Material Safety Data Sheet

Section 1 : Chemical Product Company Identification	
Product Name	Citicoline IP Impurity A
CAS No.	3416-25-9
Identified uses	Pharmaceutical Reference Standard
Details of the Supplier Company	SynZeal Research Pvt Ltd Plot No. F, Ganesh Industrial Estate 423/24/8, MahagujaratInd Estate Sarkhej-Bavla Road, Ahmedabad-382 213. Gujarat, India.
Telephone	+91-7969225400

Section 2 : Chemical Information	
Chemical Name	Cytidine 5'-pyrophosphate 2-(Dimethylamino)ethyl Ester
CAS No.	3416-25-9
Molecular Weight	474.3
Molecular Formula	C13H24N4O11P2

Section 3: Hazards Identification		
Emergency Overview:		
Appearance	White Solid	
Target Organs	NA	
Potential Health Effects:		
Eye	NIL	
Skin	NIL	
Ingestion	NIL	
Inhalation	NIL	
Chronic	NIL	

Hazard Statement:
H302:Harmful if swallowed.
H312:Harmful in contact with skin.

H319*Causes serious eye irritation. H332*Harmful if inhaled. H335*May cause respiratory irritation. Precautionary Statement: P261*Avoid breathing dust/fume/gas/mist/vapours/spray. P262*Do not get in eyes, on skin, or on clothing. P271*Use only outdoors or in a well ventilated area. P280*Vene protective glove-spirotective clothing/eye protection/face protection. P302 + P352*IF ON SKIN: Wash with plenty of water P304 + P340*IF INHALED. Remove person to fresh air and keep comfortable for breathing. P304 + P340*IF INHALED. Remove person to fresh air and keep comfortable for breathing. P308 + P313*IF exposed or concerned: Get medical advice/attention. P308 + P313*IF exposed or concerned: Get medical advice/attention. Section 4 : First Aid Measures Eye Wash with plenty of water Skin Wash with plenty of water Ingestion Medical assistance for gastric lavage. Inhalation Remove to fresh air, artificial respiration or oxygen if necessary. Citicoline IP impurity A can be washed with plenty of water in case of any exposure Section 5 : Firefighting Measures Extinguishing Media Carbon dioxide, dry chemical powder, foam, water. Unusual Fire and Explosion Hazards None indicated Wear self-contained breathing apparatus, avoid dust formation. Section 7 : Handlings and Storage Handling Wear surgical gloves			
H332:Harmful If inhaled. H335:May cause respiratory irritation. Precautionary Statement: P261:Avoid breathing dust/fume/gas/mst/vapours/spray. P262:Do not get in eyes, on skin, or on clothing. P271:Use only outdoors or in a well -ventilated area. P280:Wear protective gloves/protective clothing/eye protection/face protection. P302 + P352:IF ON SKIN: Wash with plenty of water P304 + P340:IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305 + P351 + P338:IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. P306 + P313:IF sygosed or concerned: Get medical advice/attention. Section 4 : First Akid Measures Eye Wash with plenty of water Wash with plenty of water Ingestion Medical assistance for gastric lavage. Inhalation Remove to fresh air, artificial respiration or oxygen if necessary, Citicoline IP Impurity A can be washed with plenty of water in case of any exposure Section 5 : Firefighting Measures Extinguishing Media Carbon dioxide, dry chemical powder, foam, water. Unusual Fire and Explosion Hazards None indicated Wear self-contained breathing apparatus, avoid dust formation. Section 6 : Accidental Release Measures Personal Precautions Wear self-contained breathing apparatus, avoid dust formation. Section 7 : Handlings and Storage Handling Wear surgical gloves	H315:Causes skin irritation.		
H355:May cause respiratory irritation. Precautionary Statement: P261:Avoid breathing dust/fume/gas/mist/vapours/spray. P262:Do not get in eyes, on skin, or on clothing. P271:Use only outdoors or in a well-ventilated area. P280:Wear protective gloves/protective clothing/eye protection/face protection. P302 + P352:IF ON SKIN: Wash with plenty of water P304 + P340:IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305 + P351 + P338:IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308 + P313:IF exposed or concerned: Get medical advice/attention. Section 4 : First Aid Measures Eve Wash with plenty of water Ingestion Medical assistance for gastric lavage. Inhalation Remove to fresh air, artificial respiration or oxygen if necessary. Citicoline IP Impurity A can be washed with plenty of water in case of any exposure Section 5 : Firefighting Measures Extinguishing Media Carbon dioxide, dry chemical powder, foam, water. Unusual Fire and Explosion Hazards None indicated Section 6 : Accidental Release Measures Personal Precautions Wear self-contained breathing apparatus, avoid dust formation. Spills/Leaks Wash with plenty of water, provide adequate ventilation.	H319:Causes serious eye irritation.		
Precautionary Statement: P261:Avoid breathing dust/tume/gas/mist/vapours/spray. P262:Do not get in eves, on skin, or on clothing. P271:Use only outdoors or in a well-ventilated area. P280:Wear protective gloves/protective clothing/eye protection/face protection. P302 + P352:IF ON SKIN: Wash with plenty of water P304 + P340:IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305 + P351 + P338:IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308 + P313:IF exposed or concerned: Get medical advice/attention. Section 4 : First Aid Measures Eye Wash with plenty of water Wash with plenty of water Ingestion Medical assistance for gastric lavage. Inhalation Remove to fresh air, artificial respiration or oxygen if necessary. Oiticoline IP Impurity A can be washed with plenty of water in case of any exposure Section 5 : Firefighting Measures Extinguishing Media Carbon dioxide, dry chemical powder, foam, water. Unusual Fire and Explosion Hazards None indicated Personal Precautions Wear self-contained breathing apparatus, avoid dust formation. Spills/Leaks Wash with plenty of water, provide adequate ventilation. Section 7 : Handlings and Storage Handling Wear surgical gloves	H332:Harmful if inhaled.		
P261:Avoid breathing dust/fume/gas/mist/vapours/spray. P262:Do not get in eyes, on skin, or on clothing. P271:Use only outdoors or in a well-ventilated area. P280:Wear protective gloves/protective clothing/eye protection/face protection. P302 + P352:IF ON SKIN: Wash with plenty of water P304 + P340:IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305 + P31:IF exposed or concerned: Get medical advice/attention. P308 + P313:IF exposed or concerned: Get medical advice/attention. Section 4 : First Aid Measures Eye Wash with plenty of water Ingestion Medical assistance for gastric lavage. Inhalation Remove to fresh air, artificial respiration or oxygen if necessary. Ottes to Physician Cliticoline IP Impurity A can be washed with plenty of water in case of any exposure Extinguishing Media Carbon dioxide, dry chemical powder, foam, water. Unusual Fire and Explosion Hazards None indicated Wear self-contained breathing apparatus, avoid dust formation. Section 7 : Handlings and Storage Handling Wear surgical gloves	H335:May cause respiratory irritation.		
P262:Do not get in eyes, on skin, or on clothing. P271:Use only outdoors or in a well-ventilated area. P280:Wear protective gloves/protective clothing/eye protection/face protection. P302 + P352:IF ON SKIN: Wash with plenty of water P304 + P340:IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305 + P351 + P338:IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308 + P313:IF exposed or concerned: Get medical advice/attention. Section 4 : First Aid Measures Eye Wash with plenty of water Skin Wash with plenty of water Ingestion Medical assistance for gastric lavage. Inhalation Remove to fresh air, artificial respiration or oxygen if necessary. Citicoline IP Impurity A can be washed with plenty of water in case of any exposure Section 5 : Firefighting Measures Extinguishing Media Carbon dioxide, dry chemical powder, foam, water. Unusual Fire and Explosion Hazards None indicated Section 6 : Accidental Release Measures Personal Precautions Wear self-contained breathing apparatus, avoid dust formation. Spills/Leaks Wash with plenty of water, provide adequate ventilation.	Precautionary Statement:		
P278:Use only outdoors or in a well-ventilated area. P280:Wear protective gloves/protective clothing/eye protection/face protection. P302 + P352:IF ON SKIN: Wash with plenty of water P304 + P340:IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305 + P351 + P338:IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308 + P313:IF exposed or concerned: Get medical advice/attention. Section 4 : First Aid Measures Eye Wash with plenty of water Skin Wash with plenty of water Ingestion Medical assistance for gastric lavage. Inhalation Remove to fresh air, artificial respiration or oxygen if necessary. Citicoline IP Impurity A can be washed with plenty of water in case of any exposure Section 5 : Firefighting Measures Extinguishing Media Carbon dioxide, dry chemical powder, foam, water. Unusual Fire and Explosion Hazards None indicated Section 6 : Accidental Release Measures Personal Precautions Wear self-contained breathing apparatus, avoid dust formation. Spills/Leaks Wash with plenty of water, provide adequate ventilation. Wear surgical gloves	P261:Avoid breathing dust/fume/gas/mist/vapours/spray.		
P280:Wear protective gloves/protective clothing/eye protection/face protection. P302 + P352:IF ON SKIN: Wash with plenty of water P304 + P340:IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305 + P351 + P338:IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308 + P313:IF exposed or concerned: Get medical advice/attention. Section 4 : First Aid Measures Eye Wash with plenty of water Skin Wash with plenty of water Ingestion Medical assistance for gastric lavage. Inhalation Remove to fresh air, artificial respiration or oxygen if necessary. Oited to Physician Citicoline IP Impurity A can be washed with plenty of water in case of any exposure Section 5 : Firefighting Measures Extinguishing Media Carbon dioxide, dry chemical powder, foam, water. Unusual Fire and Explosion Hazards None indicated Section 6 : Accidental Release Measures Personal Precautions Wear self-contained breathing apparatus, avoid dust formation. Spills/Leaks Wash with plenty of water, provide adequate ventilation.	P262:Do not get in eyes, on skin, or on clothing.		
P302 + P352:IF ON SKIN: Wash with plenty of water P304 + P340:IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305 + P351 + P338:IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308 + P313:IF exposed or concerned: Get medical advice/attention. Section 4 : First Aid Measures Eye Wash with plenty of water Skin Wash with plenty of water Ingestion Medical assistance for gastric lavage. Inhalation Remove to fresh air, artificial respiration or oxygen if necessary. Notes to Physician Citicoline IP Impurity A can be washed with plenty of water in case of any exposure Section 5 : Firefighting Measures Extinguishing Media Carbon dioxide, dry chemical powder, foam, water. Unusual Fire and Explosion Hazards None indicated Section 6 : Accidental Release Measures Personal Precautions Wear self-contained breathing apparatus, avoid dust formation. Spills/Leaks Wash with plenty of water, provide adequate ventilation. Section 7 : Handlings and Storage Handling Wear surgical gloves	P271:Use only outdoors or in a well-ventilated area.		
P304 + P340:F INHALED: Remove person to fresh air and keep comfortable for breathing. P305 + P351 + P338:F IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308 + P313:IF exposed or concerned: Get medical advice/attention. Section 4 : First Aid Measures Eye Wash with plenty of water Skin Wash with plenty of water Ingestion Medical assistance for gastric lavage. Inhalation Remove to fresh air, artificial respiration or oxygen if necessary. Notes to Physician Citicoline IP Impurity A can be washed with plenty of water in case of any exposure Section 5 : Firefighting Measures Extinguishing Media Carbon dioxide, dry chemical powder, foam, water. Unusual Fire and Explosion Hazards None indicated Section 6 : Accidental Release Measures Personal Precautions Wear self-contained breathing apparatus, avoid dust formation. Spills/Leaks Wash with plenty of water, provide adequate ventilation. Section 7 : Handlings and Storage Handling Wear surgical gloves	P280:Wear protective gloves/protective clothing/eye protection/face p	protection.	
P305 + P331 + P338: F IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308 + P313: F exposed or concerned: Get medical advice/attention. Section 4 : First Aid Measures Eye Wash with plenty of water Skin Wash with plenty of water Ingestion Medical assistance for gastric lavage. Inhalation Remove to fresh air, artificial respiration or oxygen if necessary. Notes to Physician Citicoline IP Impurity A can be washed with plenty of water in case of any exposure Section 5 : Firefighting Measures Extinguishing Media Carbon dioxide, dry chemical powder, foam, water. Unusual Fire and Explosion Hazards None indicated Section 6 : Accidental Release Measures Personal Precautions Wear self-contained breathing apparatus, avoid dust formation. Spills/Leaks Wash with plenty of water, provide adequate ventilation. Section 7 : Handlings and Storage Handling Wear surgical gloves	P302 + P352:IF ON SKIN: Wash with plenty of water		
P308 + P313:IF exposed or concerned: Get medical advice/attention. Section 4 : First Aid Measures Eye Wash with plenty of water Skin Wash with plenty of water Ingestion Medical assistance for gastric lavage. Inhalation Remove to fresh air, artificial respiration or oxygen if necessary. Notes to Physician Citicoline IP Impurity A can be washed with plenty of water in case of any exposure Section 5 : Firefighting Measures Extinguishing Media Carbon dioxide, dry chemical powder, foam, water. Unusual Fire and Explosion Hazards None indicated Section 6 : Accidental Release Measures Personal Precautions Wear self-contained breathing apparatus, avoid dust formation. Spills/Leaks Wash with plenty of water, provide adequate ventilation. Section 7 : Handlings and Storage Handling Wear surgical gloves	P304 + P340:IF INHALED: Remove person to fresh air and keep comfor	table for breathing.	
Section 4 : First Aid Measures Eye Wash with plenty of water Skin Wash with plenty of water Ingestion Medical assistance for gastric lavage. Inhalation Remove to fresh air, artificial respiration or oxygen if necessary. Notes to Physician Citicoline IP Impurity A can be washed with plenty of water in case of any exposure Section 5 : Firefighting Measures Extinguishing Media Carbon dioxide, dry chemical powder, foam, water. Unusual Fire and Explosion Hazards None indicated Section 6 : Accidental Release Measures Personal Precautions Wear self-contained breathing apparatus, avoid dust formation. Spills/Leaks Wash with plenty of water, provide adequate ventilation. Section 7 : Handlings and Storage Handling Wear surgical gloves	P305 + P351 +P338:IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.		
Eye Wash with plenty of water Skin Wash with plenty of water Ingestion Medical assistance for gastric lavage. Inhalation Remove to fresh air, artificial respiration or oxygen if necessary. Notes to Physician Citicoline IP Impurity A can be washed with plenty of water in case of any exposure Section 5: Firefighting Measures Extinguishing Media Carbon dioxide, dry chemical powder, foam, water. Unusual Fire and Explosion Hazards None indicated Section 6: Accidental Release Measures Personal Precautions Wear self-contained breathing apparatus, avoid dust formation. Spills/Leaks Wash with plenty of water, provide adequate ventilation. Section 7: Handlings and Storage Handling Wear surgical gloves	P308 + P313:IF exposed or concerned: Get medical advice/attention.		
Eye Wash with plenty of water Skin Wash with plenty of water Ingestion Medical assistance for gastric lavage. Inhalation Remove to fresh air, artificial respiration or oxygen if necessary. Notes to Physician Citicoline IP Impurity A can be washed with plenty of water in case of any exposure Section 5 : Firefighting Measures Extinguishing Media Carbon dioxide, dry chemical powder, foam, water. Unusual Fire and Explosion Hazards None indicated Section 6 : Accidental Release Measures Personal Precautions Wear self-contained breathing apparatus, avoid dust formation. Spills/Leaks Wash with plenty of water, provide adequate ventilation. Section 7 : Handlings and Storage Handling Wear surgical gloves			
Skin Wash with plenty of water Ingestion Medical assistance for gastric lavage. Inhalation Remove to fresh air, artificial respiration or oxygen if necessary. Notes to Physician Citicoline IP Impurity A can be washed with plenty of water in case of any exposure Section 5 : Firefighting Measures Extinguishing Media Carbon dioxide, dry chemical powder, foam, water. Unusual Fire and Explosion Hazards None indicated Section 6 : Accidental Release Measures Personal Precautions Wear self-contained breathing apparatus, avoid dust formation. Spills/Leaks Wash with plenty of water, provide adequate ventilation. Section 7 : Handlings and Storage Handling Wear surgical gloves	Section 4: First Aid Measures		
Ingestion Medical assistance for gastric lavage. Inhalation Remove to fresh air, artificial respiration or oxygen if necessary. Notes to Physician Citicoline IP Impurity A can be washed with plenty of water in case of any exposure Section 5: Firefighting Measures Extinguishing Media Carbon dioxide, dry chemical powder, foam, water. Unusual Fire and Explosion Hazards None indicated Section 6: Accidental Release Measures Personal Precautions Wear self-contained breathing apparatus, avoid dust formation. Spills/Leaks Wash with plenty of water, provide adequate ventilation. Section 7: Handlings and Storage Handling Wear surgical gloves	Eye	Wash with plenty of water	
Inhalation Remove to fresh air, artificial respiration or oxygen if necessary. Notes to Physician Citicoline IP Impurity A can be washed with plenty of water in case of any exposure Section 5: Firefighting Measures Extinguishing Media Carbon dioxide, dry chemical powder, foam, water. Unusual Fire and Explosion Hazards None indicated Section 6: Accidental Release Measures Personal Precautions Wear self-contained breathing apparatus, avoid dust formation. Spills/Leaks Wash with plenty of water, provide adequate ventilation. Section 7: Handlings and Storage Handling Wear surgical gloves	Skin	Wash with plenty of water	
Citicoline IP Impurity A can be washed with plenty of water in case of any exposure Section 5 : Firefighting Measures Extinguishing Media Carbon dioxide, dry chemical powder, foam, water. Unusual Fire and Explosion Hazards None indicated Section 6 : Accidental Release Measures Personal Precautions Wear self-contained breathing apparatus, avoid dust formation. Spills/Leaks Wash with plenty of water, provide adequate ventilation. Section 7 : Handlings and Storage Handling Wear surgical gloves	Ingestion	Medical assistance for gastric lavage.	
Section 5 : Firefighting Measures Extinguishing Media Carbon dioxide, dry chemical powder, foam, water. Unusual Fire and Explosion Hazards None indicated Section 6 : Accidental Release Measures Personal Precautions Wear self-contained breathing apparatus, avoid dust formation. Spills/Leaks Wash with plenty of water, provide adequate ventilation. Section 7 : Handlings and Storage Handling Wear surgical gloves	Inhalation	Remove to fresh air, artificial respiration or oxygen if necessary.	
Extinguishing Media Carbon dioxide, dry chemical powder, foam, water. Unusual Fire and Explosion Hazards None indicated Section 6: Accidental Release Measures Personal Precautions Wear self-contained breathing apparatus, avoid dust formation. Spills/Leaks Wash with plenty of water, provide adequate ventilation. Section 7: Handlings and Storage Handling Wear surgical gloves	Notes to Physician		
Unusual Fire and Explosion Hazards None indicated Section 6 : Accidental Release Measures Personal Precautions Wear self-contained breathing apparatus, avoid dust formation. Spills/Leaks Wash with plenty of water, provide adequate ventilation. Section 7 : Handlings and Storage Handling Wear surgical gloves	Section 5 : Firefighting Measures		
Unusual Fire and Explosion Hazards None indicated Section 6 : Accidental Release Measures Personal Precautions Wear self-contained breathing apparatus, avoid dust formation. Spills/Leaks Wash with plenty of water, provide adequate ventilation. Section 7 : Handlings and Storage Handling Wear surgical gloves	Extinguishing Media	Carbon dioxide. dry chemical powder, foam, water.	
Personal Precautions Wear self-contained breathing apparatus, avoid dust formation. Spills/Leaks Wash with plenty of water, provide adequate ventilation. Section 7: Handlings and Storage Handling Wear surgical gloves	Unusual Fire and Explosion Hazards		
Personal Precautions Wear self-contained breathing apparatus, avoid dust formation. Spills/Leaks Wash with plenty of water, provide adequate ventilation. Section 7: Handlings and Storage Handling Wear surgical gloves	Traile managed		
Spills/Leaks Wash with plenty of water, provide adequate ventilation. Section 7 : Handlings and Storage Handling Wear surgical gloves	Section 6 : Accidental Release Measures		
Section 7 : Handlings and Storage Handling Wear surgical gloves	Personal Precautions	Wear self-contained breathing apparatus, avoid dust formation.	
Handling Wear surgical gloves	Spills/Leaks	Wash with plenty of water, provide adequate ventilation.	
Handling Wear surgical gloves			
	Section 7: Handlings and Storage		
Storage	Handling	Wear surgical gloves	
	Storage		

Section 8: Exposure Controls, Personal Protection	
Respiratory Protection	Self-contained breathing apparatus
Exposure Limits	NA
Eye Protection	Wear safety goggles
Other Protective Equipment	Protective clothing
Skin	Full sleeves apron
Clothing	Cotton

Section 9: Physical and Chemical Properties	
Appearance	White Solid
Odor	Odor less
Melting Point	NA
рН	Basic
Vapor Pressure	NA
Vapor Density	NA
Evaporation Rate	NA
Viscosity	NA
Boiling Point	NA
Decomposition Temp	NA
Auto ignition Temp.	NA
Flash Point	NA
NFPA Rating	NA
Explosion Limits	
Lower	NA
Upper	NA
Solubility	Chloroform, Methanol
Specific Gravity/Density	NA

Section 10 : Stability and Reactivity	
Chemical Stability	
Conditions to avoid	Direct contract to skin
Incompatibilities with other Materials	Keep away
Hazardous Decomposition Products	NIL

Hazardous Polymerization	NIL	
Section 11 : Toxicological Information		
CAS	NA	
LD50/LC50	NA	
Carcinogenicity	NIL	
Epidemiology	NIL	
Teratogenicity	NIL	
Reproductive Effects	NIL	
Neurotoxicity	NIL	
Mutagencity	NIL	
Other Studies	NA	
Section 12: Ecological Information		
Data not available		
Section 13 : Disposal Consideration		
RCRA P-Series	Can be incinerated	
RCRA U-Series	NA	
Section 14 : Transport Consideration		
UN-Number		
ADR/RID: IMDG: IATA:		
UN proper shipping name		
ADR/RID: Not dangerous goods		
IMDG: Not dangerous goods		
IATA: Not dangerous goods		
Transport hazard class(es)		
ADR/RID: IMDG: IATA:		
Packaging Group		
ADR/RID: IMDG: IATA:		
Environmental hazards		
ADR/RID: No IMDG Marine pollutant: No IATA: No		
Special precautions for users		

Further information

Section 15: Regulatory Information	
TSCA	Attached the letter
Health and Safety Reporting List	No data available
Chemical Test Rules	Chemical analysis report is attached

Section 16: Additional Information

This product is not bioactive, non-radioactive. It is for R and D use only. Not for drug, household or other uses.

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge. It does not represent any guarantee of the product.