

# SAFETY DATA SHEET

**Product Identifier: Ionic™ FFPE to Pure DNA Kits**  
**Catalog ID number: 33006 and 33009**

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## SECTION 1 - IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

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### Contact information

**General** Purigen Biosystems, Inc.  
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**Product identifier** FFPE to Pure DNA Kits

**Synonyms** None identified

**Trade names** None identified

**Chemical family** Components (Mixture components only):  
Extraction Buffer  
Anodic Buffer  
Separation Buffer  
Neutralization Buffer  
Cathodic Buffer  
Lysis 1  
Proteinase K  
RNase  
Fluidics Chips  
Sample Buffer (FFPE)  
Mineral Oil

**Relevant identified uses of the substance or mixture and uses advised against** For research use only. Not for use of diagnostic procedures.

**Note** This SDS is written to address potential health and safety issues associated with the handling of the formulated product.

**Issue Date** 27 SEPT 2021

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## SECTION 2 - HAZARDS IDENTIFICATION

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### Classification of the substance or mixture

**Globally Harmonized System** Mixtures - Not classified  
**[GHS]**

The following components are NOT hazardous according to the OSHA Hazard Communication Standard (29 CFR 1910. 1200):  
Cathodic Buffer  
Extraction Buffer  
Anodic Buffer  
Separation Buffer  
Neutralization Buffer  
Lysis 1  
Proteinase K  
RNase  
Fluidics Chips  
Sample Buffer (FFPE)  
Mineral Oil

### **AU Hazard Classification (NOHSC)**

Cathodic Buffer: None  
Extraction Buffer: None  
Anodic Buffer: None  
Separation Buffer: None  
Neutralization Buffer: None  
Lysis 1: None  
Proteinase K: None  
RNase: None  
Fluidics Chips: None  
Sample Buffer (FFPE): None  
Mineral Oil: None

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### Label elements

#### CLP/GHS hazard pictogram

Cathodic Buffer: None  
Extraction Buffer: None  
Anodic Buffer: None  
Separation Buffer: None  
Neutralization Buffer: None  
Lysis 1: None  
Proteinase K: None  
RNase: None  
Fluidics Chips: None  
Sample Buffer (FFPE): None  
Mineral Oil: None

#### CLP/GHS signal word

Cathodic Buffer: None  
Extraction Buffer: None  
Anodic Buffer: None  
Separation Buffer: None  
Neutralization Buffer: None  
Lysis 1: None  
Proteinase K: None  
RNase: None  
Fluidics Chips: None  
Sample Buffer (FFPE): None  
Mineral Oil: None

#### CLP/GHS hazard statements

Cathodic Buffer: None  
Extraction Buffer: None  
Anodic Buffer: None  
Separation Buffer: None  
Neutralization Buffer: None  
Lysis 1: None  
Proteinase K: None  
RNase: None  
Fluidics Chips: None  
Sample Buffer (FFPE): None  
Mineral Oil: None

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**CLP/GHS precautionary statements**

Extraction Buffer: None  
Anodic Buffer: None  
Separation Buffer: None  
Neutralization Buffer: None  
Lysis 1: None  
Proteinase K: None  
RNase: None  
Extraction Rinse: None  
Fluidics Chips: None  
Sample Buffer (FFPE): None  
Mineral Oil: None

**Other hazards**

None

**Note**

None of the mixtures are classified as hazardous according to Regulation EC No 1272/ 2008 (EU CLP) and Hazard Communication Standard No. 1910.1200 (US OSHA). The pharmacological, toxicological and ecological properties of all mixtures in this kit have not been fully characterized.

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## SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

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**The following pertains to Cathodic Buffer:**

<u>Ingredient</u>	<u>Formula</u>	<u>CAS #</u>	<u>EINECS/ ELINCS#</u>	<u>Amount</u>	<u>Classification</u>
4-(2-Hydroxyethyl)piperazine-1-ethanesulfonic acid (HEPES)	C <sub>8</sub> H <sub>18</sub> N <sub>2</sub> O <sub>4</sub> S	7365-45-9	230-907-9	7%-9%	None

**The following pertains to Neutralization Buffer, Cathodic Buffer, Separation Buffer and Anodic Buffer:**

<u>Ingredient</u>	<u>Formula</u>	<u>CAS #</u>	<u>EINECS/ ELINCS#</u>	<u>Amount</u>	<u>Classification</u>
2-Amino-2-(hydroxymethyl)-1,3-propanediol (Trizma Base)	C <sub>4</sub> H <sub>11</sub> NO <sub>3</sub>	77-86-1	201-064-4	<2% - 20%	None

**Note** The ingredients listed above are considered hazardous and/or are present at reportable values. The remaining components are non-hazardous and/or present at amounts below reportable limits. See Section 16 for full text of GHS classifications.

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## SECTION 4 - FIRST AID MEASURES

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<b>Description of first aid measures</b>	<b>PERTAINS TO ALL COMPONENTS</b>
<b>Immediate Medical Attention Needed</b>	Consult a physician. Present this safety data sheet to the doctor in attendance.
<b>Eye Contact</b>	If easy to do, remove contact lenses, if worn. Immediately flush eyes with copious quantities of water for at least 15 minutes. If irritation occurs or persists, notify medical personnel and supervisor.
<b>Skin Contact</b>	Wash exposed area with soap and water and remove contaminated clothing/shoes. If irritation occurs or persists, notify medical personnel and supervisor.
<b>Inhalation</b>	Immediately move exposed subject to fresh air. If not breathing, give artificial respiration. If breathing is labored, administer oxygen. Immediately notify medical personnel and supervisor.
<b>Ingestion</b>	Do NOT induce vomiting. Do not give anything to drink unless directed by medical personnel. Never give anything by mouth to an unconscious person. Notify medical personnel and supervisor.
<b>Protection of first aid responders</b>	See Section 8 for Exposure Controls/Personal Protection recommendations.
<b>Most important symptoms and effects, both acute and delayed</b>	See Sections 2 and 11.
<b>Indication of immediate medical attention and special treatment needed, if necessary</b>	No data available.

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### SECTION 5 - FIREFIGHTING MEASURES

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#### PERTAINS TO ALL COMPONENTS

<b>Extinguishing media</b>	Use water spray (fog), alcohol resistant foam, dry powder, or carbon dioxide, as appropriate for surrounding fire and materials.
<b>Specific hazards arising from the substance or mixture</b>	All components: No data available.
<b>Flammability/Explosivity</b>	None.
<b>Advice for firefighters</b>	If necessary, wear full protective clothing and a self-contained breathing apparatus with a full face-piece operated in the pressure demand or other positive pressure mode. Decontaminate all equipment after use.

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### SECTION 6 - ACCIDENTAL RELEASE MEASURES

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#### PERTAINS TO ALL COMPONENTS

<b>Personal precautions, protective equipment and emergency procedures</b>	If product is released or spilled, take proper precautions to minimize exposure by using appropriate personal protective equipment (see Section 8). Area should be adequately ventilated. Do not breathe mist/vapors/spray. Wear respiratory protection.
<b>Environmental precautions</b>	Do not empty into drains. Avoid release to the environment.
<b>Methods and material for containment and cleaning up</b>	If vials are crushed or broken, do not cause material to become air borne. For small spills, soak up material with absorbent, e.g., paper towels. For large spills, cordon off spill area and minimize the spreading of spilled material. Soak up material with absorbent. Collect spilled material, absorbent, and rinse water into suitable containers for proper disposal in accordance with applicable waste disposal regulations (see Section 13). Decontaminate the area.
<b>Reference to other sections</b>	See Sections 8 and 13 for more information.

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### SECTION 7 - HANDLING AND STORAGE

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#### PERTAINS TO ALL COMPONENTS:

<b>Precautions for safe handling</b>	Avoid contact with skin and eyes. Avoid formation of aerosols. Potential for combustible dust formation should be taken into consideration before additional processing occurs.
<b>Conditions for safe storage including any incompatibilities</b>	Store in tightly closed containers that are appropriately labeled and at the temperatures indicated on the label for each of the components.
<b>Specific end use(s)</b>	No information identified.

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## SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

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<b>Note</b>	Dispose of broken vials/syringes in a sharps container.
<b>Control Parameters/ Occupational Exposure Limit Values</b>	No components contain materials with occupational exposure limits.
<b>Exposure/Engineering controls</b>	If handling bulk product or vials are opened/crushed/broken: Selection and use of containment devices and personal protective equipment should be based on a risk assessment of exposure potential. Use local exhaust and/or enclosure at aerosol/ mist-generating points.
<b>Respiratory protection</b>	Respiratory protection is not required. For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
<b>Hand protection</b>	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
<b>Skin protection</b>	Wear appropriate gloves, lab coat, or other protective overgarment if skin contact is likely. Base the choice of skin protection on the job activity, potential for skin contact and reagents in use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
<b>Eye/face protection</b>	Wear safety glasses with side shields, chemical splash goggles, or full face shield, if necessary. Base the choice of protection on the job activity and potential for contact with eyes or face. An emergency eye wash station should be available.
<b>Environmental Exposure Controls</b>	Avoid release to the environment and operate within closed systems wherever practicable. In case of spill, do not release to drains. Implement appropriate and effective emergency response procedures to prevent release or spread of contamination and to prevent inadvertent contact by personnel.
<b>Other protective measures</b>	Wash hands in the event of contact with this product/mixture, especially before eating, drinking or smoking. Protective equipment is not to be worn outside the work area (e.g., in common areas or out-of-doors).

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## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

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### Information on basic physical and chemical properties

<b>Appearance</b>	All Components: Clear, colorless
<b>Color</b>	See appearance
<b>Odor</b>	Lysis 1: Unpleasant All Other Components: Odorless

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**Odor threshold** All components: No information identified.

**pH** Extraction Buffer: 8.0  
 Anodic Buffer: 8.8  
 Separation Buffer: 8.0  
 Neutralization Buffer: 8.6  
 Cathodic Buffer: 8.1  
 Lysis 1: 8.7  
 Proteinase K: Not Identified  
 RNase: Not Identified  
 Sample Buffer (FFPE): Not Identified  
 Mineral Oil: Not Identified

**Melting point/freezing point** All components: No information identified.

**Initial boiling point and boiling range** All components: No information identified.

**Flash point** All components: No information identified.

**Evaporation rate** All components: No information identified.

**Flammability (solid, gas)** All components: No information identified.

**Upper/lower flammability or explosive limits** All components: No information identified.

**Vapor pressure** All components: No information identified.

**Vapor density** All components: No information identified.

**Relative density** All components: No information identified.

**Water solubility** All components: No information identified.

**Solvent solubility** All components: No information identified.

**Partition coefficient (n-octanol/water)** All components: No information identified.

**Auto-ignition temperature** All components: No information identified.

**Decomposition temperature** All components: No information identified.

**Viscosity** All components: No information identified.

**Explosive properties** All Components: Not classified as explosive.

**Oxidizing properties** All components: Not classified as oxidizing.

**Other information**

**Molecular weight** All components: Not applicable (Mixtures)

**Molecular formula** All components: Not applicable (Mixtures)



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## SECTION 10 - STABILITY AND REACTIVITY

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<b>Reactivity</b>	All components: No information identified.
<b>Chemical stability</b>	All components: Stable under recommended storage conditions.
<b>Possibility of hazardous reactions</b>	All components: No information identified.
<b>Conditions to avoid</b>	All components: No information identified.
<b>Incompatible materials</b>	All components: No information identified.
<b>Hazardous decomposition products</b>	All components: No information identified.

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## SECTION 11 - TOXICOLOGICAL INFORMATION

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### Information on toxicological effects

<b>Route of entry</b>	All components: No information identified.
<b>Acute toxicity</b>	All components: No information identified.
<b>Irritation/Corrosion</b>	All components: No information identified.
<b>Sensitization</b>	All components: No information identified.
<b>STOT-single exposure</b>	All components: No information identified.
<b>STOT-repeated exposure/Repeat-dose toxicity</b>	All components: No information identified.
<b>Reproductive toxicity</b>	All components: No information identified.
<b>Developmental toxicity</b>	All components: No information identified.
<b>Genotoxicity</b>	All components: No information identified.
<b>Carcinogenicity</b>	<p>IARC: No component of this product present at levels greater than or equal to 0.1% is identified as a probable, possible or confirmed human carcinogen by IARC.</p> <p>ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a probable, possible or confirmed human carcinogen by IARC.</p> <p>NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a probable, possible or confirmed human carcinogen by IARC.</p> <p>OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a probable, possible or confirmed human carcinogen by IARC.</p>
<b>Aspiration hazard</b>	All components: No information identified.

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**Human health data** All components: No information identified.  
 See Section 2 - "Other hazards"  
 To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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## SECTION 12 - ECOLOGICAL INFORMATION

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**Toxicity** All components: No information identified.

**Additional toxicity information** All components: No information identified.

**Persistence and Degradability** All components: No information identified.

**Bioaccumulative potential** All components: No information identified.

**Mobility in soil** All components: No information identified.

**Results of PBT and vPvB assessment** All components: Not available as chemical safety assessment not required/not conducted.

**Other adverse effects** All components: No information identified.

**Note** The environmental characteristics of this product/mixtures have not been fully investigated. The above data are for the active ingredient and/or any other ingredient(s) where applicable. Releases to the environment should be avoided.

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## SECTION 13 - DISPOSAL CONSIDERATIONS

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**Waste treatment methods** All components: Dispose of wastes in accordance to prescribed federal, state, and local guidelines, e.g., appropriately permitted chemical waste incinerator. Do not send down the drain or flush down the toilet. Offer surplus and non-recyclable solutions to a licensed disposal company.

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## SECTION 14 - TRANSPORT INFORMATION

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**Transport** DOT: All components: Not dangerous goods.  
 IMDG: All components: Not dangerous goods.  
 IATA: All components: Not dangerous goods.

**Environmental hazards** All components: Based on the available data, this mixture is not regulated as an environmental hazard or a marine pollutant.

**Special precautions for users** All components: No special precautions needed. Avoid release to the environment.

**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** All components: Not applicable.

**Hazardchem Code/HIN** Mixtures: None assigned.

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## SECTION 15 - REGULATORY INFORMATION

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**Safety, health and environmental regulations/legislation specific for the substance or mixture** This SDS complies with the requirements under US, EU and GHS (EU CLP - Regulation EC No 1272/2008) guidelines. Consult your local/regional authorities for more information.

**Chemical safety assessment** Not conducted.

**WHMIS classification** Not classified.

**TSCA status** Not listed

**SARA section 313** All Components: Not listed

These materials do not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**California proposition 65** All components: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**Massachusetts Right To Know Components** All components: No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know Components**

Cathodic Buffer: (Contains HEPES)	CAS-No 7365-45-9
Neutralization Buffer, Cathodic Buffer, Separation Buffer, Anodic Buffer (Contain Trizma Base)	CAS-No 77-86-1
All Other Components	No components are subject to the Pennsylvania Right to Know Act.

**New Jersey Right To Know Components**

Cathodic Buffer: Component HEPES	CAS-No 7365-45-9
Neutralization Buffer, Cathodic Buffer, Separation Buffer, Anodic Buffer (Component Trizma Base)	CAS-No 77-86-1
All Other Components	No components are subject to the New Jersey Right to Know Act.

**Component Analysis – State** Not Listed.

**Component Analysis – Chemical Inventory** Not Listed.

**Additional information** No other information identified.

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## SECTION 16 - OTHER INFORMATION

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<b>NFPA Ratings</b>	All Components	Health: 0	Fire: 0	Reactivity: 0
<b>HMIS Ratings</b>	All Components	Health: 0	Chronic: 0	Flammability: 0      Physical: 0

**Full text of H phrases and GHS classifications**      Full text of H-Statements referred to under sections 2 and 3.

**Sources of data**      Information from published literature and internal company data.

**Abbreviations**

ACGIH - American Conference of Governmental Industrial Hygienists; ADR/RID - European Agreement Concerning the International Carriage of Dangerous Goods by Road/Rail; AIHA - American Industrial Hygiene Association; CA - California; CAS# - Chemical Abstract Services Number; CLP - Classification, Labelling, and Packaging of Substances and Mixtures; DNEL - Derived No Effect Level; DOT - Department of Transportation; EINECS - European Inventory of New and Existing Chemical Substances; ELINCS - European List of Notified Chemical Substances; EU - European Union; GHS - Globally Harmonized System of Classification and Labeling of Chemicals; HI - Hawaii; IARC - International Agency for Research on Cancer; IDLH - Immediately Dangerous to Life or Health; IATA - International Air Transport Association; IMDG - International Maritime Dangerous Goods; LOEL - Lowest Observed Effect Level; LOAEL - Lowest Observed Adverse Effect Level; MA - Massachusetts; MN - Minnesota; NJ - New Jersey; NIOSH - The National Institute for Occupational Safety and Health; NOEL - No Observed Effect Level; NOAEL - No Observed Adverse Effect Level; NTP - National Toxicology Program; OEL - Occupational Exposure Limit; OSHA - Occupational Safety and Health Administration; PA - Pennsylvania; PNEC - Predicted No Effect Concentration; RI - Rhode Island; SARA - Superfund Amendments and Reauthorization Act; STEL - Short Term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; VT - Vermont; WA - Washington; WHMIS - Workplace Hazardous Materials Information System

**Disclaimer**

The statements contained herein are offered for informational purposes only and are based upon technical data. Purigen Biosystems, Inc. believes them to be accurate at the date of publication, but does not purport to be all-inclusive. The above-stated product is intended for use only by persons having the necessary technical skills and facilities for handling the product at their discretion and risk. Since conditions and manner of use are outside our control, we (Purigen Biosystems, Inc.) make no warranty of merchantability or any such warranty, express or implied with respect to information and we assume no liability resulting from the above product or its use. Users should perform their own investigations to determine suitability of information and product for their particular purposes.