



Material Safety Data Sheet (MSDS)  
Revision Date: 1-8-2022

Kit Name: VitroView™ Hoechst 33342 Nuclear Stain Reagent  
Catalog#: VB-1001

**Components:**

VB-1001	Ready-to-Use Hoechst 33342 Nuclear Staining Solution
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## VB-1001 Ready-to-Use Hoechst 33342 Nuclear Staining Solution MSDS

### 1. Identification of the Substance/Mixture and Company

**Product Name** Ready-to-Use Hoechst 33342 Nuclear Staining Solution  
**Catalog#** VB-1001  
**Product Description** Component  
**Manufacturer/Supplier** VitroVivo Biotech, LLC. 405 E Gude Dr., Suite 214, Rockville, MD 20850  
**Tel/fax Number** Phone: 301-500-0499; Toll free: 1-800-260-9817 Fax: 844-248-6208

### 2. Hazards Identification

Keep away from heat and ignition sources. Harmful if swallowed. Avoid breathing vapors. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed.

### 3. Composition/information on ingredients

**Mixtures Description:** Mixture of the substances listed below.

**Composition:**

Component	CAS#
Hoechst 33342	23491-52-3
Sodium Chloride	7647-14-5
Potassium Chloride	7447-40-7
Sodium Bicarbonate	144-55-8
Sodium Phosphate Monobasic Dihydrate	13472-35-0
Calcium Chloride	10043-52-4
Magnesium Sulfate	7487-88-9
Glucose	50-99-7

### 4. First Aid Measures

Keep away from heat and ignition sources. Harmful if swallowed. Avoid breathing vapors. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed.

**FIRST AID:** CALL A PHYSICIAN.

**SKIN:** Remove contaminated clothing. Wash exposed area with soap and water.

**EYES:** Wash eyes with plenty of water for at least 15 minutes, lifting lids occasionally. Seek Medical Aid.

**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen

**INGESTION:** If swallowed, induce vomiting immediately after giving two glasses of water. Never give anything by mouth to an unconscious person.

### 5. Firefighting Measures

**Fire Extinguisher Type:** Carbon Dioxide, dry chemical powder or appropriate foam  
**Fire / Explosion Hazards:** vapors heavier than air and will stay at the floor level  
**Fire Fighting Procedure:** Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and clothing.

### 6. Accidental Release Measures

Evacuate area. Wear self-contained breathing apparatus and protective clothing.  
Eliminate all sources of ignition.

### 7. Handling and Storage

Store in a cool dry well ventilated area. Keep away from heat and flame. Do not get in eyes, on skin, or on clothing.

### 8. Exposure Controls/Personal Protection

<b>Respiratory Protection:</b>	NIOSH/MSHA-approved respirator
<b>Ventilation:</b>	Mechanical
<b>Protective Gloves:</b>	Solvent resistant gloves as neoprene or nitrile
<b>Eye Protection:</b>	Splash Goggles
<b>Other Protective Equipment:</b>	Wear appropriate clothing to prevent skin exposure

## 9. Physical and Chemical Properties

### General Information

<b>Appearance</b>	
<b>Form:</b>	Fluid
<b>Color:</b>	Colorless
<b>Odor:</b>	characteristic organic odor
<b>Odor threshold</b>	Not determined
<b>pH-value</b>	Not determined
<b>Change in condition</b>	
<b>Melting point/Melting range:</b>	Undetermined
<b>Boiling point/Boiling range:</b>	Undetermined
<b>Flash point:</b>	Not applicable.
<b>Flammability (solid, gaseous)</b>	Not applicable.
<b>Ignition temperature:</b>	
<b>Decomposition temperature:</b>	Not determined.
<b>Auto igniting:</b>	Product is not self-igniting.
<b>Danger of explosion:</b>	Not determined.
<b>Explosion limits:</b>	
<b>Lower</b>	Not determined
<b>Upper</b>	Not determined
<b>Vapor pressure at 20°C (68 °F)</b>	Not determined.
<b>Density at 20°C (68 °F):</b>	Not determined.
<b>Relative density:</b>	Not determined.
<b>Vapour density:</b>	Not determined.
<b>Evaporation rate:</b>	Not determined.
<b>Solubility in / Miscibility with Water:</b>	Infinite.
<b>Segregation coefficient (n-octanol/water)</b>	Not determined
<b>Dynamic:</b>	Not determined
<b>Kinematic:</b>	Not determined
<b>Other information</b>	No further relevant information available.

## 10 Stability and Reactivity

<b>Stability:</b>	Stable
<b>Conditions to Avoid</b>	Avoid contact with heat, sparks, flames, or other sources of ignition.
<b>Materials to Avoid:</b>	Oxidizing materials
<b>Hazardous Decomposition Products:</b>	TOXIC gases produced at decomposition
<b>Hazardous polymerization:</b>	Will Not Occur
<b>Conditions to Avoid:</b>	None known

## 11. Toxicological Information

Oral, Rat: (Chloroform) 695 mg/kg, behavioral and respiratory effects noted; LD50, Dermal, Rabbit: >20,000 mg/kg, details of toxic effects not reported other than lethal dose value. Investigated as a tumorigen (Chloroform).  
 LD50, Oral, Rat (Acetic Acid): 3310 mg/kg; LD50, Dermal, Rabbit (Acetic Acid): 1.06 L/kg, details of toxic effects not reported other than lethal dose value.

## 12. Ecological Information

Ethanol has moderate chronic toxicity to aquatic life. Chloroform has moderate acute and chronic toxicity to aquatic life. Chloroform has caused damage to various plants, including brittle roots and chromosomal damage. Insufficient data are available to evaluate the short term and long term effects of Chloroform to plants, birds, or land animals. Acetic Acid has high biochemical oxygen demand, and a potential to cause oxygen depletion in aqueous systems, low potential to affect aquatic organisms and a low potential to affect the growth of some plant seedlings. Chemical Fate Information: This material is not expected to significantly bioaccumulate. Ethanol is slightly persistent in water, with a half-life of between 2 to 20 days. Chloroform is non-persistent in the aquatic environment. Acetic Acid has low potential to bioconcentrate.

### 13. Disposal Considerations

Absorb with suitable inert material (vermiculite, dry sand, earth) and place in a chemical waste container for proper disposal in an approved waste disposal facility for incineration in a chemical incinerator equipped with scrubber and afterburner. Do not flush to the sewer. Ventilate area of spill. Have extinguishing agent available in case of fire. Eliminate all sources of ignition. Use non-sparking tools and equipment. Always dispose of in accordance with local, state and federal regulations.

### 14. Transport Information

Part Numbers: R1851000-1C, R1851000-4C, R1851000-500C D.O.T. Hazard Class: 3 (6.1) U.N. / N.A. Number: UN1992 Packing Group: III D.O.T. Shipping Name: Flammable Liquid, Toxic, n.o.s., (Ethanol and Chloroform) D.O.T. Label: 3, III

### 15. Regulatory Information

**OSHA Status:** These items meet the OSHA Hazard Communication Standard (29 CFR 1910.1200) definition of a hazardous material.

**TSCA Status:** All components of this solution are listed on the TSCA Inventory or are mixtures (hydrates) of items listed on the TSCA Inventory.

**Sara Title III:**

**Section 302** Extremely Hazardous Substances: Not Applicable.

**Section 311/312** Hazardous Categories: Acute, Chronic, Fire: Yes; Pressure, Reactivity: No

**Section 313** Toxic Chemicals: Not Applicable.

**California:** Contains an ingredient (Chloroform (Trichloromethane)) known to the state of California to cause cancer. Contains an ingredient (Chloroform (Trichloromethane)) known to the state of California to cause cancer.

**Pennsylvania:** Chloroform (Trichloromethane) is listed as both Special and Environmental Hazards on the state's Hazardous Substances List. Ethyl Alcohol (Ethanol) is listed as a Basic Hazard on the state's Hazardous Substances List. Acetic Acid is listed as an Environmental Hazard on the state's Hazardous Substances List. Chloroform (Trichloromethane) is listed as both Special and Environmental Hazards on the state's Hazardous Substances List.

**CERCLA Reportable Quantity:** Chloroform (Trichloromethane) - 10 pounds. Acetic Acid - 5,000 pounds. Acetic

**D022,U044,U154,D002,U154,D002,D022,U044 WHMIS:** B-2: Flammable and Combustible Material. Flammable Liquid. D-2A: Poisonous and Infectious Material.

**Materials causing other toxic effects** - Very Toxic Material. D-1B Poisonous and Infectious Material. Materials causing immediate and serious toxic effects - Toxic Material.

### 16. Other Information

This information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of the material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.

Abbreviations and acronyms:

**ADR:** Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

**IMDG:** International Maritime Code for Dangerous Goods

**DOT:** US Department of Transportation  
**IATA:** International Air Transport Association  
**ACGIH:** American Conference of Governmental Industrial Hygienists  
**NFPA:** National Fire Protection Association (USA)  
**HMIS:** Hazardous Materials Identification System (USA)  
**LC50:** Lethal concentration, 50 percent LD50: Lethal dose, 50 percent

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