
	Document ID:	TDS-BSM-001-100ML	Version:	001
	Date of Issue:	10-JAN-2024	Approved by:	Dr. Iman Kamranfar
	Review Date:	10-JAN-2025	Signature:	
	Title:	<b>TECHNICAL DATASHEET</b>		

## Bovine Serum Albumin Solution 10% in DPBS, For Molecular Biology and Biochemistry

Treatment/Options	Sterile-filtered, does not contain stabilizer or preservative, Fatty acid-free, Immunoglobulin-free, Low endotoxin
Product Code	BSM-001-100ML
Origins	Australia
Pack Size	100mL
Shelf Life	3 years from DOM
Storage Temperature	≤ -15°C, away from direct light
Shipping Temperature	Dry Ice

## QC Specifications

Physical and Chemical Analysis	Method	Specifications	Units
Appearance	Visual	Off-White to yellowish clear solution	n/a
Used BSA Protein: Purity	Electrophoresis	≥99.0	% (w/w)
Used BSA Protein: Ash	Thermogravimetric analysis	≤ 3.0%	% (w/w)
pH	Electronic pH Meter	6.5 – 7.5	n/a
Osmolality	Osmometer	Test and report	mOsm/kg
Endotoxin	LAL Kinetic	< 200	EU/mL
Immunoglobulin	Single radial immunodiffusion	≤ 0.002	% (w/w)
Fatty Acid	Chromatography	≤ 0.02	% (w/w)
<b>Sterility and Virology</b>			
Aerobic Bacteria	Internally Validated	Not detected	n/a
Anaerobic Bacteria	Internally Validated	Not detected	n/a
Fungi (Yeast & Mold)	Internally Validated	Not detected	n/a
Mycoplasma	qPCR	Not detected	n/a
BVDV	Virus Isolation/ Detection of Antibodies (ELISA)	Not detected	n/a
IBR	Virus Isolation/ Detection of Antibodies (ELISA)	Not detected	n/a
PI3	Virus Isolation/ Detection of Antibodies (ELISA)	Not detected	n/a

\*Other pack sizes are available on request.

The raw material used for production is of Australian origin. According to the World Organization for Animal Health (WOAH), Australia is recognized as being free from BSE. Consequently, we consider these products as BSE-free.

### Product Information

Bovine Serum Albumin (BSA) is a non-glycosylated protein of 66 kDa, produced by the liver, it is the most abundant protein in plasma. BSA is used in cell culture, molecular biology, protein biochemistry, and detection techniques.

### Applications

- Cell culture**

BSA is supplemented into cell culture media to enhance nutrition, especially in serum-free conditions. In cell culture, it acts as a small molecule carrier. Because of its negative charge, BSA binds water, salts, fatty acids, vitamins, peptides, and hormones and carries these bound components between tissues and cells, allowing efficient delivery of these nutrients into cultured cells. BSA also acts as an antioxidant, reducing cellular stress and damage.



- Molecular Biology & Biochemistry**

BSA finds several applications in molecular biology and laboratory procedures:

**Protein Quantification Standard:** BSA is used as a standard for protein quantification in experiments.

**Blocking Reagent:** It serves as a blocking reagent in immunoassays (such as ELISAs and immunoblots) due to its low cross-reactivity with antibodies compared to milk.

**Stabilizing Component:** BSA stabilizes extracellular fluid volume and acts as a carrier for small molecules like steroids, fatty acids, and thyroid hormones.

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**Restriction Enzyme Digests:** It's added to restriction enzyme digest reactions for stabilization.

**Stabilization:** It stabilizes extracellular fluid volume and serves as a carrier for small molecules in serum.

**Product Use:** This product is not intended for human or animal consumption or therapeutic use.