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DATE: 03/30/06 ACCT: 888235001
INDEX: D60872612 CAT NO: BP25641 PO NBR: CROSSGROVE-PACDEV

Material Safety Data Sheet
Ultrapure dNTP Set Containing dATP, dCTP, dGTP, and dTTP.
91479

Section 1 - Chemical Product and Company Identification

MSDS Name:
Ultrapure dNTP Set Containing dATP, dCTP, dGTP, and dTTP.
Catalog Numbers:
BP2564-1, BP2564-4, BP25641, BP25644
Synonyms:
None.
Company Identification:
Fisher Scientific One Reagent Lane
Fair Lawn, NJ 07410

For information in the US, call:
201-796-7100
Emergency Number US: 201-796-7100
CHEMTREC Phone Number, US:
800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#: 1927-31-7
Chemical Name: 2'-Deoxyadenosine 5'-triphosphate
%: 1-100
EINECS#: 217-662-3
Hazard Symbols:
Risk Phrases:

CAS#: 18423-43-3
Chemical Name: 2'-Deoxythymidine-5'-Triphosphate
%: 1-100
EINECS#: unlisted
Hazard Symbols:
Risk Phrases:

CAS#: 93919-41-6
Chemical Name: 2'-Deoxyguanosine-5'-Triphosphate
%: 1-100
EINECS#: 300-026-5
Hazard Symbols:
Risk Phrases:

CAS#: 102783-51-7
Chemical Name: 2'-Deoxycytidine-5'-Triphosphate
%: 1-100
EINECS#: unlisted
Hazard Symbols:
Risk Phrases:

Text for R-phrases: see Section 16
Hazard Symbols:
None listed
Risk Phrases:
None listed

Section 3 - Hazards Identification
EMERGENCY OVERVIEW

Caution! This is expected to be a low hazard for usual industrial handling. May cause eye and skin irritation. May cause respiratory and digestive tract irritation. Good laboratory procedures are recommended when handling this compound.
Target Organs: No data found.
Potential Health Effects

Eye:
May cause eye irritation.

Skin:
May cause skin irritation.

Ingestion:
May cause irritation of the digestive tract. Low hazard for usual industrial handling. The toxicological properties of this substance have not been fully investigated.

Inhalation:
May cause respiratory tract irritation. Low hazard for usual industrial handling. The toxicological properties of this substance have not been fully investigated.

Chronic:
No information found.

Section 4 - First Aid Measures

Eyes:
Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation develops, get medical aid.

Skin:
Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.

Ingestion:

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Never give anything by mouth to an unconscious person. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water. Wash mouth out with water. Get medical aid if irritation or symptoms occur.

Inhalation:
Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

Notes to Physician:
Section 5 - Fire Fighting Measures

General Information:
Containers can build up pressure if exposed to heat and/or fire. As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.

Extinguishing Media:
Use agent most appropriate to extinguish fire. Cool containers with flooding quantities of water until well after fire is out. Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Autoignition Temperature: Not applicable.
Flash Point: Not applicable.
Explosion Limits: Lower: Not available
Explosion Limits: Upper: Not available
NFPA Rating:
health: 1; flammability: 0; instability: 0;

Section 6 - Accidental Release Measures

General Information:
Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:
Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation.

Section 7 - Handling and Storage

Handling:
Wash thoroughly after handling. Wash hands before eating. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Use with adequate ventilation.

Storage:
Store in a cool, dry, well-ventilated area away from incompatible substances. Deep freeze (below -20°C).

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:
Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
2'-Deoxyadenosine 5'-triphosphate	none listed	none listed	none listed
2'-Deoxythymidine-5'-Triphosphate	none listed	none listed	none listed
2'-Deoxyguanosine-5'-Triphosphate	none listed	none listed	none listed
2'-Deoxycytidine-5'-Triphosphate	none listed	none listed	none listed

OSHA Vacated PELs:
2'-Deoxyadenosine 5'-triphosphate:
None listed
2'-Deoxythymidine-5'-Triphosphate:
None listed
2'-Deoxyguanosine-5'-Triphosphate:
None listed
2'-Deoxycytidine-5'-Triphosphate:
None listed

Personal Protective Equipment

Eyes:
Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin:
Glove protection is not normally required.

Clothing:
Protective garments not normally required.

Respirators:
Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a

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NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties
Physical State: Liquid
Color: colorless
Odor: none reported
pH: 7.5
Vapor Pressure: Not available
Vapor Density: >1.0
Evaporation Rate: Not available
Viscosity: Not available
Boiling Point: > 100 deg C (> 212.00&F)
Freezing/Melting Point: > 0 deg C (> 32.00&F)
Decomposition Temperature: Not available
Solubility in water: Soluble
Specific Gravity/Density: >1.000
Molecular Formula: Solution
Molecular Weight: 0

Section 10 - Stability and Reactivity
Chemical Stability: Stable at room temperature in closed containers under normal storage and handling conditions.

Conditions to Avoid: Incompatible materials, excess heat.

Incompatibilities with Other Materials: None reported.

Hazardous Decomposition Products: Nitrogen oxides, carbon monoxide, oxides of phosphorus, irritating and toxic fumes and gases, carbon dioxide.

Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#: CAS# 1927-31-7: AU7358800
CAS# 18423-43-3: None listed
CAS# 93919-41-6: None listed
CAS# 102783-51-7: None listed
LD50/LC50:

RTECS: Not available.
RTECS: Not available.
RTECS: Not available.
RTECS: Not available.

Carcinogenicity:
2'-Deoxyadenosine 5'-triphosphate - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
2'-Deoxythymidine 5'-Triphosphate - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
2'-Deoxyguanosine 5'-Triphosphate - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
2'-Deoxycytidine 5'-Triphosphate - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information found
Teratogenicity: No information found
Reproductive: No information found
Neurotoxicity: No information found
Mutagenicity: No information found
Other:

See actual entry in RTECS for complete information.

Section 12 - Ecological Information
Not available

Section 13 - Disposal Considerations
Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

Section 14 - Transport Information

US DOT
Shipping Name: Please contact Fisher Scientific for shipping info
Hazard Class:
UN Number:
Packing Group:

Canada TDG
Shipping Name: CARBON DIOXIDE SOLID
Hazard Class: 9
UN Number: UN1845
Packing Group: III

Section 15 - Regulatory Information

US Federal
TSCA

CAS# 1927-31-7 is not listed on the TSCA Inventory. It is for research and development use only.
CAS# 18423-43-3 is not listed on the TSCA Inventory. It is for research and development use only.
CAS# 93919-41-6 is not listed on the TSCA Inventory. It is for research and development use only.
CAS# 102783-51-7 is not listed on the TSCA Inventory. It is for research and development use only.

Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.
Chemical Test Rules
None of the chemicals in this product are under a Chemical Test Rule.

Section 12b
None of the chemicals are listed under TSCA Section 12b.
TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs
None of the chemicals in this material have an RQ.
SARA Section 302 Extremely Hazardous Substances
None of the chemicals in this product have a TPO.

Section 313
No chemicals are reportable under Section 313.
Clean Air Act:

This material does not contain any hazardous air pollutants.
This material does not contain any Class 1 Ozone depleters.
This material does not contain any Class 2 Ozone depleters.

Clean Water Act:
None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:
STATE:
2'-Deoxyadenosine 5'-triphosphate is not present on state lists from CA, PA, MN, MA, FL, or NJ.
2'-Deoxythymidine 5'-Triphosphate is not present on state lists from CA, PA, MN, MA, FL, or NJ.
2'-Deoxyguanosine 5'-Triphosphate is not present on state lists from CA, PA, MN, MA, FL, or NJ.
2'-Deoxycytidine 5'-Triphosphate is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California Prop 65
California No Significant Risk Level:
None of the chemicals in this product are listed.

European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols: Not available

Risk Phrases:
Safety Phrases:
S 28A After contact with skin, wash immediately with plenty of water.
S 37 Wear suitable gloves.
S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)
CAS# 1927-31-7: Not available
CAS# 18423-43-3: Not available
CAS# 93919-41-6: Not available
CAS# 102783-51-7: Not available

Canada
Canadian WHMIS Classifications: Not available
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.
CAS# 1927-31-7 is not listed on Canada's Ingredient Disclosure List.
CAS# 18423-43-3 is not listed on Canada's Ingredient Disclosure List.
CAS# 93919-41-6 is not listed on Canada's Ingredient Disclosure List.
CAS# 102783-51-7 is not listed on Canada's Ingredient Disclosure List.

Section 16 - Other Information
MSDS Creation Date: 4/03/2000
Revision #4 Date: 3/04/2004

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages.

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howsoever arising, even if the company has been advised of the possibility of such damages.
