



## Material Safety Data Sheet

### Acid digestion reagent

#### Section 1 - Chemical Product and Company Identification

**MSDS Name:**

Acid digestion reagent

**Catalog Numbers:**

LC10550

**Synonyms:****Company Identification:**

LabChem Inc  
200 William Pitt Way  
Pittsburgh, PA 15238

**Company Phone Number:**

(412) 826-5230

**Emergency Phone Number:**

(800) 424-9300

**CHEMTREC Phone Number:**

(800) 424-9300

#### Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	Percent
7732-18-5	Water	balance
7664-93-9	Sulfuric acid	22
7778-80-5	Sulfuric acid dipotassium salt	13.4
7783-35-9	Mercuric sulfate	0.2

#### Section 3 - Hazards Identification

##### Emergency Overview

**Appearance:** Colorless

**Danger!** Corrosive. Causes eye and skin burns. Causes digestive and respiratory tract burns.

**Target Organs:** Eyes, skin, kidneys, respiratory and central nervous systems, teeth.

**Potential Health Effects****Eye:**

Causes severe eye burns. Eye contact can result in blindness; exposure to mist leads to watering, irritation.

**Skin:**

Skin contact may result in severe burns, blistering, pain.



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**Ingestion:**

May cause severe and permanent damage to the digestive tract. Causes gastrointestinal tract burns. Vomiting and diarrhea of dark blood may occur; asphyxia from throat swelling. Stomach and esophagus may become perforated. Ingestion of mercury salts causes immediate necrosis of the gastrointestinal tract with pain. Death may occur.

**Inhalation:**

May cause severe irritation of the respiratory tract with sore throat, coughing, shortness of breath and delayed lung edema. Causes chemical burns to the respiratory tract. At 5mg/M3 concentrations, nose and throat irritation occurs, with headache, cough, increased respiratory rate, impairment of lung to ventilate.

**Chronic:**

Delayed symptoms include tight chest, fluid in lungs, cyanosis (blue color), hypotension, bronchitis or emphysema. tracheobronchitis, dental erosion/discoloration, pneumonia, gastrointestinal disturbances may occur. Skin irritation/dermatitis, conjunctivitis and lacrimation of the eye can occur. Mercuric sulfate affects the gastrointestinal tract, central nervous system, liver, kidney.

### Section 4 - First Aid Measures

**Eyes:**

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids until chemical is gone. Get medical aid at once.

**Skin:**

Get medical aid at once. Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes.

**Ingestion:**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical aid at once. Give one ounce (30ml) of milk of magnesia. Give conscious victim large quantities of water to dilute acid.

**Inhalation:**

Get medical aid at once. Move victim to fresh air immediately. Give artificial respiration if necessary. If breathing is difficult, give oxygen.

**Notes to Physician:**

Treat symptomatically and supportively.

### Section 5 - Fire Fighting Measures

**General Information:**

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Contact with metals may evolve flammable hydrogen gas. Avoid breathing corrosive vapors, knock down with water spray. Keep out of sewers and drains. Do not use water directly on material. May ignite combustible materials on contact.

**Extinguishing Media:**

Use dry chemical, carbon dioxide, or alcohol-resistant foam.

**Autoignition Temperature:**

No information found.

**Flash Point:**

No information found.

**NFPA Rating:**

CAS# 7732-18-5: Not published.



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CAS# 7664-93-9: Not published.

CAS# 7778-80-5: Not published.

CAS# 7783-35-9: Not published.

### Explosion Limits:

Lower:

Upper:

## Section 6 - Accidental Release Measures

### General Information:

Use proper personal protective equipment as indicated in Section 8.

### Spills/Leaks:

May be neutralized with slaked lime, limestone, or sodium bicarbonate to a pH 7. Place in labeled plastic containers for disposal, wash area down with water.

## Section 7 - Handling and Storage

### Handling:

Wash thoroughly after handling. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale.

Use with adequate ventilation.

### Storage:

Do not store near alkaline substances. Store in labeled non-reactive containers (glass, plastic) protected from heat and incompatible substances.

## Section 8 - Exposure Controls, Personal Protection

### Engineering Controls:

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

### Exposure Limits:

Chemical Name:	ACGIH	NIOSH	OSHA
Water	None of the components are on this list.	None of the components are on this list.	None of the components are on this list.
Sulfuric acid	0.2 mg/m <sup>3</sup> TWA; 3 mg/m <sup>3</sup> STEL	1 mg/m <sup>3</sup> TWA	1 mg/m <sup>3</sup> TWA
Sulfuric acid dipotassium salt	None of the components are on this list.	None of the components are on this list.	None of the components are on this list.
Mercuric sulfate	None of the components are on this list.	None of the components are on this list.	None of the components are on this list.

### OSHA Vacated PELs:

Sulfuric acid: 1 mg/m<sup>3</sup> TWA

## Personal Protective Equipment

### Eyes:

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133. Provide an eye-wash fountain in the immediate work area. Do not wear contact lenses when working with chemicals.



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**Skin:**

Wear appropriate protective gloves to prevent skin exposure.

**Clothing:**

Wear acid protective clothing and gloves.

**Respirators:**

50mg/M3 - GMAGHiEP/HiEPF/SAF/SCBAF.

100mg/M3 - SAF:PD,PP,CF.

Escape - GMAGHiEP/SCBA. Firefighting - SCBAF:PD,PP.

(Respirator Codes: DHEW (NIOSH) Publication No. 78-210)

### Section 9 - Physical and Chemical Properties

<b>Physical State:</b>	Clear liquid
<b>Color:</b>	Colorless
<b>Odor:</b>	Odorless
<b>pH:</b>	Acidic
<b>Vapor Pressure:</b>	No information found.
<b>Vapor Density:</b>	No information found.
<b>Evaporation Rate:</b>	<ether
<b>Viscosity:</b>	No information found.
<b>Boiling Point:</b>	No information found.
<b>Freezing/Melting Point:</b>	No information found.
<b>Decomposition Temperature:</b>	No information found.
<b>Solubility in water:</b>	Soluble.
<b>Specific Gravity/Density:</b>	1.3
<b>Molecular Formula:</b>	No information found.
<b>Molecular Weight:</b>	No information found.

### Section 10 - Stability and Reactivity

**Chemical Stability:**

Stable under normal temperatures and pressures.

**Conditions to Avoid:**

Incompatible materials, excess heat, combustible materials, organic materials, oxidizers, amines, bases.

**Incompatibilities with Other Materials:**

Explosive or violent reactions with acetone cyanohydrin, acetone and nitric acid or potassium dichromate, acrylonitrile, alcohols, hydrogen peroxide, allyl chloride, bromates and metals, bromine pentafluoride, carbides, all chlorates, chlorine trifluoride, cuprous nitride, ethylene cyanohydrin, fulminates, indane and nitric acid, iron, mercuric nitride, nitric acid and glycerides, p-nitrotoluene, pentasilver trihydroxydiaminophosphate, perchlorates, phosphorus isocyanate picrates, silver permanganate, sodium, sodium carbonate, toluene and nitric acid. Dangerous temperatures and pressures occur with other substances, especially organic combinations. Explosive hydrogen gas is evolved from contact with steel, other metals.

**Hazardous Decomposition Products:**

Oxides of sulfur, hydrogen gas.

**Hazardous Polymerization:**



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### Section 11 - Toxicological Information

**RTECS:**

CAS# 7732-18-5: ZC0110000.  
CAS# 7664-93-9: WS5600000.  
CAS# 7778-80-5: TT5900000.  
CAS# 7783-35-9: OX0500000.

**LD50/LC50:**

CAS# 7732-18-5:  
Oral, rat: LD50 = >90 mL/kg.  
CAS# 7664-93-9:  
Inhalation, mouse: LC50 = 320 mg/m<sup>3</sup>/2H  
Inhalation, rat: LC50 = 510 mg/m<sup>3</sup>/2H  
Oral, rat: LD50 = 2140 mg/kg.  
CAS# 7778-80-5:  
Oral, rat: LD50 = 6600 mg/kg.  
CAS# 7783-35-9:  
Oral, mouse: LD50 = 25 mg/kg  
Oral, rat: LD50 = 57 mg/kg  
Skin, rat: LD50 = 625 mg/kg.

**Carcinogenicity:**

CAS# 7732-18-5: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.  
CAS# 7664-93-9:  
ACGIH: A2 - Suspected Human Carcinogen (contained in strong inorganic acid mists)  
California: Not listed.  
NIOSH: Not listed.  
NTP: Not listed.  
OSHA: Select carcinogen  
IARC: Group 1 carcinogen  
CAS# 7778-80-5: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.  
CAS# 7783-35-9: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

**Epidemiology:****Teratogenicity:****Reproductive:****Mutagenicity:****Neurotoxicity:**

### Section 12 - Ecological Information

No information found.



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### Section 13 - Disposal Considerations

Dispose of in accordance with Federal, State, and local regulations.

### Section 14 - Transport Information

#### US DOT

**Shipping Name:** Sulfuric Acid  
**Hazard Class:** 8  
**UN Number:** UN2796  
**Packing Group:** PG II

### Section 15 - Regulatory Information

#### US Federal

##### TSCA:

CAS# 7732-18-5 is listed on the TSCA Inventory.  
CAS# 7664-93-9 is listed on the TSCA Inventory.  
CAS# 7778-80-5 is listed on the TSCA Inventory.  
CAS# 7783-35-9 is listed on the TSCA Inventory.

##### SARA Reportable Quantities (RQ):

CAS# 7664-93-9: final RQ = 1000 pounds (454 kg)  
CAS# 7783-35-9: final RQ = 10 pounds (4.54 kg)

##### CERCLA/SARA Section 313:

This material contains Sulfuric acid (CAS# 7664-93-9, 22%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

##### OSHA - Highly Hazardous:

None of the components are on this list.

#### US State

##### State Right to Know:

Sulfuric acid can be found on the following state Right-to-Know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.  
Mercuric sulfate can be found on the following state Right-to-Know lists: California, New Jersey, Pennsylvania, Massachusetts.

##### California Regulations:

#### European/International Regulations

##### Canadian DSL/NDSL:

CAS# 7732-18-5 is listed on Canada's DSL List.  
CAS# 7664-93-9 is listed on Canada's DSL List.  
CAS# 7778-80-5 is listed on Canada's DSL List.  
CAS# 7783-35-9 is listed on Canada's DSL List.

##### Canada Ingredient Disclosure List:

CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.  
CAS# 7664-93-9 is listed on Canada's Ingredient Disclosure List.



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CAS# 7778-80-5 is not listed on Canada's Ingredient Disclosure List.  
CAS# 7783-35-9 is listed on Canada's Ingredient Disclosure List.

#### **Section 16 - Other Information**

MSDS Creation Date: April 19, 1998  
Revision Date: October 1, 2007

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