



Teco Diagnostics

Clinical Reagent Specialists

Form	QL801-017
Revision	A
Prepared by	Brian Anderson
Approved by	Owen Bry
Issue date	1/14/2011

[MSDS]

BUN Color

1268 N. Lakeview Ave. Anaheim, CA 92807 Phone: (714)463-1111 Fax: (714)463-1169 www.tecodiag.com

Section 1 – Product and Company Information

Product Name Catalog Number Product Type	Urea Nitrogen (BUN) Colorimetric B551-66 & B551-133 Clinical Chemistry Reagent	Emergency Telephone No. CHEMTREC (800) 424-9300 International CHEMTREC (703) 527-3887
Company Name Street Address City, State, Zip Code, Country	Teco Diagnostics 1268 N. Lakeview Avenue Anaheim, CA 92807 USA	Company Telephone No. (800) 222-9880 or (714) 693-7788 Monday - Friday 8:00-4:30 PST Fax No. (714) 693-3838

Section 2 – Composition / Information on Ingredients

Component	Chemical Names	Concentration	CAS #
BUN Enzyme reagent	Urease	10000 U/L	9002-13-5
	Sodium salicylate	6 mmol/L	
	Sodium nitroprusside	3.2 mmol/L	
BUN Color Developer	Sodium hydroxide (NaOH)	130 mmol/L	1310-73-2
	Sodium hypochlorite	6 mmol/L	

Section 3 – Hazards Identification

Emergency Overview: Routes of Entry: Inhalation, ingestion, eye contact, skin contact and skin absorption.						
Urease Harmful. Irritating to eyes, respiratory system and skin. May cause sensitization by inhalation. Skin Contact: Causes skin irritation. Skin Absorption: May be harmful if absorbed through the skin. Eye Contact: Causes eye irritation. Inhalation: Material is irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled. Ingestion: May be harmful if swallowed. Sensitization: Respiratory: May cause allergic respiratory reaction.						
Sodium hydroxide (NaOH) Corrosive. Causes burns Skin Contact: Causes burns. Skin Absorption: May be harmful if absorbed through the skin. Eye Contact: Causes burns. Inhalation: May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. Ingestion: May be harmful if swallowed.						
	HMIS RATING			NFPA RATING		
	Health	Flammability	Reactivity	Health	Flammability	Reactivity
Urease	3*	0	0	3	0	0
Sodium hydroxide (NaOH)	3*	0	1	3	0	1
	*additional chronic hazards present.					
For additional information on toxicity, please refer to Section 11.						

Section 4 – First Aid Measures

Skin:	In case of skin contact, immediately flush area with plenty of water.
Eyes:	In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician if necessary.
Ingestion:	If person is conscious, wash out mouth with large amounts of water. Contact a physician, if necessary.
Inhalation:	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Contact a physician, if necessary.

Section 5-- Fire and Explosive Hazard Data

Flash Point (Method Used): N/A
Flammable Limits: N/A
Extinguishing Media: Use media appropriate for site conditions.
Special Fire fighting Procedures: Wear self-contained breathing apparatus and protective garments to protect contact with skin and eyes.
Unusual Fire & Explosion Hazards: May emit toxic fumes under fire conditions.

Section 6 – Accidental Release Measures

Procedure to be Followed in Case of Leak or Spill Ventilate the area. Absorb on inert material. Place material and contaminated disposables into a suitable container, seal, label and hold for disposal. Wash spill site after material pickup is complete.	Methods for Disposal Refer to section 13.
Procedures of Personal Precaution(s) Exercise appropriate precautions to avoid direct contact with skin or eyes. Refer to section 8.	



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Section 7 – Handling and Storage

Handling

Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure. Avoid inhalation or ingestion. Do not pipette by mouth. Wash thoroughly after handling. Wash contaminated clothing before reuse. Refer to Section 8.

Storage

Store according to package directions.

Section 8 – Exposure Controls / PPE

Engineering Controls

Safety shower and eyewash.
Ventilation: General room ventilation is satisfactory.

Personal Protective Equipment

Respiratory Protection: None required where adequately ventilated.
Protective Clothing: lab coat
Protective Gloves: latex or rubber gloves
Eye Protection: safety glasses or goggles
Other Protective Equipment: Use a safety pipette device.

Section 9 - Physical Data

Boiling Point N/A	Melting Point N/A	Odor No Significant Odor
pH Enzyme Reagent: Not relevant to safety Color Developer: Basic	Solubility in Water Soluble	Appearance Enzyme Reagent: White or White-pink powder Color Developer: Light yellow

Section 10 – Stability and Reactivity

Stability

Stable, under normal handling and storage conditions.

Conditions to Avoid

Color Developer: Conditions of Instability: Absorbs carbon dioxide from the air. Sensitive to air.

Materials to Avoid

Enzyme Reagent: Strong oxidizing agents.
Color Developer: acids, organic materials, chlorinated solvents, aluminum, phosphorus, tin, tin oxides, zinc

Hazardous Decomposition Products

Enzyme Reagent: Not known
Color Developer: sodium, sodium oxides

Hazardous Polymerization

Will not occur

Section 11- Toxicological Information:

Toxicity Data: Urease

Route of exposure	Species	Dose	Result	Remarks
Intraperitoneal	Rat	48 mg/kg	LD50	Sense Organs and Special Senses (Nose, Eye, Ear, and Taste): Eye: Lacrimation. Behavioral: Sleep. Kidney, Ureter, Bladder: Urine volume increased.
Intravenous	Rat	20 mg/kg	LD50	Behavioral: Somnolence (general depressed activity). Behavioral: Convulsions or effect on seizure threshold.
Intraperitoneal	Mouse	50 mg/kg	LD50	Sense Organs and Special Senses (Nose, Eye, Ear, and Taste): Eye: Lacrimation. Behavioral: Sleep. Kidney, Ureter, Bladder: Urine volume increased.
Subcutaneous	Mouse	58 mg/kg	LD50	---
Intraperitoneal	Rabbit	25 mg/kg	LD50	Sense Organs and Special Senses (Nose, Eye, Ear, and Taste): Eye: Lacrimation. Behavioral: Sleep. Kidney, Ureter, Bladder: Urine volume increased.
Intravenous	Rabbit	6 mg/kg	LD50	Behavioral: Somnolence (general depressed activity). Behavioral: Convulsions or effect on seizure threshold. Lungs, Thorax, or Respiration: Dyspnea.
Intraperitoneal	Guinea pig	35 mg/kg	LD50	Sense Organs and Special Senses (Nose, Eye, Ear, and Taste): Eye: Lacrimation. Behavioral: Sleep. Kidney, Ureter, Bladder: Urine volume increased.

Signs and Symptoms of Exposure: To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Signs and Symptoms of Exposure: Sodium hydroxide (NaOH)

Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract, eyes and skin. Inhalation may result in spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.



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Section 12 – Ecological Information
No information available.

Section 13 – Disposal Considerations
Dispose of in accordance with current national and regional regulations.

Section 14 – Transport Information

DOT
Proper Shipping Name: None
Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.
Is not subject to current regulations for transport of dangerous goods (ADR/RID, IMDG, IATA/ICAO)

IATA
Non-Hazardous for Air Transport: Non-hazardous for air transport.

Section 15 – Regulatory Information

OSHA Status: Regulated under Subpart Z
Classification: The preparation is classified and labeled according to EEC Directive n.88/379.

Urease:
EU Directives Classification
Symbol of Danger: Xn
Indication of Danger: Harmful.
Risk Statements: Irritating to eyes, respiratory system and skin. May cause sensitization by inhalation.
Safety Statements: Do not breathe dust. Avoid contact with skin. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing and gloves.

Canada Regulatory Information
WHMIS Classification: 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.
DSL: No, NDSL: No

US Classification and Label Text
Indication of Danger: Harmful.
Risk Statements: Irritating to eyes, respiratory system and skin. May cause sensitization by inhalation.
Safety Statements: Do not breathe dust. Avoid contact with skin.
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing and gloves. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

United States Regulatory Information
SARA Listed: No
TSCA Inventory Item: Yes

Sodium hydroxide (NaOH)
US Classification and Label Text
Indication of Danger: Corrosive
Risk Statements: Causes burns.
Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Take off immediately all contaminated clothing. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

United States Regulatory Information
SARA Listed: No

Section 16 – Other Information
This Product is labeled in accordance with CFR21 (Food and Drugs), Section 809.10.
The information contained herein has been compiled from data presented in various technical sources believed to be accurate. We make no warranties, express or implied, and assume no liability in connection with the use of this information. It is the user's responsibility to determine the suitability of this information and to assure the adoption of necessary safety precautions.
N/A - Not Applicable or Not Available