


Product Name: Creatinine Parameter Assay Kit, 2 Plate

Reviewed on: 15 March 2018

1. Identification of Substance:

- **Other means of identification: Catalog Number: KGE005**
Components: Microplates, Creatinine Standard, Picric Acid Reagent (contains **Picric acid** and **Sodium Dodecyl Sulfate**), Sodium hydroxide.
- **GHS product identifier:** Creatinine Parameter Assay Kit, 2 Plate
- **Application of the substance / the preparation:** For Research Use Only
- **Manufacturer/Supplier:**
R&D Systems Inc.
614 McKinley Place N.E.
Minneapolis, MN 55413
USA
1-800-343-7475
- **For product related questions call:** 1-800-343-7475. In Europe call: +44(0)1235-529449.
- **Emergency information:** In case of a chemical emergency, spill, leak, fire, or accident call **CHEMTREC** at 1-800-424-9300 (US or Canada). Outside USA and Canada: +1 703-527-3887 (collect calls accepted).

2. Hazards Identification:

- **Classification: Regulation (EC) No 1272/2008 [EU-GHS/CLP]: Picric Acid Solution**
Acute Toxicity, Oral 3
Acute Toxicity, Inhalation 3
Acute Toxicity, Dermal 3
Signal Word: DANGER
- 
- **Hazard Statements:** H301: Toxic if swallowed. H311: Toxic in contact with skin. H331: Toxic if inhaled.
 - **Precautionary Statements:** P264: Wash hands thoroughly after handling. P270: Do not eat, drink or smoke when using this product. P280: Wear protective gloves/protective clothing/eye protection/face protection. P261: Avoid breathing dust/fume/gas/mist/vapours/spray. P271: Use only outdoors or in a well-ventilated area.

Responses:

- IF SWALLOWED: Immediately call a Poison Control Center or physician. See specific treatment in this MSDS. Rinse mouth.
- IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/physician if you feel unwell. See specific treatment in this MSDS. Take off immediately all contaminated clothing and wash before reuse.
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician. See specific treatment in this MSDS.

- **Classification according to EU Directives 67/548/EEC or 1999/45/EC:** T: Toxic.
- **R-phrases:** R23/24/25: Toxic by inhalation, in contact with skin and if swallowed.
- **S-phrases:** S1/2: Keep locked up and out of reach of children. S28: After contact with skin, wash immediately with plenty of soap and water. S35: This material and its container must be disposed of in a safe way. S37: Wear suitable gloves. S45: In case of accident or if you feel unwell, seek medical advice immediately (show label if possible).
- **Special Hazards:** none.

3. Information on Ingredients:

- **Description:** Picric Acid Solution

Contains	CAS No.	EC-No.	Index-No.	Content
Picric Acid	88-89-1	201-865-9	609-009-00-X	0.13%

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4. First Aid Measures:

- **After inhalation:** Move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
- **After skin contact:** Wash off with soap and plenty of water. Take victim immediately to a hospital. Consult a physician.
- **After eye contact:** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Show this MSDS.
- **After swallowing:** Never give anything by mouth to an unconscious person. Rinse mouth with water. Call a physician. Show this MSDS.
- **Most important symptoms and effects, both acute and delayed:** Unknown
- **Indication of any immediate medical attention and special treatment needed:** No data available

5. Fire Fighting Measures:

- **Suitable extinguishing agents:** Dry chemical, carbon dioxide, water spray or alcohol-resistant foam. Do not extinguish fire unless flow can be stopped. Use flooding quantities of water applied from a distance. Cool all affected containers with flooding quantities of water.
- **Special hazards arising from the substance or mixture:** Emits poisonous gasses under fire conditions including nitrogen oxides.
- **Protective equipment:** Wear self contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
- **Further information:** This product is a flammable solid. Use water spray to cool unopened containers.

6. Accidental Release Measures:

- **Personal precautions, protective equipment and emergency procedures:** Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate all personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
- **Environmental precautions:** Prevent further leakage or spillage is safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
- **Methods and materials for containment and cleaning up:** Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations.

7. Handling and Storage:

- **Precautions for safe handling:** Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Keep away from sources of ignition – No Smoking. Take measures to prevent the buildup of electrostatic charge.
- **Conditions for safe storage, including incompatibilities:** Store locked up. Store in a cool place. Keep container tightly closed in a dry and well ventilated place.

8. Exposure Controls and Personal Protection:

- **Control parameters:**
 - Component: Picric Acid:** UK EH40 WEL Workplace Exposure Limits: STEL 0.3 mg/m³. TWA 0.1 mg/m³.
OSHA PEL: TWA 15 mg/m³ (total), TWA 5 mg/m³ (resp)
- **Appropriate engineering controls:** Wear protective gloves/protective clothing/eye protection/face protection. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling product.
 - Personal Protective Equipment:**
 - Eye and Face Protection:** Tightly fitting safety goggles. Face shield (8-inch minimum).
 - Skin Protection:** Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
 - Body Protection:** Complete suit protection against chemicals, flame retardant antistatic protective clothing, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
 - Respiratory Protection:** Where risk assessment shows air-purifying respirators are appropriate use full-face respirator.

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9. Physical and Chemical Properties:

- **Appearance:** Liquid
- **Odor:** odorless
- **Odor threshold:** Not available
- **pH:** Not available
- **Melting point/freezing point:** Not available.
- **Partition coefficient: noctanol/water:** Not available
- **Flash point:** Not available
- **Water solubility:** Not available
- **Evaporation rate:** Not available
- **Flammability (solid, gas):** Not available
- **Upper/lower flammability or explosive limits:** Not available
- **Vapor density :** Not available
- **Vapor pressure:** Not available
- **Relative density:** Not available
- **Boiling point/Boiling range:** Not available
- **Auto igniting:** Not available
- **Decomposition temperature:** Not available
- **Viscosity:** Not available

10. Stability and Reactivity:

- **Reactivity:** Strong oxidizers or reducing agents. Burns if ignited. Forms salts in contact with metals.
- **Chemical Stability:** Solution is safe under normal handling conditions.
- **Possibility of hazardous reactions:** Highly flammable if dry.
- **Conditions to avoid:** Heat, flames, sources of ignition.
- **Incompatible materials:** Strong oxidizers or reducing agents.
- **Hazardous decomposition products:** no data available.

11. Toxicological Information:

- **Acute toxicity:** Rat oral – LD50 = 200 mg/kg.
- **Skin corrosion/irritation:** no data available.
- **Serious eye damage/irritation:** rabbit eye: severe eye lesions
- **Respiratory or skin sensitization:** no data available
- **Germ cell mutagenicity:** no data available.
- **Carcinogenicity:** no data available.
- **Reproductive toxicity:** no data available.
- **Specific target organ toxicity (STOT) -single exposure:** irritating to eyes, skin and respiratory tract.
- **Specific target organ toxicity (STOT) -repeated exposure:** may have effects on the liver.
- **Aspiration hazard:** Evaporation at 20° C is negligible.
- **Information on likely routes of exposure:** absorbed into the body by ingestion.
- **Symptoms related to the physical, chemical and toxicological characteristics:**
 - **Inhalation:** Burning sensation and cough.
 - **Ingestion:** Burning sensation. Cough. Nausea.
 - **Skin contact:** Redness.
 - **Eye contact:** Redness and pain.
- **Delayed and immediate effects and also chronic effects from short and long term exposure:** Irritating to eyes, skin and respiratory tract. Long term exposure may have effects on the liver.

12. Ecological Information:

- **Ecotoxicity:** Salmo gairdneri (rainbow trout) LD50 = 109.6 mg/L/96 hr.
- **Biodegradability:** Resistant to degradation under aerobic conditions.
- **Bioaccumulative potential:** bioconcentration in aquatic organisms is low.
- **Mobility in soil:** no data available.
- **Other adverse effects:** As a volatile organic compound, it can contribute to the formation of photochemical smog in the presences of other volatile organic compounds.

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13. Disposal Considerations:

- **Disposal methods:** Dispose of waste in accordance to applicable national, regional, or local regulations. Contact a licensed professional waste disposal service to dispose of this material. Do not allow to enter the waste stream.
- **Contaminated packaging:** Dispose in the same manner as unused product.

14. Transport Information:

▪ **ADR/RID ADN/ADNR IMDG IATA/DOT**

ADR/DOT/:	UN Number:	UN 2810
RID	Proper Shipping Name:	Toxic liquid, organic, n.o.s. (Picric Acid Solution)
	Hazard class:	6.1
	Packing group:	II

IATA:	UN Number:	UN 2810
	Proper Shipping Name:	Toxic liquid, organic, n.o.s. (Picric Acid Solution)
	Hazard class:	6.1
	Packing group:	II

IMDG:	UN Number:	UN 2810
	Proper Shipping Name:	Toxic liquid, organic, n.o.s. (Picric Acid Solution)
	Hazard class:	6.1
	Packing group:	II
	Marine Pollutant:	No

15. Regulations:

▪ **US Federal and State Regulations**

TSCA (Toxic Substances Control Act): Picric acid is listed.

SARA 313: Picric acid is listed.

SARA 311/312 Hazards: Acute Health Hazard.

CERCLA Reportable Quantity: Picric acid is not listed.

California Proposition 65: Picric acid is not listed on California's listing of known or potential carcinogens.

16. Other Information:

- **R-phrases:** R23/24/25: Toxic by inhalation, in contact with skin and if swallowed.
- **S-phrases:** S1/2: Keep locked up and out of reach of children. S28: After contact with skin, wash immediately with plenty of soap and water. S35: This material and its container must be disposed of in a safe way. S37: Wear suitable gloves. S45: In case of accident or if you feel unwell, seek medical advice immediately (show label if possible).
- **Notice to reader:** To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

2. Hazard Identification:

- **Classification: Regulation (EC) No. 1272/2008 [CLP/GHS]: Sodium Dodecyl Sulfate:**
Acute Tox. Oral 4
Acute Tox. Dermal, 4



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Skin Irrit. 2
Eye Irrit. 2B
Specific Target Organ Toxicity (Single Exposure), 3

- **Signal Word:** WARNING
- **Hazard statements:** H302: Harmful if swallowed. H312: Harmful in contact with skin. H315: Causes skin irritation. H320: Causes eye irritation. H335: May cause respiratory irritation.
- **Precautionary statements:** P264: Wash hands thoroughly after handling. P270: Do not eat, drink or smoke when using this product. P280: Wear protective gloves/protective clothing. P261: Avoid breathing dust/fumes/gas/mist/vapours/spray. P271: Use only outdoors or in a well-ventilated area.

Response:

IF ON SKIN (or hair): Wash with plenty of water. Call a POISON CENTER or doctor if you feel unwell. Specific treatment is indicated in this MSDS. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical attention.

IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.

- **Classification according to Directive 67/548/EEC:**
- **Hazard Symbol / R-Phrase / S-Phrase:** Xn: Harmful. R21/22: Harmful if in contact with skin or if swallowed. R36/37/38, Irritating to eyes, respiratory system and skin. S26: In case of contact with eyes, rinse immediately with plenty of water and see medical advice. S36/37: Wear suitable protective clothing and gloves.
- **Other hazards:** none

3. Information on Ingredients:

Description: Sodium Dodecyl Sulfate, Sodium Lauryl Sulfate, or SDS. Formula: C₁₂H₂₅O₄S.Na. Molecular Mass: 288.4

Contains	CAS No.	EC-No.	Index-No.	Content
Sodium Dodecyl Sulfate	151-21-3	205-788-1	-	1 - 2%

4. First Aid Measures:

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for at least 15 minutes under running water. Then consult a doctor.
- **After swallowing:** Rinse mouth with water. Immediately seek medical attention and appropriate follow-up.

5. Fire Fighting Measures:

- **Suitable extinguishing agents:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- **Hazards from the substance or mixture:** Combustible. In case of fire, irritating or toxic fumes or gases may be formed.
- **Special precautions for fire-fighters:** Self contained breathing apparatus and full protective clothing must be worn in case of fire.

6. Accidental Release Measures:

- **Person-related safety precautions:** Use appropriate personal protective equipment to prevent contamination of skin, eyes and personal clothing. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.
- **Measures for environmental protection:** Keep away from drains.
- **Measures for containment and cleaning:** Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

7. Handling and Storage:

- **Precautions for safe handling:** Avoid inhalation of dust or mist. Use normal measures for preventive fire protection.
- **Information about protection against explosions and fires:** Combustible. May give off irritating or toxic gases.

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- **Conditions for safe storage:** Store in a cool, dry place. Keep container tightly closed in a dry and well-ventilated place.

8. Exposure Controls and Personal Protection:

- **Control parameters:** Contains no substances with occupational exposure limit values
- **Appropriate engineering controls:** Use with adequate ventilation including local extraction. Ensure that eyewash stations and safety showers are close to the workstation location.
- **Individual protection measures:** Wash hands thoroughly after handling chemical products and before eating, smoking or using the toilet. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.
 - **Eye/face protection:** Wear approved safety goggles.
 - **Skin/hand protection:** Handle with protective gloves, plastic or rubber. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
 - **Body protection:** Wear suitable protective clothing as protection against splashing or contamination.
 - **Other skin protection:** Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved.
 - **Respiratory protection:** In case of inadequate ventilation, use a suitable respirator. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

9. Physical and Chemical Properties:

- | | |
|--|--|
| <ul style="list-style-type: none"> ▪ Appearance: Colorless Liquid ▪ Odor: odorless ▪ Odor threshold: Not available ▪ pH: Not available ▪ Melting point/freezing point: Not available. ▪ Boiling point/Boiling range: Not available ▪ Flash point: Not available ▪ Evaporation rate: Not available ▪ Flammability (solid, gas): Not available | <ul style="list-style-type: none"> ▪ Upper/lower flammability or explosive limits: Not available ▪ Vapor density : Not available ▪ Vapor pressure: Not available ▪ Relative density: Not available ▪ Solubility in/Miscibility with Water: Soluble ▪ Partition coefficient: noctanol/water: Not available ▪ Auto igniting: Not available ▪ Decomposition temperature: Not available ▪ Viscosity: Not available |
|--|--|

10. Stability and Reactivity:

- **Reactivity:** Reacts with strong oxidants and strong acids.
- **Chemical Stability:** Stable under recommended storage conditions.
- **Possibility of hazardous reactions:** Under normal conditions of storage and use, hazardous reactions will not occur.
- **Conditions to avoid:** Acids, oxidants, heat.
- **Incompatible materials:**
- **Hazardous decomposition products:** Products formed under fire conditions: toxic and corrosive gases including sulfur oxides.

11. Toxicological Information:

- **Acute toxicity:** Oral LD50: 1,200 mg/kg (rat)
Skin LD50: 600 mg/kg (rabbit)
- **Skin corrosion/irritation:** Redness.
- **Serious eye damage/irritation:** Redness and pain.
- **Respiratory or skin sensitization:** Sore throat and cough.
- **Germ cell mutagenicity:** No data available
- **Carcinogenicity:** No data available
- **Reproductive toxicity:** No data available
- **Specific target organ toxicity (STOT) -single exposure:** No data available
- **Specific target organ toxicity (STOT) -repeated exposure:** No data available
- **Aspiration hazard:** No data available.
- **Information on likely routes of exposure:** Routes of entry anticipated; oral, dermal, inhalation.
- **Symptoms related to the physical, chemical and toxicological characteristics:**

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Inhalation: Sore throat and cough.

Ingestion: Nausea, vomiting and diarrhea.

Skin contact: Causes redness and irritation.

Eye contact: Causes eye irritation, redness and pain.

- **Delayed and immediate effects and also chronic effects from short and long term exposure:**
 - **Short term exposure: Potential immediate effects:** Not available. **Potential delayed effects:** Not available.
 - **Long term exposure: Potential immediate effects:** Not available. **Potential delayed effects:** Not available.
- **Effects of chronic exposure:** Not available
- **Numerical measures of toxicity:** Not available
- **Other Information:** NA

12. Ecological Information:

- **Ecotoxicity:** Toxic to aquatic life. LC50, 96 Hrs, Fish *Macrorns vittatus* – 1.39 mg/L; LC50, 96 Hrs, *Daphnia* – 0.72 mg/L
- **Biodegradability:** Insoluble in water.
- **Bioaccumulative potential:** No data available.
- **Mobility in soil:** No data available.
- **Other adverse effects:** No data available.

13. Disposal Considerations:

- **Disposal methods:** Dispose of waste in accordance to applicable national, regional, or local regulations.
- **Contaminated packaging:** Dispose in the same manner as unused product.
- **Special precautions:** Dispose of small amounts of spilled material as described in section 6. Large spills must be dealt with separately by qualified disposal personnel. Avoid dispersal of spilt material to soil, waterways, drains and sewers.

14. Transport Information:

- **UN Number:** None
- **DOT regulations:** · **Hazard class:** None
- **Land transport ADR/RID (cross-border):** Not regulated.
- **Maritime transport IMDG:** Not regulated.
- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:** Not regulated.
- **Transport/Additional information:** Not dangerous according to the above specifications.

15. Regulations:

- **US Federal and State Regulations**
 - **TSCA (Toxic Substances Control Act):** On TSCA Inventory
 - **SARA 313 Components:** Not listed
 - **SARA 311/312 Hazards:** NA
 - **CERCLA Reportable Quantity:** NA
 - **California Proposition 65:** Not listed.

16. Other Information:

- **R-Phrases:** R21/22: Harmful if in contact with skin or if swallowed. R36/37/38, Irritating to eyes, respiratory system and skin.
- **S-Phrases:** S26: In case of contact with eyes, rinse immediately with plenty of water and see medical advice. S36/37: Wear suitable protective clothing and gloves.
- **Notice to reader:** To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final

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Reviewed on: 12 March 2018

determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.