



HI 50005  
pH 5.00 Technical Buffer Solution  
**Safety Data Sheet**

According to Regulation (EC) No. 1907/2006  
OSHA Regulation 29 CFR 1910.1200  
Canadian Regulation SOR/88-66

**Revision Date:** 2013-04-24  
**Reason for Revision:** Regulation (EC) No. 1272/2008 Compliance

**SECTION 1: IDENTIFICATION OF THE PRODUCT AND COMPANY**

**Product Name:** HI 50005 pH 5.00 Technical Buffer Solution      **Additional Product Codes:** HI 50005-01  
HI 50005-02  
**Application:** Calibration of pH Electrodes  
**Company Information (USA):** Hanna Instruments, Inc.  
584 Park East Dr, Woonsocket, Rhode Island, USA 02895  
**Technical Service Contact Information:** 1-800-426-6287 (8:30AM - 5:00PM ET)  
+1-401-766-4260 (8:30AM - 5:00PM ET)  
**USA Emergency Contact Information:** 1-800-424-9300 (Chemtrec 24Hr. Emergency)  
**International Emergency Contact Information:** +1-703-527-3887 (Chemtrec 24Hr. Emergency)  
**E-mail Address:** tech@hannainst.com

**SECTION 2: HAZARD IDENTIFICATION**

Non-hazardous product as specified in Directives 67/548/EEC and 1999/45/EC.  
Non-hazardous product as specified in OSHA Regulation 29 CFR 1910.1200.  
Non-hazardous product as specified in Canadian Regulation SOR/88-66.  
Non-hazardous product as specified in Regulation (EC) 1272/2008.

**SECTION 3: COMPOSITION AND COMPONENT INFORMATION**

<b>Component:</b>	<b>EC No:</b>	<b>CAS No:</b>	<b>Hazard Class:</b>	<b>Phrases:</b>	<b>Concentration:</b>
Citric acid monohydrate	201-069-1	5949-29-1	Eye Irrit. 2 Xi	H319 R: 36	> 1% - < 10%

**SECTION 4: FIRST AID MEASURES**

**After Inhalation:** Remove to fresh air. Call a physician if breathing becomes difficult.  
**After Skin Contact:** Wash affected area with water and soap.  
**After Eye Contact:** Rinse out with plenty of water for at least 15 minutes. If pain persists, summon medical advice.  
**After Swallowing:** Wash out mouth with plenty of water, provided person is conscious. Obtain medical attention if feeling unwell.  
**General Information:** Not available

**SECTION 5: FIRE-FIGHTING MEASURES**

**Suitable Extinguishing Media:**  
Water spray, Carbon Dioxide, Dry Chemical Powder, Appropriate Foam.  
**Special Risks:**  
Non-combustible. Development of hazardous combustion gases or vapors possible in the event of fire.  
**Special Protective Equipment:**  
Do not stay in dangerous zone without suitable chemical protection clothing and self-contained breathing apparatus.  
**Additional Information:**  
Prevent fire-fighting water from entering surface water or groundwater.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**Personal Precautions:**

Do not inhale vapors/aerosols. Avoid substance contact. Ensure supply of fresh air in enclosed rooms.

**Environmental Precautions:**

None

**Additional Notes:**

None

**SECTION 7: HANDLING AND STORAGE**

**Handling:**

Avoid generation of vapors/aerosols. Do not inhale substance.

**Storage:**

Tightly closed. In a well-ventilated place at +15 to +25°C.

**SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION**

**Engineering:**

Maintain general industrial hygiene practice.

**Personal Protective Equipment:**

As appropriate to quantity handled.

**Respiratory Protection:**

Required when vapors/aerosols are generated. Work under hood.

**Protective Gloves:**

Rubber or plastic

**Eye Protection:**

Goggles or face mask

**Industrial Hygiene:**

Change contaminated clothing. Wash hands after working with substance.

**SECTION 9: PHYSICAL/CHEMICAL PROPERTIES**

**Appearance:** Colorless liquid

**Odor:** Odorless

**Density at 20°C:** 1.0 g/cm<sup>3</sup> at 25°C

**Melting Point:** NA

**Boiling Point:** ~ 100°C

**Solubility:** Soluble

**pH at 20°C:** 5.00 at 25°C

**Explosion Limit:** NA

**Flash Point:** NA

**Thermal Decomp.:** NA

**SECTION 10: STABILITY AND REACTIVITY**

**Conditions to be Avoided:**

Heating

**Hazardous Polymerization:**

Will not occur.

**Further Information:**

Not available

**Hazardous Decomposition Products:**

In the event of fire: See section 5.

**Substances to be Avoided:**

The generally known reaction partners of water

### **SECTION 11: TOXICOLOGICAL INFORMATION**

#### **Product Toxicity**

Quantitative data on the toxicity of this product is not available.

#### **Potential Health Effects:**

**Inhalation:** Mucosal irritations.

**Skin Contact:** Slight irritations possible

**Eye Contact:** Irritations.

**Ingestion:** Coughing, pain, bloody vomiting possible.

**Further Data:** The product should be handled with the usual care when dealing with chemicals.

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#### **Component Toxicity**

##### **Acute Toxicity:**

Not Available

##### **Chronic Toxicity:**

Not Available

#### **Additional Data:**

APPLICABLE TO PARTIAL COMPONENT:

The following applies to Citric acid anhydrous – as the pure substance:

Acute toxicity

LD50 (oral, rat): 3000 mg/kg (RTECS).

Specific symptoms in animal studies:

Eye irritation test (rabbit): Severe irritations (Lit.).

Skin irritation test (rabbit): Slight irritations (Lit.).

Subacute to chronic toxicity

Bacterial mutagenicity: Ames test: negative. (Lit.)

No teratogenic effect in animal experiments. (Lit.)

No impairment of reproductive performance in animal experiments. (Lit.)

### **SECTION 12: ECOLOGICAL INFORMATION**

Quantitative data on the ecological effect of this product is not available.

APPLICABLE TO PARTIAL COMPONENT:

The following applies to Citric acid anhydrous – as the pure substance:

Biologic degradation:

Biodegradation: 98 % /2 d (OECD 302 B) (IUCLID).

Easily eliminable.

Behavior in environmental compartments:

Distribution: log Pow: -1.72 (20 °C) (IUCLID).

No bioaccumulation is to be expected (log Pow <1).

Ecotoxic effects:

Biological effects: Harmful effect due to pH shift.

Fish toxicity: *L.idus* LC50: 440-760 mg/L /96 h (IUCLID).

Daphnia toxicity: *Daphnia magna* EC50: ~120 mg/L /72 h (IUCLID).

Maximum permissible toxic concentration:

Protozoa: *E.sulcatum* EC5: 485 mg/L /72 h (Lit.).

Bacterial toxicity: *Ps.putida* EC5: >10000 mg/L /16 h (Lit.). *M.aeruginosa* EC5: 80 mg/L /8 d (Lit.).

Algal toxicity: *Sc.quadricauda* IC5: 640 mg/L /7 d (Lit.).

Further ecologic data:

Degradability:

BOD5: 0.526 g/g (Lit.).

TOD: 0.75 g/g (calculated).

COD: 0.728 g/g (Lit.).

**Further Data:** No ecological problems are to be expected when the product is handled and used with due care and attention.

### **SECTION 13: DISPOSAL CONSIDERATIONS**

**Waste Disposal:** Can be safely disposed of as ordinary refuse.

**Safety Data Sheet**According to Regulation (EC) No. 1907/2006  
OSHA Regulation 29 CFR 1910.1200  
Canadian Regulation SOR/88-66**SECTION 14: TRANSPORTATION INFORMATION****Land:**

Not subject to transport regulations

**Sea:**

Not subject to transport regulations

**Air:**

Not subject to transport regulations

**SECTION 15: REGULATORY INFORMATION**

Complies with European Regulations (EC) No. 1907/2006 and No. 1272/2008.  
Complies with European Council Directives 67/548/EEC and 1999/45/EC.  
Complies with OSHA Regulation 29 CFR 1910.1200.  
Complies with Canadian Regulation SOR/88-66

**SECTION 16: OTHER INFORMATION*****Text of phrases under Section 3***

R36: Irritating to eyes.  
H319: Causes serious eye irritation.

***Revision Information*****Revision Date:** 2013-04-24**Supersedes edition of:** 2012-06-01**Reason for revision:** Regulation (EC) No. 1272/2008  
Compliance**Legend** NA: Not Applicable  
ND: Not Determined

**THE INFORMATION CONTAINED HEREIN IS BASED ON THE PRESENT STATE OF OUR  
KNOWLEDGE. IT CHARACTERIZES THE PRODUCT WITH REGARD TO THE  
APPROPRIATE SAFETY PRECAUTIONS. IT DOES NOT REPRESENT A GUARANTEE OF  
THE PROPERTIES OF THE PRODUCT.**