03/02/2011 **Kit Components**

Product code	Description
222591	**Salmonella O Antiserum Factor 19**

Components:

222591a	Salmonella O Antiserum Factor 19 (w/ thimerosal)
222591b	Salmonella O Antiserum Factor 19 (w/ sodium azide)

The preservative used for this product recently has changed. Two MSDSs are being provided, one for the discontinued formulation, containing thimerosal and the other is for the new formulation, containing sodium azide. You can identify the different products by the presence or absence on the outer package and package insert of a mercury warning associated with thimerosal.

Material Safety Data Sheet
acc. to ISO/DIS 11014

Date Prepared: 03/02/2011 Reviewed On: 02/11/2011

1 Identification of the substance/mixture and of the company/undertaking

· **Product Identifier**
· **Product Name: Salmonella O Antiserum Factor 19 (w/ thimerosal)**
· **Catalog Number:** 222591

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
BD Diagnostic Systems
7 Loveton Circle
Sparks, MD 21152
Telephone.: (410) 771 - 0100 or (800) 638 – 8663
· **Emergency telephone number:**
In case of a chemical emergency, spill, fire, exposure, or accident contact BD Diagnostic Systems (410) 771-0100 or (800)-638-8663, or ChemTrec at (800) 424-9300.

2 Composition/information on ingredients

· **Chemical characterization: Mixture**
· **Description:** Mixture consisting of the following components.

· **Dangerous Components:** Void

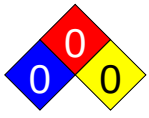
3 Hazards identification

· **Classification of the substance or mixture**

· **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
This product contains no hazardous constituents, or the concentration of all chemical constituents are below the regulatory threshold limits described by Occupational Safety Health Administration Hazard Communication Standard 29 CFR 1910.1200, the Canada's Workplace Hazardous Materials Information System (WHMIS) and the European Directive 67/548/EEC and 1999/45/EC.
Void
· **Classification system:**
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

· **Label elements**

· **Labelling according to EU guidelines:**
Observe the general safety regulations when handling chemicals
The product is not subject to identification regulations pertaining to regulations on hazardous materials.
· **NFPA ratings (scale 0-4)**



Health = 0
Fire = 0
Reactivity = 0

· **HMIS ratings (scale 0-4)**



Health = 0
Fire = 0
Reactivity = 0

(Contd. on page 2)

Material Safety Data Sheet
acc. to ISO/DIS 11014

Date Prepared: 03/02/2011 Reviewed On: 02/11/2011

Product Name: Salmonella O Antiserum Factor 19 (w/ thimerosal)

(Contd. of page 1)

4 First aid measures

· **General information** No special measures required.
· **After inhalation** Seek medical treatment in case of complaints.
· **After skin contact** Immediately wash with water and soap and rinse thoroughly.
· **After eye contact**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· **After swallowing** If symptoms persist consult doctor.
· **Information for doctor** Show this product label or this MSDS.

5 Firefighting measures

· **Suitable extinguishing agents**
CO2, ABC multipurpose dry chemical or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **Protective equipment:** No special measures required.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures** Not required.
· **Environmental precautions:** Wipe up with damp sponge or mop.
· **Methods and material for containment and cleaning up:** No special measures required.
· **Reference to other sections** No dangerous substances are released.

7 Handling and storage

· **Handling**
· **Precautions for safe handling** No special measures required.
· **Information about protection against explosions and fires:** No special measures required.
· **Storage**
· **Requirements to be met by storerooms and receptacles:** 2 - 8 ℃
· **Information about storage in one common storage facility:** Store away from oxidizing agents.
· **Further information about storage conditions:** None.

8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see Section 7.
· **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
· **Additional information:** The lists that were valid during the creation were used as basis.
· **Personal Protective Equipment**
· **General protective and hygienic measures**
The usual precautionary measures for handling chemicals should be followed.
· **Breathing equipment:** Not required.

(Contd. on page 3)

Material Safety Data Sheet
acc. to ISO/DIS 11014

Date Prepared: 03/02/2011 Reviewed On: 02/11/2011

Product Name: Salmonella O Antiserum Factor 19 (w/ thimerosal)

(Contd. of page 2)

· **Protection of hands:**



Chemical resistant gloves (i.e. nitrile, or equivalent).

· **Eye protection:** Safety glasses
· **Body protection:** Protective work clothing (lab coat).

9 Physical and chemical properties

· **General Information**	
· **Appearance:**	
Form:	Liquid
Color:	Gold Amber
· **Odor:**	Characteristic
· **Change in condition**	Undetermined
· **Melting point/Melting range:**	Not determined
· **Boiling point/Boiling range:**	Not determined
· **Flash point:**	Not applicable
· **Auto igniting:**	Product is not self igniting.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Density:**	Not determined
· **Solubility in / Miscibility with**	
Water:	Soluble

10 Stability and reactivity

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Incompatible materials:** Incompatible material: strong oxidizers.
· **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· **Acute toxicity:**
· **Primary irritant effect:**
· **on the skin:** No irritating effect.
· **on the eye:** No irritating effect.
· **Sensitization:** No sensitizing effects known.
· **Additional toxicological information:**
The product is not subject to OSHA classification according to internally approved calculation methods for preparations.
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

(Contd. on page 4)

Material Safety Data Sheet
acc. to ISO/DIS 11014

Date Prepared: 03/02/2011 Reviewed On: 02/11/2011

Product Name: Salmonella O Antiserum Factor 19 (w/ thimerosal)

(Contd. of page 3)

This product or product container contains dry natural rubber latex.

12 Ecological information

· **Acquatic toxicity:** No further relevant information available.
· **Ecotoxical effects:**
· **Other information:**
The ecological effects have not been thoroughly investigated, but currently none have been identified.
· **Additional ecological information:**
· **General notes:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation**
This product contains mercury (thimerosal). Dispose of material in accordance with state and local requirements.
Must not be disposed of with solid waste.
Dispose of material in accordance with federal (40 CFR 261.3), state and local requirements.

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to state and federal regulations.
· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· **DOT regulations:**

· **Hazard class:** -

· **Land transport ADR/RID (cross-border)**
· **ADR/RID class:** -

· **Maritime transport IMDG:**
· **IMDG Class:** -
· **Marine pollutant:** No

· **Air transport ICAO-TI and IATA-DGR:**
· **ICAO/IATA Class:** -

· **Transport/Additional information:**
If a dashed line appears in the Hazard Class section for the type of transportation, this indicates the product is not regulated for transportation.

15 Regulatory information

· **SARA Section 355 (extremely hazardous substances)**
None of the ingredients is listed.

· **SARA Section 313 (specific toxic chemical listings)**
None of the ingredients is listed.

(Contd. on page 5)

Material Safety Data Sheet
acc. to ISO/DIS 11014

Date Prepared: 03/02/2011 Reviewed On: 02/11/2011

Product Name: Salmonella O Antiserum Factor 19 (w/ thimerosal)

(Contd. of page 4)

· **TSCA (Toxic Substances Control Act)**

54-64-8	thimerosal

· **California Proposition 65 - Chemicals known to cause cancer**

None of the ingredients is listed.

· **California Proposition 65 - Chemicals known to cause reproductive toxicity**
Mercury and mercury compounds are chemicals known to the State of California to cause reproductive toxicity. Note: Contains less than or equal to 0.03% of an organic mercury compound. Foreseeable use of this product does not pose a known threat reproductive toxicity.

· **California Proposition 65 - Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **California Proposition 65 - Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **California Proposition 65 - Chemicals known to cause developmental toxicity:**

54-64-8	thimerosal

· **Carcinogenic categories**

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

16 Other information

To the best of our knowledge, the information contained herein is accurate. However, neither Becton, Dickinson and Company or any of its subsidiaries assumes any liabilities whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we can not guarantee that these are the only hazards that exist.

· **Department issuing MSDS:**
Environmental, Health & Safety
Created by Michael J. Spinazzola
· **Contact:** Technical Service Representative

Material Safety Data Sheet
acc. to ISO/DIS 11014

Date Prepared: 03/02/2011 Reviewed On: 02/11/2011

1 Identification of the substance/mixture and of the company/undertaking

· **Product Identifier**
· **Product Name: Salmonella O Antiserum Factor 19 (w/ sodium azide)**
· **Catalog Number:** 222591

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
BD Diagnostic Systems
7 Loveton Circle
Sparks, MD 21152
Telephone.: (410) 771 - 0100 or (800) 638 – 8663
· **Emergency telephone number:**
In case of a chemical emergency, spill, fire, exposure, or accident contact BD Diagnostic Systems (410) 771-0100 or (800)-638-8663, or ChemTrec at (800) 424-9300.

2 Composition/information on ingredients

· **Chemical characterization: Mixture**
· **Description:** Mixture consisting of the following components.

· **Dangerous Components:**		
26628-22-8	sodium azide	0.2%

3 Hazards identification

· **Classification of the substance or mixture**

· **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

Xn; Harmful

R22: Harmful if swallowed.
· **Classification system:**
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

· **Label elements**

· **Labelling according to EU guidelines:**
Observe the general safety regulations when handling chemicals
The product is not subject to identification regulations pertaining to regulations on hazardous materials.

· **Code letter and hazard designation of product:**
Xn Harmful

· **Hazard-determining components of labelling:**
sodium azide

· **Risk phrases:**
22 Harmful if swallowed.

· **Safety phrases:**
23 Do not breathe gas/fumes/vapour/spray.
36 Wear suitable protective clothing.
· **NFPA ratings (scale 0-4)**



Health = 2
Fire = 0
Reactivity = 0

(Contd. on page 2)

Material Safety Data Sheet
acc. to ISO/DIS 11014

Date Prepared: 03/02/2011 Reviewed On: 02/11/2011

Product Name: Salmonella O Antiserum Factor 19 (w/ sodium azide)

(Contd. of page 1)

· **HMIS ratings (scale 0-4)**

HEALTH 2	Health = 2
FIRE 0	Fire = 0
REACTIVITY 0	Reactivity = 0

4 First aid measures

· **General information**
Symptoms of poisoning may even occur after several hours; therefore provide medical observation for at least 48 hours after the accident.
· **After inhalation** Supply fresh air; consult doctor in case of complaints.
· **After skin contact** Immediately wash with water and soap and rinse thoroughly.
· **After eye contact**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· **After swallowing** If symptoms persist consult doctor.
· **Information for doctor** Show this product label or this MSDS.

5 Firefighting measures

· **Suitable extinguishing agents**
CO2, ABC multipurpose dry chemical or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **Protective equipment:** No special measures required.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures** Not required.
· **Environmental precautions:** Wipe up with damp sponge or mop.
· **Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

· **Handling**
· **Precautions for safe handling** No special measures required.
· **Information about protection against explosions and fires:** No special measures required.
· **Storage**
· **Requirements to be met by storerooms and receptacles:** No special requirements.
· **Information about storage in one common storage facility:** Store away from oxidizing agents.
· **Further information about storage conditions:** Store in cool, dry conditions in well sealed containers.

(Contd. on page 3)

Material Safety Data Sheet
acc. to ISO/DIS 11014

Date Prepared: 03/02/2011 Reviewed On: 02/11/2011

Product Name: Salmonella O Antiserum Factor 19 (w/ sodium azide)

(Contd. of page 2)

8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see Section 7.

· **Components with limit values that require monitoring at the workplace:**	
26628-22-8 sodium azide	
REL	Short-term value: C 0.3** mg/m³, C 0.1* ppm *as HN3 vapor; **as NaN3; Skin
TLV	Short-term value: C 0.29** mg/m³, C 0.11* ppm *as HN3 vapor **as NaN3

· **Additional information:** The lists that were valid during the creation were used as basis.
· **Personal Protective Equipment**
· **General protective and hygienic measures**
The usual precautionary measures for handling chemicals should be followed.
· **Breathing equipment:** Not required.
· **Protection of hands:**



Chemical resistant gloves (i.e. nitrile, or equivalent).

· **Eye protection:** Safety glasses
· **Body protection:** Protective work clothing (lab coat).

9 Physical and chemical properties

· **General Information**	
· **Appearance:**	
Form:	Liquid
Color:	Gold Amber
· **Odor:**	Characteristic
· **pH-value:**	Not applicable
· **Change in condition**	Undetermined
· **Melting point/Melting range:**	Not determined
· **Boiling point/Boiling range:**	Not determined
· **Flash point:**	Not applicable
· **Auto igniting:**	Product is not self igniting.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Density:**	Not determined
· **Solubility in / Miscibility with**	
Water:	Soluble

10 Stability and reactivity

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

(Contd. on page 4)

Material Safety Data Sheet
acc. to ISO/DIS 11014

Date Prepared: 03/02/2011 Reviewed On: 02/11/2011

Product Name: Salmonella O Antiserum Factor 19 (w/ sodium azide)

(Contd. of page 3)

· **Incompatible materials:**
Incompatible materials: acidic material and metals
Incompatible material: strong oxidizers.
· **Hazardous decomposition products:** No dangerous decomposition products known.
· **Additional information:**
Sodium azide is present in this product. Contact with acidic solutions and metal compounds over time may form potentially explosive metal azides. Should any of this material be introduced into a sanitary sewer system, flush with copious amounts of water.

11 Toxicological information

· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**		
26628-22-8 sodium azide		
Oral	LD50	27 mg/kg (rat)

· **Primary irritant effect:**
· **on the skin:** No irritating effect.
· **on the eye:** No irritating effect.
· **Sensitization:** No sensitizing effects known.
· **Additional toxicological information:**
The product is not subject to OSHA classification according to internally approved calculation methods for preparations.
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
This product or product container contains dry natural rubber latex.

12 Ecological information

· **Acquatic toxicity:** No further relevant information available.
· **Ecotoxical effects:**
· **Other information:**
The ecological effects have not been thoroughly investigated, but currently none have been identified.
· **Additional ecological information:**
· **General notes:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation**
Smaller quantities can be disposed of with solid waste.
This product is not considered a RCRA hazardous waste.
Dispose of material in accordance with federal (40 CFR 261.3), state and local requirements.

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to state and federal regulations.
· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

(Contd. on page 5)

Material Safety Data Sheet
acc. to ISO/DIS 11014

Date Prepared: 03/02/2011 Reviewed On: 02/11/2011

Product Name: Salmonella O Antiserum Factor 19 (w/ sodium azide)

(Contd. of page 4)

14 Transport information

· **DOT regulations:**

· **Hazard class:** -

· **Land transport ADR/RID (cross-border)**
· **ADR/RID class:** -

· **Maritime transport IMDG:**
· **IMDG Class:** -
· **Marine pollutant:** No

· **Air transport ICAO-TI and IATA-DGR:**
· **ICAO/IATA Class:** -

· **Transport/Additional information:**
If a dashed line appears in the Hazard Class section for the type of transportation, this indicates the product is not regulated for transportation.

15 Regulatory information

· **SARA Section 355 (extremely hazardous substances)**

26628-22-8	sodium azide

· **SARA Section 313 (specific toxic chemical listings)**

26628-22-8	sodium azide

· **TSCA (Toxic Substances Control Act)**

26628-22-8	sodium azide

· **California Proposition 65 - Chemicals known to cause cancer**
None of the ingredients is listed.

· **California Proposition 65 - Chemicals known to cause reproductive toxicity for females:**
None of the ingredients is listed.

· **California Proposition 65 - Chemicals known to cause reproductive toxicity for males:**
None of the ingredients is listed.

· **California Proposition 65 - Chemicals known to cause developmental toxicity:**
None of the ingredients is listed.

· **Carcinogenic categories**

· **NTP (National Toxicology Program)**
None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

26628-22-8	sodium azide	A4

· **National regulations**

· **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

16 Other information

To the best of our knowledge, the information contained herein is accurate. However, neither Becton, Dickinson and Company or any of its subsidiaries assumes any liabilities whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the

(Contd. on page 6)

Material Safety Data Sheet
acc. to ISO/DIS 11014

Date Prepared: 03/02/2011 Reviewed On: 02/11/2011

Product Name: Salmonella O Antiserum Factor 19 (w/ sodium azide)

(Contd. of page 5)

user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we can not guarantee that these are the only hazards that exist.

· ***Department issuing MSDS:***
Environmental, Health & Safety
Created by Michael J. Spinazzola
· ***Contact:*** *Technical Service Representative*