

# H.D.M. Labs Inc

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## CERTIFICATE OF ANALYSIS

**PRODUCT** : **STERILE BOVINE SERUM – Gamma Irradiated**  
**LOT NO** : **BS – xx/xx**

TEST	TEST METHOD	SPECIFICATION	RESULT
Sterility	USP <71>	No evidence of microbial growth	No evidence of microbial growth
Mycoplasma	Large Volume Direct Culture	Not detected	Not detected
Mycoplasma	FDA Points to consider 1993	Not detected	Not detected
BVD	EMEA	Not detected	Not detected
HA ( P1-3)	EMEA	Not detected	Not detected
CPE (IBR )	EMEA	Not detected	Not detected
Bovine Parvo	EMEA	Not detected	Not detected
Bovine Adeno 1	EMEA	Not detected	Not detected
Bovine Adeno 5	EMEA	Not detected	Not detected
BRSV	EMEA	Not detected	Not detected
REO Virus	EMEA	Not detected	Not detected
Rabies	EMEA	Not detected	Not detected
Blue Tongue	EMEA	Not detected	Not detected
Bovine Leukosis	EMEA	Not detected	Not detected
Vesicular Stomatitis	EMEA	Not detected	Not detected
Comparative Titration	EMEA	< 2 log	-0.60 log
BVD Quantitation	EMEA	Not detected	Not detected
BVD Virus Reduction	EMEA	As reported	-0.1 log
BVD SN Type 1	Serum Neutralization	As reported	< 1:1
BVD SN Type 11	Serum Neutralization	As reported	< 1:1
IBR SN	Serum Neutralization	As reported	< 1:1
PI-3 SN	Serum Neutralization	As reported	1:128
Endotoxin	USP <85> Gel clot	Value	<0.1 EU/ml
Total Protein	Biuret	50 – 85 g/L	69 g/L
Albumin	Gel Electrophoresis	As reported	35.4 g/L
Globulins	Gel Electrophoresis	As reported	33.5 g/L
Bilirubin	Diazo	As reported	1.3 umol/L
ALT	International Federation of Clinical Chemistry	As reported	23 U/L
AST	International Federation of Clinical Chemistry	As reported	68 U/L
LDH	Gay's Lactate	As reported	1159 U/L
Cholesterol	Cholesterol esterase/cholesterol oxidase/peroxidase	As reported	2.3 mmol/L
Glucose	Glucose oxidase/Pero	As reported	0.8 mmol/L
Urea	Urease/glutamate dehydrogenase	As reported	3.1 mmol/L
Creatinine	Alkaline Picric Acid	As reported	103 umol/L
Sodium	Ion Selective Electrode	As reported	144 mmol/L
Potassium	Ion Selective Electrode	As reported	5.8 mmol/L
Calcium	Cresolphthalein Complexone	As reported	2.54 mmol/L
Phosphorus	Ammonium Molybdate	As reported	2.3 mmol/L
Osmolality	Freezing Point Depression	240-340 mOsm/kg	278 mOsm/Kg
Serum Identity	Ouchterlony	Bovine	Bovine
Hemoglobin	Spectrophotometric	< 25.0 mg/dl	11.1 mg/dL
pH	Potentiometric	7.1-7.7	7.69
Specific Gravity	Weight/Volume	> 1.010 g/mL	1.025 g/mL
ALP	Colorimetric	As reported	153 U/L
GGT	Enzymatic Colorimetric	As reported	21 U/L
Chloride	Indirect ISE	As reported	100 mmol/L
Uric Acid	Enzymatic Colorimetric	As reported	29 umol/L
Triglyceride	Enzymatic	As reported	0.24 mmol/L
Plating Efficiency	Diploid Cell Line	pass	Pass
Population Doublings	Diploid Cell Line	Pass	Pass
Cell Toxicity	Diploid Cell Line	None	None
Growth Promotion	Diploid Cell Line	> 75% of in-house control	96.6%
Appearance	Visua	Clear yellow – amber	Complies

**MANUFACTURING DATE** : April, 2008

**EXPIRY DATE** : April, 2013

COUNTRY OF ORIGIN U.S.A. THIS SERUM HAS BEEN DERIVED FROM BLOOD ASEPTICALLY COLLECTED IN APPROVED FACILITIES. THE SERUM WAS ASEPTICALLY PROCESSED AND FILTER STERILIZED (0.2 um) IN A FACILITY REGISTERED AND FOLLOWING GUIDELINES OF U.S FDA.