

# **Kit #701 Chemiluminescence Demonstration**



## 1. IDENTIFICATION

### 1.1 Product Identifiers

Product Name: Luminol Activator Solution  
Alternative names: Hydrogen Peroxide, 3%  
Product Number: 701-2EA, TX-B009

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: For laboratory and educational use only

### 1.3 Details of the supplier of the safety data sheet

Company: Lab-Aids, Inc, 17 Colt Ct., Ronkonkoma, NY 11779, USA  
Telephone: +1 800 381 8003.  
Fax: +1 631 820 8268

### 1.4 Emergency telephone number

Emergency number: CHEMTREC 1 800 424-9300

## 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

#### GHS classification

Skin irrit. (Category 2), H315  
Eye dam. (Category 1), H318

### 2.2 Label elements, including precautionary statements

Signal word: Danger  
Hazards statements: H315– Causes skin irritation, H318– Causes serious eye damage.  
Precautionary statements: P264 - Wash skin thoroughly after handling, P280 - Wear protective gloves, eye protection, P305+351-IF IN EYES: Rinse cautiously with water for several minutes. See section 4 for Eye Contact.



Pictogram:

### 2.3 Hazards not otherwise classified: None.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: Not applicable

### 3.2 Mixture

Chemical Name	Product identifier	%	GHS-US classification
Water	CAS# 7732-18-5	94%	Not classified
Hydrogen peroxide	CAS# 7722-84-1	3%	Ox. Liq. 1, H271; Eye Dam. 1, H318; Skin Corr. 1A H314;

3.3 Chemicals where a trade secret is claimed:

## 4. FIRST AID MEASURE

### 4.1 Description of the first aid measure:

**INGESTION:** Never give anything by mouth to unconscious person. Rinse mouth and get conscious person drink a glass of milk or water. Do NOT induce vomiting unless directed to do so by medical personnel. Get immediate medical attention.

**INHALATION:** Remove to fresh air. Get medical attention if necessary.

**EYE CONTACT:** Wash immediately with plenty of water, and continue washing for at least 15min., occasionally lifting upper and lower eyelids. Seek immediate medical attention.

**SKIN CONTACT:** Flush thoroughly with mild soap and water. Remove contaminated clothing. Get medical attention if irritation develops.

4.2 Most important symptoms and effects, both acute and delayed: Refer to section 11.

4.3 Indication of any immediate medical attention and special treatment needed: No additional information available.

## 5. FIREFIGHTING MEASURES

5.1 Extinguishing media: Not flammable

Suitable extinguishing media: Use TriClass, dry chemical extinguisher.

5.2 Special hazard arising from the substance or mixture: Contact with metals can generate hydrogen gas.

5.3 Advice for firefighters: Use self-contained breathing apparatus and protective clothing.

## 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Wear laboratory grade gloves, eye protection and a lab coat.

6.2 Emergency procedures: Restrict unprotected personnel from the area.

6.3 Methods and material used for containment and cleanup procedure: Contain the spill with an inert absorbent material and place in appropriate container. Use paper towel for small spills and deposit in waste container. Ventilate and wash the spill area with soap and water.

## 7. HANDLING AND STORAGE

7.1 Precaution for safe handling: Read label on container before using. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Use only under adult supervision. Avoid breathing vapor. Use hood or with adequate ventilation. Wash hands thoroughly after handling.

7.2 Storage: Keep container in cool, well-ventilated area.

7.3 incompatibility: Refer to section 10.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**8.1 Control parameters:** ACGIH: TWA: 1.4mg/m<sup>3</sup> (hydrogen peroxide).

**8.2 Exposure controls:** Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits.

**Respiratory protection:** None should be needed if normal laboratory handling at room temperature.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical state:** Liquid.

**Appearance:** Transparent.

**Odor:** Not available

**pH:** Not available

**Vapor Pressure ( mm Hg):** Not available

**Vapor Density:** Not available

**Evaporation Rate:** Not available

**Viscosity:** Not available

**Flash point:** Not available

**Autoignition:** Not available

**Boiling point:** Not available

**Melting point:** Not available

**Freezing point:** Not available

**Decomposition temp:** Not available

**Solubility:** Miscible in water

**Specific gravity (H<sub>2</sub>O = 1):** Not available

**Percent volatile (%):** Not available

**Molecular formula:** Mixture

**Molecular weight:** Mixture

## 10. STABILITY AND REACTIVITY

**Chemical Stability:** Stable

**Conditions to Avoid:** High temperatures, light, and incompatible materials.

**Incompatibilities:** Slightly reactive to reactive with reducing agents, combustible materials, metals, acids, alkalis.

**Hazardous decomposition:** not available.

**Hazardous polymerization:** Will not occur.

## 11. TOXICOLOGICAL INFORMATION

### Acute effects:

**Eyes:** Causes severe irritations with possible burns. Symptoms may include burning sensation, redness, inflammation, pain, possible corneal edema and corneal cloudiness. **Skin:** May cause skin irritation. May cause reddening of the skin and temporary whitening of the skin. Not expected to be a health hazard under normal conditions. **Ingestion:** Ingestion of large doses may cause gastrointestinal tract irritation with possible blistering of the tongue, mouth, throat and stomach. It can produce nausea, vomiting, hypermotility, diarrhea. May affect behavior/CNS May affect cardiovascular system and cause vascular collapse and damage.

### Toxicological data:

Acute oral toxicity ORAL LD<sub>50</sub>: 2000mg/kg [Rabbit], as hydrogen peroxide

Acute vapor toxicity IHL-LC<sub>50</sub>: 2000ppm [Rat]/4h, as hydrogen peroxide

DERMAL LD<sub>50</sub>: 4060mg/kg [Rat], as hydrogen peroxide.

### Carcinogenicity:

California prop 65: Not classified

## 12. ECOLOGICAL INFORMATION

May be toxic to aquatic life.

## 13. DISPOSAL CONSIDERATION

Disposal of in accordance with all local, state, and federal regulations, or contact with a licensed chemical disposal agency.

## 14. TRANSPORT INFORMATION

**UN number:** N/A

**Shipping name:** Not controlled

**Hazard Class:** N/A

**Packing group:** N/A

**Exceptions:** N/A

## 15. REGULATORY INFORMATION

TSCA-listed, DSCL (EEC): S26-In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

## 16. OTHER INFORMATION

### Disclaimer:

The Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Lab-Aids, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation and verification. The data should not be confused with local, state, federal regulations, or insurance mandates, and CONSTITUTE NO WARRANTY. Any use of these data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond Lab-Aids, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

## 1. IDENTIFICATION

### 1.1 Product Identifiers

Product Name: Reagent A  
Alternative names: Proprietary mixture.  
Product Number: 701-1EA.

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: For laboratory and educational use only.

### 1.3 Details of the supplier of the safety data sheet

Company: Lab-Aids, Inc, 17 Colt Ct., Ronkonkoma, NY 11779, USA.  
Telephone: +1 800 381 8003.  
Fax: +1 631 820 8268.

### 1.4 Emergency telephone number

Emergency number: CHEMTREC 1 800 424-9300.

## 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

#### GHS classification

Eye Irrit. (Category 2A), H319  
Skin Irrit (Category 2), H315

### 2.2 Label elements, including precautionary statements

Signal word: Warning  
Hazards statements: H319– Causes serious eye irritation, H315–Causes skin irritation.  
Precautionary statements: P264 - Wash skin thoroughly after handling, P280 - Wear protective gloves, eye protection



Pictogram:

### 2.3 Hazards not otherwise classified: None.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substance: N/A

### 3.2 Mixture:

Chemical Name	Product identifier	%	GHS-US classification
Proprietary ingredient 1	Trade Secret	81-8-87.9%	Not classified
Proprietary ingredient 2	Trade Secret	10-14%	Eye Irrit. 2A, H319
Proprietary ingredient 3	Trade Secret	1-2%	Eye Irrit. 2A, H319; Skin Irrit. 2, H315; STOT SE, 3, H335
Proprietary ingredient 4	Trade Secret	1-2%	Acute Tox. 3, H301; Eye Irrit. 2A, H319; Skin Irrit. 2
Proprietary ingredient 5	Trade Secret	0.1-0.2%	Eye Irrit. 2A, H319; Skin Irrit. 2, H315; STOT SE, 3, H335

**3.3 Chemicals where a trade secret is claimed:** Any concentration shown as a range is to protect confidentiality, or is it due to batch variation.

## 4. FIRST AID MEASURE

### 4.1 Description of the first aid measure:

**INGESTION:** Never give anything by mouth to unconscious person. Rinse mouth and get conscious person drink a glass of milk or water. Do NOT induce vomiting unless directed to do so by medical personnel. Get immediate medical attention.

**INHALATION:** Remove to fresh air. Get medical attention if necessary.

**EYE CONTACT:** Wash immediately with plenty of water, and continue washing for at least 15min., occasionally lifting upper and lower eyelids. Seek medical attention if irritation develops.

**SKIN CONTACT:** Flush thoroughly with mild soap and water. Remove contaminated clothing. Get medical attention if necessary.

**4.2 Most important symptoms and effects, both acute and delayed:** Refer to section 11.

**4.3 Indication of any immediate medical attention and special treatment needed:** No additional information available.

## 5. FIREFIGHTING MEASURES

### 5.1 Extinguishing media: Not flammable

Suitable extinguishing media: Use extinguishing methods for surrounding fires.

**5.2 Special hazard arising from the substance or mixture:** Sodium oxides.

**5.3 Advice for firefighters:** Use self-contained breathing apparatus and protective clothing.

## 6. ACCIDENTAL RELEASE MEASURES

**6.1 Personal precautions:** Wear laboratory grade gloves, eye protection and a lab coat.

**6.2 Emergency procedures:** Restrict unprotected personnel from the area.

**6.3 Methods and material used for containment and cleanup procedure:** Use adequate tools to put the spilled solid in a appropriate waste disposal container, or reuse if not contaminated. Ventilate and wash the spill area with soap and water.

## 7. HANDLING AND STORAGE

**7.1 Precaution for safe handling:** Read label on container before using. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Use only under adult supervision. Avoid breathing vapor. Use hood or with adequate ventilation. Wash hands thoroughly after handling.

**7.2 Storage:** Keep container in cool, well-ventilated area. Keep It tightly closed.

**7.3 incompatibility:** Refer to section 10.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**8.1 Control parameters: ACGIH:** not available.

**8.2 Exposure controls:** Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits.

**Respiratory protection:** Non should be needed if normal laboratory handling at room temperature.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical state:** Solid.

**Appearance:** White to Off white with blue crystals

**Odor:** Not available

**pH:** Alkaline

**Vapor Pressure ( mm Hg):** Not available

**Vapor Density:** Not available

**Evaporation Rate:** Not available

**Viscosity:** Not available

**Flash point:** Not available

**Autoignition:** Not available

**Boiling point:** Not available

**Melting point:** Not available

**Freezing point:** Not available

**Decomposition temp:** Not available

**Solubility:** Soluble in water

**Specific gravity (H<sub>2</sub>O = 1):** Not available

**Percent volatile (%):** Not available

**Molecular formula:** Not available

**Molecular weight:** Not available

## 10. STABILITY AND REACTIVITY

**Chemical Stability:** Stable

**Conditions to Avoid:** Heat, moisture and incompatibles.

**Incompatibilities:** Reacts with acids to release carbon dioxide gas and heat.

**Hazardous decomposition:** Gaseous carbon dioxide.

**Hazardous polymerization:** Will not occur.

## 11. TOXICOLOGICAL INFORMATION

**Acute effects:** Eyes: Causes eye irritation. Skin: Causes skin irritation. Prolonged or repeated skin exposure may cause dermatitis. Inhalation: Dust may cause respiratory tract and mucous membrane irritation with coughing and shortness of breath. Ingestion: Ingestion may cause irritation of the digestive tract resulting in nausea, vomiting, diarrhea, thirst and abdominal pain. It contains minimal amounts of copper compounds. Individuals with Wilson's disease may be affected by ingestion of elemental copper. Hereditary metabolic disorder involving deficiency in the copper binding and transport ceruloplasmin.

ORAL LD<sub>50</sub>: 4090mg/kg Not available  
DUST LC<sub>50</sub>: 2300mg/m<sup>3</sup> Not available

**Carcinogenicity:**

California prop 65: Not classified

## 12. ECOLOGICAL INFORMATION

LC50 Bluegill (*Lepomis macrochirus*) 300mg/l, 96h, EC50 Water flea (*Ceriodaphnia dubia*) 156-298.9 mg/l, 48h

## 13. DISPOSAL CONSIDERATION

Disposal of in accordance with all local, state, and federal regulations, or contact with a licensed chemical disposal agency.

## 14. TRANSPORT INFORMATION

**UN number:** Not available

**Shipping name:** Not controlled.

**Hazard Class:** N/A

**Packing group:** N/A

**Exceptions:** N/A

## 15. REGULATORY INFORMATION

TSCA-listed.

## 16. OTHER INFORMATION

**Disclaimer:**

The Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Lab-Aids, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation and verification. The data should not be confused with local, state, federal regulations, or insurance mandates, and CONSTITUTE NO WARRANTY. Any use of these data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond Lab-Aids, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).