Kit Summary

Product Code(s)  AB204537
Product name  Creatinine Assay Kit (Colorimetric)

Creatinine Detection Reagent

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>EC-No</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>Classification (Reg. 1272/2008)</th>
<th>REACH Registration Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>200-659-6</td>
<td>67-56-1</td>
<td>12</td>
<td>STOT SE 1 (H370)  Acute Tox. 3 (H301)  Acute Tox. 3 (H311)  Acute Tox. 3 (H331)  Flam Liq. 2 (H225)</td>
<td>-</td>
</tr>
<tr>
<td>Sodium hydroxide</td>
<td>215-185-5</td>
<td>1310-73-2</td>
<td>2</td>
<td>Skin Corr. 1A (H314)</td>
<td>-</td>
</tr>
<tr>
<td>Picric Acid</td>
<td>201-865-9</td>
<td>88-89-1</td>
<td>0.5</td>
<td>Acute Tox. 3 (H301)  Acute Tox. 3 (H311)  Acute Tox. 3 (H331)  Expl. 1.1; (H201)</td>
<td>-</td>
</tr>
</tbody>
</table>

GHS / CLP - GHS - Classification

Signal Word
Danger

Hazard statements
H301 - Toxic if swallowed
H311 - Toxic in contact with skin
H331 - Toxic if inhaled
H370 - Causes damage to organs
**Precautionary Statements - EU (§28, 1272/2008)**

- P264 - Wash face, hands and any exposed skin thoroughly after handling
- P270 - Do not eat, drink or smoke when using this product
- P405 - Store locked up
- P501 - Dispose of contents/container to an approved waste disposal plant
- P280 - Wear protective gloves/eye protection/face protection
- P361 - Remove/Take off immediately all contaminated clothing
- P363 - Wash contaminated clothing before reuse
- P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
- P271 - Use only outdoors or in a well-ventilated area
- P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
- P311 - Call a POISON CENTER or doctor/physician
- P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
- P260 - Do not breathe dust/fume/gas/mist/vapors/spray
- P307 + P311 - IF exposed: Call a POISON CENTER or doctor/physician

**2.3 Other information**

A safety datasheet follows for all potentially hazardous components – all other components are non-hazardous.

**TRANSPORT INFORMATION**

<table>
<thead>
<tr>
<th>DOT</th>
<th>Not dangerous goods</th>
</tr>
</thead>
<tbody>
<tr>
<td>IATA</td>
<td>Not dangerous goods</td>
</tr>
<tr>
<td>ADR</td>
<td>Not dangerous goods</td>
</tr>
</tbody>
</table>
1. PRODUCT AND COMPANY IDENTIFICATION

Product name
Creatinine Detection Reagent

Recommended use
For research use only

Supplier Address
Abcam Inc
1 Kendall Square, Ste 341
Cambridge, MA 02139-1517
USA
Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free)
Fax: (866) 739-9884 or (866) 457-9616 (both US toll free)

E-mail address
technical@abcam.com

Emergency telephone
Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free) - Monday-Friday 8am-9pm EST

2. HAZARDS IDENTIFICATION

GHS - Classification

<table>
<thead>
<tr>
<th>Hazardity</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute oral toxicity</td>
<td>Category 3</td>
</tr>
<tr>
<td>Acute dermal toxicity</td>
<td>Category 3</td>
</tr>
<tr>
<td>Acute inhalation toxicity - dust/mist</td>
<td>Category 3</td>
</tr>
<tr>
<td>Specific target organ systemic toxicity (single exposure)</td>
<td>Category 1</td>
</tr>
<tr>
<td>Ozone</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

GHS Label elements, including precautionary statements

Signal Word
Danger

Hazard statements
H301 - Toxic if swallowed
H311 - Toxic in contact with skin
H331 - Toxic if inhaled
H370 - Causes damage to organs
Precautionary Statements - EU (§28, 1272/2008)
P264 - Wash face, hands and any exposed skin thoroughly after handling
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P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P271 - Use only outdoors or in a well-ventilated area
P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
P311 - Call a POISON CENTER or doctor/physician
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P307 + P311 - IF exposed: Call a POISON CENTER or doctor/physician

Other information
No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>Classification (Reg. 1272/2008)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>7-13</td>
<td>STOT SE 1 (H370)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acute Tox. 3 (H301)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acute Tox. 3 (H311)</td>
</tr>
<tr>
<td>Sodium hydroxide</td>
<td>1310-73-2</td>
<td>1-5</td>
<td>Skin Corr. 1A (H314)</td>
</tr>
<tr>
<td>Picric Acid</td>
<td>88-89-1</td>
<td>0.1-1</td>
<td>Acute Tox. 3 (H301)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acute Tox. 3 (H311)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acute Tox. 3 (H331)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Expl. 1.1; (H201)</td>
</tr>
</tbody>
</table>

For the full text of the H-Statements mentioned in this Section, see Section 16
4. FIRST AID MEASURES

General advice
When symptoms persist or in all cases of doubt seek medical advice. Immediate medical attention is required.

Eye contact
Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes.

Skin contact
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician.

Inhalation
Move to fresh air. If breathing is difficult, give oxygen. If symptoms persist, call a physician.

Ingestion
Rinse mouth. Do not induce vomiting without medical advice. Consult a physician.

Notes to physician
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flammable properties
Not flammable.

Flash point
not determined

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Explosion Data
Sensitivity to Mechanical Impact
None.

Sensitivity to Static Discharge
None.

Specific hazards arising from the chemical
The product causes burns of eyes, skin and mucous membranes Thermal decomposition can lead to release of irritating gases and vapors In the event of fire and/or explosion do not breathe fumes

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment. Evacuate personnel to safe areas. Avoid contact with skin, eyes and clothing. Keep people away from and upwind of spill/leak.

Environmental precautions
Try to prevent the material from entering drains or water courses.

Methods for containment
Prevent further leakage or spillage if safe to do so. Cover powder spill with plastic sheet or tarp to minimize spreading. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up
Dike far ahead of liquid spill for later disposal. Soak up with inert absorbent material. Take up mechanically and collect in suitable container for disposal. Clean contaminated surface thoroughly. Prevent product from entering drains. Dam up. After cleaning, flush away traces with water.

Other information
Refer to protective measures listed in sections 7 and 8.

7. HANDLING AND STORAGE
Advice on safe handling

Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation at machinery.

Technical measures/Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
</table>
| Methanol 67-56-1    | STEL: 250 ppm  
TWA: 200 ppm  
S* | TWA: 200 ppm TWA: 260 mg/m³  
(vacated) TWA: 200 ppm | IDLH: 6000 ppm  
TWA: 200 ppm TWA: 260 mg/m³  
STEL: 250 ppm STEL: 325 mg/m³ |
| Sodium hydroxide 1310-73-2 | Ceiling: 2 mg/m³  
TWA: 2 mg/m³  
(vacated) Ceiling: 2 mg/m³ | IDLH: 10 mg/m³  
TWA: 2 mg/m³  
STEL: 250 ppm STEL: 325 mg/m³ |
| Picric Acid 88-89-1 | TWA: 0.1 mg/m³  
(vacated) TWA: 0.1 mg/m³ | IDLH: 75 mg/m³  
TWA: 0.1 mg/m³  
STEL: 0.3 mg/m³ |
|                     |           |          |           |

NIOSH IDLH: Immediately Dangerous to Life or Health

Other Exposure Guidelines

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Engineering measures

Shower
Eyewash stations
Ventilation systems

Personal protective equipment

Eye/face protection
Tightly fitting safety goggles. Face-shield.

Skin and body protection
No special protective equipment required.

Respiratory protection
If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene measures

When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use. Keep away from food, drink and animal feeding stuffs. Contaminated work clothing should not be allowed out of the workplace. Provide regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. For environmental protection, remove and wash all contaminated protective equipment before re-use. Wear suitable gloves and eye/face protection.
9. PHYSICAL AND CHEMICAL PROPERTIES

| Appearance | No information available. |
| Odor Threshold | No information available |
| pH | No information available |
| Flash point | No information available |
| Decomposition temperature | No information available |
| Melting point/range | No information available |
| Explosion limits | No information available |
| Specific Gravity | No data available |
| Evaporation rate | No information available |
| Vapor density | No data available |
| Odor | Physical State @20°C |
| Autoignition temperature | No information available |
| Boiling point/boiling range | No information available |
| Flammability Limits in Air | No information available |

10. STABILITY AND REACTIVITY

Stability
Stable under recommended storage conditions.

Incompatible products
Incompatible with strong acids and bases. Incompatible with oxidizing agents.

Conditions to avoid
Exposure to air or moisture over prolonged periods.

Hazardous decomposition products
Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous polymerization
Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity
Product Information
Product is toxic by ingestion Toxic in contact with skin Toxic by inhalation, in contact with skin and/or if swallowed

Inhalation
Toxic by inhalation Avoid breathing vapors or mists

Eye contact
Avoid contact with eyes

Skin contact
Toxic in contact with skin Wash thoroughly after handling

Ingestion
Toxic if swallowed

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>5628 mg/kg (Rat)</td>
<td>15800 mg/kg (Rabbit)</td>
<td>83.2 mg/L (Rat) 4 h 64000 ppm (Rat) 4 h</td>
</tr>
<tr>
<td>Sodium hydroxide</td>
<td>1350 mg/kg (Rabbit)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Picric Acid</td>
<td>200 mg/kg (Rat)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Chronic toxicity

Chronic toxicity
Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen Avoid repeated exposure Possible risks of irreversible effects

Target Organ Effects
12. ECOLOGICAL INFORMATION

Ecotoxicity
The environmental impact of this product has not been fully investigated.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Toxicity to algae</th>
<th>Toxicity to fish</th>
<th>Toxicity to microorganisms</th>
<th>Toxicity to daphnia and other aquatic invertebrates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td></td>
<td>28200: 96 h Pimephales promelas mg/L LC50 flow-through 100: 96 h Pimephales promelas mg/L LC50 static 19500 - 20700: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 18 - 20: 96 h Oncorhynchus mykiss mL/L LC50 static 13500 - 17600: 96 h Lepomis macrochirus mg/L LC50 flow-through</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sodium hydroxide</td>
<td></td>
<td>45.4: 96 h Oncorhynchus mykiss mg/L LC50 static</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

13. DISPOSAL CONSIDERATIONS

Waste disposal methods
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated packaging
Do not re-use empty containers.

US EPA Waste Number
U154

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>RCRA</th>
<th>RCRA - Basis for Listing</th>
<th>RCRA - D Series Wastes</th>
<th>RCRA - U Series Wastes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol - 67-56-1</td>
<td></td>
<td>Included in waste stream:</td>
<td>F039</td>
<td>U154</td>
</tr>
</tbody>
</table>

This product contains one or more substances that are listed with the State of California as a hazardous waste.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Hazardous Waste Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>Toxic Ignitable</td>
</tr>
<tr>
<td>Sodium hydroxide</td>
<td>Toxic Corrosive</td>
</tr>
<tr>
<td>Picric Acid</td>
<td>Ignitable Reactive</td>
</tr>
</tbody>
</table>

14. TRANSPORT INFORMATION

DOT
Not dangerous goods

IATA
Not dangerous goods

ADR
Not dangerous goods

15. REGULATORY INFORMATION

U.S. Federal Regulations
SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>12</td>
<td>1.0</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazard Categories
- Acute Health Hazard: yes
- Chronic Health Hazard: yes
- Fire Hazard: no
- Sudden Release of Pressure Hazard: no
- Reactive Hazard: no

Clean Water Act
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide</td>
<td>1000 lb</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Hazardous Substances RQs</th>
<th>Extremely Hazardous Substances RQs</th>
<th>RQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>5000 lb</td>
<td></td>
<td>RQ 5000 lb final</td>
</tr>
<tr>
<td>Sodium hydroxide</td>
<td>1000 lb</td>
<td></td>
<td>RQ 1000 lb final</td>
</tr>
</tbody>
</table>

U.S. State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Sodium hydroxide</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Picric Acid</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

International Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Carcinogen Status</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td></td>
<td>Mexico: TWA 200 ppm Mexico: TWA 260 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mexico: STEL 250 ppm Mexico: STEL 310 mg/m³</td>
</tr>
<tr>
<td>Sodium hydroxide</td>
<td></td>
<td>Mexico: Ceiling 2 mg/m³</td>
</tr>
<tr>
<td>Picric Acid</td>
<td></td>
<td>Mexico: TWA 0.1 mg/m³ Mexico: STEL 0.3 mg/m³</td>
</tr>
</tbody>
</table>

WHMIS Note: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.
16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3
H314 - Causes severe skin burns and eye damage H370 - Causes damage to organs if inhaled H301 - Toxic if swallowed H311 - Toxic in contact with skin H331 - Toxic if inhaled H225 - Highly flammable liquid and vapor H201 - Explosive; mass explosion hazard

Hazard statements
H301 - Toxic if swallowed
H311 - Toxic in contact with skin
H331 - Toxic if inhaled
H370 - Causes damage to organs

Revision Date 15-Jun-2018
Revision Note No information available.

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of MSDS