

## 1. Product and Company Identification

<b>Material name</b>	<b>UIBC-SL Binding Buffer Reagent (R1)</b>
<b>Version #</b>	01
<b>Issue date</b>	02-19-2013
<b>Revision date</b>	-
<b>Supersedes date</b>	-
<b>CAS #</b>	Mixture
<b>Part No.</b>	153-10-91R1; 153-10; 153-90; 153-50.
<b>Product use</b>	For the IN VITRO quantitative determination of UIBC in serum.
<b>Manufacturer information</b>	
<b>Corporate Headquarters</b>	Sekisui Diagnostics, LLC 4 Hartwell Place, Lexington, MA 02421, USA www.sekisuidiagnostics.com Phone: 800-332-1042 Americas 1-760-476-3962
<b>Emergency Telephone Numbers</b>	Europe, Middle East & Africa +1-760-476-3961 Asia Pacific +1-760-476-3960 Access code 333512

## 2. Hazards Identification

<b>Physical state</b>	Liquid.
<b>Appearance</b>	Colorless liquid.
<b>Emergency overview</b>	WARNING  May be harmful if swallowed. Causes skin and eye irritation. Contact with acid liberates toxic gas. The chemical, physical and toxicological properties of this preparation have not been thoroughly characterized.
<b>OSHA regulatory status</b>	This product is hazardous according to OSHA 29 CFR 1910.1200.
<b>Potential health effects</b>	
<b>Routes of exposure</b>	Inhalation. Ingestion. Skin contact. Eye contact.
<b>Eyes</b>	Causes eye irritation. Exposed individuals may experience eye tearing, redness, and discomfort.
<b>Skin</b>	Causes skin irritation. Sodium azide may be absorbed through the skin and result in systemic effects.
<b>Inhalation</b>	Vapors and mist may irritate throat and respiratory system and cause coughing.
<b>Ingestion</b>	May be harmful if swallowed. Do not ingest.
<b>Target organs</b>	Eye Skin Respiratory system.
<b>Chronic effects</b>	Suspect cancer hazard. May cause toxic effects on the blood system including bone marrow toxicity and reduction in red blood cells, white blood cells, and platelets. Enlargement of the thyroid and spleen has also been reported.
<b>Signs and symptoms</b>	Ingestion may cause irritation and malaise.
<b>Potential environmental effects</b>	Not expected to be harmful to aquatic organisms.

## 3. Composition / Information on Ingredients

Components	CAS #	Percent
Polyethylene glycol octylphenol ether	9002-93-1	1 - < 3
Thiourea	62-56-6	< 2
Sodium hydroxide	1310-73-2	> 0.5 - < 1
Sodium azide	26628-22-8	< 1

**Composition comments**

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

**4. First Aid Measures****First aid procedures****Eye contact**

In case of contact, immediately flush eyes with fresh water for at least 15 minutes while holding the eyelids open. Remove contact lenses if worn. Get medical attention if irritation persists.

**Skin contact**

For skin contact flush with large amounts of water while removing contaminated clothing. Get medical attention if irritation develops and persists.

**Inhalation**

Move to fresh air. Call a physician if symptoms develop or persist.

**Ingestion**

If material is ingested, immediately contact a poison control center.

**Notes to physician**

Provide general supportive measures and treat symptomatically.

**General advice**

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**5. Fire Fighting Measures****Flammable properties**

This product is not flammable.

**Extinguishing media****Suitable extinguishing media**

Extinguish with water spray, carbon dioxide, dry chemical or material appropriate for the surrounding fire.

**Unsuitable extinguishing media**

None known.

**Protection of firefighters****Specific hazards arising from the chemical**

When heated to decomposition, may produce hydrazoic acid fumes.

**Protective equipment and precautions for firefighters**

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Fire fighting equipment/instructions**

Use standard firefighting procedures and consider the hazards of other involved materials.

**Specific methods**

Use standard firefighting procedures and consider the hazards of other involved materials.

**Hazardous combustion products**

Fire will generate toxic and irritating gases. Carbon monoxide and carbon dioxide. Nitrogen oxides.

**6. Accidental Release Measures****Personal precautions**

Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

**Environmental precautions**

Do not allow to enter drains, sewers or watercourses. This mixture contains a small amount of sodium azide which can react with copper, lead, brass or solder in plumbing systems and form potentially explosive metal azides. Follow proper disposal procedures.

**Methods for containment**

Absorb spillage with non-combustible, absorbent material.

**Methods for cleaning up**

Absorb spill with vermiculite or other inert material. Dispose of waste in accordance with all applicable federal, state, local and provincial environmental regulations, per Section 13.

**Other information**

Clean up in accordance with all applicable regulations.

**7. Handling and Storage****Handling**

Avoid contact with skin and eyes. Wash thoroughly after handling. In case of insufficient ventilation, wear suitable respiratory equipment. Handle and open container with care.

**Storage**

Store at 2-8°C (35-46°F). Store in a closed container away from incompatible materials.

**8. Exposure Controls / Personal Protection****Occupational exposure limits****US. ACGIH Threshold Limit Values**

Components	Type	Value
Sodium azide (CAS 26628-22-8)	Ceiling	0.29 mg/m3
		0.11 ppm

**Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)**

Components	Type	Value	Form
Sodium azide (CAS 26628-22-8)	Ceiling	0.3 mg/m3	Vapor.
		0.29 mg/m3	
		0.11 ppm	Vapor.

**Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)**

Components	Type	Value	Form
Sodium azide (CAS 26628-22-8)	Ceiling	0.29 mg/m3	
		0.11 ppm	Vapor.

**Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)**

Components	Type	Value
Sodium azide (CAS 26628-22-8)	Ceiling	0.29 mg/m3

**Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)**

Components	Type	Value
Sodium azide (CAS 26628-22-8)	Ceiling	0.3 mg/m3
		0.11 ppm

**Exposure guidelines**

Follow standard monitoring procedures.

**Engineering controls**

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

**Personal protective equipment****Eye / face protection**

Wear approved safety glasses or goggles.

**Skin protection**

Wear lab coat or other protective garments. Remove contaminated clothing promptly.

**Respiratory protection**

Under normal conditions, respirator is not normally required.

**General hygiene considerations**

Handle in accordance with good industrial hygiene and safety practice.

**9. Physical & Chemical Properties**

<b>Appearance</b>	Colorless liquid.
<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Color</b>	Colorless, clear.
<b>Odor</b>	Odorless.
<b>Odor threshold</b>	Not available.
<b>pH</b>	8.6 - 8.8
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Boiling point</b>	Not available.
<b>Melting point/Freezing point</b>	Not available.
<b>Solubility (water)</b>	Soluble.
<b>Specific gravity</b>	1.011
<b>Flash point</b>	Not available.
<b>Flammability limits in air, upper, % by volume</b>	Not available.
<b>Flammability limits in air, lower, % by volume</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.

## 10. Chemical Stability & Reactivity Information

<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Conditions to avoid</b>	Protect against direct sunlight.
<b>Incompatible materials</b>	No data available.
<b>Hazardous decomposition products</b>	None.
<b>Possibility of hazardous reactions</b>	Contact with acids liberates toxic gas.

## 11. Toxicological Information

### Toxicological data

Components	Species	Test Results
Sodium azide (CAS 26628-22-8)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	20 mg/kg
<i>Oral</i>		
LD50	Rat	27 mg/kg
Thiourea (CAS 62-56-6)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 2800 mg/kg
	Rat	> 6810 mg/kg
<b>Sensitization</b>	Not classified.	
<b>Acute effects</b>	May be harmful if swallowed.	
<b>Local effects</b>	Ingestion may cause irritation and malaise.	
<b>Chronic effects</b>	No data available.	
<b>Carcinogenicity</b>	Suspected of causing cancer.	
<b>ACGIH Carcinogens</b>		
Sodium azide (CAS 26628-22-8)	A4 Not classifiable as a human carcinogen.	
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>		
Thiourea (CAS 62-56-6)	3 Not classifiable as to carcinogenicity to humans.	
<b>US NTP Report on Carcinogens: Anticipated carcinogen</b>		
Thiourea (CAS 62-56-6)	Reasonably Anticipated to be a Human Carcinogen.	
<b>Epidemiology</b>	No epidemiological data is available for this product.	
<b>Mutagenicity</b>	Not classified.	
<b>Reproductive effects</b>	Not classified.	
<b>Symptoms and target organs</b>	Ingestion may cause irritation and malaise.	
<b>Further information</b>	No other specific acute or chronic health impact noted.	

## 12. Ecological Information

### Ecotoxicological data

Components	Species	Test Results
Polyethylene glycol octylphenol ether (CAS 9002-93-1)		
<b>Aquatic</b>		
Fish	LC50	Bluegill ( <i>Lepomis macrochirus</i> )
		2.8 - 3.2 mg/l, 96 hours
Sodium azide (CAS 26628-22-8)		
<b>Aquatic</b>		
Crustacea	EC50	Water flea ( <i>Daphnia pulex</i> )
		2.8 - 6.2 mg/l, 48 hours
Fish	LC50	Bluegill ( <i>Lepomis macrochirus</i> )
		0.68 mg/l, 96 hours
<b>Ecotoxicity</b>	Not expected to be harmful to aquatic organisms.	

<b>Environmental effects</b>	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
<b>Aquatic toxicity</b>	Not classified.
<b>Persistence and degradability</b>	No data is available on the degradability of this product.
<b>Bioaccumulation / Accumulation</b>	Not available.
<b>Partition coefficient</b>	
Thiourea (CAS 62-56-6)	-1.08
<b>Mobility in environmental media</b>	The product is soluble in water.

### 13. Disposal Considerations

<b>Disposal instructions</b>	Dispose in accordance with all applicable regulations. This preparation contains a small amount of sodium azide which can react with copper, lead, brass or solder in plumbing systems and form potentially explosive metal azides. If preparation enters drain, flush with a large volume of water to prevent azide build-up.
<b>Waste from residues / unused products</b>	Dispose in accordance with all applicable regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal.

### 14. Transport Information

#### DOT

Not regulated as a hazardous material by DOT.

#### IATA

Not regulated as dangerous goods.

#### IMDG

Not regulated as dangerous goods.

#### TDG

Not regulated as dangerous goods.

### 15. Regulatory Information

<b>US federal regulations</b>	This product is hazardous according to OSHA 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List. This mixture is a component of an in vitro diagnostic device regulated by the U.S. Food and Drug Administration.
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#### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

#### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

#### US EPCRA (SARA Title III) Section 302 - Extremely Hazardous Spill: Reportable quantity

Sodium azide (CAS 26628-22-8)	1000 lbs
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#### US EPCRA (SARA Title III) Section 302 - Extremely Hazardous Substance: Threshold Planning Quantity

Sodium azide (CAS 26628-22-8)	500 lbs
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#### US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration

Sodium azide (CAS 26628-22-8)	1.0 %
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Thiourea (CAS 62-56-6)	0.1 %
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#### US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

Sodium azide (CAS 26628-22-8)	Listed.
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Thiourea (CAS 62-56-6)	Listed.
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#### CERCLA (Superfund) reportable quantity (lbs) (40 CFR 302.4)

Thiourea: 10

Sodium azide: 1000

#### Superfund Amendments and Reauthorization Act of 1986 (SARA)

<b>Hazard categories</b>	Immediate Hazard - Yes
	Delayed Hazard - Yes
	Fire Hazard - No
	Pressure Hazard - No
	Reactivity Hazard - No

<b>Section 302 extremely hazardous substance (40 CFR 355, Appendix A)</b>	No
<b>Section 311/312 (40 CFR 370)</b>	Yes
<b>Drug Enforcement Administration (DEA) (21 CFR 1308.11-15)</b>	Not controlled
<b>Canadian regulations</b>	This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.
<b>WHMIS status</b>	Controlled
<b>WHMIS classification</b>	D1A - Immediate/Serious-VERY TOXIC D2B - Other Toxic Effects-TOXIC

#### WHMIS labeling



#### Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

#### State regulations

##### US - California Hazardous Substances (Director's): Listed substance

Sodium azide (CAS 26628-22-8)	Listed.
Thiourea (CAS 62-56-6)	Listed.

##### US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Thiourea (CAS 62-56-6)	Listed.
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##### US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Thiourea (CAS 62-56-6)	Listed: January 1, 1988 Carcinogenic.
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##### US - New Jersey RTK - Substances: Listed substance

Sodium azide (CAS 26628-22-8)	Listed.
Thiourea (CAS 62-56-6)	Listed.

##### US - Pennsylvania RTK - Hazardous Substances: Special hazard

Thiourea (CAS 62-56-6)	Special hazard.
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##### US. Massachusetts RTK - Substance List

Sodium azide (CAS 26628-22-8)	Listed.
Thiourea (CAS 62-56-6)	Listed.

##### US. New Jersey Worker and Community Right-to-Know Act

Sodium azide (CAS 26628-22-8)	500 lbs
Thiourea (CAS 62-56-6)	500 lbs

##### US. Pennsylvania RTK - Hazardous Substances

Sodium azide (CAS 26628-22-8)	Listed.
Thiourea (CAS 62-56-6)	Listed.

<b>Mexico regulations</b>	This safety data sheet was prepared in accordance with the Official Mexican Standard (NOM-018-STPS-2000).
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## 16. Other Information

<b>Recommended restrictions</b>	Use in accordance with supplier's recommendations.
<b>Further information</b>	HMIS® is a registered trade and service mark of the NPCA.
<b>HMIS® ratings</b>	Health: 2* Flammability: 0 Physical hazard: 0
<b>NFPA ratings</b>	Health: 2 Flammability: 0 Instability: 0

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