6397.

SB13757

Kit #32 Biology and Chemistry of Soil Experiment

1. IDENTIFICATION

1.1 Product Identifiers

Product Name: Potassium Dichromate Solution
Alternative names: Potassium dichromate water solution.
Product Number: 32-4EA, A32-4, C32-4.

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

Acute Toxicity, Oral (Category 2), H300; Skin Sen. (Category 1) H317
Germ cell Mutagenicity (Category 1A), H340
Carcinogenicity (Category 1A) H350
Eye Damage , Skin Corrosion (Category 1) H314
Aquatic Acute (Category 1), H400; Aquatic Chronic (Category 1), H410

2.2 Label elements, including precautionary statements

Pictogram:

Signal word: Danger

Hazards statements: H317–May cause an allergic skin reaction. H340–May cause genetic defects. H350-May cause cancer. H410-Very toxic to aquatic life with long lasting effects. H300-Fatal if swallowed. H314-Causes severe skin burns and eye damage.

Precautionary statements: P273—Avoid release to the environment P264 - Wash skin thoroughly after handling, P280 - Wear protective gloves, eye protection.

2.3 Hazards not otherwise classified: none.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: N/A

Chemical Name	Product identifier	%	GHS-US classification
Water	CAS# 7732-18-5	82%	Not classified
Potassium dichromate	CAS# 7778-50-9	12%	Ox. Solid 2, H272; Acute Tox. 2, H300; Acute Tox. 4, H312, Skin Sen. 1, H317; Resp. Sen. 1, H334; Eye Dam. 1, H314; STOT 1, H372; Muta 1B, H340; Carc. 1B, H350; Repr. 1B, H360; Aquatic Acute 1, H400, Aquatic Chronic 1, H410

3.2 Mixture: Yes

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 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: No data available.

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 deposit in a suitable container. Ventilate and wash 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. 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: TWA: 0.05mg/m³ as potassium dichromate.

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: Liquid
Appearance: Orange-yellow.
Odor: Not available
pH: Not available
Vapor Pressure (mm Hg): Not available
Vapor Density: The highest known is 0.62
Evaporation Rate: Not available
Viscosity: N/A
Flash point: Not available
Autoignition: Not available

Boiling point: The lowest know is 100°C
Melting point: Not available
Freezing point: Not available
Decomposition temp: Not available
Solubility: Miscible in water and alcohol
Specific gravity (H_2O = 1): 1.011 at 20°C
Percent volatile (%): Not available
Molecular formula: Mixture
Molecular weight: Mixture

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: Incompatible materials.
Incompatibilities: Slightly reactive with reducing agents, combustible materials, organic materials.
Hazardous decomposition: Not available.
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eye: Causes eye irritation with possible eye burns and eye damage. Skin: It may cause skin irritation and possible burns. Inhalation: May cause respiratory tract and mucous membrane irritation. Ingestion: Fatal if swallowed. It may cause irritation and possible burns of the mouth, throat and stomach. Prolonged or repeated ingestion of potassium dichromate may affect kidneys, liver, CNS and cause damage. May cause adverse reproductive effects. May affect genetic material. Solid potassium dichromate is a known human carcinogen. Serious over-exposure may lead to death. California prop. 65: This product contains potassium dichromate for which the State of California has found to cause cancer, and developmental harm.

Toxicological data:
ORAL LD_{50}: 25mg/kg [Mouse] as potassium dichromate
DERMAL LD_{50}: 1150mg/kg [Rabbit] as potassium dichromate
DUST LC_{50}: No information available

Carcinogenicity:
California prop 65: Potassium dichromate.

12. ECOLOGICAL INFORMATION

LC50 Pimephales promelas (fathead minnow) 14-20.9mg/l, 96h, as potassium dichromate.
LC50 Oryzias latipes 21.21-30.05mg/l, 96h, as potassium dichromate.
Dangerous to aquatic life in high concentrations.

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: 3287
Shipping name: Toxic liquid, inorganic, n.o.s. (potassium dichromate)
Hazard Class: 6.1
Packing group: III
Exceptions: Ltd. Qty. 5L

15. REGULATORY INFORMATION

TSCA-listed, EINECS-listed (232-140-5). WHMIS (Canada): CLASS D-2B: Material causing other toxic effects. DSCL (EEC) R36-Irritating to eyes. R22-Harmful if swallowed. S46-If swallowed, seek medical advice immediately and show this container or label.

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: Barium Chloride Solution
Alternative names: Barium chloride water solution.
Product Number: 32-2EA, A32-2, C32-2.

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
Oral Tox. (Category 5) H303

2.2 Label elements, including precautionary statements
Signal word: Warning
Pictogram: Not classified
Hazards statements: H303 - May be harmful when swallowed.
Precautionary statements: P273—Avoid release to the environment,P264 - Wash exposed skin thoroughly after handling, P280 - Wear protective gloves, eye protection.

2.3 Hazards not otherwise classified: None.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: N/A
3.2 Mixture: Yes

Chemical Name	Product identifier	%	GHS-US classification
Water	CAS# 7732-18-5	95-98%	Not classified
Barium Chloride	CAS# 10361-37-2	2-5%	Acute Tox. 4, H301; Acute Tox. 4, H332, Aquatic Tox. 3, H402; Aquatic Chronic 3, H412

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. Get medical attention if necessary.
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: Emits barium oxides and hydrogen chloride gas when heated to decomposition.
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 deposit in an appropriate container. For small spills use paper towel. Ventilate and wash 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. 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: TWA 0.5 mg/m³ as barium chloride

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: Liquid.
Appearance: Clear.
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_2O = 1): Not available
Percent volatile (%): Not available
Molecular formula: Mixture
Molecular weight: Mixture

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: Incompatible materials.
Incompatibilities: Reactive with oxidizing agents and acids.
Hazardous decomposition: Barium oxides and hydrogen chloride gas.
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eye: May cause eye irritation. Skin: May cause skin irritation. Inhalation: Not expected to cause adverse effects under normal handling procedures. Ingestion: Ingestion may cause gastrointestinal irritation with nausea, vomiting, diarrhea.

Toxicological data:
ORL-LD_{50}: 118mg/kg [Rat], 76mg/kg [Guinea pig], 150mg/kg [Mouse]
IHL-RAT LD_{50}: Not available
SKN-RABIT LD_{50}: Not available

Carcinogenicity:
California prop 65: Not classified

12. ECOLOGICAL INFORMATION

EC50 [(Daphnia magna (Water flea)] 48 hours: 14.5 mg/l: barium chloride.

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: 1564
Shipping name: Barium Compound, n.o.s. (Barium chloride liquid)
Hazard Class: 6.1
Packing group: III
Exceptions: Lt qty. 4L

15. REGULATORY INFORMATION

TSCA-listed, EINECS-listed (233-788-1) as barium chloride. WHMIS (Canada): CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC). DSCL (EEC). R25– Toxic if swallowed.

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: pH Soil Indicator Solution
Alternative names: Universal Indicator alcohol based solution.
Product Number: 32-3EA, A32-3, C32-3

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
Flam. Liq. (Category 2), H225
Eye Irrit. (Category 2A) H319
Oral Tox. (Category 4) H302
Specific Target Organ Toxicity, Single Exposure (Category 3), H336

2.2 Label elements, including precautionary statements
Signal word: Danger
Pictogram:
Hazards statements: H225 - Highly flammable liquid and vapor, H319– Causes serious eye irritation, H302-Harmful if swallowed, H336– May cause drowsiness or dizziness. H351– Suspected of causing cancer.
Precautionary statements: P210 - Keep away from heat, hot surfaces, open flames, sparks, P280 - Wear protective gloves, eye protection
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	49%	Not classified
Ethyl alcohol	CAS# 64-17-5	45%	Flam. Liq. 2, H225; STOT SE 3; H336
Methanol	CAS# 67-56-1	2.5%	Flam. Liq. 2, H225; Acute Tox. 3, H301+H302+H303
Ethyl Acetate	CAS# 141-78-6	2%	Flam. Liq. 2, H225; Skin Irrit. 2, H315; Eye Irrit. 2A, H319
Methyl isobutyl ketone	CAS# 108-10-1	0.5%	Flam. Liq. 2, H225; Eye Irrit. 2A, H319, Carc. 2, H351
Universal Indicator	Trade Secret	0.1-1%	Not classified

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 necessary.
SKIN CONTACT: Flush thoroughly with mild soap and water. Remove contaminated clothing. Get medical attention if irritation develop.
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: Flammable liquid.
Suitable extinguishing media: Use water spray, alcohol-resistant foam, or TriClass, dry chemical extinguisher.
5.2 Special hazard arising from the substance or mixture: Vapor spreads at floor level. Flash back possible over considerable distance.
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 deposit in a sealed container. For small spill use paper towel. Dry material place in trash. Ventilate and wash spill area with soap and water.

7. HANDLING AND STORAGE

7.1 Precaution for safe handling: Read label on container before using. Keep away from heat, sparks and flame. Vapor forms from this product and may travel, or be moved by air currents and ignited by pilot lights, static discharges , flames, sparks, heaters or other ignition sources. Ensure all equipment is electrically grounded before beginning transfer operations.
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: Flammable cabinet. 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: 400ppm (Ethyl Acetate); **USA OSHA:** TWA: 200ppm (Methanol); **ACGIH:** TWA: 1000ppm (Ethanol).

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: Liquid.
Appearance: Green or red orange.
Odor: Strong alcohol odor
pH: Not available
Vapor Pressure (mm Hg): 66.661hPa
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: Not available
Flash point: 13 °C (55 °F)
Autoignition: ca. 400 °C, 752 °F; ASTM D 2155

Flammability: Explosion limits: Lower: 3.3% **Upper:** 19.0%
Boiling point: 74-80 °C (165.2-176 ° F)
Melting point: -114°C (-173° F)
Freezing point: Not available
Decomposition temp: Not available
Solubility: Miscible in water and many organic solvents
Specific gravity (H_2O = 1): 0.79 g/cm3 @ 15.5 °C, 60 °F
Percent volatile (%): Not available
Molecular formula: Mixture
Molecular weight: Mixture

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: High temperatures, sparks open flames and incompatible materials.
Incompatibilities: Strong oxidizing agents, acids, peroxides, acid chlorides, acid anhydrides, alkali metals, ammonia.
Hazardous decomposition: N/A
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eye: Causes eye irritation. Skin: May cause mild skin irritation. May be absorbed through skin. Inhalation: Inhalation of high concentration may affect CNS characterized by headache, dizziness, confusion, and loss of coordination. Ingestion: May be harmful if swallowed. Ingested doses will produce nausea, dizziness and headache. May affect behavior, brain, CNS.

Toxicological data:
ORAL LD_{50}: 2000mg/kg [Rat] (Ethanol)
VAPOR LC_{50}: >20 mg/l [Mouse] 4h (Ethanol)
DERMAL LD_{50}: >2000mg/kg [Rabbit] (Ethanol)

ORAL LD_{50}Methyl alcohol: >50-300 mg/kg [Rat].
VAPOR LC_{50}Methyl alcohol: >2-10 mg/l [Rat].
DERMAL LD_{50}Methyl alcohol: >200-1000 mg/kg [Rabbit]

ORAL LD_{50}: >2000mg/kg [Rat] (Ethyl Acetate)
VAPOR LC_{50}: Not available
DERMAL LD_{50}: >2000mg/kg [Rabbit] (Ethyl Acetate)

ORAL LD_{50}MIBK: >2000 mg/kg [Rat].
VAPOR LC_{50}MIBK: >10-20 mg/l 4h [Rat].
DERMAL LD_{50}MIBK: >2000 mg/kg [Rabbit]

Carcinogenicity:
California prop 65: Methanol, Methyl isobutyl ketone.

12. ECOLOGICAL INFORMATION

LC50 (Pimephales promelas (fathead minnow)) 96 hours: > 100 mg/l; flow-through test Test substance: Ethanol;
LC50 (Pimephales promelas (fathead minnow)) 96 hours: 29,400 mg/l Test substance: Methanol;
LC50 (Pimephales promelas (fathead minnow)) 96 hours: > 100 mg/l; semi-static test Test substance: Ethyl Acetate;
LC50 (Danio rerio (zebra fish)) 96 hours: > 100 mg/l; static test, Test substance MIBK

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: 1987
NA: N/A
Shipping name: ALCOHOLS, NOS
Hazard Class: 3
Packing group: PG II
Exceptions: Lty Qty ≤1L

15. REGULATORY INFORMATION

TSCA-listed, EINECS-listed (200-578-6) ethanol, (200-659-6) methanol, (205-500-5) Ethyl Acetate, (203-550-1) MIBK. WHMIS (Canada): Class B, Division 2: Flammable liquid. Class D, Division 2, Subdivision A: Very toxic material. Class D, Division 2, Subdivision B: Toxic material.

16. OTHER INFORMATION

Disclaimer:

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1. IDENTIFICATION

1.1 Product Identifiers
Product Name: Phenolic Rose Bengal Solution
Alternative names: Phenol solution, Carbolic acid solution.
Product Number: 32-1EA, A32-1, C32-1.

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
Acute Toxicity, Oral (Category 5), H303, Acute Toxicity, Inhalation (Category 5) H333
Acute Toxicity, Dermal (Category 5), H313, Germ cell Mutagenicity (Category 2), H341
Eye Damage and Skin Corr. (Category 1) H314
Specific Target Organ Toxicity, Repeated Exposure (Category 2),H373
Aquatic Acute (Category 3), H402; Aquatic Chronic (Category 3), H412

Pictogram:

2.2 Label elements, including precautionary statements
Signal word: Danger
Hazards statements: H303-May be harmful if swallowed, H333-May be harmful when inhaled, H313– May be harmful in contact with skin, H314-Causes severe skin burns and eye damage, H341–Suspected to cause genetic defects. H373-May cause damage to organs: liver and kidneys through prolonged or repeated exposure: ingestion. H402-Harmful to aquatic life, H412-Harmful to aquatic life with long lasting effects.
Precautionary statements: P273—Avoid release to the environmentP264 - Wash skin thoroughly after handling, P280 - Wear protective gloves, eye protection.
2.3 Hazards not otherwise classified: none.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: N/A
3.2 Mixture: Yes

Chemical Name	Product identifier	%	GHS-US classification
Water	CAS# 7732-18-5	94%	Not classified
Rose Bengal	CAS# 632-69-9	1%	Not classified
Phenol	CAS# 108-95-2	5%	Acute Tox. 3, Oral, H301; Acute Tox. 3, Dermal, H311, Acute Tox. 3, Inh, H331; Skin Corr. 1, H314; Eye Dam. 1, H314; STOT RE 2, H373; Muta 2, H341; Aquatic Acute 2, H402, Aquatic Chronic 2, H412

3.3 Chemicals where a trade secret is claimed: none.

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 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: May produce combustible vapor at high temperatures.
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 deposit in a suitable container. Ventilate and wash 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. Use hood. Keep away from fire, sparks and ignition sources. 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: TWA: 5ppm as phenol.

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: Liquid
Appearance: Red.
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 and alcohol
Specific gravity (H_2O = 1): 1.011 at 20°C
Percent volatile (%): Not available
Molecular formula: Mixture
Molecular weight: Mixture

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: Heat, Incompatible materials.
Incompatibilities: Reactive with oxidizing agents, metals, acids, alkalies.
Hazardous decomposition: Carbon oxides.
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eye: Causes severe eye irritations and possible burns. May cause corneal injury and blindness. Skin: Causes skin irritation with possible burns. It may be absorbed through skin and cause systemic effects similar to those of ingestion and inhalation. Inhalation: May cause respiratory tract and mucous membrane irritation with coughing, difficulty breathing and headache. Ingestion: Harmful if swallowed. It may cause irritation and possible burns of the digestive tract with nausea, vomiting salivation, diarrhea, immediate and marked abdominal pain. May cause severe and permanent damage to the digestive tract. May also affect metabolism and affect behavior/central nervous system. Prolonged and repeated ingestion may affect kidney and liver .

Toxicological data:
ORAL LD_{50}: 317mg/kg [Rat] as carbolic acid.
DERMAL LD_{50}: 669mg/kg [Rat] as carbolic acid
DUST LC_{50}: No information available

Carcinogenicity:
California prop 65: Not listed.

12. ECOLOGICAL INFORMATION

LC50 Pimephales promelas (fathead minnow) 11.9-25.3mg/l, 96h, as phenol
LC50 Oncorhynchus mykiss 4.23-7.49mg/l, 96h, as phenol.

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: 2821
Shipping name: Phenol solutions
Hazard Class: 6.1
Packing group: III
Exceptions: Ltd. Qty. 5L

15. REGULATORY INFORMATION

TSCA-listed, EINECS-listed (203-632-7) as phenol. WHMIS (Canada): CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC). DSCL (EEC) R22-Harmful if swallowed. S46-If swallowed, seek medical advice immediately and show this container or label.

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).

Kit #33 Soil Organism Study

LAB-AIDS
Experiencing Science

SAFETY DATA SHEET
Version: SDS_275.01.00
Revision Date: July 10, 2015

1. IDENTIFICATION

1.1 Product Identifiers
Product Name: Dilute Alcohol
Alternative names: Denatured ethyl alcohol water solution.
Product Number: 33-1xx, A33-1, C33-1

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
Flam. Liq. (Category 2), H225
Eye Irrit. (Category 2A) H319
Oral Tox. (Category 4) H302

2.2 Label elements, including precautionary statements
Signal word: Danger
Pictogram:

Hazards statements: H225 - Highly flammable liquid and vapor, H336– May cause drowsiness or dizziness,
Precautionary statements: P210 - Keep away from heat, hot surfaces, open flames, sparks, P280 - Wear protective gloves, eye protection

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	30%	Not classified
Ethyl alcohol	CAS# 64-17-5	61%	Flam. Liq. 2, H225; STOT SE 3; H336
Methanol	CAS# 67-56-1	4.5%	Flam. Liq. 2, H225; Acute Tox. 3, H301+H302+H303
Ethyl Acetate	CAS# 141-78-6	3.6%	Flam. Liq. 2, H225; Skin Irrit. 2, H315; Eye Irrit. 2A, H319
Methyl isobutyl ketone	CAS# 108-10-1	0.9%	Flam. Liq. 2, H225; Eye Irrit. 2A, H319

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 medical attention if necessary.
SKIN CONTACT: Flush thoroughly with mild soap and water. Remove contaminated clothing. Get medical attention if irritation develop.
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: Flammable liquid.
Suitable extinguishing media: Use water spray, alcohol-resistant foam, or TriClass, dry chemical extinguisher.
5.2 Special hazard arising from the substance or mixture: Vapor spreads at floor level. Flash back possible over considerable distance.
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 deposit in a sealed container. For small spill use paper towel. Dry material place in trash. Ventilate and wash spill area with soap and water.

7. HANDLING AND STORAGE

7.1 Precaution for safe handling: Read label on container before using. Keep away from heat, sparks and flame. Vapor forms from this product and may travel, or be moved by air currents and ignited by pilot lights, static discharges , flames, sparks, heaters or other ignition sources. Ensure all equipment is electrically grounded before beginning transfer operations.
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: Flammable cabinet. 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: 400ppm (Ethyl Acetate); **USA OSHA:** TWA: 200ppm (Methanol); **ACGIH:** TWA: 1000ppm (Ethanol).

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: Liquid.
Appearance: Clear, colorless.
Odor: Strong alcohol odor
pH: Not available
Vapor Pressure (mm Hg): 66.661hPa
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: Not available
Flash point: 13 °C (SS °F)
Autoignition: ca. 400 °C, 752 °F; ASTM D 2155

Flammability: Explosion limits: Lower: 3.3% **Upper:** 19.0%
Boiling point: 74-80 °C (165.2-176 ° F)
Melting point: -114°C (-173° F)
Freezing point: Not available
Decomposition temp: Not available
Solubility: Miscible in water and many organic solvents
Specific gravity (H_2O = 1): 0.79 g/cm3 @ 15.5 °C, 60 °F
Percent volatile (%): Not available
Molecular formula: Mixture
Molecular weight: Mixture

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: High temperatures, sparks open flames and incompatible materials.
Incompatibilities: Strong oxidizing agents, acids, peroxides, acid chlorides, acid anhydrides, alkali metals, ammonia.
Hazardous decomposition: N/A
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eye: Causes eye irritation. Skin: May cause mild skin irritation. May be absorbed through skin. Inhalation: Inhalation of high concentration may affect CNS characterized by headache, dizziness, confusion, and loss of coordination. Ingestion: May be harmful if swallowed. Ingested doses will produce nausea, dizziness and headache. May affect behavior, brain, CNS.

Toxicological data:
ORAL LD_{50}: 2000mg/kg [Rat] (Ethanol)
VAPOR LC_{50}: >20 mg/l [Mouse] 4h (Ethanol)
DERMAL LD_{50}: >2000mg/kg [Rabbit] (Ethanol)

ORAL LD_{50}Methyl alcohol: >50-300 mg/kg [Rat].
VAPOR LC_{50}Methyl alcohol: >2-10 mg/l [Rat].
DERMAL LD_{50}Methyl alcohol: >200-1000 mg/kg [Rabbit]

ORAL LD_{50}: >2000mg/kg [Rat] (Ethyl Acetate)
VAPOR LC_{50}: Not available
DERMAL LD_{50}: >2000mg/kg [Rabbit] (Ethyl Acetate)

ORAL LD_{50}MIBK: >2000 mg/kg [Rat].
VAPOR LC_{50}MIBK: >10-20 mg/l 4h [Rat].
DERMAL LD_{50}MIBK: >2000 mg/kg [Rabbit]

Carcinogenicity:
California prop 65: Methanol, Methyl isobutyl ketone.

12. ECOLOGICAL INFORMATION

LC50 (Pimephales promelas (fathead minnow)) 96 hours: > 100 mg/l; flow-through test Test substance: Ethanol;
LC50 (Pimephales promelas (fathead minnow)) 96 hours: 29,400 mg/l Test substance: Methanol;
LC50 (Pimephales promelas (fathead minnow)) 96 hours: > 100 mg/l; semi-static test Test substance: Ethyl Acetate;
LC50 (Danio rerio (zebra fish)) 96 hours: > 100 mg/l; static test, Test substance MIBK

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: 1987
NA: N/A
Shipping name: ALCOHOLS, NOS
Hazard Class: 3
Packing group: PG II
Exceptions: Lty Qty ≤1L

15. REGULATORY INFORMATION

TSCA-listed, EINECS-listed (200-578-6) ethanol, (200-659-6) methanol, (205-500-5) Ethyl Acetate, (203-550-1) MIBK. WHMIS (Canada): Class B, Division 2: Flammable liquid. Class D, Division 2, Subdivision A: Very toxic material. Class D, Division 2, Subdivision B: Toxic material.

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® 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).