



48810 Kato Road, Suite 100E & 200E, Fremont, CA 94538

Tel : +1 (800) 421-4149, Fax: +1 (510) 824-1490,

support@biogenex.com

Material Safety Data Sheet

Doc#: HK183 Rev. C
Release Date: 22-Sep-2020

1. CHEMICAL IDENTIFICATION/COMPANY

Product Name: New Fuchsin Substrate Pack Catalog No.: Hk183-5K

Manufacturer: BioGenex Laboratories, Inc.
48810 Kato Road, Suite 100E & 200E, Fremont, CA 94538, USA
Information: Tel: +1 (800) 421-4149 Fax: +1 (510) 824-1490

Emergency Contact: BioGenex: +1 (800) 421-4149
Chemtrec Assistance: (800) 424-9300 (U.S. and Canada only) (01)(703) 527-3887 (All other countries)

2. COMPOSITION/INFORMATION ON INGREDIENTS

Part No.	Description of Component	Formula	Hazard Status
HK184-5K	Tris Buffer	Mixture	See Section 3 below
HK185-5K	New Fuchsin Chromogen	Mixture	See Section 3 below
HK186-5K	Activator	Mixture	See Section 3 below
HK187-5K	Naphthol Phosphate Substrate	Mixture	See Section 3 below

3. HAZARDS IDENTIFICATION

Part No.	Chemical Name	Synonyms	CAS No.	Percent	Einecs#
HK184-5K	Tris(hydroxymethyl)aminomethane	Tris, Trizma	000077-86-1	<10	Unlisted
HK185-5K	Hydrochloric acid New Fuchsin	HCl, Hydrogen chloride (Same)	007647-01-0 003248-91-7	<10 <10	NDA NDA
HK186-5K	Sodium nitrite	Nitrous acid, sodium salt	007632-00-0	<10	NDA
HK187-5K	Tris(hydroxymethyl)aminomethane Naphthol AS-MX Phosphate, Sodium salt	Tris, Trizma (Same)	000077-86-1 096189-12-7	<10 <1	Unlisted NDA

Exposure Limits & NFPA Safety Ratings (Health-Fire-Reactivity)

CAS No.	OSHA PEL	ACGIH TLV	NIOSH	NFPA (H-F-R)
000077-86-1	NDA	NDA	NDA	NDA
003248-91-7	NDA	NDA	NDA	NDA
007632-00-0	NDA	NDA	NDA	NDA
007647-01-0	5 ppm, 7.6 mg/m ³	5 ppm, 7.6 mg/m ³	5 ppm, 7.6 mg/m ³	3-0-1
096189-12-7	NDA	NDA	NDA	NDA

4. FIRST AID MEASURES

HK184-5K, HK186-5K, HK187-5K

Get medical aid immediately.

EYES: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids.

SKIN: Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

INGESTION: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person.

INHALATION: Move the victim to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician: Treat symptomatically and supportively. No specific antidote exists.

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HK185-5K

Get medical aid immediately.

EYES: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Do Not allow victim to rub or keep eyes closed. Continue irrigating with normal saline until the pH has returned to normal.

SKIN: Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Discard contaminated clothing in a manner which limits further exposure. In case of chemical burns, cover area with sterile, dry dressing, bandage securely, but not too tightly.

INGESTION: Dilute the acid immediately by drinking large quantities of water or milk. If vomiting persists, administer fluids repeatedly. Maintain airway and treat shock. If vomiting occurs, keep head below hips to help prevent aspiration.

INHALATION: Move the victim to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician: Treat symptomatically and supportively. Symptoms may be delayed. No specific antidote exists.

5. FIRE-FIGHTING MEASURES**HK184-5K, HK185-5K, HK186-5K, HK187-5K****FLASH POINT:** NDA**FLAMMABLE LIMITS:** NDA**FIRE AND EXPLOSION HAZARD:** NDA

FIREFIGHTING MEDIA: For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For larger fires, use water spray, fog or alcohol foam. Use agents suitable for type of surrounding fire.

FIREFIGHTING MEASURES: Firefighters should wear proper protective equipment and self-contained breathing apparatus (SCBA) with full facepiece operated in positive pressure mode. Move container from fire area if possible. Do not scatter spilled material with more water than needed for fire control. Dike fire control water for later disposal. Avoid breathing hazardous vapors; keep upwind.

Toxic fumes produced under fire conditions.

6. ACCIDENTAL RELEASE MEASURES**HK184-5K, HK187-5K**

Wear self-contained breathing apparatus (SCBA) and full protective clothing. Absorb spill using an absorbent, non-combustible material such as earth, sand, or vermiculite and place in closed containers for disposal. Flush spill area with water.

HK185-5K

Wear self-contained breathing apparatus (SCBA) and full protective clothing. Neutralize spill with slaked lime, sodium bicarbonate or crushed limestone. Absorb spill using an absorbent, non-combustible material such as earth, sand, or vermiculite and place in closed containers for disposal. Flush spill area with water.

HK186-5K

Wear self-contained breathing apparatus (SCBA) and full protective clothing. Remove all sources of ignition. Absorb spill using an absorbent, non-combustible material such as earth, sand, or vermiculite and place in closed containers for disposal. Flush spill area with water. Use spark-proof tools and explosion proof equipment. Remove all sources of ignition.

7. HANDLING AND STORAGE**HK184-5K, HK187-5K**

HANDLING: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Avoid contact with skin, eyes, and clothing. Avoid ingestion and inhalation.

STORAGE: Observe all federal, state and local regulations when storing or disposing of this substance.

Store in a tightly closed container in a cool area away from incompatible substances.

HK185-5K

HANDLING: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Avoid contact with skin, eyes, and clothing. Avoid ingestion and inhalation.

STORAGE: Observe all federal, state and local regulations when storing or disposing of this substance.

Store refrigerated in a tightly closed container in a well-ventilated area away from oxidizing materials and other incompatible substances.

HK186-5K

HANDLING: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Avoid contact with skin, eyes, and clothing. Avoid ingestion and inhalation.

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STORAGE: Observe all federal, state and local regulations when storing or disposing of this substance.

Keep away from combustible materials, heat, sparks, and flame. Store refrigerated in a tightly closed container in a cool, well-ventilated area away from strong acids and other incompatible substances.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

HK184-5K, HK185-5K, HK186-5K, HK187-5K

VENTILATION: Provide local exhaust or process enclosure ventilation system to meet all federal, state, and local requirements.

RESPIRATORS: Follow the OSHA respirator regulations found in 29 CFR 1010.134. Always use a NIOSH-approved respirator when necessary.

EYE/SKIN PROTECTION: Wear safety goggles and appropriate protective (impervious) clothing and equipment to prevent repeated or prolonged eye/skin contact with this substance.

9. PHYSICAL AND CHEMICAL PROPERTIES

HK184-5K

BOILING POINT: NDA

VAPOR DENSITY(AIR=1): NDA

SPECIFIC GRAVITY: NDA

APPEARANCE & ODOR: Clear liquid

VAPOR PRESSURE(MM HG): NDA

MELTING POINT: NDA

SOLUBILITY(H₂O): NDA

HK185-5K

BOILING POINT: NDA

VAPOR DENSITY(AIR=1): NDA

SPECIFIC GRAVITY: NDA

APPEARANCE & ODOR: Dark brown liquid

VAPOR PRESSURE(MM HG): NDA

MELTING POINT: NDA

SOLUBILITY(H₂O): NDA

HK186-5K

BOILING POINT: NDA

VAPOR DENSITY(AIR=1): NDA

SPECIFIC GRAVITY: NDA

APPEARANCE & ODOR: Clear liquid

VAPOR PRESSURE(MM HG): NDA

MELTING POINT: NDA

SOLUBILITY(H₂O): NDA

HK187-5K

BOILING POINT: NDA

VAPOR DENSITY(AIR=1): NDA

SPECIFIC GRAVITY: NDA

APPEARANCE & ODOR: Clear liquid

VAPOR PRESSURE(MM HG): NDA

MELTING POINT: NDA

SOLUBILITY(H₂O): NDA

10. STABILITY AND REACTIVITY

HK184-5K

STABILITY: Stable at room temperature in closed containers under normal storage and handling conditions.

CONDITIONS TO AVOID: Bases, oxidizing agents, acids, aldehydes, copper, brass, and aluminum.

DECOMPOSITION: Nitrogen oxides, carbon monoxide, carbon dioxide, nitrogen, and ammonia and/or derivatives.

HAZARDOUS POLYMERIZATION: None reported.

HK185-5K

STABILITY: Stable at room temperature under normal storage and handling conditions.

CONDITIONS TO AVOID: Strong oxidizing agents.

DECOMPOSITION: Nitrogen oxides, carbon monoxide, carbon dioxide, hydrogen chloride gas, hydrogen.

HAZARDOUS POLYMERIZATION: None reported.

HK186-5K

STABILITY: Stable at room temperature under normal storage and handling conditions.

CONDITIONS TO AVOID: Strong acids, Strong reducing agents, ammonium salt, amines, activated carbon, cyanides.



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DECOMPOSITION: Nitrogen oxides, carbon monoxide, carbon dioxide, phosphorus oxides, phosphin, nitrogen, and ammonia and/or derivatives.

HAZARDOUS POLYMERIZATION: None reported.

HK187-5K

STABILITY: Stable at room temperature in closed containers under normal storage and handling conditions.

CONDITIONS TO AVOID: Bases, oxidizing agents, acids, aldehydes, copper, brass, and aluminum.

DECOMPOSITION: Nitrogen oxides, carbon monoxide, carbon dioxide, phosphorus oxides, phosphin, nitrogen, and ammonia and/or derivatives.

HAZARDOUS POLYMERIZATION: None reported.

11. TOXICOLOGICAL INFORMATION

HK184-5K, HK187-5k

EYE CONTACT: May cause eye irritation.

SKIN CONTACT: May cause skin irritation. May be absorbed through the skin. Skin absorption may cause unconsciousness.

INGESTION: May cause severe gastrointestinal tract irritation with nausea, vomiting and possible burns.

INHALATION: May cause irritation of the respiratory tract with burning pain in the nose and throat, coughing, wheezing, shortness of breath and pulmonary edema.

CHRONIC: Prolonged or repeated exposure may cause dermatitis.

TARGET ORGANS: None identified

ROUTES OF ENTRY: None indicated

The toxicological properties have not been thoroughly investigated.

HK185-5K

Hydrochloric acid: CORROSIVE.

EYE CONTACT: May cause severe irritation, conjunctivitis, corneal necrosis and burns with impairment or permanent loss of vision.

SKIN CONTACT: May cause severe irritation, inflammation, ulceration, necrosis and chemical burns, shock symptoms may develop including rapid pulse, sweating and collapse. Photosensitization reactions may occur in persons previously exposed. Contact with a compressed gas may cause frostbite.

INGESTION: May cause burns of the mouth, throat, esophagus and stomach with consequent pain, uneasiness, nausea, salivation, vomiting, diarrhea, chills, shock and intense thirst. Nephritis, fever and perforation of the intestinal tract, and circulatory collapse may occur. Death may be due to esophageal or gastric necrosis.

INHALATION: May cause irritation and burning of the throat. Coughing and choking.

CHRONIC: Repeated or prolonged exposure may cause conjunctivitis, dermatitis, photosensitization, bronchitis, gastritis, and erosion and discoloration of exposed tissues and organs.

TARGET ORGANS: None identified.

ROUTES OF ENTRY: None indicated

The toxicological properties have not been thoroughly investigated.

HK186-5K

EYE CONTACT: May cause eye irritation.

SKIN CONTACT: May cause skin irritation.

INGESTION: May cause irritation of the digestive tract.

INHALATION: Material is irritating to mucous membrane and upper respiratory tract. Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer.

CHRONIC: Laboratory experiments have shown mutagenic effects.

TARGET ORGANS: Blood cardiovascular system.

ROUTES OF ENTRY: None indicated

The toxicological properties have not been thoroughly investigated.

Toxicity Data

CAS#	RTECS	LD50	CARCINOGENICITY						
			ACGIH	IARC	NIOSH	NTP	OSHA	Other	
000077-86-1	TY2900000	ORL-RAT: 5.9 gm/kg	No	No	No	No	No	None	
003248-91-7	NDA	NDA	NDA	NDA	NDA	NDA	NDA	NDA	
007632-00-0	RA1225000	ORL-CHD LDLO: 22 mg/kg ORL-HUM LDLO: 71 mg/kg IPR-MUS: 158 mg/kg	LANCAO 2,162,17 34ZIAG -,543,69 JPETAB 165,30,69	NDA	No	NDA	No	No	NDA



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		ORL-MUS: 175 mg/kg	FAONAU 53A,97,74						
		IHL-RAT LC50: 5.5 mg/m ³	GTPZAB 16(10),36,72						
		IVN-RAT: 65 mg/kg	ARZNAD 13,320,63						
		ORL-RAT: 85 mg/kg	AIHAAP 30,470,69						
		EYE-RBT: 500 mg/24H MLD	28ZPAK -,15,72						
007647-01-0	NDA	ORL-RBT: 186 mg/kg	SOVEA7 27,246,74	No	No	No	No	No	None
		IPR-MUS: 40 mg/kg							
096189-12-7	NDA	ORL-RBT: 900 mg/kg	AIHAAP 30,470,69	NDA	NDA	NDA	NDA	NDA	NDA
		NDA							

Only selected Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here. Consult the actual entry in RTECS for complete information.

12. ECOLOGICAL INFORMATION

No information available.

13. DISPOSAL CONSIDERATIONS

HK184-5K, HK187-5K

Dispose in accordance with all applicable federal, state, and local environmental regulations.

Not listed as a material banned from land disposal according to RCRA.

HK185-5K, HK186-5K

Cautiously add to a large stirred excess of water. Adjust pH to neutral. Dispose in accordance with all applicable federal, state, and local environmental regulations.

14. TRANSPORT INFORMATION

No information available.

15. REGULATORY INFORMATION

No information available.

16. MISCELLANEOUS INFORMATION

No additional information available.

N/A: Not Applicable NDA: No Data Available

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