



**Section 1: Product and Company Identification**

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**Product Name:** *Giardia/Cryptosporidium* DFA Kit

**Generic Name:** NA

**Synonyms:** NA

**Product Description:** Diagnostic kit for *Giardia* and *Cryptosporidium*

**CAS #** NA – mixture

**Rev. #** 1

**Section 2: Hazard Identification**

**Emergency Overview:** Appearance: Six different liquids. All liquids may be irritating to eyes, skin, digestive tract or respiratory tract. For *in vitro* use only.

<b>HMIS HEALTH</b>	<b>1</b>
<b>HMIS FLAMMABILITY</b>	<b>0</b>
<b>HMIS REACTIVITY</b>	<b>0</b>
<b>PERSONAL PROTECTION</b>	<b>C</b>

**Regulatory Status:** Only the Positive Control, Negative Control and Mounting Media are considered hazardous under the OSHA standard or WHMIS.

**Potential Health Effects:**

**Inhalation:** Inhalation of liquid or mist may be irritating to the respiratory tract.

**Ingestion:** May cause irritation of the digestive tract.

**Skin Contact:** May cause skin irritation. Formaldehyde in Positive control, Negative control and Mounting Media may cause skin sensitization.

**Eye Contact:** May cause eye irritation.

**Chronic Exposure:** Repeated or prolonged exposure may cause allergic reactions in sensitive individuals.

**Aggravation of Pre-existing Conditions:** No information available.

**Target Organs:** No information available.

**Section 3: Composition/Information On Ingredients**

<b>Kit Component</b>	<b>Contains</b>	<b>CAS #</b>	<b>EINECS #</b>	<b>Weight %</b>
Conjugate	Sodium Azide	22628-22-8	247-852-1	<0.1%
Counterstain	Citric Acid	77-92-9	201-069-1	<0.2%
Positive Control	Formaldehyde	50-00-0	200-001-8	10%
Negative Control	Formaldehyde	50-00-0	200-001-8	10%
Wash Concentrate	Thimerosal	54-64-8	200-210-4	0.4%
Mounting Media	Formaldehyde	50-00-0	200-001-8	0.4%

Non-hazardous components may or may not be listed. Carcinogens are listed when present at 0.1% or more; components which are otherwise hazardous according to OSHA are listed when present at 1.0% or more. This is not intended to be complete compositional disclosure. See Section 15 for applicable states right to know and other regulatory information.

### Section 4: First Aid Measures

**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Ingestion:** Drink several glasses of water or milk. Never give anything by mouth to an unconscious person. Get medical attention.

**Skin:** Immediately flush skin with plenty of water for at least 15 minutes. Get medical attention if irritation develops.

**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

**Note to Physicians:** N/A

### Section 5: Fire Fighting Measures

**Fire:** Flash point: Not flammable.

**Explosion:** Not considered an explosion hazard.

**Extinguishing Media:** Use appropriate media for the surrounding fire.

**Special Precautions:** In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

**NFPA Rating:** Health – 1      Flammability – 0      Reactivity – 0      Other – NA

### Section 6: Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Collect liquid or solid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Wash contaminated area with plenty of water.

### Section 7: Handling and Storage

Keep all containers tightly closed. Store at 2-8°C. Protect material from long-term exposure to light. Short periods of exposure to light are acceptable.

### Section 8: Exposure Control/Personal Protection

Compound	CAS#	OSHA PEL	ACGIH TLV	NIOSH TLV
Thimerosal	54-64-8	None Established	0.1 mg/m <sup>3</sup> (TWA) (as Hg)	0.05 mg/m <sup>3</sup> (TWA) (vapor except organoalkyls, as Hg)
Formaldehyde	50-00-0	0.75 ppm (TWA) 2 ppm (STEL)	0.3 ppm (Ceiling)	0.016 ppm (TWA) 20 ppm (IDLH)
Citric Acid	77-92-9	None Established	None Established	None Established
Sodium Azide	26625-22-8	None Established	0.11 ppm as HN <sub>3</sub> 0.29 mg/m <sup>3</sup> NaN <sub>3</sub> (Ceiling)	0.1 ppm skin as HN <sub>3</sub> 0.3 mg/m <sup>3</sup> NaN <sub>3</sub> (Ceiling)

**Personal Protective Equipment:**

**Skin Contact:** Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact. Latex and nitrile are suitable glove materials.

**Eye Contact:** Use chemical safety goggles and/or full face shield where misting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

**Inhalation:** Use NIOSH-approved vapor respirator if exposure is unknown or exceeds permissible limits. A respiratory protection program that meets OSHA's 29 CFR 1910.134 or ANSI Z88.2 requirements must be followed whenever workplace conditions warrant respirator use. **WARNING:** Air-purifying respirators do not protect workers in oxygen deficient atmospheres.

**Engineering Controls:** A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.

### Section 9: Physical and Chemical Properties

	Conjugate	Counterstain	Positive Control	Negative Control
Appearance	Clear colorless liquid	Dark purple liquid	Opaque brown liquid	Opaque brown liquid
Melting Point	≈ 0°C	≈ 0°C	≈ 0°C	≈ 0°C
Boiling Point	≥ 100°C	≥ 100°C	≥ 100°C	≥ 100°C
Specific Gravity	About 1.0	About 1.0	About 1.0	About 1.0
pH	About 7.7	About 3.3	About 7.0	About 7.0
Solubility in water	Complete	Complete	Complete	Complete
	Wash Concentrate	Mounting Media		
Appearance	Clear colorless liquid	Clear colorless liquid		
Melting Point	≈ 0°C	≈ 0°C		
Boiling Point	≥ 100°C	≥ 100°C		
Specific Gravity	About 1.0	About 1.0		
pH	About 6.5	About 9.2		
Solubility in water	Complete	Complete		

### Section 10: Stability and Reactivity

**Chemical Stability:** This product is stable in closed containers at room temperature.

**Hazardous Decomposition Products:** Carbon oxides (CO, CO<sub>2</sub>), nitrogen oxides (NO, NO<sub>2</sub>, N<sub>2</sub>O), sulfur oxides (SO<sub>2</sub>, SO<sub>3</sub>), and hydrogen chloride

**Incompatibilities:** Strong oxidizers, heat, strong acids or bases

**Conditions to Avoid:** Incompatible materials, combustible materials.

### Section 11: Toxicological Information

**Acute Dose Effects:** Eye: Formaldehyde: Draize Rabbit: 750 µg/24H Severe

Skin: Formaldehyde: Draize Rabbit: 2 mg/24H Severe; Rabbit LD50: 270 µL/kg

Ingestion: Formaldehyde: Rat LD50: 100 mg/kg. Citric acid: Rat LD50: 3000mg/kg

Inhalation: Formaldehyde: Mouse LC50: 454 mg/m<sup>3</sup>/4H; Rat LC50: 578 mg/m<sup>3</sup>/2H

**Carcinogenicity:** OSHA-regulated carcinogen; ACGIH: A2 - Suspected Human Carcinogen; NTP: Suspect carcinogen; IARC: Group 1 carcinogen

### Section 12: Ecological Information

**Environmental Fate:** This product is not expected to bioaccumulate. When released into water or air its expected half-life is 1- 10 days.

**Ecotoxicity:** Dilute nature and small volumes of products makes any ecological effect highly unlikely.

### Section 13: Disposal Considerations

**As a waste, this material in its raw form IS NOT considered a HAZARDOUS WASTE under RCRA (29 CFR 261).**

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

**Section 14: Transport Information**

All the solutions are unregulated by DOT and IATA.

With proper packaging and labeling this kit can be transported by passenger and cargo aircraft.

This kit cannot be sent through the mail.

**Section 15: Regulatory Information**

**TSCA Chemical Inventory:** All of the chemicals in this product are listed on the TSCA Inventory.

**TSCA Sec 4 Chemical Test Rule:** None of the chemicals in this product are under a Chemical Test Rule.

**TSCA Sec 8(d):** None of the chemicals in this product are on the Health and Safety Reporting List.

**TSCA Sec 12(b) Notices of Export:** None of the chemicals in this product are on this list.

**TSCA Significant New Use Rule (SNUR):** None of the chemicals in this product are on this list.

**SARA Sec 302 (EHS) TPQ:** Formaldehyde, 500 lbs; Sodium azide, 500 lbs.

**SARA Sec 302 (EHS) RQ:** Formaldehyde, 100 lbs; Sodium azide, 1000 lbs

**SARA Sec 311/312:** Acute –Formaldehyde and Sodium azide; Chronic –Formaldehyde and Sodium azide; Fire – NO; Release of Pressure – NO; Reactivity – NO

**SARA 313 List:** Formaldehyde and Sodium azide in this product are reportable under Section 313 Title III and 40 CFR Part 372.

**CERCLA Hazardous Substances and corresponding RQs:** Formaldehyde, 100 lbs; Sodium azide, 1000 lbs.

**RCRA:** Formaldehyde has a Hazardous waste code of U122. Sodium azide has a Hazardous waste code of P105.

**Clean Air Act: Hazardous Air Pollutants?** 50-00-0 **Class 1 Ozone Depletors?** NO **Class 2 Ozone Depletors?** NO

**Clean Water Act: Hazardous Substance?** Formaldehyde **Priority Pollutant?** NO **Toxic Pollutant?** NO

**Chemical Weapons Convention:** None of the chemicals in this product are on this list.

**Drug Enforcement Agency (DEA) CDTA:** None of the chemicals in this product are on this list.

**OSHA:** Formaldehyde in this product is considered Highly Hazardous by OSHA.

**State Right-to-Know Lists:** Formaldehyde and Sodium azide are found on the Right-to-Know lists of California, New Jersey, Pennsylvania, Massachusetts and Minnesota.

**California Proposition 65:** This product contains Formaldehyde, a chemical known to the state to cause cancer or reproductive toxicity. This product contains Thimerosal, a chemical known to the state to cause cancer or reproductive toxicity. A person in the course of doing business must warn others who may consume, come into contact with, or otherwise be exposed to this chemical.

**Canadian DSL/NDSL Status:** As an *in vitro* diagnostic product, this product is regulated by Health Canada (Medical Devices Regulations, SOR/98-282).

**European Union****Hazard Symbols:** C

**Risk Phrases:** R20/21/22 – Harmful by inhalation, in contact with skin and if swallowed

R36/38- Irritating to eyes and skin.

R25- Toxic if swallowed.

R26- Very toxic by inhalation.

R34- Causes burns.

**Safety Phrases:** S1/2- Keep locked up and out of the reach of children.

S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S28- After contact with skin, wash immediately with plenty of water.

S36/37- Wear suitable protective clothing and gloves.

S39- Wear eye/face protection.

S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**Section 16: Other Information****Abbreviations and acronyms used:**

ACGIH American Conference of Governmental Industrial Hygienists  
ANSI American National Standards Institute

NA not applicable, not available  
NIOSH National Institute for Occupational Safety and Health

atm	Atmosphere (pressure unit)	ND	not determined
BOD	biological oxygen demand	NFPA	National Fire Prevention Association
CAS	Chemical Abstracts Service	NTP	National Toxicology Program
CC	closed cup	OC	open cup
CDTA	Chemical Drug and Trafficking Act	OSHA	Occupational Safety and Health Administration
COC	Cleveland Open Cup	Part	partition
COD	chemical oxygen demand	PEL	permissible exposure limits
coeff.	coefficient	ppb	parts per billion
CFR	Code of Federal Regulations	PPE	personal protection equipment
CPR	cardio-pulmonary resuscitation	ppm	parts per million
DEA	Drug Enforcement Agency	psi	pounds per square inch
DOT	Department of Transportation	RCRA	Resource Conservation and Recovery Act
FDA	Food and Drug Administration	RQ	Reportable quantity
IARC	Internat'l Agency for Research on Cancer	RTK	Right to Know
IDLH	immediate danger to life and health	SARA	Superfund Amendments and Reauthorization Act
kg	kilogram	S/TEL	short-term exposure limit
L	liter	TCC	Tagliabue Closed Cup
LC50	median lethal concentration	TPQ	threshold planning quantity
LD50	median lethal dose	TQ	threshold quantity
LEL	lower explosive limit	TSCA	Toxic Substances Control Act
mg	milligram	TWA	time-weighted average
mL	milliliter	WHMIS	Workplace Hazardous Materials Information System

This document was prepared in accordance with 29 CFR 1910.1200 and ANSI Z400.1-2004.

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