109 Experiment

Material Safety Data Sheets

Full-size (8.5 x 11") pdf copy of MSDS is available at www. edvotek.com or by request.

EDVOTEK®

Material Safety Data Sheet
May be used to comply with OSHA's Hazard Communication Standard. 29 CFR 1910.1200 Standard must be consulted for specific requirements.

IDENTITY (As Used on Label and List): **Practice Gel Loading Solution**

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Section I

Manufacturer's Name: EDVOTEK, Inc.
Address (Number, Street, City, State, Zip Code): 14676 Rothgeb Drive, Rockville, MD 20850

Emergency Telephone Number: (301) 251-5990
Telephone Number for information: (301) 251-5990
Date Prepared: 10/05/06
Signature of Preparer (optional):

Section II - Hazardous Ingredients/Identify Information

Hazardous Components [Specific Chemical Identity; Common Name(s)] | OSHA PEL | ACGIH TLV | Other Limits Recommended | % (Optional)

This product contains no hazardous materials as defined by the OSHA Hazard Communication Standard.

Section III - Physical/Chemical Characteristics

Boiling Point	No data	Specific Gravity (H_2O = 1)	No data
Vapor Pressure (mm Hg.)	No data	Melting Point	No data
Vapor Density (AIR = 1)	No data	Evaporation Rate (Butyl Acetate = 1)	No data

Solubility in Water: Soluble
Appearance and Odor: Blue liquid, no odor

Section IV - Physical/Chemical Characteristics

Flash Point (Method Used): No data	Flammable Limits	LEL: No data	UEL: No data

Extinguishing Media: Dry chemical, carbon dioxide, water spray or foam
Special Fire Fighting Procedures: Use agents suitable for type of surrounding fire. Keep upwind, avoid breathing hazardous sulfur oxides and bromides. Wear SCBA.
Unusual Fire and Explosion Hazards: Unknown

Section V - Reactivity Data

Stability: Unstable [ ] Stable [X]
Conditions to Avoid: None
Incompatibility: None
Hazardous Decomposition or Byproducts: Sulfur oxides, and bromides
Hazardous Polymerization: May Occur [ ] Will Not Occur [X]
Conditions to Avoid: None

Section VI - Health Hazard Data

Route(s) of Entry: Inhalation? Yes Skin? Yes Ingestion? Yes
Health Hazards (Acute and Chronic): Acute eye contact: May cause irritation. No data available for other routes.
Carcinogenicity: No data available NTP? IARC Monographs? OSHA Regulation?
Signs and Symptoms of Exposure: May cause skin or eye irritation
Medical Conditions Generally Aggravated by Exposure: None reported
Emergency First Aid Procedures: Treat symptomatically and supportively. Rinse contacted area with copious amounts of water.

Section VII - Precautions for Safe Handling and Use

Steps to be Taken in case Material is Released for Spilled: Wear eye and skin protection and mop spill area. Rinse with water.
Waste Disposal Method: Observe all federal, state, and local regulations.
Precautions to be Taken in Handling and Storing: Avoid eye and skin contact.
Other Precautions: None

Section VIII - Control Measures

Respiratory Protection (Specify Type)
Ventilation: Local Exhaust Yes; Mechanical (General) Yes; Special None; Other None
Protective Gloves: Yes
Eye Protection: Splash proof goggles
Other Protective Clothing or Equipment: None required
Work/Hygienic Practices: Avoid eye and skin contact

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Material Safety Data Sheet
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IDENTITY (As Used on Label and List): **50x Electrophoresis Buffer**

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Section I

Manufacturer's Name: EDVOTEK, Inc.
Address (Number, Street, City, State, Zip Code): 14676 Rothgeb Drive, Rockville, MD 20850

Emergency Telephone Number: (301) 251-5990
Telephone Number for information: (301) 251-5990
Date Prepared: 10/05/06
Signature of Preparer (optional):

Section II - Hazardous Ingredients/Identify Information

Hazardous Components [Specific Chemical Identity; Common Name(s)] | OSHA PEL | ACGIH TLV | Other Limits Recommended | % (Optional)

This product contains no hazardous materials as defined by the OSHA Hazard Communication Standard.

Section III - Physical/Chemical Characteristics

Boiling Point	No data	Specific Gravity (H_2O = 1)	No data
Vapor Pressure (mm Hg.)	No data	Melting Point	No data
Vapor Density (AIR = 1)	No data	Evaporation Rate (Butyl Acetate = 1)	No data

Solubility in Water: Appreciable, (greater than 10%)
Appearance and Odor: Clear, liquid, slight vinegar odor

Section IV - Physical/Chemical Characteristics N.D. = No data

Flash Point (Method Used): No data	Flammable Limits	LEL: N.D.	UEL: N.D.

Extinguishing Media: Use extinguishing media appropriate for surrounding fire.
Special Fire Fighting Procedures: Wear protective equipment and SCBA with full facepiece operated in positive pressure mode.
Unusual Fire and Explosion Hazards: None identified

Section V - Reactivity Data

Stability: Unstable [ ] Stable [X]
Conditions to Avoid: None
Incompatibility: Strong oxidizing agents
Hazardous Decomposition or Byproducts: Carbon monoxide, Carbon dioxide
Hazardous Polymerization: May Occur [ ] Will Not Occur [X]
Conditions to Avoid: None

Section VI - Health Hazard Data

Route(s) of Entry: Inhalation? Yes Skin? Yes Ingestion? Yes
Health Hazards (Acute and Chronic): None
Carcinogenicity: None identified NTP? IARC Monographs? OSHA Regulation?
Signs and Symptoms of Exposure: Irritation to upper respiratory tract, skin, eyes
Medical Conditions Generally Aggravated by Exposure: None
Emergency First Aid Procedures: Ingestion: If conscious, give large amounts of water
Eyes: Flush with water Inhalation: Move to fresh air Skin: Wash with soap and water

Section VII - Precautions for Safe Handling and Use

Steps to be Taken in case Material is Released for Spilled: Wear suitable protective clothing. Mop up spill and rinse with water, or collect in absorptive material and dispose of the absorptive material.
Waste Disposal Method: Dispose in accordance with all applicable federal, state, and local enviromental regulations.
Precautions to be Taken in Handling and Storing: Avoid eye and skin contact.
Other Precautions: None

Section VIII - Control Measures

Respiratory Protection (Specify Type)
Ventilation: Local Exhaust Yes; Mechanical (General) Yes; Special None; Other None
Protective Gloves: Yes
Eye Protection: _Safety goggles
Other Protective Clothing or Equipment: None
Work/Hygienic Practices: None

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Material Safety Data Sheet
May be used to comply with OSHA's Hazard Communication Standard. 29 CFR 1910.1200 Standard must be consulted for specific requirements.

IDENTITY (As Used on Label and List): Agarose

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Section I

Manufacturer's Name: EDVOTEK, Inc.
Address (Number, Street, City, State, Zip Code): 14676 Rothgeb Drive, Rockville, MD 20850

Emergency Telephone Number: (301) 251-5990
Telephone Number for information: (301) 251-5990
Date Prepared: 10/05/06
Signature of Preparer (optional):

Section II - Hazardous Ingredients/Identify Information

Hazardous Components [Specific Chemical Identity; Common Name(s)] | OSHA PEL | ACGIH TLV | Other Limits Recommended | % (Optional)

This product contains no hazardous materials as defined by the OSHA Hazard Communication Standard.
CAS #9012-36-6

Section III - Physical/Chemical Characteristics

Boiling Point: For 1% solution 194 F		Specific Gravity (H 0 = 1): 2	No data
Vapor Pressure (mm Hg.)	No data	Melting Point	No data
Vapor Density (AIR = 1)	No data	Evaporation Rate (Butyl Acetate = 1)	No data

Solubility in Water: Insoluble - cold
Appearance and Odor: White powder, no odor

Section IV - Physical/Chemical Characteristics N.D. = No data

Flash Point (Method Used): No data	Flammable Limits	LEL: N.D	UEL: N.D.

Extinguishing Media: Water spray, dry chemical, carbon dioxide, halon or standard foam
Special Fire Fighting Procedures: Possible fire hazard when exposed to heat or flame
Unusual Fire and Explosion Hazards: None

Section V - Reactivity Data

Stability: Unstable [ ] Stable [X]
Conditions to Avoid: None
Incompatibility: No data available
Hazardous Decomposition or Byproducts
Hazardous Polymerization: May Occur [ ] Will Not Occur [X]
Conditions to Avoid: None

Section VI - Health Hazard Data

Route(s) of Entry: Inhalation? Yes Skin? Yes Ingestion? Yes
Health Hazards (Acute and Chronic)
Inhalation: No data available Ingestion: Large amounts may cause diarrhea
Carcinogenicity: NTP? IARC Monographs? OSHA Regulation?
Signs and Symptoms of Exposure: No data available
Medical Conditions Generally Aggravated by Exposure: No data available
Emergency First Aid Procedures: Treat symptomatically and supportively

Section VII - Precautions for Safe Handling and Use

Steps to be Taken in case Material is Released for Spilled: Sweep up and place in suitable container for disposal
Waste Disposal Method: Normal solid waste disposal
Precautions to be Taken in Handling and Storing: None
Other Precautions: None

Section VIII - Control Measures

Respiratory Protection (Specify Type): Chemical cartridge respirator with full facepiece.
Ventilation: Local Exhaust; Mechanical: Gen. dilution ventilation; Special; Other
Protective Gloves: Yes
Eye Protection: Splash proof goggles
Other Protective Clothing or Equipment: Impervious clothing to prevent skin contact
Work/Hygienic Practices: None

Material Safety Data Sheets

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Experiment

EDVOTEK®

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard. 29 CFR 1910.1200 Standard must be consulted for specific requirements.

IDENTITY (As Used on Label and List): InstaStain® Blue, FlashBlue™

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Section I

Manufacturer's Name: EDVOTEK, Inc.

Address (Number, Street, City, State, Zip Code): 14676 Rothgeb Drive, Rockville, MD 20850

Emergency Telephone Number: (301) 251-5990

Telephone Number for information: (301) 251-5990

Date Prepared: 03-26-09

Signature of Preparer (optional):

Section II - Hazardous Ingredients/Identify Information

Hazardous Components [Specific Chemical Identity; Common Name(s)]	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (Optional)
Methylene Blue				
3.7 Bis (Dimethylamino) Phenothiazin 5 IUM Chloride	No data available			
CAS # 61-73-4				

Section III - Physical/Chemical Characteristics

Boiling Point	No data	Specific Gravity (H_2O = 1)	No data
Vapor Pressure (mm Hg.)	No data	Melting Point	No data
Vapor Density (AIR = 1)	No data	Evaporation Rate (Butyl Acetate = 1)	No data

Solubility in Water: Soluble - cold

Appearance and Odor: Chemical bound to paper, no odor

Section IV - Physical/Chemical Characteristics

Flash Point (Method Used)	Flammable Limits	LEL	UEL
No data available	No data		No data

Extinguishing Media: Water spray, carbon dioxide, dry chemical powder, alcohol or polymer foam

Special Fire Fighting Procedures: Self contained breathing apparatus and protective clothing to prevent contact with skin and eyes

Unusual Fire and Explosion Hazards: Emits toxid fumes under fire conditions

Section V - Reactivity Data

Stability			Conditions to Avoid
	Unstable		None
	Stable	X	

Incompatibility: Strong oxidizing agents

Hazardous Decomposition or Byproducts: Toxic fumes of Carbon monoxide, Carbon dioxide, nitrogen oxides, sulfur oxides, hydrogen, chloride gas

Hazardous Polymerization			Conditions to Avoid
	May Occur		None
	Will Not Occur	X	

Section VI - Health Hazard Data

Route(s) of Entry: Inhalation? Yes Skin? Yes Ingestion? Yes

Health Hazards (Acute and Chronic): Skin: May cause skin irritation Eyes: May cause eye irritation Inhalation: Cyanosis

Carcinogenicity: NTP? IARC Monographs? OSHA Regulation?
Meets criteria for proposed OSHA medical records rule PEREAC 47.30420.82

Signs and Symptoms of Exposure: No data available

Medical Conditions Generally Aggravated by Exposure: No data available

Emergency First Aid Procedures: Treat symptomatically

Section VII - Precautions for Safe Handling and Use

Steps to be Taken in case Material is Released for Spilled: Ventilate area and wash spill site

Waste Disposal Method: Mix material with a combustible solvent and burn in chemical incinerator equipped with afterburner and scrubber. Check local and state regulations.

Precautions to be Taken in Handling and Storing: Keep tightly closed. Store in cool, dry place

Other Precautions: None

Section VIII - Control Measures

Respiratory Protection (Specify Type): MIOSH/OSHA approved, SCBA

Ventilation				
	Local Exhaust		Special	
	Mechanical (General)	Required	Other	

Protective Gloves: Rubber

Eye Protection: Chem. safety goggles

Other Protective Clothing or Equipment: Rubber boots

Work/Hygienic Practices:

EDVOTEK®

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard. 29 CFR 1910.1200 Standard must be consulted for specific requirements.

IDENTITY (As Used on Label and List): InstaStain® Ethidium Bromide

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Section I

Manufacturer's Name: **InstaStain, Inc.**
P.O. Box 1232
West Bethesda, MD 20827

Emergency Telephone Number: **(301) 251-5990**

Telephone Number for information: **(301) 251-5990**

Date Prepared: 10/05/06

Signature of Preparer (optional):

Section II - Hazardous Ingredients/Identify Information

Hazardous Components [Specific Chemical Identity; Common Name(s)]	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (Optional)
Ethidium Bromide		Data not available		
(2,7-Diamino-10-Ethyl-9-Phenylphenanthridinium Bromide)				
CAS# 139-33-3				

Section III - Physical/Chemical Characteristics

Boiling Point	No data	Specific Gravity (H_2O = 1)	No data
Vapor Pressure (mm Hg.)	No data	Melting Point	No data
Vapor Density (AIR = 1)	No data	Evaporation Rate (Butyl Acetate = 1)	No data

Solubility in Water: Soluble

Appearance and Odor: Chemical bound to paper, no odor

Section IV - Physical/Chemical Characteristics

N.D. = No data

Flash Point (Method Used)	Flammable Limits	LEL	UEL
No data		N.D.	N.D.

Extinguishing Media: Water spray, carbon dioxide, dry chemical powder, alcohol or polymer foam

Special Fire Fighting Procedures: Wear protective clothing and SCBA to prevent contact with skin & eyes

Unusual Fire and Explosion Hazards: Emits toxic fumes

Section V - Reactivity Data

Stability			Conditions to Avoid
	Unstable		None
	Stable	X	

Incompatibility: Strong oxidizing agents

Hazardous Decomposition or Byproducts: Carbon monoxide, Carbon dioxide, nitrogen oxides, hydrogen bromide gas

Hazardous Polymerization			Conditions to Avoid
	May Occur		None
	Will Not Occur	X	

Section VI - Health Hazard Data

Route(s) of Entry: Inhalation? Yes Skin? Yes Ingestion? Yes

Health Hazards (Acute and Chronic): Chronic: May alter genetic material
Acute: Material irritating to mucous membranes, upper respiratory tract, eyes, skin

Carcinogenicity: No data available NTP? IARC Monographs? OSHA Regulation?

Signs and Symptoms of Exposure: Irritation to mucous membranes and upper respiratory tract

Medical Conditions Generally Aggravated by Exposure: No data

Emergency First Aid Procedures: Treat symptomatically and supportively

Section VII - Precautions for Safe Handling and Use

Steps to be Taken in case Material is Released for Spilled: Wear SCBA, rubber boots, rubber gloves

Waste Disposal Method: Mix material with combustible solvent and burn in a chemical incinerator equipped afterburner and scrubber

Precautions to be Taken in Handling and Storing: Use in chemical fume hood with proper protective lab gear.

Other Precautions: Mutagen

Section VIII - Control Measures

Respiratory Protection (Specify Type): SCBA

Ventilation				
	Local Exhaust	Yes	Special	Chem. fume hood
	Mechanical (General)	No	Other	None

Protective Gloves: Rubber

Eye Protection: Chem. safety goggles

Other Protective Clothing or Equipment: Rubber boots

Work/Hygienic Practices: Use in chemical fume hood with proper protective lab gear.

EDVOTEK Series 100 Electrophoresis Experiments:

Cat. #	Title
101	Principles and Practice of Agarose Gel Electrophoresis
102	Restriction Enzyme Cleavage Patterns of DNA
103	PCR - Polymerase Chain Reaction
104	Size Determination of DNA Restriction Fragments
105	Mapping of Restriction Sites on Plasmid DNA
109	DNA Fingerprinting - Identification of DNA by Restriction Fragmentation Patterns
112	Analysis of *Eco* RI Cleavage Patterns of Lambda DNA
114	DNA Paternity Testing Simulation
115	Cancer Gene Detection
116	Sickle Cell Gene Detection (DNA-based)
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124	DNA-based Screening for Smallpox
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