



MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **Triple Dye Loading Buffer (6X)** PRODUCT NUMBER: EC-855
 CHEMICAL NAMES/ DESCRIPTION: Aqueous solution of sucrose, tris base, and dyes.

MANUFACTURER: National Diagnostics, Inc TELEPHONE NUMBER:
 305 Patton Drive (800) 526-3867
 Atlanta, GA 30336 (404) 699-2121
 EMERGENCY NUMBER:
 CHEMTREC (800) 424-9300

2. COMPOSITION / INFORMATION ON INGREDIENTS

Component	% Comp	CAS #	EINECS #	TLV (units)
Sucrose	50	57-50-1		10 mg/m3
Xylene Cyanol	< 2.0	4463-44-9		none established
Orange G	< 1.0	1936-15-8		none established
Bromophenol Blue	< 1.0	115-39-9		none established
Tris-Base	< 1.0	77-86-1		none established

3. HAZARDS IDENTIFICATION

APPEARANCE AND ODOR: dark blue, odorless liquid

EMERGENCY OVERVIEW - IMMEDIATE HAZARD IN DRY FORM, SUCROSE MAY FORM COMBUSTIBLE DUST CONCENTRATIONS IN AIR. NUISANCE DUST. HIGH CONCENTRATIONS MAY IRRITATE EYES AND RESPIRATORY TRACT.
EMERGENCY OVERVIEW - CHRONIC HAZARD WARNING CHRONIC EFFECTS OF OVERCONSUMPTION OF SUCROSE MAY INCLUDE CORPULENCE AND TOOTH DECAY. AS PART OF GOOD LABORATORY AND PERSONAL HYGIENE AND SAFETY PROCEDURE, AVOID ALL UNNECESSARY EXPOSURE TO THE CHEMICAL SUBSTANCE AND ENSURE PROMPT REMOVAL FROM SKIN, EYES, AND CLOTHING.

POTENTIAL HEALTH EFFECTS

INHALATION

Not expected to be a health hazard. In dry form, sucrose is a nuisance dust. Inhalation of high concentration may cause upper respiratory tract irritation.

INGESTION

Extremely large oral doses may produce gastrointestinal disturbances.

SKIN

No adverse effects expected.

EYES

No adverse effects expected but in dry form, dust may cause mechanical irritation.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

INHALATION

Coughing.

INGESTION

Nausea and stomach upset possible with extremely large oral doses.

SKIN

No adverse effects expected.

EYES

Redness and itching with mechanical irritation.

CARCINOGENICITY

Not listed as a known or anticipated carcinogen by NTP or IARC.

MUTAGENICITY

No information found.

REPRODUCTIVE TOXICITY

No information found.

TERATOGENIC EFFECTS

No information found.

ROUTES OF ENTRY

No information found.

TARGET ORGAN STATEMENT

No information found.

4. FIRST AID MEASURES

INHALATION:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

INGESTION:

Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Call a physician.

SKIN:

Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

EYES:

Immediately flush eyes with plenty of water for at least fifteen minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

5. FIRE FIGHTING MEASURES

FLASH POINT: N.A. FLAMMABLE LIMITS: N.A.

FLASH POINT METHOD: N.A. AUTOIGNITION TEMPERATURE: N.A.

EXTINGUISHING MEDIA

Use media appropriate to the primary cause of fire.

PROTECTIVE EQUIPMENT

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

HAZARDOUS COMBUSTION PRODUCTS:

Thermal decomposition products may include toxic oxides of nitrogen and carbon.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Not considered an explosion hazard.

NFPA CODES: Health: 1 Flammability: 0 Reactivity: 0

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Contain and clean up spill immediately, prevent from entering floor drains. Contain liquids using absorbents. Shovel all spill materials into disposal drum. Scrub spill area with detergent, flush with copious amounts of water.

WASTE DISPOSAL METHOD

Disposal must be made in accordance with applicable federal, state, and local regulations.

PERSONAL PRECAUTIONS

Wear appropriate protective equipment as specified in section 8.

7. HANDLING AND STORAGE

HANDLING

Avoid contact and inhalation. Do not get in eyes, on skin, on clothing. Wash thoroughly after handling.

STORAGE

Keep in a tightly closed container, stored in a cooled, dry, ventilated area.

STORAGE TEMPERATURE: Room Temperature

DISPOSAL

Observe all national, state, and local regulations regarding disposal.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

AIRBORNE EXPOSURE LIMITS:

Component: Sucrose

ACGIH Threshold Limit Value (TLV): 10 mg/m³

OSHA Permissible Exposure Limit (PEL): 15 mg/m³ total dust, 5 mg/m³ respirable fraction

ENGINEERING CONTROLS

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborn Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source.

RESPIRATORY PROTECTION

For conditions of use where exposure to the dust or mist is apparent, a full-face dust/mist respirator may be worn. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator.

EYE PROTECTION

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

SKIN PROTECTION

Wear protective gloves and clean body covering clothing.

OTHER CONTROL MEASURES

N.A.

9. PHYSICAL PROPERTIES

Boiling Point	220 F	Evaporation Rate	1.0
Melting Point	N.A.	Solubility in Water	Soluble
Vapor Pressure mm Hg	Water	pH	8.3
Vapor Density Air = 1	N.A.	Specific Gravity (H ₂ O = 1)	1.16
% Volatile by Volume	31		

10. STABILITY AND REACTIVITY

STABILITY

Stable under ordinary conditions of use and storage.

CONDITIONS TO AVOID

Heat, incompatibles.

HAZARDOUS DECOMPOSITION PRODUCTS

Thermal decomposition can produce carbon monoxide and carbon dioxide.

HAZARDOUS POLYMERIZATION

Will not occur

INCOMPATIBLES

Sucrose

Oxidizers, sulfuric acid and nitric acid.

Xylene Cyanol

Strong oxidizing agents, strong reducing agents.

Orange G

No information found.

Bromophenol Blue

Strong oxidizers.

Tris-Base

Copper, brass, aluminum, and oxidizing agents.

11. TOXICOLOGICAL INFORMATION

PRODUCT LD50 VALUES

Triple Dye Loading Buffer (6X) Oral Rat LD50 (mg/kg): 59400

Triple Dye Loading Buffer (6X) Dermal Rabbit LD50 (mg/kg): N.A.

COMPONENT CANCER LIST STATUS

Component	NTP Carcinogen		IARC Category
	Known	Anticipated	
Sucrose	No	No	None
Xylene Cyanol	No	No	None
Orange G	No	No	None
Bromophenol Blue	No	No	None
Tris-Base	No	No	None

12. ECOLOGICAL INFORMATION

Sucrose

No information found.

Xylene Cyanol

No information found.

Orange G

No information found.

Bromophenol Blue

No information found.

Tris-Base

No information found on either the environmental fate or environmental toxicity of this material.

13. DISPOSAL CONSIDERATIONS

Observe all national, state, and local regulations regarding disposal.

14. TRANSPORT INFORMATION

DOMESTIC (D.O.T.)

Proper Shipping Name: Not Regulated

Hazard Class: N.A.

UN Number: N.A.

Packing Group: N.A.

INTERNATIONAL (I.A.T.A./I.M.O)

Proper Shipping Name: Not Regulated

Hazard Class: N.A.

UN Number: N.A.

Packing Group: N.A.

15. REGULATORY INFORMATION

UNITED STATES

TSCA Regulatory:

All intentional ingredients are listed on the TSCA Inventory.

SARA 311/312 Hazard Categories

Component	Fire	Pressure	Reactivity	Acute	Chronic
Sucrose	Yes	No	No	No	No
Xylene Cyanol	No	No	No	Yes	Yes
Orange G	No	No	No	No	No
Bromophenol Blue	No	No	No	Yes	No
Tris-Base	No	No	No	Yes	No

EUROPE

EEC Regulatory:

All intentional ingredients are listed on the European EINECS Inventory.

16. OTHER INFORMATION

NFPA CODES: Health: 1 Flammability: 0 Reactivity: 0

MANUFACTURER DISCLAIMER: The information given herein is offered in good faith as accurate, but without guarantee. Conditions of use and suitability of the product for particular uses are beyond our control. All risks of use of the product are therefore assumed by the user. Nothing is intended as a recommendation for uses which infringe valid patents or as extending license under valid patents. Appropriate warnings and safe handling procedures should be provided to handlers and users.