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Revision Number 3

**1. Identification****Product identifier****Product Name** UAS Preservative; Colli-Pee UAS FV-50XX (FV-5040)**Other means of identification****Product Code(s)** PD-MSDS-152**Synonyms** None**Recommended use of the chemical and restrictions on use****Recommended use** For stabilization of human specimens**Restrictions on use** No information available**Details of the supplier of the safety data sheet****Initial supplier identifier**DNA Genotek Inc., 500 Palladium Dr.,  
Suite 3000, Ottawa, ON, Canada, K2V  
1C2**Supplier Address**DNA Genotek Inc., 500 Palladium Dr.,  
Suite 3000, Ottawa, ON, Canada, K2V  
1C2**Manufacturer Address**DNA Genotek Inc., 500 Palladium Dr., Suite  
3000, Ottawa, ON, Canada, K2V 1C2**Emergency telephone number****Company Phone Number** 1-866-813-6354 Mon-Fri 9:00am-5:00am ET**Emergency Telephone** 1-866-813-6354 Mon-Fri 9:00am-5:00am ET**2. Hazard(s) identification****Classification**

Reproductive toxicity	Category 1B
Flammable liquids	Category 3

**Appearance** aqueous solution**Physical state** Liquid**Odor** No information available**Label elements****Danger****Hazard statements**May damage fertility or the unborn child  
Flammable liquid and vapor



#### Precautionary Statements - Prevention

Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood  
Wear protective gloves, protective clothing, eye protection and face protection  
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
Keep container tightly closed  
Ground and bond container and receiving equipment  
Use only non-sparking tools  
Take precautionary measures against static discharge

#### Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

##### Skin

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water and then shower

##### Fire

In case of fire: Use CO<sub>2</sub>, dry chemical, or foam to extinguish

#### Precautionary Statements - Storage

Store locked up  
Store in a well-ventilated place. Keep cool

#### Precautionary Statements - Disposal

Dispose of contents and container to an approved waste disposal plant

#### Other information

Harmful to aquatic life.

### 3. Composition/information on ingredients

#### Substance

Not applicable.

#### Mixture

Chemical name	CAS No.	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Ethanol	64-17-5	10-30	-	-
Sodium Acetate Trihydrate	6131-90-4	5-10	-	-
Boric acid	10043-35-3	1-5	-	-

### 4. First-aid measures

#### Description of first aid measures

##### General advice

IF exposed or concerned: Get medical advice/attention. Show this safety data sheet to the doctor in attendance.

Inhalation	Remove to fresh air.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Ingestion	Rinse mouth.
Self-protection of the first aider	Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. See section 8 for more information.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** No information available.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Treat symptomatically.

## 5. Fire-fighting measures

<b>Suitable Extinguishing Media</b>	Dry chemical. Carbon dioxide (CO2). Water spray. Alcohol resistant foam.
<b>Large Fire</b>	CAUTION: Use of water spray when fighting fire may be inefficient.
<b>Unsuitable extinguishing media</b>	Do not scatter spilled material with high pressure water streams.
<b>Specific hazards arising from the chemical</b>	Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
<b>Explosion data</b>	
<b>Sensitivity to mechanical impact</b>	None.
<b>Sensitivity to static discharge</b>	Yes.
<b>Special protective equipment and precautions for fire-fighters</b>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

<b>Personal precautions</b>	Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material.
<b>Other information</b>	Ventilate the area. Refer to protective measures listed in Sections 7 and 8.

**Methods and material for containment and cleaning up**

<b>Methods for containment</b>	Stop leak if you can do it without risk. Do not touch or walk through spilled material. A vapor suppressing foam may be used to reduce vapors. Dike far ahead of spill to collect runoff
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water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

#### Methods for cleaning up

Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

## 7. Handling and storage

### Precautions for safe handling

#### Advice on safe handling

Use personal protection equipment. Avoid breathing vapors or mists. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes.

### Conditions for safe storage, including any incompatibilities

#### Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Store locked up.

## 8. Exposure controls/personal protection

### Control parameters

#### Exposure Limits

Chemical name		ACGIH TLV	OSHA PEL	NIOSH	
Ethanol 64-17-5		STEL: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m³ (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m³	IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m³	
Boric acid 10043-35-3		TWA: 2 mg/m³ inhalable particulate matter STEL: 6 mg/m³ inhalable particulate matter	-	-	
Chemical name	Alberta	British Columbia	Ontario	Quebec	
Ethanol 64-17-5	TWA: 1000 ppm TWA: 1880 mg/m³	STEL: 1000 ppm	STEL: 1000 ppm	STEL: 1000 ppm	
Boric acid 10043-35-3	-	TWA: 2 mg/m³ STEL: 6 mg/m³	TWA: 2 mg/m³ STEL: 6 mg/m³	TWA: 2 mg/m³ STEL: 6 mg/m³	

### Appropriate engineering controls

#### Engineering controls

Showers  
Eyewash stations  
Ventilation systems.

### Individual protection measures, such as personal protective equipment

Eye/face protection	Tight sealing safety goggles.
Hand protection	Wear suitable gloves. Impervious gloves.
Skin and body protection	Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Antistatic boots.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General hygiene considerations	Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

Physical state	Liquid
Appearance	aqueous solution
Color	orange
Odor	No information available
Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	4.8 - 5.2	None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No data available	None known
Flash point	= 27 °C / 80.6 °F	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility in other solvents	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	363 °C / 685.4 °F	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

### Other information

Explosive properties	No information available
Oxidizing properties	No information available
Softening point	No information available
Molecular weight	No information available
VOC content	No information available
Liquid Density	No information available
Bulk density	No information available

## 10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	None known based on information supplied.

## 11. Toxicological information

### Information on likely routes of exposure

#### Product Information

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	Specific test data for the substance or mixture is not available.
Ingestion	Specific test data for the substance or mixture is not available.

### Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	No information available.
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### Acute toxicity

#### Numerical measures of toxicity

No information available

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	16,881.20 mg/kg
ATEmix (dermal)	41,697.00 mg/kg
ATEmix (inhalation-gas)	99,999.00 ppm
ATEmix (inhalation-dust/mist)	36.80 mg/l
ATEmix (inhalation-vapor)	99,999.00 mg/l

#### Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Ethanol 64-17-5	= 7060 mg/kg ( Rat )	-	= 116.9 mg/L ( Rat ) 4 h = 133.8 mg/L ( Rat ) 4 h
Sodium Acetate Trihydrate 6131-90-4	= 3530 mg/kg ( Rat )	> 10 g/kg ( Rabbit )	> 30 g/m <sup>3</sup> ( Rat ) 1 h
Boric acid 10043-35-3	= 2660 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	> 2.12 mg/L ( Rat ) 4 h

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	No information available.
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**Serious eye damage/eye irritation** No information available.

**Respiratory or skin sensitization** No information available.

**Germ cell mutagenicity** No information available.

**Carcinogenicity** Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Ethanol 64-17-5	A3	Group 1	Known	X
Boric acid 10043-35-3	-	Group 2A	-	X

**Legend**

**ACGIH (American Conference of Governmental Industrial Hygienists)**

A3 - Animal Carcinogen

**IARC (International Agency for Research on Cancer)**

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

**NTP (National Toxicology Program)**

Known - Known Carcinogen

**OSHA (Occupational Safety and Health Administration of the US Department of Labor)**

X - Present

**Reproductive toxicity** Contains a known or suspected reproductive toxin. Classification based on data available for ingredients. May damage fertility or the unborn child.

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Target organ effects** Liver, Respiratory system, Eyes, Skin, Central nervous system, Blood, Reproductive system.

**Aspiration hazard** No information available.

## 12. Ecological information

**Ecotoxicity** Harmful to aquatic life.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Ethanol 64-17-5	-	LC50: 12.0 - 16.0mL/L (96h, Oncorhynchus mykiss) LC50: >100mg/L (96h, Pimephales promelas) LC50: 13400 - 15100mg/L (96h, Pimephales promelas)	-	LC50: 9268 - 14221mg/L (48h, Daphnia magna) EC50: =2mg/L (48h, Daphnia magna)
Sodium Acetate	-	LC50: >100mg/L (96h,	-	EC50: >1000mg/L (48h,

Trihydrate 6131-90-4		Danio rerio)		Daphnia magna)
Boric acid 10043-35-3	-	-	-	EC50: 115 - 153mg/L (48h, Daphnia magna)

**Persistence and degradability** No information available.

#### Bioaccumulation

#### Component Information

Chemical name	Partition coefficient
Ethanol 64-17-5	-0.35
Boric acid 10043-35-3	-1.09

**Mobility in soil** No information available.

**Other adverse effects** No information available.

### 13. Disposal considerations

#### Disposal methods

**Waste from residues/unused products** Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

**California waste information** This product contains one or more substances that are listed with the State of California as a hazardous waste.

### 14. Transport information

**DOT**  
Proper shipping name Not restricted  
Special Provisions 49 CFR § 173.150 (e)

**TDG**  
UN proper shipping name Not restricted  
Special Provisions SOR/2001-286 1.36 (b)

**MEX**  
UN proper shipping name Not restricted  
Special Provisions 144

**IATA**  
UN proper shipping name Not restricted  
Special Provisions 144

**IMDG**  
UN proper shipping name Not restricted  
Special Provisions 144



<b>RID</b>	Not restricted
<b>UN proper shipping name</b>	Not restricted
<b>Special Provisions</b>	144

<b>ADR</b>	Not restricted
<b>UN proper shipping name</b>	Not restricted
<b>Special Provisions</b>	144

## 15. Regulatory information

### Safety, health and environmental regulations/legislation specific for the substance or mixture

#### International Regulations

**The Montreal Protocol on Substances that Deplete the Ozone Layer** Not applicable

**The Stockholm Convention on Persistent Organic Pollutants** Not applicable

**The Rotterdam Convention** Not applicable

#### International Inventories

<b>TSCA</b>	Contact supplier for inventory compliance status.
<b>DSL/NDSL</b>	Contact supplier for inventory compliance status.
<b>EINECS/ELINCS</b>	Contact supplier for inventory compliance status.
<b>ENCS</b>	Contact supplier for inventory compliance status.
<b>IECSC</b>	Contact supplier for inventory compliance status.
<b>KECL</b>	Contact supplier for inventory compliance status.
<b>PICCS</b>	Contact supplier for inventory compliance status.
<b>AIIC</b>	Contact supplier for inventory compliance status.

#### **Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**AIIC** - Australian Inventory of Industrial Chemicals

#### US Federal Regulations

##### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

##### **SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

##### **CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

##### **CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and

Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

### US State Regulations

#### **California Proposition 65**

This product contains the following Proposition 65 chemicals:.

Chemical name	California Proposition 65
Ethanol - 64-17-5	Carcinogen Developmental

### U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
RO/DI Water 7732-18-5	-	-	X
Ethanol 64-17-5	X	X	X
Boric acid 10043-35-3	X	-	-

### U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

## **16. Other information**

**NFPA**                      **Health hazards** 1                      **Flammability** 3                      **Instability** 0                      **Special hazards** -  
**HMIS**                      **Health hazards** \* 2                      **Flammability** 3                      **Physical hazards** 0                      **Personal protection** X  
 Chronic Hazard Star Legend                      \* = Chronic Health Hazard

### **Key or legend to abbreviations and acronyms used in the safety data sheet**

**Legend**    **Section 8: Exposure controls/personal protection**  
 TWA                      TWA (time-weighted average)                      STEL                      STEL (Short Term Exposure Limit)  
 Ceiling                      Maximum limit value                      Sk\*                      Skin designation

### **Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)  
 U.S. Environmental Protection Agency ChemView Database  
 European Food Safety Authority (EFSA)  
 EPA (Environmental Protection Agency)  
 Acute Exposure Guideline Level(s) (AELG(s))  
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
 U.S. Environmental Protection Agency High Production Volume Chemicals  
 Food Research Journal  
 Hazardous Substance Database  
 International Uniform Chemical Information Database (IUCLID)  
 National Institute of Technology and Evaluation (NITE)  
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
 NIOSH (National Institute for Occupational Safety and Health)  
 National Library of Medicine's ChemID Plus (NLM CIP)  
 National Library of Medicine's PubMed database (NLM PUBMED)  
 National Toxicology Program (NTP)  
 New Zealand's Chemical Classification and Information Database (CCID)  
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
 Organization for Economic Co-operation and Development Screening Information Data Set

World Health Organization

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**Revision Note** No information available.

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**