



**Material Safety Data Sheet**  
***ELISA Kits – Infectious Diseases***  
(Complies with the requirements of regulation (EC) no.  
1907/2006 (REACH), annex II)

Version No. 1

**1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY/  
UNDERTAKING**

**1.1. IDENTIFICATION OF THE SUBSTANCE OR PREPARATION**

**PRODUCT NAME:** BORRELIA/LYME IGG ELISA

**PRODUCT CATALOG #:** **IB79804**

**COMPONENTS:** Microtiter strips  
Calibrators  
Enzyme conjugate  
Washing buffer (10x concentrate)  
Sample diluent  
Substrate  
Stop solution

**1.2. USE OF THE SUBSTANCE/PREPARATION**

Enzyme immunoassay based on microtiter plate for the detection and quantitative determination of human antibodies against infectious agents in serum or plasma; in-vitro diagnostic

**1.3. COMPANY / UNDERTAKING IDENTIFICATION**

**MANUFACTURED FOR:** **IMMUNO-BIOLOGICAL LABORATORIES, INC. (IBL-AMERICA)**  
8201 Central Ave NE, Suite P  
Minneapolis, MN 55432  
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**1.4. EMERGENCY TELEPHONE**

In the event of a medical emergency, please dial 911.



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### 2. HAZARDS IDENTIFICATION

The components of the preparation are classified according to directive 1999/45/EC as follows:

<b>CLASSIFICATION:</b>	Microtiter strips	Not classified
	Calibrators	Not classified
	Enzyme conjugate	Not classified
	Washing buffer (10x concentrate)	Not classified
	Sample diluent	Not classified
	Substrate	Not classified
	Stop solution	Corrosive, C, R34
<b>HEALTH HAZARDS:</b>	Microtiter strips	Not applicable
	Calibrators	Not applicable
	Enzyme conjugate	Not applicable
	Washing buffer (10x concentrate)	Not applicable
	Sample diluent	Not applicable
	Substrate	Not applicable
	Stop solution	Causes burns

For detailed information to health effects and symptoms see section 11.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

<b>SUBSTANCE / COMPONENT:</b>	Microtiter strips	Commodity
	Calibrators	Preparation
	Enzyme conjugate	Preparation
	Washing buffer (10x concentrate)	Preparation
	Sample diluent	Preparation
	Substrate	Preparation
	Stop solution	Sulfuric acid (H <sub>2</sub> SO <sub>4</sub> ), 0.5 M

Hazardous substance	Concentration	CAS No.	EC No.	Classification
Sulfuric acid	1-5%	7664-93-9	231-639-5	C, R35

See section 16 for the detailed text of the above stated r-phrases.

There are no ingredients contained in the preparation which are classified as harmful or polluting in the contained concentrations according to the actual state of knowledge of the manufacturer. The product is not hazardous in the sense of the directive 67/548/EC.



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### 4. FIRST AID MEASURES

<b>INHALATION:</b>	Microtiter strips Calibrators Enzyme conjugate Washing buffer (10x concentrate) Sample diluent Substrate Stop solution	} Move person into fresh air. If not breathing give artificial respiration. In case of severe disturbance consult a physician.
<b>INGESTION:</b>	Microtiter strips Calibrators Enzyme conjugate Washing buffer (10x concentrate) Sample diluent Substrate Stop solution	
<b>SKIN CONTACT:</b>	Microtiter strips Calibrators Enzyme conjugate Washing buffer (10x concentrate) Sample diluent Substrate Stop solution	} Rinse skin with plenty of water. Remove contaminated clothes and protective gloves. Wash clothes thoroughly before reuse. Clean shoes. In case of severe disturbance consult a physician.
<b>EYE CONTACT:</b>	Microtiter strips Calibrators Enzyme conjugate Washing buffer (10x concentrate) Sample diluent Substrate Stop solution	} Rinse thoroughly with plenty of water for at least 15 minutes. In case of severe disturbance consult a physician.
<b>PROTECTION OF FIRST AIDER:</b>	Microtiter strips Calibrators Enzyme conjugate Washing buffer (10x concentrate) Sample diluent Substrate Stop solution	Not applicable Not applicable Not applicable Not applicable Not applicable Not applicable Do not take any actions which are connected to any personal risk or which were not adequately trained. If vapors are suspected, wear appropriate air-purifying respirator. For first-aid providing persons there exists a possible risk due to mouth-to-mouth resuscitation. Remove contaminated clothing. Wear protective gloves.
<b>ADVICE FOR PHYSICIANS:</b>	No special treatment. Treat symptomatically. In the case of ingestion or inhalation of larger amounts consult toxicologist.	
<b>SPECIAL TREATMENT:</b>	No data available.	

**For detailed information to health impacts and symptoms see section 11.**



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### 5. FIRE-FIGHTING MEASURES

#### NOT SUITABLE EXTINGUISHING

<b>MEDIA:</b>	Microtiter strips	Not applicable
	Calibrators	Not applicable
	Enzyme conjugate	Not applicable
	Washing buffer (10x concentrate)	Not applicable
	Sample diluent	Not applicable
	Substrate	Not applicable
	Stop solution	Do not use water jet.

**SUITABLE EXTINGUISHING MEDIA:** Consider adjacent fires when choosing the extinguishing medium.

#### DANGEROUS COMBUSTION

**PRODUCTS:** No data available.

#### SPECIAL PROTECTIVE

**EQUIPMENT FOR FIRE-FIGHTERS:** Wear appropriate personal protective equipment. Wear pressure operated full-face respirator.

### 6. ACCIDENTAL RELEASE MEASURES

<b>PERSONAL PRECAUTIONS:</b>	Microtiter strips Calibrators Enzyme conjugate Washing buffer (10x concentrate) Sample diluent Substrate Stop solution	} Do not take any actions which are connected to any personal risk or which were not adequately trained. Evacuate surrounding. Prohibit access for not protected persons. Do not touch or tread spilled substance. Avoid inhalation of vapors or mist. Care for sufficient ventilation. If ventilation is insufficient, wear respirator. Wear adequate personal protective equipment (see section 8).
<b>ENVIRONMENTAL PRECAUTIONS:</b>	Microtiter strips Calibrators Enzyme conjugate Washing buffer (10x concentrate) Sample diluent Substrate Stop solution	} Avoid spreading and drain-off of spilled material as well as contact with soil, watercourses, drains or canalization. Contact responsible department, if environmental contaminations were caused (drains, watercourses, soil or air).
<b>METHODS FOR CLEANING:</b>	Microtiter strips	Sweep material and dispose in an appropriate labeled container. Dispose via an approved waste disposal company.
	Calibrators Enzyme conjugate Washing buffer (10x concentrate) Sample diluent Substrate Stop solution	} Eliminate leakage. Remove container from contaminated area. Swab with a cloth or adsorb with an inert dry material and dispose in an appropriate labeled container. Dispose via an approved waste disposal company.



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### 7. HANDLING AND STORAGE

**HANDLING:** Microtiter strips  
Calibrators  
Enzyme conjugate  
Washing buffer (10x concentrate)  
Sample diluent  
Substrate  
Stop solution

After handling wash hands thoroughly.

Do not ingest. Avoid contact with eyes, skin or clothes. Use only with sufficient ventilation. Do not inhale vapor or mist. After handling wash hands thoroughly.

**STORAGE:** Store at 2-8°C. Protect from direct sun light. Store only in original containers. Do not store together with food. Keep containers closed until usage. After usage close opened containers again tightly. Do not store in unlabeled containers. Consider local regulations.

**SPECIFIC USE:** According to the intended use of the instruction manual for the determination of antibodies against infectious agents. Do not use reagents for other purposes.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

#### 8.1. EXPOSURE LIMIT VALUES

Microtiter strips	Not applicable
Calibrators	Not applicable
Enzyme conjugate	Not applicable
Washing buffer (10x concentrate)	Not applicable
Sample diluent	Not applicable
Substrate	Not applicable
Stop solution	See table

<b>Substance</b>	Sulfuric acid
<b>Type of exposure limit</b>	Threshold limit value (Germany 2009)
<b>Exposure limit</b>	0.1 mg/m <sup>3</sup> determined as respirable aerosol fraction
<b>Momentary value</b>	0.2 mg/m <sup>3</sup> determined as respirable aerosol fraction
<b>Maximum exposure limit</b>	exceeding factor 1, 15 min (mean), 4x/shift, 1 hour interval



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### 8.2. EXPOSURE CONTROLS

**LIMITATION OF EXPOSURE IN THE WORKING ENVIRONMENT:**

No special ventilation procedures. Common ventilation should be sufficient to limit exposure of the employees towards air pollutants. Optionally use process chambers, local exhaust fans or other technical equipment to keep exposition under recommended or mandatory limits.

**HYGIENIC MEASURES:**

After handling of chemical products as well as before eating, smoking or visit of a lavatory wash hands, forearms and optionally face thoroughly. Wash contaminated clothes before re-use. Ensure that close to the work environment eye wash stations and safety showers are available.

**RESPIRATORY PROTECTION:**

While handling according to the intended use no respiratory protection is necessary.

**HAND PROTECTION:**

Wear chemical resistant impenetrable gloves according to the specifications of directive 89/686/EC and the resulting standard EN 374. Time of penetration of the glove material: permeation level  $\geq 6$ .

**EYE PROTECTION:**

To avoid exposition against liquid spills, mist, gases or dust wear safety goggles with side protection according to the specifications of directive 89/686/EC and the resulting standard EN166.

**BODY PROTECTION:**

Wear closed lab coat.

**MONITORING OF EXPOSURE IN THE WORKING ENVIRONMENT:**

For methods of monitoring the respiratory exposition against chemical substances see the European standard EN 689.

**LIMITATION AND MONITORING OF ENVIRONMENTAL EXPOSURE:**

Monitor the emission of ventilation and process equipment for ensuring the compliance with the requirements of environment protection laws. In case of exceeding threshold values install exhaust air washers, filters or other appropriate technical equipment.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. GENERAL INFORMATION

<b>PHYSICAL STATE:</b>	Microtiter strips	plastic plate
	Calibrators	liquid
	Enzyme conjugate	liquid
	Washing buffer (10x concentrate)	liquid
	Sample diluent	liquid
	Substrate	liquid
	Stop solution	liquid
<b>COLOR:</b>	Microtiter strips	white/clear
	Calibrators	blue
	Enzyme conjugate	red
	Washing buffer (10x concentrate)	clear
	Sample diluent	blue
	Substrate	clear
	Stop solution	clear



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### 9.2. IMPORTANT HEALTH, SAFETY AND ENVIRONMENTAL INFORMATION

<b>PH:</b>	Microtiter strips	Not applicable
	Calibrators	6-8
	Enzyme conjugate	6-8
	Washing buffer (10x concentrate)	6-8
	Sample diluent	6-8
	Substrate	3-4
	Stop solution	<1
<b>BOILING POINT:</b>	Microtiter strips	Not applicable
	Calibrators	} Lowest known value (water): 100°C/212°F
	Enzyme conjugate	
	Washing buffer (10x concentrate)	
	Sample diluent	
	Substrate	
	Stop solution	
<b>MELTING POINT:</b>	Microtiter strips	Not applicable
	Calibrators	} May melt at 0°C/32°F This specification is based on the ingredient water.
	Enzyme conjugate	
	Washing buffer (10x concentrate)	
	Sample diluent	
	Substrate	
	Stop solution	
<b>SOLUBILITY:</b>	Microtiter strips	Not applicable
	Calibrators	} Complete solubility in cold and hot water.
	Enzyme conjugate	
	Washing buffer (10x concentrate)	
	Sample diluent	
	Substrate	
	Stop solution	
<b>VAPOR PRESSURE:</b>	Microtiter strips	Not applicable
	Calibrators	} 23.4 mbar at 20°C/68°F This specification is based on the ingredient water.
	Enzyme conjugate	
	Washing buffer (10x concentrate)	
	Sample diluent	
	Substrate	
	Stop solution	
<b>NO AVAILABLE DATA:</b>	To flash point, explosion limits, ignition temperatures, viscosity, oxidizing properties, density, partition coefficient (octanol/water).	



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**10. STABILITY AND REACTIVITY**

**10.1. CONDITIONS TO AVOID**

Microtiter strips	}	Components of the product are stable. Under the specified storage conditions no degradation or polymerization will occur.
Calibrators		
Enzyme conjugate		
Washing buffer (10x concentrate)		
Sample diluent		
Substrate		
Stop solution		
		Thermal stress.

**10.2. MATERIALS TO AVOID**

Microtiter strips	}	When handled according to the intended use no hazardous reactions are to be expected.
Calibrators		
Enzyme conjugate		
Washing buffer (10x concentrate)		
Sample diluent		
Substrate		
Stop solution		
		Strong bases.

**10.3. DANGEROUS DECOMPOSITION PRODUCTS**

Under the specified storage and handling conditions no dangerous decomposition products are formed. In the case of fire, dangerous decomposition products (carbon oxides, nitric oxides, sulfuric oxides) may occur.





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### 11. TOXICOLOGICAL INFORMATION

<b>INHALATION:</b>	Microtiter strips Calibrators Enzyme conjugate Washing buffer (10x concentrate) Sample diluent Substrate Stop solution	} No health effects known. } May cause irritation of the respiratory system.
<b>INGESTION:</b>	Microtiter strips Calibrators Enzyme conjugate Washing buffer (10x concentrate) Sample diluent Substrate Stop solution	} No health effects known. } May cause irritations in mouth or throat.
<b>SKIN CONTACT:</b>	Microtiter strips Calibrators Enzyme conjugate Washing buffer (10x concentrate) Sample diluent Substrate Stop solution	} No health effects known. } May cause irritation of the skin.
<b>EYE CONTACT:</b>	Microtiter strips Calibrators Enzyme conjugate Washing buffer (10x concentrate) Sample diluent Substrate Stop solution	} No health effects known. } May cause irritation of the eyes.

The following information is based on sulfuric acid as ingredient of the stop solution:

LD50:	2140 mg/kg (rat)
Sensitization:	No sensitizing effects known.

Further information of the components to chronic toxicity, carcinogenicity, mutagenicity, teratogenicity or reproductive toxicity is not available.

### 12. ECOLOGICAL INFORMATION

The following information is based on sulfuric acid as ingredient of the stop solution. For all other components no data are available.

<b>AQUATIC TOXICITY:</b>	Harmful effects on water organisms due to pH shift. Quantitative data to the ecological effects of the product are not available.
<b>WATER HAZARD CLASS:</b>	WGK 1 (according to annex 2 of the German administrative rule for substances harmful to water): weakly harmful to water.



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### 13. DISPOSAL CONSIDERATIONS

- WASTE DISPOSAL METHODS:** Consider all national environmental protection requirements and waste disposal laws as well as local rules. Avoid spreading of spilled material through contact with soil, water courses, drains or canalization.
- HAZARDOUS WASTE:** According to our current knowledge no hazardous waste in the sense of the European directive 91/689/EC.

### 14. TRANSPORT INFORMATION

This product is not subject to the rules of the following traffic systems:

- Street traffic: ADR (directive 94/55/EC)
- Rail traffic: RID (directive 96/49/EC)
- Sea traffic: IMDG
- Air traffic: ICAO/IATA

### 15. REGULATORY INFORMATION

**IDENTIFICATION ACCORDING TO EUROPEAN DIRECTIVES:**

The classification and identification was performed according to the European directives 67/548/EC and 1999/45/EC (including amendments) and consider the intended use of the product. A Chemical Safety Assessment was not conducted for substances included in this preparation.

**R-PHRASES:**

- Microtiter strips
  - Calibrators
  - Enzyme conjugate
  - Washing buffer (10x concentrate)
  - Sample diluent
  - Substrate
  - Stop solution
- } This product is not classified according to European laws.
- R34: Causes burns.

**S-PHRASES:**

- Microtiter strips
  - Calibrators
  - Enzyme conjugate
  - Washing buffer (10x concentrate)
  - Sample diluent
  - Substrate
  - Stop solution
- } S 36: Wear suitable protective clothing.
- S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.  
S45: In case of accident or if you feel unwell seek medical advice immediately (show the label where possible).

**EUROPEAN INVENTORY:**

Sulfuric acid as ingredient of the stop solution not listed.

**NATIONAL RULES:**

German administrative rule for substances harmful to water (VwVwS): WGK 1 (according to annex 2): weakly harmful to water.  
German regulation for industrial safety (BetrSichV): no classification.



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**16. OTHER INFORMATION**

**COMPLETE TEXT OF THE R-PHRASES ACCORDING TO SECTION 2 AND 3:**

Microtiter strips	}	Not applicable.
Calibrators		
Enzyme conjugate		
Washing buffer (10x concentrate)		
Sample diluent		
Substrate		
Stop solution		
		R34: Causes burns.
		R35: causes severe burns.

**DOCUMENT HISTORY:** Version 1: 2009-12-23 (creation and release)

**HINT:** The information is based on our present knowledge, but is not a guaranty of special product properties and establishes no legal relationship.