



Material Safety Data Sheet  
Part # 900871  
MSDS #: 702298

Important Safety Information – Do Not Discard  
Please route to your Company Safety Director

**Identification of Product:**

Affymetrix GeneChip® Human MALD 3K SNP kit

**Contact Information:**

Manufacturer: Affymetrix, Inc. 7300 Shoreline Court, South San Francisco, CA 94080  
Tel: +1 650 228 7413

This Hazard Communication Packet has been put together to inform you of the potential hazards associated with the components used in this reagent kit. Refer to the Material Safety Data Sheet(s) for the listed items

**Composition:**

<u>Vial Name</u>	<u>Pages</u>
GapFill Mix	2-4
ExoMix	2-4
HY Digest Mix	2-4
Stain Cocktail	5-7
Human Kit Control DNA	8-10

For each kit, a MSDS sheet will be sent only on the first shipment, unless a substantial revision occurs. While the information provided in the MSDS is believed to be correct, this information is provided by Affymetrix, Inc. without any warranty, express or implied, regarding its corrective uses. To the best of our knowledge the information provided is correct. However, the information should only be used as a guide and the final determination is the sole responsibility of the user as all materials may contain unknown hazards and should be used with caution. Affymetrix, Inc. shall not be held liable for any damages or losses resulting from use of the product(s).



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**Contact Information:**

Manufacturer: Affymetrix, Inc. 7300 Shoreline Court, South San Francisco, CA 94080  
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**Composition / Information:**

Most of the components of this kit consist of either aqueous solutions containing buffers or enzymes, none of which are at a concentration that would render the reagents hazardous under the US Hazard Communication Standard, 20 CFR 1910.1200. The components listed below contain glycerol. This MSDS is written to apply to the glycerol.

<u>Vial Name</u>	<u>Component</u>	<u>CAS #</u>	<u>Percent(%)</u>
GapFill Mix	Glycerol	56-81-5	50
ExoMix	Glycerol	56-81-5	50
HY Digest Mix	Glycerol	56-81-5	50

**Hazards Identification:**

Physical State: liquid

Effects and Symptoms:

Inhalation: Inhalation of mist may cause irritation to the mucous membranes and respiratory tract.

Skin Contact: May cause irritation

Eye Contact: May cause irritation

Chronic Exposure: None known. Not thoroughly investigated

Aggravating Conditions: None known

Carcinogenicity: Not listed by NTP, IARC or regulated by OSHA as carcinogens.

**First Aid Measures:**

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Consult physician.

Eye or Skin Contact: Flush eyes or wash contaminated area with water for 15 minutes. Seek medical consultation if irritation persists.

Ingestion: Rinse out mouth immediately. Do not induce vomiting. Consult physician.

**Fire Fighting Measures:**

Extinguishing media: Water, Carbon dioxide, dry chemical or appropriate foam

Special Fire procedure: Wear appropriate fire protection gear for surrounding fire.

Unusual fire / exp. hazards: N/A

**Accidental release measures:**

If released or spilled: Absorb on inert material, collect for appropriate disposal. Do not flush to sewer.

Absorbent material: No restrictions

**Handling and Storage:**

Handling: Special handling procedures are not needed

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Storage: There are no restrictions concerning storage with other products.

**Exposure Controls / Personal Protection:**

Protective equipment: Use general laboratory protective equipment, lab safe gloves, general eye protection safety glasses or goggles. Prudent laboratory practices should be followed when handling any material.

Hygiene: General lab practices. Keep away from food and beverages.

Ventilation: Local exhaust

Precautionary Labeling: None required

**Physical and Chemical Properties:**

Appearance and Odor: clear viscous odorless liquid

Boiling Point: Not available for mixture

Flash Point: Not available for mixture

Specific Gravity: Not available for mixture

Vapor Density: Not available for mixture

pH: Not available for mixture

Solubility in Water: Soluble

**Stability and Reactivity:**

Stability: Stable

Incompatibility: Strong oxidizers

Hazardous Decomp.: Burning may produce carbon monoxide, carbon dioxide and nitrogen oxides

Hazardous Polymerization: Not expected to occur

**Toxicological Information:**

**NOTE:** Toxicological information is reported for the individual components. The toxicity of the mixture has not been investigated.

Ingredient	OSHA PEL	Lethal Dose (LD, LC, etc.)
Glycerol	15 mg/m <sup>3</sup> (mist)	12600 mg/kg oral - rat

**Ecological Information:**

No data found

**Disposal Considerations:**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Transport Information:**

This product is not subject to current regulations for transportation of hazardous goods (US DOT)

UN No.: N/A

**Regulatory:**

TSCA: These products are solely for use for research and development purposes in accordance with 40 CFR 720.36 and may not be used, process or distributed for a commercial purpose. It may only be handled by technically qualified

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SARA:	individuals.
CERCLA:	N/A
Section 302:	N/A
Section 304:	N/A
Section 313:	N/A
California Prop 65:	Not listed

**Other Information:**

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Material Safety Data Sheet  
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**Identification of Product:**

Stain Cocktail

**Contact Information:**

Manufacturer: Affymetrix, Inc. 7300 Shoreline Court, South San Francisco, CA 94080  
Tel: +1 650 228 7413

**Composition / Information:**

Ingredient	CAS #	Percent(%)
Antibody-conjugated Cadmium selenide/Zinc sulfide core/ shell quantum dots	none	<1
Sodium borate	1303-96-4	<1

**Hazards Identification:**

Physical State: liquid

Effects and Symptoms: The toxicological properties of the product mixture have not been investigated; health effects are given for the individual components.

**Inhalation:**

Cadmium Selenide: Respiratory toxicity, mucous membrane irritation and cancer  
Sodium borate: Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath.

**Skin Contact:**

Cadmium Selenide: Causes irritation and burns upon contact with the skin.  
Sodium borate: Causes irritation to the skin. Symptoms include redness, itching and pain. May be absorbed through the skin with possible systemic effects.

**Eye Contact:**

Cadmium Selenide: Causes irritation upon contact with the eyes.  
Sodium borate: Corrosive. Causes irritation upon contact with the eyes.

**Ingestion:**

Cadmium Selenide: Considered toxic.  
Sodium borate: May cause nausea, vomiting, diarrhea, muscular spasm, dullness, lethargy, circulatory depression, central nervous system depression, shock, kidney damage, coma, and death. Estimated lethal dose is 15 to 20 grams.

**Carcinogenicity:**

This product contains cadmium, which is classified as a human carcinogen by IARC and NTP, as a potential human carcinogen by NIOSH and as a carcinogen by OSHA.

**First Aid Measures:**

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Consult physician.

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Eye or Skin Contact: Flush eyes or wash contaminated area with water for 15 minutes. Seek medical consultation.

Ingestion: Rinse out mouth immediately. Consult physician.

**Fire Fighting Measures:**

Extinguishing media: Product mixture is not flammable. Use any means suitable for extinguishing surrounding fire.

Special Fire procedure: Wear appropriate fire protection gear for surrounding fire.

Unusual fire / exp. hazards: N/A

**Accidental release measures:**

If released or spilled: Absorb on inert material, collect for appropriate disposal. Do not flush to sewer.

Absorbent material: No restrictions

**Handling and Storage:**

Handling: Prudent laboratory practices should be followed when handling any material. Avoid contact with skin, eyes or mucous membranes. Wash thoroughly with soap and water after handling.

Storage: Store products at 4°C. Do not freeze. Do not store together with acids.

**Exposure Controls / Personal Protection:**

Protective equipment: Use general laboratory protective equipment, lab safe gloves, general eye protection safety glasses or goggles. Prudent laboratory practices should be followed when handling any material.

Hygiene: General lab practices. Keep away from food and beverages.

Ventilation: Local exhaust

Precautionary Labeling: None required

**Physical and Chemical Properties:**

Appearance and Odor: clear aqueous solution with little to no odor

Boiling Point: Not available for mixture

Flash Point: Not available for mixture

Specific Gravity: Not available for mixture

Vapor Density: Not available for mixture

pH: Not available for mixture

Solubility in Water: Soluble

**Stability and Reactivity:**

Stability: Stable

Incompatibility: Acids

Hazardous Decomp.: When heated to decomposition cadmium selenide may emit toxic fumes of cadmium and selenium. When heated to decomposition zinc sulfide may emit toxic fumes of oxides of sulfur and zinc. When heated to decomposition sodium borate may emit toxic fumes of sodium oxide and boron.

**Toxicological Information:**

**NOTE:** The toxicity of the mixture has not been investigated. Toxicological information is reported for

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the individual components.

Ingredient	OSHA PEL	ACGIH (TLV)
Cadmium and compounds	0.005 mg/m <sup>3</sup>	0.01 mg/m <sup>3</sup>
Selenium and compounds	0.2 mg/m <sup>3</sup>	0.2 mg/m <sup>3</sup>
Sodium borate	Not established	5 mg/m <sup>3</sup>

Cadmium is listed on the California Proposition 65 List as a reproductive and developmental toxin. Cadmium is an experimental teratogen and mutagen.

**Ecological Information:**

Cadmium and selenium bioaccumulate in the food chain when released into local waters. This material should not be released into the environment unless in compliance with all governmental regulations.

**Disposal Considerations:**

Discarded in its purchased form, this product would be considered a hazardous waste. Disposal of material containing this product or derived from the product should be in accordance with applicable regional, national and local laws and regulations.

**Transport Information:**

This product contains cadmium and selenium, and should be transported in accordance with all federal, state and local regulations governing actual levels of this material.

**Regulatory:**

TSCA: These products are solely for use for research and development purposes in accordance with 40 CFR 720.36 and may not be used, process or distributed for a commercial purpose. It may only be handled by technically qualified individuals.

SARA: Cadmium selenide is subject to reporting requirements of SARA Title III  
California Prop 65: This product contains cadmium, which is known to the State of California to cause cancer, birth defects and/or reproductive toxicity.

**Other Information:**

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**Identification of Product:**

Human Kit Control DNA

**Contact Information:**

Manufacturer: Affymetrix, Inc. 7300 Shoreline Court, South San Francisco, CA 94080

Tel: +1 650 228 7413

Emergency contact: CHEMTREC: 800 424 9300 in USA

**Composition / Information:**

The follow list shows component(s) of this product classified as hazardous based on physical properties and/or health effects.

<u>Ingredient Name</u>	<u>CAS #</u>	<u>Percent</u>
Tris (hydroxymethyl) aminomethane	77-86-1	<1 %
Ethylenediaminetetraacetic acid (EDTA)	60-00-4	<1 %
Water	7732-18-5	98 %

**Hazards Identification:**

Physical State: Liquid

Effects and Symptoms:

Inhalation: May cause irritation

Skin Contact: May cause irritation

Eye Contact: May cause irritation

Chronic Exposure: None known. Not thoroughly investigated

Aggravating Conditions: None known

Carcinogenicity: Not listed by NTP, IARC or regulated by OSHA as carcinogens.

**First Aid Measures:**

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Consult physician.

Eye or Skin Contact: Flush eyes or wash contaminated area with water for 15 minutes. Seek medical consultation if irritation persists.

Ingestion: Rinse out mouth immediately. Do not induce vomiting. Consult physician.

**Fire Fighting Measures:**

Extinguishing media: Water, Carbon dioxide, dry chemical or appropriate foam

Special Fire procedure: Wear appropriate fire protection gear for surrounding fire.

Unusual fire / exp. hazards: N/A

**Accidental release measures:**

If released or spilled: Absorb on inert material, collect for appropriate disposal. Do not flush to sewer.

Absorbent material: No restrictions

**Handling and Storage:**

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Handling: Special handling procedures are not needed  
Storage: Store products at -20C, non-frost-free freezer  
There are no restrictions concerning storage with other products.

**Exposure Controls / Personal Protection:**

Protective equipment: Use general laboratory protective equipment, lab safe gloves, general eye protection safety glasses or goggles  
Hygiene: General lab practices and universal precautions should be used. Keep away from food and beverages.  
Ventilation: Local exhaust  
Precautionary Labeling: None required

**Physical and Chemical Properties:**

Appearance and Odor: Clear odorless liquid  
Boiling Point: Not available  
Flash Point: Not available  
Specific Gravity: Not available  
Vapor Density: Not available  
pH: Not available  
Solubility in Water: Soluble

**Stability and Reactivity:**

Stability: Stable  
Incompatibility: EDTA is incompatible with: strong oxidizing agents, strong bases, copper, copper alloys, aluminum.  
Hazardous Decomp.: Burning may produce carbon monoxide, carbon dioxide, nitrogen oxides and ammonia  
Hazardous Polymerization: Not expected to occur

**Toxicological Information:**

**NOTE:** Toxicological information is reported for the individual components. The toxicity of the mixture has not been thoroughly investigated.

Ingredient	OSHA PEL	NIOSH	Lethal Dose (LD, LC, etc.)
Tris (hydroxymethyl) aminomethane	None listed	None listed	5900 mg/kg – oral, rat
EDTA	None listed	None listed	30 mg/kg – oral, mouse

**Ecological Information:**

No information available on mixture

**Disposal Considerations:**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Transport Information:**

This product is not subject to current regulations for transportation of hazardous goods (US DOT)  
UN No.: N/A



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**Regulatory:**

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TSCA: All components are listed  
SARA:  
Section 302: CAS # 77-86-1: acute  
Section 313: This material contains Water.  
California Prop 65: Not listed

European/International:  
Hazard Symbols: Not available  
Risk Phrases:  
Safety Phrases:

WGK (Water Danger/Protection)

CAS# 7732-18-5 No information available  
CAS# 77-86-1 1  
CAS# 60-00-4 2

Canada – DSL/NDSL

CAS# 7732-18-5 is listed  
CAS# 77-86-1 is listed  
CAS# 60-00-4 is listed

Canada – WHMIS This product has a WHMIS classification of D2B

**Other Information:**

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