

Material Safety Data Sheet

<i>1. PRODUCT AND COMPANY IDENTIFICATION</i>		
<i>Product Information</i>		
Product name	NEUROLITE® Vial B	
Version	2.0, 11/21/2007	
Chemical Name	Not applicable	
Synonyms	Sodium Phosphate, Monobasic and Dibasic; Sodium Phosphate Buffer; Rinsing Buffer; Phosphate Buffer; Kit for the Preparation of Technetium Tc99m Biscate for Injection	
Product Uses	This material is used as a medical imaging agent. It is combined with a radioactive material to form the solution for administration to the patient.	
<i>Company/Undertaking Identification</i>		
Address	Lantheus Medical Imaging 331 Treble Cove Road Billerica, MA 01862 United States of America 1-800-299-3431	
Emergency Phone Number	CHEMTREC 1-800-424-9300. For all international transportation emergencies call CHEMTREC at 1-703-527-3887. Collect calls accepted.	
<i>2. COMPOSITION/INFORMATION ON INGREDIENTS</i>		
Components	Concentration	CAS-No.
<i>Other ingredients</i>		
Disodium phosphate heptahydrate	<1 %	7782-85-6
Sodium Phosphate Monobasic	<1 %	10049-21-5
Water	> 1 %	7732-18-5
<i>3. HAZARDS IDENTIFICATION</i>		
<i>Emergency Overview</i>		
Appearance	liquid : colourless	
Hazard Statements	CAUTION-SUBSTANCE NOT FULLY TESTED	
Precautionary Measures	Avoid ingestion, inhalation, skin and eye contact. Wash hands after handling to minimize exposure.	
<i>Potential Health Effects</i>		
Eyes	Not available	
Skin	Not available	
Ingestion	Not available	
Inhalation	Not available	
Target Organs	Not available	
<i>Environmental Effects</i>	Not available	

4. FIRST AID MEASURES

Eye contact	Rinse immediately with plenty of water for at least 15 minutes. Keep eye wide open while rinsing. Obtain medical attention.
Skin contact	Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.
Inhalation	Move to fresh air. Oxygen or artificial respiration if needed. Obtain medical attention.
Ingestion	Obtain medical attention. Do NOT induce vomiting. Never give anything by mouth to an unconscious person.
Notes to Physician	This material is used as a medical imaging agent. It is combined with a radioactive material to form the solution for administration to the patient.
Medical Surveillance	Employees who are pregnant, are breast-feeding, or who are concerned with other reproductive issues should be encouraged to consult with the occupational health physician monitoring worker's health.

5. FIRE-FIGHTING MEASURES

Flammable Properties	Material is an aqueous solution. Not expected to be flammable.
Extinguishing Media	Suitable extinguishing media: Dry chemical, Water spray, Foam Unsuitable extinguishing media: Do NOT use water jet.
Protection of Firefighters	Specific hazards: Not available Protective equipment: Use personal protective equipment. In the event of fire, wear self-contained breathing apparatus. Hazardous Combustion Products: oxides of phosphorus
Other information:	Decontaminate protective clothing and equipment before reuse.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Refer to protective measures listed in sections 7 and 8. Use personal protective equipment. Examples include tightly fitting safety goggles, lab coat and impervious gloves. Depending on the nature of the spill (quantity and extent of spill) additional protective clothing and equipment such as a self-contained breathing apparatus may be needed. If reconstituted with radioactive tracer, notify your site Radiation Officer for appropriate procedures and methods. .
Environmental precautions	Prevent release to drains and waterways. Prevent release to the environment.
Containment Methods	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). If reconstituted with radioactive tracer, notify your site Radiation Officer for appropriate procedures and methods. .
Cleanup Methods	Contain and collect spillage and place in container for disposal according to local regulations (see Section 13). Handle waste materials, including gloves, protective clothing, contaminated spill cleanup material, etc., as appropriate for chemically and pharmacologically similar materials. If reconstituted with radioactive tracer, notify your site Radiation Officer for appropriate procedures and methods. .

7. HANDLING AND STORAGE

Handling Precautions	Avoid inhalation of vapour or mist. When handling larger quantities, such as in a manufacturing setting, ensure worker exposure is below the recommended exposure limit. Keep away from heat and sources of ignition. Prevent release to drains and waterways.
Storage Conditions	Store at room temperature. (15 - 25°C) Protect against light. Keep away from heat, sparks and flames.
Container Requirements	Store in the original primary packaging as provided.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limit(s)	Company Guideline	ACGIH	OSHA	NIOSH
Disodium phosphate heptahydrate	--	--	--	--
Sodium Phosphate Monobasic	--	--	--	--
Water	--	--	--	--
Exposure Control Band	Not available			
Lantheus Exposure Guidelines Summary	Not available			
Recommended Industrial Hygiene Monitoring Methods	A specific exposure sampling method is not available.			
Engineering Controls and Ventilation	When handling small quantities in a clinical setting, good room ventilation is desirable. Specific engineering controls should not be needed. When handling larger quantities, such as in a manufacturing setting, ensure worker exposure is below the recommended exposure limit. If significant aerosol (mist) is generated, use process enclosures, containment technology, or other engineering controls to keep airborne levels below recommended exposure limit. This is applicable for material prior to reconstitution with radioactive tracer only.			
Respiratory protection	Respiratory protection is not required for normal use of this material. If the occupational exposure limit (OEL) is exceeded, wear an appropriate respirator with a protection factor sufficient to control exposures to below the OEL. This is applicable for material prior to reconstitution with radioactive tracer only.			
Eye protection	Glasses or chemical splash resistant goggles are recommended if eye contact is possible. Chemical splash resistant goggles should be worn when potential for splash exists. This is applicable for material prior to reconstitution with radioactive tracer only.			
Hand protection	Impervious nitrile, rubber and latex gloves are recommended. Please note that employees who are allergic to natural rubber latex should use nitrile gloves. This is applicable for material prior to reconstitution with radioactive tracer only.			
Skin and body protection	Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. This is applicable for material prior to reconstitution with radioactive tracer only.			

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Hygiene	Wash hands before breaks and immediately after handling the product. This is applicable for material prior to reconstitution with radioactive tracer only.
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9. PHYSICAL AND CHEMICAL PROPERTIES*Appearance*

Physical State	liquid
Color	colourless
Form	Not available

Descriptive properties

Molecular Weight	Not available
Molecular formula	Not applicable
Bulk density	Not available
Chemical Name	Not applicable
Evaporation rate	Not available
Hydrolysis/Photolysis	Not available
Hygroscopicity	Not available
Log Octanol/Water Partition Coeff [log Kow]	Not available
Surface Tension	Not available
Odor	Not available
Odor Threshold	Not available
pH	7.2 - 8.0
pKa	Not available
Particle Size	Not available
Solubility, Water	Not available
Specific Gravity/ Relative density	Not available
Viscosity	Not available

Thermal/Stability properties

Autoignition temperature	Not available
Boiling Point	Not available
Thermal decomposition	Not available
Explosive Limits, LEL	Not available
Explosive limits, LEL	Not available
Explosiveness	Not available
Flammability	Not available
Flash point	Not available
Melting Point	Not available
Oxidizing Potential	Not available

Vapor Properties

Vapor Density	Not available
Vapor Pressure	Not available
Saturated Vapor Concentration	Not available

10. STABILITY AND REACTIVITY*Stability*

Chemical Stability	Stable under normal conditions.
Conditions to avoid	Not available

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10. STABILITY AND REACTIVITY

Incompatible products	Not available
Hazardous decomposition products	Hazardous decomposition products formed under fire conditions.: oxides of phosphorus
Hazardous reactions	None known.

11. TOXICOLOGICAL INFORMATION

Routes of Entry	Ingestion, Inhalation, Eye contact, Skin contact
Eye Irritation	Not available
Skin Irritation	Not available
Respiratory Irritation	Not available
Sensitisation	Not available
Acute Toxicity Study	Not available
Repeated dose toxicity	Not available
Genetic Toxicity	Not available
Carcinogenicity	Not available
Reproductive Toxicity	Not available
Developmental Toxicity	Not available
Human experience	Not available
Target Organs	Not available
Symptoms	Not available
Other Toxicity Information	Not available

12. ECOLOGICAL INFORMATION

Ecotoxicological Information (Aquatic)	Not available
Ecotoxicological Information (Terrestrial)	Not available
Chemical fate information	Not available

13. DISPOSAL CONSIDERATIONS

Advice On Disposal And Packaging	Disposal should be in accordance with applicable regional, national, and local laws and regulations. Local regulations may be more stringent than regional or national requirements. This information presented only applies to the material as supplied. If reconstituted with radioactive tracer, notify your site Radiation Officer for appropriate procedures and methods. .
Other information	Disposal by incineration is recommended.

14. TRANSPORT INFORMATION

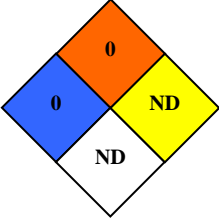
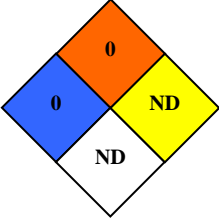
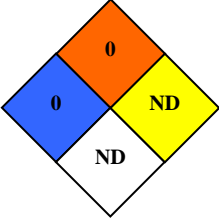
This material is not a dangerous good for the purpose of transportation.

15. REGULATORY INFORMATION**United States of America**

OSHA Hazard Classification	No OSHA Hazards.
313 Toxic Release Inventory. Listed Chemicals/Compounds	No components listed on the SARA 313 inventory.

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15. REGULATORY INFORMATION	
TSCA Inventory	Ingredients present at greater than 1% are listed.
International	
Canada	
WHMIS	Uncontrolled product according to WHMIS classification criteria.
DSL/NDSL	Ingredients present at greater than 1% are listed.
Mexico	
Mexico Classification	Health classification - Minimal hazard - 0 - Substances that do not pose a hazard under emergency conditions other than that of ordinary combustible materials.
Europe	
EINECS/ELINCS Number	Water: 231-791-2
Other information	Medicinal products are exempt from classification and labeling requirements under EU Preparations Directive 1999/45/EC.

16. OTHER INFORMATION										
<i>MSDS preparation information</i>										
Prepared by	Environmental Health & Safety 1-978-671-8673									
Prepared on	11/21/2007									
This Safety Data Sheet has been revised. This MSDS has been reformatted in a new electronic system. This data sheet contains changes from the previous version in section(s): All.										
<i>Other information</i>										
HMIS	<table border="1"> <tr> <td>Health</td> <td>0</td> </tr> <tr> <td>Flammability</td> <td>0</td> </tr> <tr> <td>Reactivity</td> <td>Not Determined (ND)</td> </tr> <tr> <td>Personal protective equipment</td> <td>See Section 8.</td> </tr> </table>	Health	0	Flammability	0	Reactivity	Not Determined (ND)	Personal protective equipment	See Section 8.	
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NFPA	<table> <tr> <td>Health</td> <td>0</td> <td rowspan="4">  </td> </tr> <tr> <td>Fire</td> <td>0</td> </tr> <tr> <td>Reactivity</td> <td>ND</td> </tr> <tr> <td>Special</td> <td>ND</td> </tr> </table>	Health	0		Fire	0	Reactivity	ND	Special	ND
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Fire	0									
Reactivity	ND									
Special	ND									
The information contained in this MSDS is believed to be accurate and represents the best information reasonably available at the time of preparation. However, we make no warranty, express or implied, with respect to such information. and we assume no liability from its use.										