



MATERIAL SAFETY DATA SHEET

EX-PAC 2™

MSDS: 206025  
Version : 02  
Issued Date: DEC. '09

PRODUCT IDENTIFICATION AND COMPANY

**Product Name:** Drew EX-PAC 2™ Reagent Set  
**Synonyms:** Reagent Set for Drew EXCELL 16 & EVOLUTION Hematology Analyzers  
**NIOSH/RTECS Number:** None  
**CAS No.:** None  
**Product Number(s):** EX-PAC 2  
**Manufacturer:** Drew Scientific, Inc.  
4230 Shilling Way  
Dallas, Texas 75237  
drew-scientific.com  
**EMERGENCY PHONE:** 800 433 0945

COMPONENTS

<u>Component</u>	<u>CAS Number</u>
EX-ISO Diff Diluent	None
EX-LYSE Reagent	None
EX-ZYME Cleaner	None

TRANSPORTATION INFORMATION

Transportation of this product not regulated according to the definition of hazardous in 49CFR (US DOT).  
Transportation of this product is also not regulated by IATA, ICAO, Canadian TDG or European ADR.



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## SECTION I - PRODUCT IDENTIFICATION AND COMPANY

**Product Name:** DREW HEMATOLOGY DILUENT™  
**Synonyms:** EX-ISO Diluent  
**NIOSH/RTECS Number:** None  
**CAS No.:** None

**Product Number(s):** Component of EX-PAC 2

**Manufacturer:** *Drew Scientific, Inc.*  
4230 Shilling Way  
Dallas, Texas 75237

**EMERGENCY PHONE:** 800 433 0945

## SECTION II - INGREDIENTS

<u>Component</u>	<u>Concentration</u>	<u>CAS Number</u>
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Contains no hazardous ingredients

## SECTION III – HAZARDS IDENTIFICATION

**CDS Safety Information:**

[1] Health  
[0] Flammability  
[0] Reactivity  
[0] Contact

**Code**

0 = None  
1 = Slight  
2 = Caution  
3 = Severe

**Physical Hazards:** None  
**Potential Health Effects:** This product is not considered hazardous under OSHA, EU or WHMIS criteria.  
**Product Hazard Classification:** OSHA – Not applicable  
EU – Not applicable  
WHMIS – Exempt

## SECTION IV – FIRST AID MEASURES

**Eye Contact:** Flush eyes thoroughly with water. If irritation occurs, seek medical attention.  
**Ingestion:** Wash contact surfaces with water. Seek medical attention if swallowed.  
**Inhalation:** Move exposed individual to fresh air. If individual is not breathing, begin artificial respiration immediately. Seek medical attention immediately.  
**Skin Contact:** Wash affected area with water for at least 15 minutes.



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## SECTION V - FIRE AND EXPLOSION HAZARD DATA

<b>Flashpoint:</b>	Not applicable
<b>Flammable Limits:</b>	Not applicable
<b>Autoignition Temperature:</b>	Not applicable
<b>Fire Extinguishing Media:</b>	Any. Non-flammable, does not support combustion.
<b>Special Fire and Explosion Hazards:</b>	None
<b>Hazardous Combustion Products:</b>	None
<b>Firefighter Protective Equipment:</b>	Self-contained breathing apparatus.

## SECTION VI – ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions:</b>	No special precautions required. Use good laboratory practice.
<b>Spills and Leaks:</b>	Dispose through a sanitary sewer, or use absorbent material and dispose as non-hazardous solid waste. Disposal must comply with Federal, State and Local requirements.
<b>Environmental Precautions:</b>	Contain spill to prevent contamination of surrounding areas.

## SECTION VII - HANDLING AND STORAGE PRECAUTIONS

<b>Handling Precautions:</b>	No special precautions required. Use good laboratory practice.
<b>Storage Conditions:</b>	Store at 2 to 30°C (30 to 86°F).

## SECTION VIII – EXPOSURE CONTROL AND PERSONAL PROTECTION

<b>Exposure Limits:</b>	OSHA – None established ACGIH – None established DFG MAK – None established
<b>Engineering Controls:</b>	Use in well ventilated areas.
<b>Respiratory Protection:</b>	Under normal use conditions, no respiratory protection is required.
<b>Eye Protection:</b>	Safety glasses, goggles or face shield recommended.
<b>Skin Protection:</b>	Latex or equivalent gloves recommended.

## SECTION IX – PHYSICAL AND CHEMICAL PROPERTIES

<b>Boiling Point:</b>	~ 100°C	<b>Vapor Pressure (mm Hg):</b> N/A
<b>Melting Point:</b>	N/A	<b>Vapor Density (Air = 1):</b> N/A
<b>Specific Gravity:</b>	1.0 (Water = 1)	<b>Evaporation Rate</b>
<b>Solubility (water):</b>	Miscible	<b>(butyl acetate = 1):</b> N/A
<b>Appearance and Color:</b>	Clear, colorless liquid	

## SECTION X - REACTIVITY DATA

<b>Stability:</b>	Stable at normal temperatures and pressures.
<b>Conditions to Avoid:</b>	Keep away from aqueous-sensitive materials. Avoid freezing.
<b>Hazardous Incompatibility:</b>	None
<b>Decomposition Products:</b>	None

## SECTION XI – TOXICOLOGICAL INFORMATION

<b>Toxicity of Hazardous Ingredients:</b>	None
<b>Primary Routes of Exposure:</b>	Contact with eyes, mucous membranes, skin punctures, ingestion and inhalation.
<b>Effects of Acute Exposure:</b>	None identified.
<b>Effects of Chronic Exposure:</b>	None identified.



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## SECTION XI – TOXICOLOGICAL INFORMATION

**Symptoms of Overexposure:** No specific symptoms identified.  
**Carcinogenicity:** Contains no ingredients listed as potential carcinogens by ACGIH, IARC, NTP or OSHA.  
**Other Effects:** None known.  
**Conditions Aggravated by Exposure:** None known.

## SECTION XII – ECOLOGICAL INFORMATION

**Ecotoxicity:** No information available.  
**Biodegradability:** No information available.  
**Mobility:** No information available.

## SECTION XIII – WASTE DISPOSAL

**Waste Disposal:** Waste disposal must comply with Federal, State and Local requirements. Contact local authorities for information.

## SECTION XIV – TRANSPORT INFORMATION

**Transport Regulations:** Transportation of this product not regulated according to the definition of hazardous in 49CFR (US DOT). Transportation of this product is also not regulated by IATA, ICAO, Canadian TDG or European ADR.

## SECTION XV – REGULATORY INFORMATION

**US Regulatory Information:**

SARA 313: Formaldehyde generated over time is subject to reporting requirements specified by Section 313, Title III of SARA.

California Proposition 65: Formaldehyde has been identified by the State of California to cause cancer. Regulation requires a warning to individuals who may be exposed to chemicals identified by the State to cause cancer or reproductive harm. **WARNING:** This product contains a chemical known to the State of California to cause cancer..

Massachusetts MSL: Formaldehyde is listed. Sodium sulfate is listed.

New Jersey Dept. of Health RTK: Formaldehyde is listed..

Pennsylvania RTK: Formaldehyde is listed. Sodium sulfate is listed.

Florida Substance List: Formaldehyde is listed.

**Canada:** Product is exempt from WHMIS and MSDS requirements.

**Ingredients on Disclosure List:** Formaldehyde

**Ingredients with Unknown Toxicological Properties:** None

## SECTION XVI – OTHER INFORMATION

For further information, please contact *Drew Scientific, Inc.*



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## SECTION I - PRODUCT IDENTIFICATION AND COMPANY

**Product Name:** DREW HEMATOLOGY LYSE™  
**Synonyms:** EX-LYSE, Stromatolyse reagent  
**NIOSH/RTECS Number:** None  
**CAS No.:** None

**Product Number(s):** Component of EX-PAC 2

**Manufacturer:** Drew Scientific, Inc.  
4230 Shilling Way  
Dallas, Texas 75237

**EMERGENCY PHONE:** 800 433 0945

## SECTION II - INGREDIENTS

<u>Component</u>	<u>Concentration</u>	<u>CAS Number</u>
2-Propanol	< 2.5% w/v	67-63-0
Quaternary ammonium salt	< 3.6% w/v	*
Potassium cyanide	< 0.02% w/v	151-50-8

\*The identities of these components have been withheld as a trade secret. All hazard and property information is included in this MSDS.

## SECTION III - HAZARDS IDENTIFICATION

**CDS Safety Information:**

[2] Health

[0] Flammability

[0] Reactivity

[2] Contact

Code

0 = None

1 = Slight

2 = Caution

3 = Severe

**Physical Hazards:** None  
**Potential Health Effects:** Contact irritant for eyes and mucous membranes  
**Product Hazard Classification:** OSHA – Hazardous  
EU – Not applicable  
WHMIS – Exempt

## SECTION IV - FIRST AID MEASURES

**Eye Contact:** Flush eyes thoroughly with water. If irritation occurs, seek medical attention.  
**Ingestion:** Wash contact surfaces with water. Contact poison control center or seek medical attention if swallowed.  
**Inhalation:** Move exposed individual to fresh air. If individual is not breathing, begin artificial respiration immediately. Seek medical attention immediately.  
**Skin Contact:** Wash affected area with water for at least 15 minutes.



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## SECTION V - FIRE AND EXPLOSION HAZARD DATA

<b>Flashpoint:</b>	Not applicable
<b>Flammable Limits:</b>	Not applicable
<b>Autoignition Temperature:</b>	Not applicable
<b>Fire Extinguishing Media:</b>	Any. Does not support combustion.
<b>Special Fire and Explosion Hazards:</b>	None
<b>Hazardous Combustion Products:</b>	None
<b>Firefighter Protective Equipment:</b>	Self-contained breathing apparatus.

## SECTION VI – ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions:</b>	No special precautions required. Use good laboratory practice.
<b>Spills and Leaks:</b>	Dispose through a sanitary sewer, or use absorbent material and dispose as non-hazardous solid waste. Disposal must comply with Federal, State and Local requirements.
<b>Environmental Precautions:</b>	Contain spill to prevent contamination of surrounding areas.

## SECTION VII - HANDLING AND STORAGE PRECAUTIONS

<b>Handling Precautions:</b>	Avoid eye and mucous membrane contact. Use good laboratory practice.
<b>Storage Conditions:</b>	Store at 2 to 30°C (30 to 86°F).

## SECTION VIII – EXPOSURE CONTROL AND PERSONAL PROTECTION

<b>Exposure Limits:</b>	OSHA – None established ACGIH – 2-Propanol: 500 ppm STEL; 400 ppm TWA DFG MAK – 2-Propanol: 200 ppm MAK; 500 mg/m <sup>3</sup> MAK
<b>Engineering Controls:</b>	Use in well ventilated areas.
<b>Respiratory Protection:</b>	Under normal use conditions, no respiratory protection is required.
<b>Eye Protection:</b>	Safety glasses, goggles or face shield recommended.
<b>Skin Protection:</b>	Latex or equivalent gloves recommended.

## SECTION IX – PHYSICAL AND CHEMICAL PROPERTIES

<b>Boiling Point:</b>	N/A	<b>Vapor Pressure (mm Hg):</b>	N/A
<b>Melting Point:</b>	N/A	<b>Vapor Density (Air = 1):</b>	N/A
<b>Specific Gravity:</b>	1.05 (Water = 1)	<b>Evaporation Rate</b>	
<b>Solubility (water):</b>	Miscible	<b>(butyl acetate = 1):</b>	N/A
<b>Appearance and Color:</b>	Clear, colorless liquid		

## SECTION X - REACTIVITY DATA

<b>Stability:</b>	Stable at normal temperatures and pressures.
<b>Conditions to Avoid:</b>	Avoid freezing. Keep away from incompatible materials.
<b>Hazardous Incompatibility:</b>	Strong acids, strong oxidizers
<b>Decomposition Products:</b>	None



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## SECTION XI – TOXICOLOGICAL INFORMATION

<b>Toxicity of Hazardous Ingredients:</b>	2-Propanol: Inhalation: LD50 (Rat) = 16,000 ppm/8 hr. shift Ingestion: LD50 (Rat) = 5,045 mg/kg; LD50(Mouse) = 3,600 mg/kg Skin: LD50 (Rabbit) = 12,800 mg/kg
<b>Primary Routes of Exposure:</b>	Contact with eyes, mucous membranes, skin and inhalation.
<b>Effects of Acute Exposure:</b>	Eyes: Severe burns, irritation, possible loss of sight. Inhalation: Coughing, difficulty in breathing Skin: Irritation and redness Ingestion: Burning in mouth throat, stomach; nausea, vomiting, diarrhea, shock and loss of consciousness. Full toxicological properties have not been determined for this product.
<b>Effects of Chronic Exposure:</b>	Eye, inhalation and skin effects are similar to acute exposure. No long-term effects of ingestion have been reported in humans.
<b>Symptoms of Overexposure:</b>	Eyes: Redness, burning and watering. Inhalation: Coughing, difficulty breathing, depression and coma. Skin: Redness, dry, cracking. Ingestion: Burning mouth, throat, stomach, nausea, vomiting, diarrhea, shock and loss of consciousness.
<b>Carcinogenicity:</b>	Contains no ingredients listed as potential carcinogens by ACGIH, IARC, NTP or OSHA.
<b>Other Effects:</b>	None known.
<b>Conditions Aggravated by Exposure:</b>	Acute or chronic eye and skin conditions may be aggravated by this product.

## SECTION XII – ECOLOGICAL INFORMATION

<b>Ecotoxicity:</b>	Toxic to fish and other water-borne organisms.
<b>Biodegradability:</b>	No information available.
<b>Mobility:</b>	No information available.

## SECTION XIII – WASTE DISPOSAL

<b>Waste Disposal:</b>	Waste disposal must comply with Federal, State and Local requirements. Contact local authorities for information.
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## SECTION XIV – TRANSPORT INFORMATION

<b>Transport Regulations:</b>	Transportation of this product not regulated according to the definition of hazardous in 49CFR (US DOT). Transportation of this product is also not regulated by IATA, ICAO, Canadian TDG or European ADR.
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## SECTION XV – REGULATORY INFORMATION

<b>US Regulatory Information:</b>	
SARA 313:	2-Propanol is subject to reporting requirements specified by Section 313, Title III of SARA.
California Proposition 65:	No compounds listed.
Massachusetts MSL:	2-Propanol is listed. Potassium cyanide is listed.
New Jersey Dept. of Health RTK:	2-Propanol is listed. Potassium cyanide is listed.
Pennsylvania RTK:	2-Propanol is listed. Potassium cyanide is listed.



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SECTION XV – REGULATORY INFORMATION (Continued)

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<b>Canada:</b>	Product is exempt from WHMIS and MSDS requirements.
<b>Ingredients on Disclosure List:</b>	2-Propanol
<b>Ingredients with Unknown</b>	
<b>Toxicological Properties:</b>	Exempt product
<b>EU:</b>	No dangerous ingredients listed.

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SECTION XVI – OTHER INFORMATION

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For further information, please contact *Drew Scientific, Inc.*





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## SECTION I - PRODUCT IDENTIFICATION AND COMPANY

**Product Name:** DREW HEMATOLOGY CLEAN™  
**Synonyms:** EX-ZYME, Enzyme-based cleaner  
**NIOSH/RTECS Number:** None  
**CAS No.:** None

**Product Number(s):** Component of EX-PAC 2

**Manufacturer:** Drew Scientific, Inc.  
4230 Shilling Way  
Dallas, Texas 75237

**EMERGENCY PHONE:** 800 433 0945

## SECTION II - INGREDIENTS

<u>Component</u>	<u>Concentration</u>	<u>CAS Number</u>
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Contains no hazardous ingredients

## SECTION III - HAZARDS IDENTIFICATION

**CDS Safety Information:**

	<u>Code</u>
[1] Health	0 = None
[0] Flammability	1 = Slight
[0] Reactivity	2 = Caution
[0] Contact	3 = Severe

**Physical Hazards:** None  
**Potential Health Effects:** This product is not considered hazardous under OSHA, EU or WHMIS criteria.  
**Product Hazard Classification:** OSHA – Not applicable  
EU – Not applicable  
WHMIS – Not applicable

## SECTION IV - FIRST AID MEASURES

**Eye Contact:** Flush eyes thoroughly with water. If irritation occurs, seek medical attention.  
**Ingestion:** Wash contact surfaces with water. Seek medical attention if swallowed.  
**Inhalation:** Move exposed individual to fresh air. If individual is not breathing, begin artificial respiration immediately. Seek medical attention immediately.  
**Skin Contact:** Wash affected area with water for at least 15 minutes.

## SECTION V - FIRE AND EXPLOSION HAZARD DATA

**Flashpoint:** Not applicable  
**Flammable Limits:** Not applicable  
**Autoignition Temperature:** Not applicable  
**Fire Extinguishing Media:** Any. Non-flammable, does not support combustion.



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## SECTION V - FIRE AND EXPLOSION HAZARD DATA (Continued)

**Special Fire and Explosion Hazards:** None  
**Hazardous Combustion Products:** None  
**Firefighter Protective Equipment:** Self-contained breathing apparatus.

## SECTION VI – ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** No special precautions required. Use good laboratory practice.  
**Spills and Leaks:** Dispose through a sanitary sewer, or use absorbent material and dispose as non-hazardous solid waste. Disposal must comply with Federal, State and Local requirements.  
**Environmental Precautions:** Contain spill to prevent contamination of surrounding areas.

## SECTION VII - HANDLING AND STORAGE PRECAUTIONS

**Handling Precautions:** No special precautions required. Use good laboratory practice.  
**Storage Conditions:** Store at 2 to 30°C (30 to 86°F).

## SECTION VIII – EXPOSURE CONTROL AND PERSONAL PROTECTION

**Exposure Limits:** OSHA – None established  
ACGIH – None established  
DFG MAK – None established  
**Engineering Controls:** No special controls required.  
**Respiratory Protection:** Under normal use conditions, no respiratory protection is required.  
**Eye Protection:** Safety glasses, goggles or face shield recommended.  
**Skin Protection:** Latex or equivalent gloves recommended.

## SECTION IX – PHYSICAL AND CHEMICAL PROPERTIES

<b>Boiling Point:</b>	N/A	<b>Vapor Pressure (mm Hg):</b>	N/A
<b>Melting Point:</b>	N/A	<b>Vapor Density (Air = 1):</b>	N/A
<b>Specific Gravity:</b>	1.03 (Water = 1)	<b>Evaporation Rate</b>	
<b>Solubility (water):</b>	Miscible	<b>(butyl acetate = 1):</b>	N/A
<b>Appearance and Color:</b>	Clear, colorless liquid	<b>pH:</b>	7.3 – 7.7

## SECTION X - REACTIVITY DATA

**Stability:** Stable at normal temperatures and pressures.  
**Conditions to Avoid:** Avoid freezing.  
**Hazardous Incompatibility:** None  
**Decomposition Products:** None

## SECTION XI – TOXICOLOGICAL INFORMATION

**Toxicity of Hazardous Ingredients:** Not applicable  
**Primary Routes of Exposure:** Contact with eyes, mucous membranes, and skin  
**Effects of Acute Exposure:** None identified.  
**Effects of Chronic Exposure:** None identified.  
**Symptoms of Overexposure:** None identified.  
**Carcinogenicity:** Contains no ingredients listed as potential carcinogens by ACGIH, IARC, NTP or OSHA.  
**Other Effects:** None known.  
**Conditions Aggravated by Exposure:** None known.



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SECTION XII – ECOLOGICAL INFORMATION

**Ecotoxicity:** No information available.  
**Biodegradability:** No information available.  
**Mobility:** No information available.

SECTION XIII – WASTE DISPOSAL

**Waste Disposal:** Waste disposal must comply with Federal, State and Local requirements. Contact local authorities for information.

SECTION XIV – TRANSPORT INFORMATION

**Transport Regulations:** Transportation of this product not regulated according to the definition of hazardous in 49CFR (US DOT). Transportation of this product is also not regulated by IATA, ICAO, Canadian TDG or European ADR.

SECTION XV – REGULATORY INFORMATION

**US Regulatory Information:**  
SARA 313: Formaldehyde generated over time is subject to reporting requirements specified by Section 313, Title III of SARA.  
California Proposition 65: Formaldehyde has been identified by the State of California to cause cancer. Regulation requires a warning to individuals who may be exposed to chemicals identified by the State to cause cancer or reproductive harm. **WARNING:** This product contains a chemical known to the State of California to cause cancer.  
Massachusetts MSL: Formaldehyde is listed.  
New Jersey Dept. of Health RTK: Formaldehyde is listed.  
Pennsylvania RTK: Formaldehyde is listed.  
Florida Substance List: Formaldehyde is listed.  
**EU:** No dangerous ingredients.  
**Canada:** Product is exempt from WHMIS and MSDS requirements.  
**Ingredients on Disclosure List:** Formaldehyde  
**Ingredients with Unknown Toxicological Properties:** None

SECTION XVI – OTHER INFORMATION

For further information, please contact *Drew Scientific, Inc.*