



Certificate
of Analysis

Fetal Bovine Serum (South America), Embryonic Stem Cells Tested

Batch N° :	xxxxxxxxxxx	Storage :	-20°C
Catalog N° :	EU-001-500	Filtration :	Triple 0.1 µm filtered
Validation Date :	xxxxxxxxxxx	Batch size :	1 495,3 liters
Expiry date :	xxxxxxxxxxx	Origin :	SOUTH AMERICA

QUALITY PROFILE

Tests	Methods	Units	Specifications	Results
Appearance			Clear straw to amber liquid	Clear straw to amber liquid
Bacteria and Fungi			Not detected	Not detected
Mycoplasma	Culture		Not detected	Not detected
pH			6.8 - 7.8	7.18
Osmolality	Freezing point . EU Ph. 2.2.35	mOsm/kg	275-345	313
Endotoxin	Chromokinetic test . Method D of EU Ph. 2.6.14	EU/ml	< 30	3.173
Haemoglobin		mg/100ml	< 30	7.45
Total protein	Biuret colorimetry	g/l	30-45	37.3
BVD virus	Cell culture observation and ELISA test		Not detected	Not detected
Cytopathogenic Agents eg. IBR / BHV-1	Cell culture observation and ELISA test		Not detected	Not detected
Haemadsorbing Agents eg. PI3 virus	Cell culture observation and ELISA test		Not detected	Not detected

CHEMICAL PARAMETERS

Tests	Methods	Units	Specifications	Results
	UV kinetic at 37°C	IU/l		7
ALAT (SGPT)	Colorimetry kinetic at 37°C	IU/l		445
Alkaline Phosphatase	UV kinetic at 37°C	IU/l		35
ASAT (SGOT)	DPD / caffeine colorimetry	mg/100ml		0.22
Bilirubin	Arsénazo colorimetry	mg/100ml		13.9
Calcium	Colorimetry kinetic at 37°C	IU/l		8
Gamma GT	Cholesterolase Trinder colorimetry	mg/100ml		34
Cholesterol	Colorimetry Kinetic (Jaffé)	mg/100ml		3.2
Creatinine	Indirect potentiometry	mmol/l		101
Chloride	Hexokinase UV	mg/100ml		54
Glucose	IPTZ colorimetry	µg/100ml		175
Iron	UV kinetic at 37°C	IU/l		760
Lactate Dehydrogenase	Phosphomolybdate colorimetry	mg/100ml		9.00
Phosphorus	Indirect potentiometry	mmol/l		11.2
Potassium	Indirect potentiometry	mmol/l		137
Sodium				
Triglycerides	Glycerokinase Trinder colorimetry	mg/100ml		55
Urea	Urease UV	mg/100ml		36
Uric Acid	Uricase trinder colorimetry	mg/100ml		1.6

PROTEIN ELECTROPHORESIS

Tests	Methods	Units	Specifications	Results
Albumin	Immunoturbidimetry	g/l		17.1
Alpha Globulins	Immunoturbidimetry	g/l		12.6
Beta Globulins	Immunoturbidimetry	g/l		6.9
Gamma Globulins	Immunoturbidimetry	g/l		0.6

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Società Italiana Chimici
Divisione scientifica r.l.

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Manufactured by: Immunological Sciences - Unit 46, Unit Grange Science Park - Stairbridge Lane - Bolney - Sussex - RH17 5 PB



Certificate
of Analysis

Fetal Bovine Serum (South America), Embryonic Stem Cells Tested

Batch N° : S13259S181S
Catalog N° : EU-001S-500
Validation Date : 28 / 04 / 2015
Expiry date : 28 / 04 / 2020

Storage : -20°C
Filtration : Triple 0.1 µm filtered
Batch size : 1 495,3 liters
Origin : SOUTH AMERICA

ELISA TEST				
Tests	Methods	Units	Specifications	Results
IgG	elisa test	mg/l		216.9

BIOLOGICAL PERFORMANCE				
Tests	Methods	Units	Specifications	Results
L929 cell growth : 3rd day		%		106
L929 cell growth : 6th day		%		118
SP2/O-Ag14 cell growth : 3rd day		%		52
SP2/O-Ag14 cell growth : 6th day		%		79
HELA cell growth : 3rd day		%		89
HELA cell growth : 6th day		%		103
MRC-5 cell growth : 3rd day		%		91
MRC-5 cell growth : 6th day		%		103
Plating efficiency - cells implanted			500	500
Plating efficiency - number of colonies				449
Plating efficiency - PE absolute		%		90
Plating efficiency - PE relative		%		107
Cloning efficiency - cells implanted per well			1	1
Cloning efficiency - number of clones				16
Cloning efficiency - CE absolute		%		17
Cloning efficiency - CE relative		%		26
ES (E14) cell growth		%	75 à 125 %	98
ES (E14) morphology			Pass	Pass
ES (E14) Phosphatase Alcaline test			Pass	Pass
ES (E14) toxicity			No toxic effects at 30 %	No Toxic effect at 30 %

Estelle Dubreuil

Quality Service

Date :

04/08/2015

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