


	Document ID:	TDS-S-NC-MX-015	Version:	001
	Date of Issue:	10-JAN-2024	Approved by:	Dr. Iman Kamranfar
	Review Date:	10-JAN-2025	Signature:	
	Title:	<b>TECHNICAL DATASHEET</b>		

### Newborn Calf Serum

<b>Filtration, Treatment</b>	0.2 µm sterile filtered
<b>Origin</b>	Mexico
<b>Product Code</b>	S-NC-MX-015
<b>Shelf Life</b>	5 Years from DOM
<b>Storage Temperature</b>	<-15°C
<b>Shipping Temperature</b>	dry ice

### QC Specifications

Physical and Chemical Analysis	Method	Specifications	Units
Appearance	Visual	Clear yellow-amber to dark amber Liquid	n/a
Identity	Internally Validated	Bovine	n/a
pH at RT	Electronic pH Meter	6.8 - 8.2	n/a
Osmolality	Osmometer	260 - 340	mOsm/kg
Endotoxin	LAL Kinetic	Test and Report	EU/ml
Free Hemoglobin	Colorimetric	Test and Report	mg/dl
Specific Gravity	Mass Balance	> 1.01	g/ml
<b>Sterility</b>			
Sterility	Eur. Ph. 2.6.1	Pass	n/a
Mycoplasma	qPCR	Not detected	n/a
<b>Protein Profile</b>			
Total Protein	IDEXX Catalyst One	Test and Report	g/dl
Albumin	IDEXX Catalyst One	Test and Report	g/dl
<b>Virus Testing</b>			
BHV-1/IBRV	qPCR	Test and Report	n/a
PIV-3	qPCR	Test and Report	n/a
<b>Biochemistry</b>			
Aspartate Aminotransferase (AST)	IDEXX Catalyst One	Record	U/L
Alanine Aminotransferase (ALT)	IDEXX Catalyst One	Record	U/L
Lactate Dehydrogenase (LDH)	IDEXX Catalyst One	Record	U/L
Alkaline Phosphatase (ALKP)	IDEXX Catalyst One	Record	U/L
Gamma-Glutamyl Trans. (GGT)	IDEXX Catalyst One	Record	U/L
Cholesterol (CHOL)	IDEXX Catalyst One	Record	mmol/L
Glucose (GLU)	IDEXX Catalyst One	Record	mmol/L
Urea (BUN)	IDEXX Catalyst One	Record	mmol/L
Creatinine (CREA)	IDEXX Catalyst One	Record	µmol/L
Uric Acid (URIC)	IDEXX Catalyst One	Record	µmol/L
Calcium (Ca)	IDEXX Catalyst One	Record	mmol/L
Phosphorus (PHOS)	IDEXX Catalyst One	Record	mmol/L
Total Bilirubin (TBIL)	IDEXX Catalyst One	Record	µmol/L
Magnesium (Mg)	IDEXX Catalyst One	Record	mmol/L
Sodium (Na)	IDEXX Catalyst One	Record	mmol/L
Potassium (K)	IDEXX Catalyst One	Record	mmol/L
Chloride (CL)	IDEXX Catalyst One	Record	mmol/L

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Cell Culture Testing - Option 1			
Cell Line	Method	Specifications	Results
L-929, HeLa, MRC-5	Morphology	Tested vs. Control Serum	Scoring System 1
L-929, HeLa, MRC-5	Density	Tested vs. Control Serum	Scoring System 2
L-929, HeLa, MRC-5	Cell Count	Cell count [log10/ml]/dead cells vs. Control	Record
Scoring system	Meaning		Results
1 - Morphology	Dead Cells		0
	Many Cells degenerate and many dead cells		1
	Cells partially degenerate and many dead cells		2
	Few cells degenerate and few dead cells		3
	Without pathological findings		4
2 - Density	Single cells/cell aggregates		0
	< 50% confluency		1
	50 - 90% confluency		2
	confluency		3
	overly confluent		4
Cell Culture Testing - Option 2			
Cell Line	Method	Specifications	Units
BHK-21, MRC-5	Multiple Passage - Records results vs. control at day: 0, 3, 6, 12	>75% of control growth	%
BHK-21, MRC-5	Plating Efficiency - Records results vs. control at day: 0, 3, 6, 12	>75% PE vs. control PE	%
BHK-21, MRC-5	Cloning Efficiency - Records results vs. control at day: 0, 3, 6, 12	>75% CE vs. control CE	%

## RECOMMENDED USE:



### Storage

To effectively preserve the integrity of animal serum, it should be stored frozen and protected from light. The recommended storage temperature is <-15°C.

Multiple thaw/freeze cycles should be avoided, as they will accelerate the degradation of serum nutrients and can encourage the formation of insoluble precipitates. For this reason, serum should never be stored in “frost-free” freezers. These types of freezers periodically warm themselves to avoid internal ice deposits and are detrimental to the stability of frozen serum products.

### Suggested Thawing Procedure

1. Remove the serum bottles from the freezer and allow them to adjust to room temperature for approximately 10 minutes.
2. Place each container in a 30 to 37 °C water bath or incubator. Excessive temperatures will degrade heat labile nutrients. If using a water bath, prevent the bottle caps from being submerged.
3. Gently agitate the bottles every 10 – 15 minutes until the serum is completely thawed.

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#### Efficient and Effective Usage

After thawing, use the serum promptly. Liquid serum may be stored refrigerated (2 to 8 °C) for up to four weeks. To avoid thaw/freeze cycles or long periods of refrigeration, it is recommended that any unused serum be immediately dispensed into small, useful aliquots and refrozen for future use.

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