

Safety Data Sheet



Revision Date: 6/9/2015

SDS # SDS-10058-02

DAB-C Solution

1. PRODUCT AND COMPANY IDENTIFICATION

Product Description:

Histo, DAB-C Solution

Product Code

71-00-13

Hazardous Reagent

Histo, DAB-C Solution

Hazardous Reagent Product code

71-00-13

Recommended Use Reagent

Contact Manufacturer KPL, Inc.
910 Clopper Road
Gaithersburg, Maryland 20878
USA

Phone #: 1-301-948-7755

Fax #: 1-301-948-0169

Web: www.kpl.com

Email: kplmsds@seracare.com

Emergency Telephone Numbers:

AUSTRALIA – POISONS INFORMATION CENTER	Telephone: 13 11 26	Hours: 24 hours
CANADIAN TRANSPORT EMERGENCY CENTER	Telephone: (1) 613 996 6666	Hours: 24 hours/day, 7 days/week
UK – THE NATIONAL FOCUS	Telephone: (44) 029 2041 6388	Hours: 09:00-17:00 GMT
USA- NATIONAL RESPONSE CENTER	Telephone: (1) 800 424 8802	Hours: 24 hours/day, 7 days/week

CHEMTREC: CHEMTREC Customer Number:- CCN12505*
For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident
Call CHEMTREC Day or Night
Within USA and Canada: 1-800-424-9300 CCN12505 or
+1 703-527-3887 (collect calls accepted)

2. HAZARD IDENTIFICATION

Hazard Type Health Hazard

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Classification Acute Tox. 4 * H302
Acute Tox. 4 * H312
Skin Irrit. 2 H315
Eye Irrit. 2 H319
Muta. 2; Carc. 1B

Hazard Statement H302: Harmful if swallowed.
H312: Harmful in contact with skin.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H350: May cause cancer.
H341: Suspected of causing genetic defects.

Precautionary Statement P264: Wash skin thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you

feel unwell.

P302 + P352: IF ON SKIN: Wash with plenty of soap and water.

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P312: Call a POISON CENTER or doctor/physician if you feel unwell.

P330: Rinse mouth.

P332 + P313: If skin irritation occurs: Get medical advice/attention.

P337 + P313: If eye irritation persists: Get medical advice/attention.

P362: Take off contaminated clothing and wash before reuse.

P363: Wash contaminated clothing before reuse.

P501: Dispose of contents/container in accordance with local regulation.

Symbols of Danger

Warning



Data for 100% Hazardous Chemical

ROUTES OF EXPOSURE: The substance can be absorbed into the body by ingestion.

INHALATION RISK: A harmful contamination of the air will not or will only very slowly be reached on evaporation of this substance at 20°C; on spraying or dispersing, however, much faster.

SHORT-TERM EXPOSURE: The substance may cause effects on the kidneys, resulting in kidney impairment. The substance may cause effects on the central nervous system and liver by ingestion. Exposure by ingestion may result in death.

LONG-TERM EXPOSURE: Not Available

The product is a Mixture. It May Cause the following symptoms.

INGESTION: Abdominal pain. Nausea. Vomiting. Diarrhoea. Dizziness. Drowsiness. Confusion. Unconsciousness.

EYES: Redness. Pain. Severe deep burns.

SKIN: MAY BE ABSORBED! Redness

INHALATION: Burning sensation. Cough. Laboured breathing.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CHEMICAL</u>	<u>% Weight</u>	<u>CAS #:</u>
DAB-C Solution	Diethylene glycol	80%	111-46-6
	Catechol	3%	120-80-9
	Biphenyl-3,3',4,4'-tetrayltetraammonium tetrachloride	2.5%	868272-85-9

Classification

Acute Tox. 4 * H302
 Acute Tox. 4 * H312
 Skin Irrit. 2 H315
 Eye Irrit. 2 H319
 Muta. 2; Carc. 1B

4. FIRST AID MEASURES

Data for 100% Hazardous Chemical

Ingestion First Aid: Give one or two glasses of water to drink. Refer immediately for medical attention. See Notes. 007

Inhalation First Aid: Fresh air, rest.

Skin First Aid: Rinse skin with plenty of water or shower.

Eye First Aid: Rinse with plenty of water (remove contact lenses if easily possible).

5. FIRE FIGHTING MEASURES

Data For 100% Hazardous Chemical

Fire Acute Hazard: Combustible.	Fire Prevention: NO open flames.	Fire Fighting: Powder, alcohol-resistant foam, water spray, carbon dioxide .
Explosion Acute Hazard: Not Available	Not Available	Not Available
CHEMICAL DANGERS: Reacts violently with strong oxidants causing fire and explosion hazard. Attacks some forms of plastic.		
PHYSICAL DANGERS: Not Available		

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Avoid contact with skin and clothing.
Environmental Precautions	Low hazard to waters. Inform the responsible authorities when very large quantities get into water, drainage, sewer, or the ground.
Method of Containment	Collect leaking and spilled liquid in sealable containers as far as possible.
Methods of Clean-up	Clean-up with copious amounts of water.
Other Information	Not Available

Data for 100% Hazardous Chemical

SPILLAGE DISPOSAL	Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance. Collect leaking liquid in sealable containers. Wash away spilled liquid with plenty of water.
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7. HANDLING AND STORAGE

Handling:	Handle in accordance with good industrial hygiene and safety practice.
Storage:	Store at 4°C.

Data for 100% Hazardous Chemical

STORAGE	Dry. Well closed. Separated from strong oxidants.
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8. EXPOSURE CONTROL

Data for 100% Hazardous Chemical

•INHALATION	Ventilation.
•EYES	Safety spectacles.
•SKIN	Protective gloves.
•INGESTION	Do not eat, drink, or smoke during work.

Engineering Controls Not Available

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear, brown colored solution
Physical State	Liquid
pH:	Not Available

Data for 100% Hazardous Chemical

Boiling point: 244 °C	Melting point: -6.5°C	Relative density (water = 1): 1.12 Temperature: 20 °C	Solubility in water: miscible	Vapour pressure, Pa at 20°C: 2.7	pH-VALUE: 6 - 8 Temperature: 20 °C Concentration: 200 g/l
Relative vapour density (air = 1): 3.7	Flash point: 124°C c.c.	Auto-ignition temperature: 229°C	Explosive limits, vol% in air: 1.6-10.8	Octanol/water partition coefficient as log Pow: -1.47	

10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Incompatibility Materials to Avoid	Strongly oxidizing substances. The substance should not be stored with substances with which hazardous chemical reactions are possible.
Hazardous Decomposition Products	On combustion, forms irritating fumes.
Hazardous Polymerization	Will not occur

Data for 100% Hazardous Chemical

CHEMICAL DANGERS:	Reacts violently with strong oxidants causing fire and explosion hazard. Attacks some forms of plastic.
PHYSICAL DANGERS:	Not Available

11. TOXICOLOGY MEASURES

Acute Toxicity

The toxicological risks are minor due to the low concentration of hazardous ingredients. The following toxicological information is for the hazardous ingredient in pure form.

LD50 Oral	Data for 100% Diethylene Glycol: LD50 oral rat Value: 12600 mg/kg Reference: Raw Material Data Handbook, Vol.1: Organic Solvents, 1974. Vol. 1, Pg. 25, 1974.
	Data for 100% Catechol: LD50 oral rat Value: 260 mg/kg Reference: Advances in Food Research. Vol. 3, Pg. 197, 1951.
LD50 Dermal	Data for 100% Diethylene Glycol: LD50 dermal Species: Rabbit Value: 11900 mg/kg Reference: Raw Material Data Handbook, Vol.1: Organic Solvents, 1974. Vol. 1, Pg. 25, 1974.
	Data for 100% Catechol: LD50 dermal Species: Rabbit Value: 800 mg/kg Reference: American Industrial Hygiene Association Journal. Vol. 37, Pg. 596, 1976.
LC50 Inhalation	Not Available
Chronic Toxicity	
Carcinogenicity	Catechol CAS# 120-80-9: Health Hazard: Recognized: Carcinogen
Irritation	H315: Causes skin irritation. H319: Causes serious eye irritation.
Corrosivity	Not Applicable
Sensitization	Not Applicable
Neurological Effects	This product contains Catechol CAS# 120-80-9: which is a suspected Neurotoxicant.

Mutagenic Effects	Not Available
Reproductive Effects	Not Applicable
Developmental Effects	Not Available
Target Organ Effects	Eyes, Skin and Respiratory tract, Gastrointestinal tract
Other adverse effects	EFFECTS OF LONG-TERM OR REPEATED EXPOSURE: Repeated or prolonged contact may cause skin sensitization.

12. ECOLOGICAL MEASURES

Ecotoxicity	<p>Data for 100% Diethylene Glycol: LC50 Fish (96 hours) Minimum: 75200 mg/l Maximum: 75200 mg/l Median: 75200 mg/l Study number: 1 Reference for median: Geiger, D.L., L.T. Brooke, and D.J. Call 1990. Acute Toxicities of Organic Chemicals to Fathead Minnows (<i>Pimephales promelas</i>), Volume 5. Ctr.for Lake Superior Environ.Stud., Univ.of Wisconsin-Superior, Superior, WI :332 p.</p> <p>Data for 100% Catechol: LC50 Fish (96 hours) Minimum: 3,5 mg/l Maximum: 9,22 mg/l Median: 8,9 mg/l Study number: 6 Reference for median: Bergman, H.L., and A.D. Anderson 1977. Effects of Aqueous Effluents from In Situ Fossil Fuel Processing Technologies on Aquatic Systems. Contract No.EY-77-C-04-3913, Univ.of Wyoming, Laramie, WY :73 p.; DeGraeve, G.M., D.L. Geiger, J.S. Meyer, and H.L. Bergman 1980. Acute and Embryo-Larval Toxicity of Phenolic Compounds to Aquatic Biota. Arch.Environ.Contam.Toxicol. 9(5):557-568</p>
Persistence/Degradability	Not Available
Mobility in Environmental Media	Not Available
Bioaccumulation/Accumulation	Not Available

13. DISPOSAL MEASURES

Waste Disposal Method:	Carefully stir residue into a large excess of water. Next, neutralise with soda lye; check the pH level. Place in a collection container for salt solutions. This container should be adjusted for a pH value of 6-8. Collection vessels must be clearly labelled with a systematic description of their contents and with the hazard symbol and the R and S phrases. Store the vessels in a well-ventilated location. Entrust them to the appropriate authorities for disposal.
Contaminated Packaging:	Dispose of in compliance with the respective national and local regulations.
US EPA Waste Number:	Not Available

14. TRANSPORTATION MEASURES

DOT:	Not Available
IATA:	Not Available
ADR (road)/ RID (rail):	Not Available
IMDG (sea):	Not Available
General Transport Regulations	Not Available

15. REGULATORY MEASURES

This product is a mixture that may contain one or more hazardous chemicals. The hazardous ingredients listed are only those as required by 29 CFR 1910.1200 (OSHA HCS).

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains Catechol CAS# 120-80-9 CERCLA RQ: 100 Section13 : 313

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (See 40 CFR 61)

This product contains Catechol CAS# 120-80-9:

Health Hazard:

Recognized: Carcinogen

Suspected: Cardiovascular or Blood Toxicant, Gastrointestinal or Liver Toxicant, Immunotoxicant, Neurotoxicant, Skin or Sense Organ Toxicant

State Regulations

California Proposition 65:

This product contains the following Proposition 65 chemicals: Catechol: Cancer A (Reproductive and Cancer Hazard Assessment) Date:15-Jul-03

State Right to Know Act

Chemical Name	Diethylene glycol	Catechol	Biphenyl-3,3',4,4'-tetrayltetraammonium tetrachloride
New Jersey	Listed	Not Listed	
Pennsylvania	Listed	Listed	
New York	Listed	Listed	
Rhode Island	Listed	Listed	

International Inventories

Chemical Name	Diethylene glycol	Catechol	Biphenyl-3,3',4,4'-tetrayltetraammonium tetrachloride
TSCA	Listed	Listed	
DSL	Listed	Listed	
NDSL	Not Listed	Not Listed	
EINECS	Listed	Listed	
CHINA	Listed	Listed	
KECL	Listed	Not Listed	
JAPAN:	Listed	Listed	
AICS	Listed	Listed	

EU Regulations

Annex I Index#	Data for 100% Catechol CAS No: 120-80-9: EC No: 204-427-5 INDEX No: 604-016-00-4 Data for 100% Diethylene glycol CAS No: 111-46-6 EC No: 203-872-2 INDEX No: 603-140-00-6
Classification	Acute Tox. 4 * H302 Acute Tox. 4 * H312 Skin Irrit. 2 H315 Eye Irrit. 2 H319 Muta. 2; Carc. 1B
Risk Phrases	H302: Harmful if swallowed. H312: Harmful in contact with skin. H315: Causes skin irritation. H319: Causes serious eye irritation. H350: May cause cancer.

Safety Phrases

H341: Suspected of causing genetic defects.
P264: Wash skin thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P302 + P352: IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312: Call a POISON CENTER or doctor/physician if you feel unwell.
P330: Rinse mouth.
P332 + P313: If skin irritation occurs: Get medical advice/attention.
P337 + P313: If eye irritation persists: Get medical advice/attention.
P362: Take off contaminated clothing and wash before reuse.
P363: Wash contaminated clothing before reuse.
P501: Dispose of contents/container in accordance with local regulation.

Symbols and Indications of Danger

Warning

Specific Concentration Limits

Not Applicable

16. OTHER INFORMATION

The above information is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. KPL shall not be held liable for any damage resulting from handling or from contact with the above product. Users should make their own investigations to determine the suitability of the information for their particular purposes. This material is sold for research purposes and is intended as laboratory reagents only. It is not intended for food, drug, household, agricultural or cosmetic use. Its use must be supervised by a technically qualified individual experienced in handling potentially hazardous chemicals.

Revision Date:

6/9/2015