

## MATERIAL SAFETY DATA SHEET

DATE: 2004 February 4

SECTION 1 MATERIAL IDENTIFICATION		<b>For Internal Use Only</b>  HAZARD  RATING  LABEL
<b>CHEMICAL NAME</b>	Sodium Iodide Iodine 131 (I-131) Solution	
<b>CHEMICAL SYNONYMS</b>	Na <sup>131</sup> I in NaOH containing 0.02M Na <sub>2</sub> SO <sub>4</sub> pH-9-13	
<b>CHEMICAL FAMILY</b>	Base; Sodium Iodide in dilute sodium hydroxide solution	
<b>MANUFACTURER /SUPPLIER NAME</b>	MDS Nordion Inc. 447 March Road Kanata, Ontario K2K 1X8 Telephone: (613) 592-2790 - Radiation Safety	

SECTION 2 HAZARDOUS INGREDIENTS				
INGREDIENT	Activity or %	Radiation Category	%	TLV
High Radioactivity	200-10000 mCi/ml	High energy gamma and high energy beta Half-Life: 8.02 days		
Sodium Hydroxide	< 2.8 mg/ml (< 0.3% w/v)			
AECB Permitted Exposures: 50 mSv/y for Radiation Workers; 5 mSv/y for Public				

SECTION 3 PHYSICAL DATA				
BOILING POINT: 760 mm Hg (°C)	100-105°C	SOLUBILITY IN WATER, % by weight @ 25°C	100	
VAPOUR PRESSURE: 20°C (mm Hg)	N/A	SPECIFIC GRAVITY (H <sub>2</sub> O = 1)	1.003	
VAPOUR DENSITY (air = 1)	> 1.0	EVAPORATION RATE (butylacetate = 1)	N/A	
pH		MELTING POINT		
APPEARANCE AND ODOUR:	Product appears like water and is contained in a shielded and securely sealed package. No odour.			

SECTION 4 FIRE AND EXPLOSION HAZARD DATA				
FLASH POINT (°C); TEST METHOD:	None	FLAMMABLE LIMITS	LEL	UEL
			N/A	N/A
AUTOIGNITION TEMPERATURE (°C)	None			
EXTINGUISHING MEDIA:	N/A			
SPECIAL FIREFIGHTING PROCEDURES: N/A				
UNUSUAL FIRE AND EXPLOSION HAZARDS: None				

SECTION 5 REACTIVITY DATA		
STABILITY:	STABLEX  UNSTABLE <input type="checkbox"/>	CONDITIONS TO AVOID: None
INCOMPATIBILITY:	N/A	
HAZARDOUS DECOMPOSITION PRODUCTS:		
HAZARDOUS POLYMERIZATION:	WILL NOT OCCURX  MAY OCCUR <input type="checkbox"/>	CONDITIONS TO AVOID: Not identified.

N/A - Not Applicable

**MATERIAL SAFETY DATA SHEET - Sodium Iodide Iodine 131 Solution (cont'd)**

<b>SECTION 6 HEALTH HAZARD DATA</b>	
<b>EFFECTS OF OVEREXPOSURE:</b>	<b>INHALATION:</b> Will result in heavy thyroid radiation dose. No respiratory symptoms.
	<b>INGESTION:</b> Will result in heavy thyroid radiation dose. Sodium hydroxide concentration low, may cause throat irritation and burning sensation.
	<b>EYES:</b> Sodium hydroxide will have irritation effect; wash immediately.
	<b>SKIN:</b> Corrosive effect and high radiation on contact; wash immediately.
<b>EMERGENCY FIRST AID PROCEDURES:</b>	<b>INHALATION:</b> Remove to fresh air and stand upwind if outside. Ascertain if individual has allergies to iodine. If not, administer stable iodine (eg. Lugol's solution). Seek medical attention for radiation intake.
	<b>INGESTION:</b> Ascertain if individual has allergies to iodine. If not, administer stable iodine (eg. Lugol's solution). Do not induce vomiting, due to corrosive effect of solution. Remove from source. Seek medical aid for radiation intake.
	<b>EYES:</b> Flush open eye(s) continuously for 15 minutes with clean water. Remove from source. See Physician for external radiation or if irritation persists.
	<b>SKIN:</b> Wash well with soap and water to remove contamination. Remove contaminated clothing. Remove from source. See Physician for external radiation or if irritation persists.
	<b>NOTE: IN ALL CASES, OBTAIN MEDICAL AID PROMPTLY.</b>
<b>SECTION 7 SPECIAL PROTECTION INFORMATION</b>	
<b>VENTILATION:</b>	With I-131 local ventilation is very important, if I-131 gasses off. Wear respiratory protection, and stand upwind (if outside).
<b>RESPIRATORY PROTECTION:</b>	Air purifying respirator with combination radio-nuclide cartridge or SCBA where spill has occurred.
<b>PROTECTIVE CLOTHING:</b>	If package is damaged, wear lead-lined gloves before handling.
<b>EYE PROTECTION:</b>	<input type="checkbox"/> NOT NORMALLY NECESSARY <input type="checkbox"/> SAFETY GLASSES WITH SIDE SHIELDS <input type="checkbox"/> SAFETY GLASSES <input type="checkbox"/> GASTIGHT GOGGLES OR EQUIVALENT X CHEMICAL WORKERS GOGGLES <input type="checkbox"/> OTHER
<b>SECTION 8 SPECIAL PRECAUTIONS</b>	
<b>PRECAUTIONS IN HANDLING AND STORAGE:</b>	All shippers and consignees must possess radioisotope license and conform with all conditions of license.
<b>OTHER PRECAUTIONS:</b>	
<b>SECTION 9 SPILL OR LEAK PROCEDURES</b>	
<b>STEPS TO BE TAKEN IF MATERIAL SPILLED OR LEAKED:</b> Note also Section 7. If wet spill occurs, isolate contaminated area using vermiculite or charcoal. When acidified this material will release I-131. If in transport mode, call CANUTEC at (613) 996-6666 in Canada or National Response Centre at 1-800-424-8802 in USA.	
<b>WASTE DISPOSAL METHOD:</b> If on site, follow instructions on site license or as directed by local Radiation Control Officer.	

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