

MATERIAL SAFETY DATA SHEET

PRODUCT : RedSafe Nucleic Acid Staining Solution
CAT. NO. : 21141

1. PRODUCT AND COMPANY INFORMATION

iNtRON Biotechnology, INC.

EMERGENCY CALL : 82-31-778-7890

NOTE: If this product is a kit or is supplied with more than one material, please refer to the MSDS for each component for hazard information.

PRODUCT USE: These products are for laboratory research use only and are not intended for human or animal diagnostics, therapeutic, or other clinical uses.

SYNONYMS: Not available

2. COMPOSITION, INFORMATION ON INGREDIENTS

The following list shows components of this product classified as Non-hazardous based on physical properties and health effects:
No hazardous components

3. HAZARDS IDENTIFICATION

Not hazardous according to Directive 67/548/EEC

Occupational exposure presents little or no health hazard.

Potential Health Effects:

Eye: May cause irritation of the eye.

Skin: Contact may irritate/inflame the skin.

Inhalation: No toxicity expected from inhalation.

Ingestion: May cause nausea or vomiting.

Chronic: No data on cancer.

4. FIRST AID MEASURES

Eye: Flush with water in an eyewash for at least 15 minutes, holding eyelids open. Remove contact lenses, clean before re-use. Obtain medical attention if symptoms develop (redness, itching, etc.)

Skin: Wash with plenty of soap and water. Obtain medical attention if symptoms develop (redness, itching, etc.). Remove contaminated clothes, wash before re-use.

Inhalation: Remove person to fresh air. Obtain medical attention unless effects are mild and temporary.

Ingestion: Give plenty of water, if conscious. If vomiting occurs naturally, wash mouth out. Be prepared to induce vomiting upon a physician's advice. Obtain medical attention if symptoms develop.

Note To Physician: Treat symptomatically.

5. FIRE FIGHTING MEASURES

Flashpoint Deg C: Not available.

Upper Flammable Limit %: Not available.

Lower Flammable Limit %: Not available.

Autoignition Temperature Deg C: Not available.

Extinguishing Media: Use means appropriate for surrounding materials.

Firefighting Techniques/Equipment: Standard turnout gear ("bunker gear"). Positive-pressure self-contained breathing apparatus.

Hazardous Combustion Products: Includes carbon dioxide, carbon monoxide, dense smoke.

6. ACCIDENTAL RELEASE MEASURES

Accidental releases may be subject to special reporting requirements and other regulatory mandates. Refer to Section 8 for personal protection equipment recommendations.

Spill Cleanup: Absorb spill. Common absorbent materials should be effective. Deposit in appropriate containers for removal and disposal.

7. HANDLING AND STORAGE

Handling :

Keep closed or covered when not in use.

Storage :

Suitable for most general chemical storage areas.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Exposure Limits:

| Component | OSHA PELAGCIH TWA (ppm) | (ppm) |
|-------------------------|-------------------------|-------|
| No hazardous components | | |

Engineering Controls : Area ventilation is generally adequate.
Personal Protective Equipment:

Eye: Safety glasses should be the minimum eye protection.

Skin: Gloves should be used as minimum hand protection.

Respiratory: No respiratory protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance/physical state: Liquid solution / suspension

Odor: No odor.

Melting Point (C): Not established.

pH: Not established.

Vapor Density: Not established.

Octanol/water Partition Coeff: Not

Evaporation Rate: Not established.

Boiling Point (C): Not established.

Solubility in water: Not established.

Vapor Pressure: Not established.

Specific Gravity/Density: Not established.

Volatiles: Not established.

Viscosity: Not established.

10. STABILITY AND REACTIVITY

Stability: Stable under ordinary conditions of use and storage.

Materials to Avoid: Strong oxidizers.

Hazardous Decomposition Products: hydrogen chloride, nitrogen oxides, carbon monoxide and carbon dioxide.

Hazardous Polymerization: Not expected to occur.

11. TOXICOLOGICAL INFORMATION

RTECS Number : N/A

Acute Toxicity:

| Chemical Name | LD50 (Mouse) |
|---------------|-------------------------------|
| RedSafe dye | > 5,000 mg/kg Oral LD50 Mouse |

Signs and symptoms of exposure:

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

Mutagenic effects:

In presence of metabolic activation S9 mix, the number of revertant colonies of strains TA₉₇ and TA₁₀₀ were close to the spontaneous revertant colony plate counts. And those of the strain TA₉₈ and TA₁₀₂ were increased, but the increase in the number of revertants were not higher twice the spontaneous revertant colony plate counts, and there was no dose-response relationship.

12. ECOLOGICAL INFORMATION

Ecotoxicological Information: No ecological information available.

Environmental Fate (Degradation, Transformation, and Persistence) : Bioconcentration is not expected to occur.

13. DISPOSAL CONSIDERATIONS

Regulatory Information: Not applicable.

Disposal Method: Clean up and dispose of waste in accordance with all federal, state, and local environmental regulation.

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name : None

Non-hazardous for Transport : This substance is considered to be non-hazardous for transport.

IATA

Proper Shipping Name : None

Non-hazardous for Transport : Non-hazardous for air transport.

15. REGULATORY INFORMATION

Not hazardous according to Directive 67/548/EEC

TSCA: This product is solely for research and development purposes only and may not be used, processed or distributed for a commercial purpose. It may only be handled by technically qualified individuals.

Prop 65 Listed Chemicals: PROP 65

No hazardous components. No 313 Chemicals.

16. OTHER INFORMATION

HMIS Rating 0-4:

FIRE: Not determined.

HEALTH: Not determined.

REACTIVITY: Not determined.

Abbreviations

N/A - Data is not applicable

SARA - Superfund and Reauthorization Act

HMIS - Hazard Material Information System NTP - National Toxicology Program

WHMIS - Workplace Hazard Materials Information System

OSHA - Occupational Health and Safety Administration

IARC - International Agency for Research on Cancer

PROP 65 - California Safe Drinking Water and Toxic Enforcement Act of 1986.

EINECS - European Inventory of Existing Commercial Chemical Substances.

The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may present unknown hazards and should be used with caution. Since iNtRON Biotechnology, INC. cannot control the actual methods, volumes, or conditions of use, the Company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein. THE INFORMATION IN THIS MSDS DOES NOT CONSTITUTE A WARRANTY, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.