions are standardised on the basis of number of spores per 0.1 mL of suspension.
4. Use a suitable sterile pipette or syringe to accurately measure and deliver the volume of suspension to be utilised.
5. Manually shake vial before each use. Do not vortex.
6. If a syringe is used, disinfect septum surface and pull syringe plunger halfway back. Insert needle through the septum, push the plunger in, and slowly withdraw plunger to fill syringe to desired volume.
7. If a pipette is used, remove cap and septum and insert pipette. Withdraw desired volume.
8. Deposit suspension onto product. The area to be inoculated should be the one most difficult to sterilise. Return vial(s) of remaining suspension to refrigerator storage (2°C to 8°C) after use.
9. Allow product to dry at room temperature (15°C to 30°C) for approximately 24 hours (or until visibly dry). Some devices with small lumens may take longer to dry.
10. Package inoculated product exactly like product being sterilised and identify prominently as “Inoculated Test Samples.”
11. Distribute “Inoculated Test Samples” throughout the sterilizer load, as outlined in associated validation protocol or work instruction specific to your process.
12. After sterilisation cycle is complete, test the inoculated products as soon as possible by aseptically transferring into Soybean Casein Digest Broth (SCDB).

Incubation: incubated at 30°C to 40°C. for up to 7 days or for a validated incubation period.

Monitoring: Examine the tubes daily during incubation. Record observations.

Interpretation: Tubes which demonstrate turbidity with a cream orange-coloured pellicle are considered positive for growth of *Bacillus atrophaeus*. Tubes which remain clear and without pellicle formation are considered negative for growth.

Disposal

Autoclave for not less than 30 minutes at 121°C or per other validated disposal cycle prior to discard.

Physical Properties

Organism	<i>Bacillus atrophaeus</i> (Cell Line 9372)
Suspended Volume	10 mL suspended in water for injection (WFI)
Packaging	Pharmaceutical grade glass vial with screw cap and septum

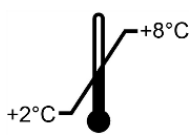




Performance Characteristics

Population	$\geq 1.0 \times 10^2 - 10^9$ spores per 0.1 mL
EO Resistance	<i>D</i> value at 54°C ± 1°C, 600 mg/L ± 30mg/L, 60% RH ± 10%RH ≥2.0 minutes
Dry Heat Resistance	<i>D</i> value at 160°C ± 1°C, ≥2.0 minutes z value: ≥ 20°C Determined based on three temperatures in the rang of 150°C to 180°C. Excelsior typically uses <i>D</i> values determined at 150°C, 160°C and 180°C for z value calculation.
Post Market Criteria	Population: 50% to 300% of certified population <i>D</i> value: ± 20% of the certified <i>D</i> value

Compliance

ISO 11138-1 and USP (where applicable)

Storage and Shelf Life

	Refrigerate 2°C to 8°C		Keep away from sunlight
	Do not freeze		Protect from heat and radioactive sources & sterilising agents
Shelf Life	24 months from the date of manufacture		
	Do not use damaged vials of Spore Suspensions. Do not use after the expiration date. The Spore Suspensions contain live cultures and should be handled with care.		

For additional product information:
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