



Form	QL801-043
Revision	A
Prepared by	Brian Anderson
Approved by	Owen Bry
Issue date	1/14/2011

[MSDS] **CSF/Urine Protein**

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>CSF/URINE PROTEIN</b>	<b>Emergency Telephone No.</b>
<b>Catalog Number</b>	P615-480	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**

	<b>Chemical Names</b>	<b>Concentration</b>	<b>CAS#</b>
Reagent:	Pyrogallol red (pyrogallol sulfonphthalein)	2.4 mg/dL	32638-88-3
	Sodium molybdate	0.96 mg/dL	10102-40-6
Standard:	BSA (bovine serum albumin)	100 mg/dL	9048-46-8
	Sodium azide	0.1%	26628-22-8

Other components either non-hazardous or at concentrations below that requiring hazardous listing.

**Section 3 – Hazards Identification**

**Emergency Overview:**  
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.

Pyrogallol red: Caution: Avoid contact and inhalation.  
Sodium molybdate: Irritant. Irritating to eyes, respiratory system and skin.  
Sodium azide: Highly Toxic (USA). Very Toxic (EU). Toxic if inhaled, if ingested, or in contact with skin. Contact with acid liberates very toxic gas. Possible explosive hazard. May react with lead and copper plumbing to form highly explosive metal azides. Toxic to aquatic organisms; may cause long-term adverse effects in the aquatic environment. Target organs: Nerves, Heart.

	<b>HMIS Rating</b>			<b>NFPA Rating</b>		
	<b>Health</b>	<b>Flammability</b>	<b>Reactivity</b>	<b>Health</b>	<b>Flammability</b>	<b>Reactivity</b>
Pyrogallol red:	N/A	N/A	N/A	N/A	N/A	N/A
Sodium molybdate:	1	0	0	1	0	0
BSA:	0	0	0	0	0	0
Sodium azide:	4*	0	2	4	0	2

\*additional chronic hazards present

For additional information on toxicity, please refer to section 11. For information on ecological effects, please refer to section 12.

**Section 4 – First Aid Measures**

**Oral Exposure**  
If swallowed, wash out mouth with large amounts of water provided person is conscious. Call a physician if necessary.

**Inhalation Exposure**  
If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

**Skin Exposure**  
In case of skin contact, immediately wash skin with soap and copious amounts of water. Remove and wash contaminated clothing and shoes.

**Eye Exposure**  
In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers.

**Section 5- Fire and Explosive Hazard Data**

<b>Autoignition Temp</b> N/A	<b>Extinguishing Media</b> Water spray. Carbon dioxide, dry chemical powder or appropriate foam.
<b>Explosion Hazards</b> This reagent contains sodium azide which may react with lead or copper plumbing to form potentially explosive metal azides.	
<b>Firefighting Measures</b> Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Unusual Fire & Explosion Hazards: Emits toxic fumes under fire conditions.	

**Section 6 – Accidental Release Measures**

<b>Procedure to be Followed in Case of Leak or Spill</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.	<b>Procedures of Personal Precaution</b> Wear chemical safety goggles, rubber boots and heavy rubber gloves. Exercise appropriate precautions to minimize direct contact with skin or eyes.
<b>Methods for Cleaning Up and Disposal</b> Waste Disposal Method: Dispose of in accordance with federal, state, and local regulations.	



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**CSF/URINE PROTEIN:**

**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. Refer to Section 8

**Storage**

Keep tightly closed. Store according to package directions.

**Section 8 – Exposure Controls / PPE**

**Personal Protective Equipment**

Respiratory Protection: None required where adequate ventilation is satisfactory.  
Ventilation: General room ventilation is satisfactory.  
Protective Gloves: Recommended  
Eye Protection: Chemical safety glasses or goggles  
Other Protective Equipment: Use a safety pipette device. Lab coat recommended.

**Engineering Controls**

Safety shower and eyewash. Good general ventilation.

**General Hygiene Measures**

Wash thoroughly after handling. Wash contaminated clothing before reuse.

**Exposure Limits, RTECS (RTECS# QA5085000): Sodium molybdate:**

Country	Source	Type	Value	Remarks
USA	ACGIH	TWA	5 MG(MO)/M3	--
USA	MSHA Standard-air	TWA	10 MG(MO)/M3	--
USA	OSHA	PEL	8H TWA 15 MG(MO)/M3, TOTAL DUS	--
New Zealand	OEL	--	--	Check ACGIH TLV

**Exposure Limits: Sodium azide**

Country	Type	Value
Poland	NDS	0.1 mg/m3
Poland	NDSCh	0.3 mg/m3
Poland	NDSP	--

**Exposure Limits, RTECS (RTECS# VY8050000): Sodium azide**

Country	Source	Type	Value	Remarks
USA	ACGIH	Ceiling concentration	0.29 mg/m3	--
USA	NIOSH	Ceiling concentration	0.1 ppm (SK)	--
New Zealand	OEL	--	--	Check ACGIH TLV

**Section 9 - Physical Data**

<b>Boiling Point</b> N/A	<b>Solubility in Water</b> Soluble	<b>Specific Gravity (g/cm<sup>3</sup>)</b> N/A
<b>Odor</b> No Significant Odor	<b>pH</b> Not relevant to safety	<b>Appearance</b> Clear red liquid

**Section 10 – Stability and Reactivity**

**Stability**

Stable, under normal handling and storage conditions.

**Materials to Avoid**

Strong oxidizing agents, halogenated solvents, metals, acids, acid chlorides.

**Hazardous Decomposition Products**

Pyrogallol red → carbon monoxide, carbon dioxide, sulfur oxides  
Sodium molybdate → carbon monoxide, carbon dioxide, molybdenum oxides, sodium oxides  
BSA → carbon monoxide, carbon dioxide  
Sodium azide → nitrogen oxides, hydrazoic acid

**Hazardous Polymerization**

Will not occur.

**Section 11 – Toxicological information**

**Route of Exposure**

Skin Contact: May cause skin irritation.  
Skin Absorption: May be harmful if absorbed through the skin.  
Eye Contact: May cause eye irritation.  
Inhalation: May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.  
Ingestion: May be harmful if swallowed.

**Signs and Symptoms of Exposure**

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

**Toxicity Data: Sodium molybdate:**

Species	Route of Application	Dose	Result	Remarks
Rat	Intraperitoneal	520 mg/kg	LD50	Behavioral: Somnolence (general depressed activity) Behavioral: Coma



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Mouse	Intraperitoneal	257 mg/kg	LD50	Behavioral: Somnolence (general depressed activity) Behavioral: Coma
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**CSF/URINE PROTEIN:**

**Section 11 – Toxicological information (continued)**

**Chronic Exposure – Teratogen: Sodium molybdate:**

Species	Route of Application	Dose	Exposure Time	Remarks
Mouse	Intravenous	968 mg/kg	8D PREG	Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Specific Developmental Abnormalities: Musculoskeletal system

**Chronic Exposure – Reproductive Hazard: Sodium molybdate:**

Species	Route of Application	Dose	Exposure Time	Remarks
Rat	Oral	401 mg/kg	6W PRE / 1-21D PREG	Maternal Effects: Menstrual cycle changes or disorders. Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

Note: Only selected Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here. See actual entry in RTECS for complete information. (RTECS#: QA5085000)

**Toxicity Data: Sodium azide**

Species:	Dose:	Route of Application:	Result:	Remarks (refer to Remark # below)
Woman	786 mg/kg	Oral	LDLO	1, 2, 6
Man	29 mg/kg	Oral	LDLO	7, 10, 11
Man	129 mg/kg	Oral	LDLO	2, 7, 9
Woman	14 mg/kg	Oral	LDLO	1, 6, 8
Man	143 mg/kg	Oral	LDLO	3, 4, 16
Rat	27 mg/kg	Oral	LD50	--
Rat	37 mg/m3	Inhalation	LC50	1, 12, 17
Rat	50 mg/kg	Skin	LD50	--
Rat	45100 ug/kg	Subcutaneous	LD50	14, 15
Rat	47500 ug/kg	Intratracheal	LD50	14, 15
Mouse	27 mg/kg	Oral	LD50	--
Mouse	32.4 mg/m3	Inhalation	LC50	1, 12, 17
Mouse	28 mg/kg	Intraperitoneal	LD50	1, 5, 13
Mouse	23060 ug/kg	Subcutaneous	LD50	14, 15
Mouse	19 mg/kg	Intravenous	LD50	--
Rabbit	20 mg/kg	Skin	LD50	--
Bird (wild)	23.7 mg/kg	Oral	LD50	--

Note: Only selected Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here. See actual entry in RTECS for complete information. (RTECS#: VY8050000)

**Other/Organ Effects: Sodium azide**

Remark #	Remarks
1	Behavioral: convulsions or effect on seizure threshold.
2	Behavioral: coma.
3	Behavioral: somnolence (general depressed activity).
4	Behavioral: irritability.
5	Behavioral: change in motor activity (specific assay).
6	Cardiac: arrhythmias (including changes in conduction).
7	Cardiac: pulse rate.
8	Cardiac: change in force of contraction.
9	Cardiac: other changes.
10	Brain and coverings: Increased intracranial pressure.
11	Lungs, Thorax or Respiration: acute pulmonary edema.
12	Lungs, Thorax or Respiration: structural or functional change in trachea or bronchi.
13	Lungs, Thorax or Respiration: respiratory stimulation.
14	Lungs, Thorax or Respiration: Other changes.
15	Peripheral Nerve and Sensation: spastic paralysis with or without sensory change.
16	Sense Organs and Special Senses: (nose, eye, ear, and taste): Eye: mydriasis (pupillary dilation).
17	Sense Organs and Special Senses: (nose, eye, ear, and taste): Other.

**Section 12 – Ecological Information**

**Acute Ecotoxicology Tests: Sodium azide:**

Test Type	Species	Time	Value
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EC50 Daphnia	Daphnia pulex	48.0 h	4.2 mg/l
LC50 Fish	Pinephales promelas (Fathead minnow)	96.0 h	5.46 mg/l
LC50 Fish	Onchorhynchus mykiss (Rainbow trout)	96.0 h	3.92 mg/l

**CSF/URINE PROTEIN:**

**Section 13 – Disposal Considerations**

Dispose of in accordance with current national and regional regulations.

**Section 14 – Transport Information**

<b>DOT</b> Proper shipping name: None Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport. Product is stable under normal conditions.	<b>IATA</b> Non-Hazardous for Air Transport: Non-hazardous for air transport.
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**Section 15 – Regulatory Information**

<b>Pyrogallol red:</b> <b>EU Additional Classification</b> Safety Statements: S 22 24/25 Do not breathe dust. Avoid contact with skin and eyes.	<b>Pyrogallol red:</b> <b>US Classification and Label Text</b> Caution: Avoid contact and inhalation.
<b>Canada Regulatory Information</b> 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: Yes	<b>US Regulatory Information</b> SARA Listed: No

<b>Sodium molybdate:</b> <b>EU Additional Classification</b> Symbol of Danger: Xi Indication of Danger: Irritant. Risk Statements: R36/37/38 Irritating to eyes, respiratory system, and skin. Safety Statements: S 26 36 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.	<b>Sodium molybdate:</b> <b>US Classification and Label Text</b> Indication of Danger: Irritant. Risk Statements: Irritating to eyes, respiratory system, and skin. Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing
<b>Canada Regulatory Information</b> 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.	<b>US Regulatory Information</b> SARA Listed: No

<b>BSA:</b> <b>Canada Regulatory Information</b> 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.	<b>BSA:</b> <b>US Regulatory Information</b> SARA Listed: No
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<b>Sodium azide:</b> <b>EU Additional Classification</b> Symbol of Danger: T+ N Indication of Danger: Very toxic. Dangerous for the environment. Risk Statements: R 28 32 50/53 Very Toxic if swallowed. Contact with acids liberates very toxic gas. Very Toxic to aquatic organisms; may cause long-term adverse effects in the aquatic environment. Safety Statements: S 28 45 61 After contact with skin, wash immediately with plenty of soap-suds. In case of accident or if you feel unwell, seek medical advice immediately (show label where possible). Avoid release to the environment. Refer to special instructions safety data sheet	<b>Sodium azide:</b> <b>US Classification and Label Text</b> Indication of Danger: Highly Toxic (USA). Very Toxic (EU). Risk Statements: Heating may cause and explosion. Very toxic by inhalation, in contact with skin and if swallowed. Contact with acids liberates very toxic gas. Very Toxic to aquatic organisms; may cause long-term adverse effects in the aquatic environment. Safety Statements: In case of accident or if you feel unwell, seek medical advice immediately (show label where possible). Wear suitable protective clothing, gloves and eye/face protection. Do not breathe dust. <b>US Statements</b> Readily absorbed through skin. May react with lead and copper plumbing to form highly explosive metal azides. Target Organs: Nerves, Heart
<b>Canada Regulatory Information</b> 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	<b>US Regulatory Information</b> SARA Listed: Yes Derminimis: 1.0% Notes: Subject to SARA section 313 reporting requirements.

**Section 16 – Other Information**

This Product is labeled in accordance with CFR21 (Food and Drugs), Section 809.10.



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N/A - Not Applicable or Not Available