Print Date: 8/03/2007
Revision Date: 3/22/2006
Version: 4

Material Safety Data Sheet
Imidazole Buffered Saline

Section 1 - Chemical Product and Company Identification

MSDS Name:

Imidazole Buffered Saline

Catalog Numbers:

100647, 200647, 23257970, 250647, 257964

Synonyms:

None.

Company Identification:

Fisher Diagnostics
Fisher Scientific Company LLC
8365 Valley Pike
Middletown, VA 22645-0307

Company Phone Number:

(800) 528-0494

Emergency Phone Number:

(800) 528-0494

CHEMTREC Phone Number:

800-424-9300

CHEMTREC (International):

703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	Percent	EINECS/ ELINCS		
7732-18-5	Water	Balance	231-791-2		
7647-14-5	Sodium chloride	0.6 %	231-598-3		
6923-01-9	Imidazole	0.34 %	Not available		
26628-22-8	Sodium azide	0.33 %	247-852-1		
68-04-2	Trisodium citrate anhydrous	0.15	200-675-3		
7647-01-0	Hydrogen chloride	0.14 %	231-595-7	C	34 37

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: clear, colorless liquid
Caution! May cause eye, skin, and respiratory tract irritation.
Target Organs: none.

Potential Health Effects

Eye:

May cause eye irritation.

Skin:

May cause skin irritation.

Ingestion:

May cause gastrointestinal irritation with nausea, vomiting and diarrhea.

Inhalation:

May cause respiratory tract irritation.

Chronic:

No information found.

Section 4 - First Aid Measures

Eyes:

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin:

Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.

Ingestion:

If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation:

Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician:

Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

Extinguishing Media:

For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam.

Autoignition Temperature:

Not applicable.

Explosion Limits:

Lower: Not available. Upper: Not available.

Flash Point:

Not applicable.

NFPA Rating:

Not published.

Material Safety Data Sheet
Imidazole Buffered Saline

Section 6 - Accidental Release Measures

General Information:

Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Clean up spills immediately, observing precautions in the Protective Equipment section.

Section 7 - Handling and Storage

Handling:

Wash thoroughly after handling. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale.

Storage:

Store in a cool place in the original container and protect from sunlight. Keep container closed when not in use.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Chemical Name:	ACGIH	NIOSH	OSHA
Water	None of the components are on this list.	None of the components are on this list.	None of the components are on this list.
Sodium chloride	None of the components are on this list.	None of the components are on this list.	None of the components are on this list.
Imidazole	None of the components are on this list.	None of the components are on this list.	None of the components are on this list.
Sodium azide	0.29 mg/m3 Ceiling (as NaN3); 0.11 ppm Ceiling (vapor, as hydrazoic acid)	0.1 ppm Ceiling (as HN3); 0.3 mg/m3 Ceiling (as NaN3)	None of the components are on this list.
Trisodium citrate anhydrous	None of the components are on this list.	None of the components are on this list.	None of the components are on this list.
Hydrogen chloride	2 ppm Ceiling	50 ppm IDLH 5 ppm Ceiling; 7 mg/m3 Ceiling	5 ppm Ceiling; 7 mg/m3 Ceiling

OSHA Vacated PELs

Personal Protective Equipment

Eyes:

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Material Safety Data Sheet
Imidazole Buffered Saline

Respirators:

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State:	Liquid
Color:	clear, colorless
Odor:	None reported.
pH:	No information found
Vapor Pressure:	No information found
Vapor Density:	No information found
Evaporation Rate:	No information found
Viscosity:	No information found
Boiling Point:	Not available.
Freezing/Melting Point:	No information found
Decomposition Temperature:	No information found
Solubility in water:	Not available.
Specific Gravity/Density:	No information found
Molecular Formula:	Mixture
Molecular Weight:	No information found

Section 10 - Stability and Reactivity

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Incompatible materials.

Incompatibilities with Other Materials

Strong oxidants.

Hazardous Decomposition Products

Hydrogen chloride.

Hazardous Polymerization

Has not been reported

Section 11 - Toxicological Information

RTECS:

CAS# 7732-18-5: ZC0110000.
CAS# 7647-14-5: VZ4725000.
CAS# 6923-01-9 unlisted.
CAS# 26628-22-8: VY8050000.
CAS# 68-04-2: GE8300000.
CAS# 7647-01-0: MW4025000; MW4031000.

Material Safety Data Sheet
Imidazole Buffered Saline

LD50/LC50:

CAS# 7732-18-5:
Oral, rat: LD50 = >90 mL/kg.
CAS# 7647-14-5:
Draize test, rabbit, eye: 100 mg Mild
Draize test, rabbit, eye: 100 mg/24H Moderate
Draize test, rabbit, eye: 10 mg Moderate
Draize test, rabbit, skin: 50 mg/24H Mild
Draize test, rabbit, skin: 500 mg/24H Mild
Inhalation, rat: LC50 = >42 gm/m3/1H
Oral, mouse: LD50 = 4 gm/kg
Oral, rat: LD50 = 3000 mg/kg
Skin, rabbit: LD50 = >10 gm/kg.
CAS# 6923-01-9:
No information foundCAS# 26628-22-8:
Inhalation, mouse: LC50 = 32400 ug/m3
Inhalation, rat: LC50 = 37 mg/m3
Oral, mouse: LD50 = 27 mg/kg
Oral, rat: LD50 = 27 mg/kg
Skin, rabbit: LD50 = 20 mg/kg
Skin, rat: LD50 = 50 mg/kg.
CAS# 68-04-2:
No information foundCAS# 7647-01-0:
Inhalation, mouse: LC50 = 1108 ppm/1H
Inhalation, mouse: LC50 = 20487 mg/m3/5M
Inhalation, mouse: LC50 = 3940 mg/m3/30M
Inhalation, mouse: LC50 = 8300 mg/m3/30M
Inhalation, rat: LC50 = 3124 ppm/1H
Inhalation, rat: LC50 = 60938 mg/m3/5M
Inhalation, rat: LC50 = 7004 mg/m3/30M
Inhalation, rat: LC50 = 45000 mg/m3/5M
Inhalation, rat: LC50 = 8300 mg/m3/30M
Oral, rabbit: LD50 = 900 mg/kg.

Carcinogenicity:

CAS# 7732-18-5: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.
CAS# 7647-14-5: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.
CAS# 6923-01-9: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.
CAS# 26628-22-8: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.
CAS# 68-04-2: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.
CAS# 7647-01-0
IARC: Group 3 (not classifiable)

Epidemiology:

No information found

Teratogenicity:

No information found

Reproductive:

No information found

Mutagenicity:

No information found

Neurotoxicity:

No information found

Other:

See actual entry in RTECS for complete information.

Section 12 - Ecological Information

No information found

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste.
US EPA guidelines for the classification determination are listed in 40 CFR Part 261.3.
Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P Series Wastes

CAS# 26628-22-8: waste number P105.

RCRA U Series Wastes

None of the components are on this list.

Section 14 - Transport Information

	US DOT	Canadian TDG
Proper Shipping Name:	No information found	No information found
Hazard Class:		
UN Number:		
Packing Group:		

Section 15 - Regulatory Information

US Federal

TSCA

CAS# 7732-18-5 is listed on the TSCA Inventory.
CAS# 7647-14-5 is listed on the TSCA Inventory.
CAS# 6923-01-9 is not listed on the TSCA Inventory. It is for research and development use only.
CAS# 26628-22-8 is listed on the TSCA Inventory.
CAS# 68-04-2 is listed on the TSCA Inventory.
CAS# 7647-01-0 is listed on the TSCA Inventory.

Health and Safety Reporting List

None of the components are on this list.

Chemical Test Rules

None of the components are on this list.

TSCA Section 12b

None of the components are on this list.

TSCA Significant New Use Rule (SNUR)

None of the components are on this list.

CERCLA Hazardous Substances and corresponding RQs

CAS# 26628-22-8: 1000 lb final RQ; 454 kg final RQ
CAS# 7647-01-0: 5000 lb final RQ; 2270 kg final RQ

SARA Section 302 Extremely Hazardous Substances

CAS# 26628-22-8: 500 lb TPQ (This material is a reactive solid. The TPQ does not default to 10000 pounds for non-powder, non-molten, non-solvent form)
CAS# 7647-01-0: 500 lb TPQ (gas only)

SARA Hazard Categories

CAS# 7647-14-5: acute.
CAS# 26628-22-8: acute, chronic, reactive.
CAS# 7647-01-0: acute.

CERCLA/SARA Section 313

Sodium azide is not at a high enough concentration to be reportable under Section 313.
Hydrogen chloride is not at a high enough concentration to be reportable under Section 313.

Clean Air Act - Hazardous Air Pollutants (HAPs)

CAS# 7647-01-0 is listed as a hazardous air pollutant (HAP).

Clean Air Act - Class 1 Ozone Depletors

None of the components are on this list.

Clean Air Act - Class 2 Ozone Depletors

None of the components are on this list.

Clean Water Act - Hazardous Substances

CAS# 7647-01-0 is listed as a Hazardous Substance under the CWA.

Clean Water Act - Priority Pollutants

None of the components are on this list.

Clean Water Act - Toxic Pollutants

None of the components are on this list.

OSHA - Highly Hazardous

CAS# 7647-01-0 is considered highly hazardous by OSHA.

US State

State Right to Know

Sodium azide can be found on the following state Right-to-Know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.
Hydrogen chloride can be found on the following state Right-to-Know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

California Regulations

CAS# 7732-18-5: No information found
CAS# 7647-14-5: No information found
CAS# 6923-01-9: No information found
CAS# 26628-22-8: No information found
CAS# 68-04-2: No information found
CAS# 7647-01-0: No information found

European/International Regulations

Material Safety Data Sheet
Imidazole Buffered Saline

European Labelling in Accordance with EC Directives:

Hazard Symbols:
Risk Phrases:
Safety Phrases:

WGK (Water Danger/Protection)

CAS# 7732-18-5: No information found
CAS# 7647-14-5: 0
CAS# 6923-01-9: No information found
CAS# 26628-22-8: 2
CAS# 68-04-2: 0
CAS# 7647-01-0: 1

United Kingdom Occupational Exposure Limits

No information found

Canadian DSL/NDSL

CAS# 7732-18-5 is listed on Canada's DSL List.
CAS# 7647-14-5 is listed on Canada's DSL List.
CAS# 26628-22-8 is listed on Canada's DSL List.
CAS# 68-04-2 is listed on Canada's DSL List.
CAS# 7647-01-0 is listed on Canada's DSL List.

Canadian WHMIS Classifications

No information found

Canadian Ingredient Disclosure List

CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.
CAS# 7647-14-5 is not listed on Canada's Ingredient Disclosure List.
CAS# 6923-01-9 is not listed on Canada's Ingredient Disclosure List.
CAS# 26628-22-8 is listed on Canada's Ingredient Disclosure List.
CAS# 68-04-2 is not listed on Canada's Ingredient Disclosure List.
CAS# 7647-01-0 is listed on Canada's Ingredient Disclosure List.

Exposure Limits

CAS# 26628-22-8: OEL-AUSTRALIA:TWA 0.1 ppm (0.3 mg/m3)
OEL-BELGIUM:STEL 0.11 ppm (0.3 mg/m3)
OEL-DENMARK:TWA 0.3 mg/m3
OEL-FINLAND:TWA 0.1 ppm (0.3 mg/m3);STEL 0.3 ppm (0.9 mg/m3)
OEL-FRANCE:STEL 0.1 ppm (0.3 mg/m3)
OEL-GERMANY:TWA 0.07 ppm (0.2 mg/m3)
OEL-THE NETHERLANDS:TWA 0.1 ppm (0.3 mg/m3)
OEL-SWITZERLAND:TWA 0.07 ppm (0.2 mg/m3)
OEL-UNITED KINGDOM:TWA 0.1 ppm (0.3 mg/m3);STEL
OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV
OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

CAS# 7647-01-0: OEL-AUSTRALIA:TWA 5 ppm (7 mg/m3)
OEL-AUSTRIA:TWA 5 ppm (7 mg/m3)
OEL-BELGIUM:STEL 5 ppm (7.7 mg/m3)
OEL-DENMARK:STEL 5 ppm (7 mg/m3)
OEL-FINLAND:STEL 5 ppm (7 mg/m3);Skin
OEL-FRANCE:STEL 5 ppm (7.5 mg/m3)
OEL-GERMANY:TWA 5 ppm (7 mg/m3)
OEL-HUNGARY:STEL 5 mg/m3
OEL-JAPAN:STEL 5 ppm (7.5 mg/m3)
OEL-THE NETHERLANDS:TWA 5 ppm (7 mg/m3)
OEL-THE PHILIPPINES:TWA 5 ppm (7 mg/m3)
OEL-POLAND:TWA 5 mg/m3
OEL-RUSSIA:STEL 5 ppm (5 mg/m3)
OEL-SWEDEN:STEL 5 ppm (8 mg/m3)
OEL-SWITZERLAND:TWA 5 ppm (7.5 mg/m3);STEL 10 ppm (15 mg/m3)
OEL-THAILAND:TWA 5 ppm (7 mg/m3)
OEL-TURKEY:TWA 5 ppm (7 mg/m3)
OEL-UNITED KINGDOM:TWA 5 ppm (7 mg/m3);STEL 5 ppm (7 mg/m3)
OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV
OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

Section 16 - Other Information

Color information has been
MSDS Creation Date: September 2, 1997
Revision Date: March 22, 2006

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantibility or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.