



# Teco Diagnostics

Clinical Reagent Specialists

Form	QL801-161
Revision	A
Prepared by	Brian Anderson
Approved by	Owen Bry
Issue date	1/14/2011

[MSDS]

## Creatinine, Direct Endpoint

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

### Section 1 – Product and Company Information

<b>Product Name</b>	<b>Creatinine, Direct Endpoint</b>	<b>Emergency Telephone No.</b>
<b>Catalog Number</b>	CS15-480	CHEMTREC (800) 424-9300
<b>Product Type</b>	Clinical Chemistry Reagent	International CHEMTREC (703) 527-3887
<b>Company Name</b>	Teco Diagnostics	<b>Company Telephone No.</b>
<b>Street Address</b>	1268 N. Lakeview Avenue	(800) 222-9880 or (714) 693-7788 Monday - Friday 8:00-4:30 PST
<b>City, State, Zip Code, Country</b>	Anaheim, CA 92807 USA	Fax No. (714) 693-3838

### Section 2 – Composition/Information on Ingredients

Kit Components	Chemical Names	Concentration	CAS#
Creatinine Picric Acid Reagent:	Picric acid	10 mM	88-89-1
Creatinine Buffer Reagent:	Sodium hydroxide, sodium borate	240 mM, 10mM	1310-73-2, 1303-96-4
Creatinine Standard:	Creatinine in hydrochloric acid with preservative	5 mg/dl	60-27-5

### Section 3 – Hazard Identification

<b>Emergency Overview:</b>
Note: The following information applies to the component materials at higher concentrations than present in the reagent. Although lower concentrations are present in the reagent, appropriate safety precautions should still be taken.
Note: Picric acid is explosive when dry.
Routes of Entry/Exposure: skin contact, eye contact, inhalation, ingestion, and skin absorption
Skin contact: May cause irritation.
Skin absorption: May be harmful if absorbed through the skin.
Eye contact: May cause irritation.
Ingestion: May be harmful if ingested.
Inhalation: May cause irritation to mucous membranes and upper respiratory tract.
In case of inhalation, ingestion, eye contact, or skin contact, refer to section 4.
Effects of chronic exposure: No information available.
Sensitization to product: No information available.
Carcinogenicity: Not a known carcinogen
For additional information on toxicity, please refer to section 11.

### Section 4 – First Aid Measures

<b>Skin:</b>	In case of skin contact, immediately flush area with plenty of water for at least 15 minutes. Call a physician if necessary.
<b>Eyes:</b>	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.
<b>Ingestion:</b>	If swallowed, wash out mouth with water provided person is conscious. Call a physician.
<b>Inhalation:</b>	If inhaled, remove to fresh air. If not breathing give artificial respiration, but NOT by mouth-to-mouth resuscitation. If breathing is difficult, give oxygen. Call a physician.

### Section 5 – Fire and Explosive Hazard Data

<b>Flammable:</b>	No
<b>Extinguishing Media:</b>	Use media appropriate for surrounding materials and site conditions.
<b>Flash Point:</b>	Not applicable
<b>Explosion Limits:</b>	Not applicable
<b>Fire fighting Measures:</b>	Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
<b>Unusual Fire or Explosion hazards:</b>	May emit toxic fumes under fire conditions. Picric acid is explosive when dry.

### Section 6 – Accidental Release Measures

<b>Procedure to be Followed in Case of Leak or Spill</b>	<b>Personal Protection</b>
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.	Refer to Section 8.
<b>Methods for Cleaning Up and Disposal</b>	
Waste Disposal Method: Dispose of in accordance with federal, state, and local regulations.	
<b>Environmental Precaution(s)</b>	
Sodium borate (in Creatinine Buffer Reagent): Avoid contaminating sewers and waterways with this material. Avoid contaminating water supply. Refer to section 12.	

### Section 7 – Handling and Storage

<b>Handling</b>	<b>Storage</b>
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Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure. Avoid inhalation or ingestion. Do not pipet by mouth. Refer to Section 8

Store according to package directions.

### Creatinine, Direct Endpoint

#### Section 8 – Exposure Controls / PPE (Personal Protective Equipment)

<b>Local Exhaust:</b>	Not required.
<b>Ventilation:</b>	Good general ventilation is satisfactory.
<b>Protective Clothing:</b>	Lab coat
<b>Protective Gloves:</b>	Chemical resistant rubber/latex gloves.
<b>Eye Protection:</b>	Safety glasses or goggles
<b>Respiratory Protection:</b>	Not required where adequate general ventilation.
<b>Other Protection:</b>	Avoid contact and inhalation. Do not pipet by mouth. Do not get in eyes, on skin or clothing. Wash contaminated clothing before reuse. Safety shower and eyewash should be available.
<b>General Hygiene Measures:</b>	Wash hands thoroughly after handling.

#### Sodium Borate: Exposure Limits

Country	Type
Poland	NDS
Poland	NDSch
Poland	NDSP

#### Sodium Borate: Exposure Limits, RTECS

Country	Source	Type	Value	Remarks
USA	ACGIH	TWA	5 MG/M3	---
New Zealand	OEL	---	---	check ACGIH TLV
USA	NIOSH	TWA	5 MG/M3	---

#### Section 9 - Physical Data

<b>Boiling Point</b> Not available	<b>Solubility in Water</b> Not applicable	<b>Specific Gravity</b> Not available
<b>Odor</b> No Significant Odor	<b>pH</b> Creatinine Picric Acid reagent: Acidic Creatinine Buffer reagent: Basic Creatinine Standard: Not relevant to safety	<b>Appearance</b> Creatinine Picric Acid Reagent: yellow liquid. Creatinine Buffer Reagent: Colorless to pale yellow liquid Creatinine Standard: Colorless to pale yellow liquid

#### Section 10 – Stability and Reactivity

<b>Stability</b> Stable, under normal handling and storage conditions.
<b>Conditions to Avoid</b> Heat. Picric acid can become explosive upon drying or evaporation.
<b>Materials to Avoid</b> Strong oxidizing agents, strong bases, reducing agents, heavy metals, heavy metal salts, ammonia
<b>Hazardous Decomposition Products</b> Creatinine Picric Acid Reagent: carbon monoxide, carbon dioxide Creatinine Buffer Reagent: boron oxides, sodium oxides.
<b>Hazardous Polymerization</b> Will not occur

#### Section 11 – Toxicological information

**Signs and symptoms of exposure:**  
**Sodium Borate:** Animal feeding studies in rat, mouse and dog, at high doses, have demonstrated effects on fertility and testes. Studies with the chemically related boric acid in the rat, mouse and rabbit, at high doses, demonstrate developmental effects on the fetus, including fetal weight loss and minor skeletal variations. The doses administered were many times in excess of those to which humans would normally be exposed. Human epidemiological studies show no increase in pulmonary disease in occupational populations with chronic exposures to boric acid dust and sodium borate dust. A recent epidemiological study under the conditions of normal occupational exposure to borate dusts indicated no effect on fertility. RTECS# VZ2275000

#### Section 12 – Ecological Information

Acute ecotoxicity tests: Sodium Borate:			
Test Type	Species	Time	Value
LC50	Fish, Carassius auratus (Goldfish)	72 hours	178 mg/l
LC50	Fish, Onchorhynchus mykiss (Rainbow trout)	24 days	150 mg/l
LC50	Fish, Carassius auratus (Goldfish)	72 hours	630 mg/l
EC50	Daphnia, Daphnia magna	48 hours	1,085 - 1,402 mg/l



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LC50	Algae, other microorganisms	96 hours	158 mg/l
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**Section 13 – Disposal Considerations**

**Appropriate method of disposal of substance or preparation:**

Contact a licensed professional waste disposal service to dispose of this material. Observe all federal, state, and local environmental regulations.

**Section 14 – Transport Information**

Product is stable under normal conditions.

**Section 15 – Regulatory Information**

**Creatinine Picric Acid Reagent**

OSHA Status: Regulated under Subpart Z

Classification: The preparation is classified and labeled according to EEC Directive n.88/379.

Risk Statements: NA

Safety Statements: NA

**Sodium Hydroxide in Creatinine Buffer Reagent**

OSHA Status: Regulated under Subpart Z

Classification: The preparation is classified and labeled according to EEC Directive n.88/379.

Symbol: C (Corrosive)

**Risk Statements:** Harmful by inhalation, in contact with skin and if swallowed. Causes burns. Irritating to eyes, respiratory system and skin.

**Safety Statements:** Avoid contact with skin and eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of water. If swallowed, seek medical advice immediately and show this container or label.

**Sodium Borate in Creatinine Buffer Reagent**

**EU additional classification:**

Safety Statements: Do not breathe dust. Avoid contact with skin and eyes.

**US classification and label text:**

US Statements: Caution: Avoid contact and inhalation.

**US Regulatory information:**

SARA listed: No, TSCA inventory item: Yes

**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: Yes, NDSL: No

**Creatinine Standard**

OSHA Status: Regulated under Subpart Z

Classification: The preparation is classified and labeled according to EEC Directive n.88/379.

Risk Statements: NA

Safety Statements: NA

**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