

Chemwatch: 74-0338	
Version No: 4.1	Issue Date: <b>12/10/2021</b> Print Date: <b>09/14/2022</b>
Safety Data Sheet according to WHS Regulations (Hazardous Chemicals) Amendment 2020 and ADG requirements	L.GHS.AUS.EN.E

#### SECTION 1 Identification of the substance / mixture and of the company / undertaking

Product Identifier		
Product name	Vintessential Acetic Acid Analysis Kit Vial 2 Coenzyme (liquid)	
Chemical Name	Not Applicable	
Synonyms	Item No: 4A100, 4A105	
Chemical formula	Not Applicable	
Other means of identification	Not Available	

## Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	General laboratory reagent for in vitro use only. Measuring acetic acid in grape juice and wine.	
	Use according to manufacturer's directions.	

## Details of the manufacturer or supplier of the safety data sheet

Registered company name	Vintessential Laboratories	
Address	2 BRASSER AVENUE DROMANA VIC 3936 Australia	
Telephone	61 3 5987 2242	
Fax	ax +61 3 5987 3303	
Website	Website Not Available	
Email Not Available		

#### Emergency telephone number

Association / Organisation	oisons Information Centre	
Emergency telephone numbers	13 11 26	
Other emergency telephone numbers	Not Available	

## **SECTION 2 Hazards identification**

assification of the substance or mixture				
Poisons Schedule Not Applicable				
Classification <sup>[1]</sup>	lassification [1] Acute Toxicity (Oral) Category 4, Serious Eye Damage/Eye Irritation Category 2A			
Legend: 1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI				

#### Label elements

Hazard pictogram(s)



Signal word Warning

H302	Harmful if swallowed.
H319	Causes serious eye irritation.

#### Precautionary statement(s) Prevention

P264	264 Wash all exposed external body areas thoroughly after handling.	
P270 Do not eat, drink or smoke when using this product.		
P280 Wear protective gloves, protective clothing, eye protection and face protection.		

## Precautionary statement(s) Response

P305+P351+P338	F IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.		
P337+P313	P337+P313 If eye irritation persists: Get medical advice/attention.		
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor/physician/first aider if you feel unwell.			
P330 Rinse mouth.			

#### Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

DE04	Dispass of contents/container to outherized hereadous or appendix wate collection point in considered with any local regulation
P501	Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

## **SECTION 3 Composition / information on ingredients**

## Substances

See section below for composition of Mixtures

#### Mixtures

CAS No	%[weight]	Name
111-46-6	10-30	diethylene glycol
987-65-5	1-10	adenosine 5'-triphosphate disodium salt
26628-22-8	<0.05	sodium azide
Not Available	balance	Use according to manufacturer's directions.
Legend: 1. Classified by Chernwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4. Classification drawn from C&L * EU IOELVs available		

## **SECTION 4 First aid measures**

Description of first aid measu			
Eye Contact	<ul> <li>If this product comes in contact with the eyes:</li> <li>Wash out immediately with fresh running water.</li> <li>Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.</li> <li>Seek medical attention without delay; if pain persists or recurs seek medical attention.</li> <li>Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>		
Skin Contact	If skin contact occurs: <ul> <li>Immediately remove all contaminated clothing, including footwear.</li> <li>Flush skin and hair with running water (and soap if available).</li> <li>Seek medical attention in event of irritation.</li> </ul>		
Inhalation			
Ingestion	<ul> <li>If swallowed do NOT induce vomiting.</li> <li>If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.</li> <li>Observe the patient carefully.</li> <li>Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.</li> <li>Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.</li> <li>Seek medical advice.</li> <li>Avoid giving milk or oils.</li> <li>Avoid giving alcohol.</li> </ul>		

Indication of any immediate medical attention and special treatment needed

Any material aspirated during vomiting may produce lung injury. Therefore emesis should not be induced mechanically or pharmacologically. Mechanical means should be used if it is considered necessary to evacuate the stomach contents; these include gastric lavage after endotracheal intubation. If spontaneous vomiting has occurred after ingestion, the patient should be monitored for difficult breathing, as adverse effects of aspiration into the lungs may be delayed up to 48 hours. Treat symptomatically.

- Polyethylene glycols are generally poorly absorbed orally and are mostly unchanged by the kidney.
- Dermal absorption can occur across damaged skin (e.g. through burns) leading to increased osmolality, anion gap metabolic acidosis, elevated calcium, low ionised calcium, CNS depression and renal failure.
- Treatment consists of supportive care.

[Ellenhorn and Barceloux: Medical Toxicology]

#### **SECTION 5 Firefighting measures**

#### Extinguishing media

The product contains a substantial proportion of water, therefore there are no restrictions on the type of extinguishing media which may be used. Choice of extinguishing media should take into account surrounding areas

Though the material is non-combustible, evaporation of water from the mixture, caused by the heat of nearby fire, may produce floating layers of combustible substances. In such an event consider:

- foam.
- dry chemical powder.
- carbon dioxide.

#### Special hazards arising from the substrate or mixture

· ·	
Fire Incompatibility	None known.

#### Advice for firefighters

	<ul> <li>Equipment should be thoroughly decontaminated after use.</li> <li>The material is not readily combustible under normal conditions.</li> <li>However, it will break down under fire conditions and the organic component may burn.</li> </ul>
	<ul> <li>Not considered to be a significant fire risk.</li> <li>Heat may cause expansion or decomposition with violent rupture of containers.</li> <li>Decomposes on heating and may produce toxic fumes of carbon monoxide (CO).</li> </ul>
Fire/Explosion Hazard	May emit acrid smoke.
	Decomposes on heating and produces toxic fumes of: carbon dioxide (CO2) other pyrolysis products typical of burning organic material.
	May emit poisonous fumes.
HAZCHEM	Not Applicable

#### **SECTION 6 Accidental release measures**

#### Personal precautions, protective equipment and emergency procedures

See section 8

#### **Environmental precautions**

See section 12

#### Methods and material for containment and cleaning up

Minor Spills	<ul> <li>Clean up all spills immediately.</li> <li>Avoid breathing vapours and contact with skin and eyes.</li> <li>Control personal contact with the substance, by using protective equipment.</li> <li>Contain and absorb spill with sand, earth, inert material or vermiculite.</li> <li>Wipe up.</li> <li>Place in a suitable, labelled container for waste disposal.</li> </ul>						
	Chemical Class For release ont		•••		nts listed i	n order of p	priority.
Major Spills	SORBENT TYPE	RANK	APPLICA	TION	COLL	ECTION	LIMITATIONS
	LAND SPILL -	SMALL					
	cross-linked polymer - particulate		1	shovel	shovel	R, W, SS	
	cross-linked polymer - pillow		1	throw	pitchfork	R, DGC, RT	
	sorbent clay - particulate		2	shovel	shovel	R,I, P	
	wood fiber - p	wood fiber - pillow			throw	pitchfork	R, P, DGC, RT
	treated wood fiber - pillow		3	throw	pitchfork	DGC, RT	
	foamed glass - pillow		4	throw	pichfork	R, P, DGC, RT	
	LAND SPILL - MEDIUM						

cross-linked polymer - particulate	1	blower	skiploader	R,W, SS
polypropylene - particulate	2	blower	skiploader	W, SS, DGC
sorbent clay - particulate	2	blower	skiploader	R, I, W, P, DGC
polypropylene - mat	3	throw	skiploader	DGC, RT
expanded mineral - particulate	3	blower	skiploader	R, I, W, P, DGC
polyurethane - mat	4	throw	skiploader	DGC, RT
DGC: Not effective where ground cover R; Not reusable I: Not incinerable P: Effectiveness reduced when rainy RT:Not effective where terrain is rugge SS: Not for use within environmentally W: Effectiveness reduced when windy Reference: Sorbents for Liquid Hazard R.W Melvold et al: Pollution Technolog Moderate hazard. Clear area of personnel and move Alert Fire Brigade and tell them low Wear breathing apparatus plus pro Prevent, by any means available, Stop leak if safe to do so. Contain spill with sand, earth or ve Collect recoverable product into la Neutralise/decontaminate residue Collect solid residues and seal in 1 Wash area and prevent runoff into After clean up operations, deconta H contamination of drains or water	ed dous : dous : gy Re e upw catior otecti spilla ermic spilla ermic (see labell (see labell o drain amina	sitive sites Substance view No. 1: n and natur ve gloves. ge from en ulite. d containen Section 13 ed drums fo ns. ate and laur	50: Noyes Data e of hazard. Itering drains or s for recycling. f or specific ag or disposal. Inder all protecti	a Corporation 1988 r water course. , , , , , , , , , , , , , , , , , , ,

Personal Protective Equipment advice is contained in Section 8 of the SDS.

## **SECTION 7 Handling and storage**

Precautions for safe handling	
Safe handling	<ul> <li>DO NOT allow clothing wet with material to stay in contact with skin</li> <li>Avoid all personal contact, including inhalation.</li> <li>Wear protective clothing when risk of exposure occurs.</li> <li>Use in a well-ventilated area.</li> <li>Prevent concentration in hollows and sumps.</li> <li>DO NOT enter confined spaces until atmosphere has been checked.</li> <li>DO NOT allow material to contact humans, exposed food or food utensils.</li> <li>Avoid contact with incompatible materials.</li> <li>When handling, DO NOT eat, drink or smoke.</li> <li>Keep containers securely sealed when not in use.</li> <li>Avoid physical damage to containers.</li> <li>Always wash hands with soap and water after handling.</li> <li>Work clothes should be laundered separately. Launder contaminated clothing before re-use.</li> <li>Use good occupational work practice.</li> <li>Observe manufacturer's storage and handling recommendations contained within this SDS.</li> <li>Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.</li> </ul>
Other information	<ul> <li>Store in original containers.</li> <li>Keep containers securely sealed.</li> <li>No smoking, naked lights or ignition sources.</li> <li>Store in a cool, dry, well-ventilated area.</li> <li>Store away from incompatible materials and foodstuff containers.</li> <li>Protect containers against physical damage and check regularly for leaks.</li> <li>Observe manufacturer's storage and handling recommendations contained within this SDS.</li> </ul>

## Conditions for safe storage, including any incompatibilities

Suitable container	<ul> <li>Polyethylene or polypropylene container.</li> <li>Packing as recommended by manufacturer.</li> <li>Check all containers are clearly labelled and free from leaks.</li> </ul>
Storage incompatibility	<ul> <li>Glycols and their ethers undergo violent decomposition in contact with 70% perchloric acid. This seems likely to involve formation of the glycol perchlorate esters (after scission of ethers) which are explosive, those of ethylene glycol and 3-chloro-1,2-propanediol being more powerful than glyceryl nitrate, and the former so sensitive that it explodes on addition of water.</li> <li>Alcohols         <ul> <li>are incompatible with strong acids, acid chlorides, acid anhydrides, oxidising and reducing agents.</li> <li>reacts, possibly violently, with alkaline metals and alkaline earth metals to produce hydrogen</li> <li>react with strong acids, strong caustics, aliphatic amines, isocyanates, acetaldehyde, benzoyl peroxide, chromic acid, chromium oxide, dialkylzincs, dichlorine oxide, ethylene oxide, hypochlorous acid, isopropyl chlorocarbonate, lithium tetrahydroaluminate, nitrogen dioxide, pentafluoroguanidine, phosphorus halides, phosphorus pentasulfide, tangerine oil, triethylaluminium, triisobutylaluminium</li> <li>should not be heated above 49 deg. C. when in contact with aluminium equipment</li> <li>Avoid strong acids, bases.</li> </ul> </li> </ul>

## SECTION 8 Exposure controls / personal protection

#### **Control parameters**

Occupational Exposure Limits (OEL)

## INGREDIENT DATA

INGREDIENT DATA									
Source	Ingredient Material name TWA		STEL	Peak	Notes				
Australia Exposure Standards	diethylene 2,2'-Oxybis[ethanol] 23 ppm / 100 mg/m3			Not Available	Not Available	Not Available			
Australia Exposure Standards	sodium azide	Sodium azide	Not Available	Not Available	0.11 ppm / 0.3 mg/m3	(benomyl an are establish	wo substances marked with this footnote of sodium azide), the exposure standards ned as gravimetric (mg/m <sup>3</sup> ) values and to volumetric values.		
Emergency Limits									
Ingredient	TEEL-1			TEEL-2			TEEL-3		
diethylene glycol	6.9 ppm	6.9 ppm				860 ppm			
sodium azide	0.026 mg/m3			0.29 mg/m3			5.3 mg/m3		
Ingredient	Original IDLH	I			Revised I	Revised IDLH			
diethylene glycol	Not Available	Not Available					Not Available		
adenosine 5'-triphosphate disodium salt	Not Available	Not Available					Not Available		
sodium azide	Not Available	Not Available					Not Available		
Occupational Exposure Bandin	9								
Ingredient	Occupationa	Exposure Band Rating	9		Occupati	onal Exposure	Band Limit		
adenosine 5'-triphosphate disodium salt	E	E				≤ 0.01 mg/m³			
Notes:	Occupational	Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the							

Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.

#### MATERIAL DATA

Sensory irritants are chemicals that produce temporary and undesirable side-effects on the eyes, nose or throat. Historically occupational exposure standards for these irritants have been based on observation of workers' responses to various airborne concentrations. Present day expectations require that nearly every individual should be protected against even minor sensory irritation and exposure standards are established using uncertainty factors or safety factors of 5 to 10 or more. On occasion animal no-observable-effect-levels (NOEL) are used to determine these limits where human results are unavailable. An additional approach, typically used by the TLV committee (USA) in determining respiratory standards for this group of chemicals, has been to assign ceiling values (TLV C) to rapidly acting irritants and to assign short-term exposure limits (TLV STELs) when the weight of evidence from irritation, bioaccumulation and other endpoints combine to warrant such a limit. In contrast the MAK Commission (Germany) uses a five-category system based on intensive odour, local irritation, and elimination half-life. However this system is being replaced to be consistent with the European Union (EU) Scientific Committee for Occupational Exposure Limits (SCOEL); this is more closely allied to that of the USA.

OSHA (USA) concluded that exposure to sensory irritants can:

- cause inflammation
- cause increased susceptibility to other irritants and infectious agents
- lead to permanent injury or dysfunction
- permit greater absorption of hazardous substances and
- ▶ acclimate the worker to the irritant warning properties of these substances thus increasing the risk of overexposure.

#### Exposure controls

	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls of be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategical "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use. Employers may need to use multiple types of controls to prevent employee overexposure. General exhaust is adequate under normal operating conditions. Local exhaust ventilation may be required in special circumstances. If risk of overexposure exists, wear approved respirator. Supplied-air type respirator may be required in special circumstances. Correct fit is essential to ensure adequate protection. Provide adequate ventilation in warehouses and enclosed storage areas. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.							
	Type of Contaminant:	Air Speed:						
Appropriate engineering controls	solvent, vapours, degreasing etc., evaporating from tank (in	0.25-0.5 m/s (50-100 f/min)						
Controis	aerosols, fumes from pouring operations, intermittent conta drift, plating acid fumes, pickling (released at low velocity ir	0.5-1 m/s (100-200 f/min.)						
	direct spray, spray painting in shallow booths, drum filling, generation into zone of rapid air motion)	1-2.5 m/s (200-500 f/min.)						
	grinding, abrasive blasting, tumbling, high speed wheel ger very high rapid air motion)	2.5-10 m/s (500-2000 f/min.)						
	Within each range the appropriate value depends on:							
	Lower end of the range	Upper end of the range						
	1: Room air currents minimal or favourable to capture	1: Disturbing room air currents						
	2: Contaminants of low toxicity or of nuisance value only.	2: Contaminants of high toxicity						
	3: Intermittent, low production.	3: High production, heavy use						
	4: Large hood or large air mass in motion	4: Small hood-local control only						

Other protection	<ul> <li>Overalls.</li> <li>P.V.C apron.</li> <li>Barrier cream.</li> <li>Skin cleansing cream.</li> <li>Eye wash unit.</li> </ul>
Body protection	See Other protection below
Hands/feet protection	<ul> <li>Wear chemical protective gloves, e.g. PVC.</li> <li>Wear stately footwear or safety gumbools, e.g. Rubber</li> <li>The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.</li> <li>The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.</li> <li>Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.</li> <li>Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:         <ul> <li>requency and durability of glove has a dependent on usage. Important factors in the selection of gloves include:             <ul> <li>requency and durability of glove type is dependent on usage. Important factors in the selection of gloves include:</li></ul></li></ul></li></ul>
Skin protection	See Hand protection below
Eye and face protection	<ul> <li>Safety glasses with side shields.</li> <li>Chemical goggles.</li> <li>Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]</li> </ul>
Personal protection	
	Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be adjusted in a tank 2 meters distant from the extraction point. Other mechanical consideration producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

## Recommended material(s)

## GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:

"Forsberg Clothing Performance Index". The effect(s) of the following substance(s) are taken into account in the *computer*generated selection:

Vintessential Acetic Acid Analysis Kit Vial 2 Coenzyme (liquid)

Material	СРІ
BUTYL	А
NATURAL RUBBER	С
NEOPRENE	С
NITRILE	С
PVA	С

## **Respiratory protection**

Type AB-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required. Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 5 x ES	AB-AUS / Class 1 P2	-	AB-PAPR-AUS / Class 1 P2
up to 25 x ES	Air-line*	AB-2 P2	AB-PAPR-2 P2
up to 50 x ES	-	AB-3 P2	-

# TON C 50+ x ES - Air-line\*\* -

\* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

\* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

Annearance Clear liquid, missible with water

^ -	Ful	l-face	
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A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

- Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.
- The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

#### **SECTION 9 Physical and chemical properties**

Information on basic physical and chemical properties

Appearance	Clear liquid; miscible with water.		
Physical state	Liquid	Relative density (Water = 1)	Not Available
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	Not Available	Decomposition temperature (°C)	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	Not Applicable	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Applicable	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Applicable	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water	Miscible	pH as a solution (Not Available%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

#### **SECTION 10 Stability and reactivity**

Reactivity	See section 7
Chemical stability	<ul> <li>Unstable in the presence of incompatible materials.</li> <li>Product is considered stable.</li> <li>Hazardous polymerisation will not occur.</li> </ul>
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

#### **SECTION 11 Toxicological information**

#### Information on toxicological effects

Inhaled	Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by narcosis, reduced alertness, loss of reflexes, lack of coordination and vertigo. Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual.
Ingestion	Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual. Swallowing of the liquid may cause aspiration of vomit into the lungs with the risk of haemorrhaging, pulmonary oedema, progressing to chemical pneumonitis; serious consequences may result. Signs and symptoms of chemical (aspiration) pneumonitis may include coughing, gasping, choking, burning of the mouth, difficult breathing, and bluish coloured skin (cyanosis).

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	-				
	Repeated exposure may cause skin cracking, flaking or Most liquid alcohols appear to act as primary skin irritant man.	ts in humans. Significant percutaneou			
	Open cuts, abraded or irritated skin should not be expos	ed to this material			
Skin Contact	<ul> <li>The material may produce mild skin irritation; limited evid</li> <li>produces mild inflammation of the skin in a substant</li> <li>produces significant, but mild, inflammation when ap present twenty-four hours or more after the end of the standard stan</li></ul>	ial number of individuals following dia oplied to the healthy intact skin of ani	rect contact, and/or		
	Skin irritation may also be present after prolonged or rep dermatitis is often characterised by skin redness (erythe thickening of the epidermis. At the microscopic level the intracellular oedema of the epidermis.	ma) and swelling (oedema) which ma	ay progress to blistering (vesiculation), scaling and		
Еуе	Limited evidence or practical experience suggests, that the material may cause eye irritation in a substantial number of individuals. Repeated or prolonged eye contact may cause inflammation characterised by temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur.				
Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving			umulative health effects involving organs or		
Chronic	biochemical systems. There is some evidence that human exposure to the material may result in developmental toxicity. This evidence is based on animal studies where effects have been observed in the absence of marked maternal toxicity, or at around the same dose levels as other toxic effects but which are not secondary non-specific consequences of the other toxic effects.				
Vintessential Acetic Acid	ΤΟΧΙΟΙΤΥ	IRRITATION			
Analysis Kit Vial 2 Coenzyme (liquid)	Not Available	Not Available			
(iquiu)		1			
	ΤΟΧΙΟΙΤΥ	IRRITATION			
	Dermal (rabbit) LD50: 11890 mg/kg <sup>[2]</sup>	Eye (rabbit) 50 mg	g mild		
diethylene glycol	Inhalation(Rat) LC50; >4.6 mg/l4h <sup>[1]</sup>	Eye: no adverse e	ffect observed (not irritating) <sup>[1]</sup>		
	Oral (Rat) LD50; 12565 mg/kg <sup>[2]</sup>	Skin (human): 112	2 mg/3d-I mild		
		Skin (rabbit): 500	mg mild		
		Skin: no adverse	Skin: no adverse effect observed (not irritating) <sup>[1]</sup>		
	ΤΟΧΙΟΙΤΥ	TOXICITY IRRITATION			
adenosine 5'-triphosphate	Oral (Rat) LD50; >2000 mg/kg <sup>[1]</sup>	Eye: no adverse e	affect observed (not irritating) <sup>[1]</sup>		
disodium salt	Skin: no adverse effect observed (not irritating) <sup>[1]</sup>				
		1			
	TOXICITY	IRRITATION			
sodium azide	Dermal (rabbit) LD50: 20 mg/kg <sup>[2]</sup>	Eye: no adverse effect observed (not irritating) <sup>[1]</sup>			
	Inhalation(Rat) LC50; >0.054<0.52 mg/l4h <sup>[1]</sup>	Skin: no adverse	effect observed (not irritating) <sup>[1]</sup>		
	Oral (Rat) LD50; 27 mg/kg <sup>[2]</sup>				
Legend:	1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances				
DIETHYLENE GLYCOL	The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis. Diglycolic acid is formed following the oxidation of accidentally ingested diethylene glycol in the body and can lead to severe complications with fatal outcome.				
ADENOSINE 5'-TRIPHOSPHATE DISODIUM SALT	Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. On the other hand, industrial bronchitis is a disorder that occurs as a result of exposure due to high concentrations of irritating substance (often particles) and is completely reversible after exposure ceases. The disorder is characterized by difficulty breathing, cough and mucus production.				
	the concentration of and duration of exposure to the irrita result of exposure due to high concentrations of irritating	ating substance. On the other hand, i substance (often particles) and is co	ation is an infrequent disorder with rates related to ndustrial bronchitis is a disorder that occurs as a		
SODIUM AZIDE	the concentration of and duration of exposure to the irrita result of exposure due to high concentrations of irritating	ating substance. On the other hand, i substance (often particles) and is co nd mucus production.	ation is an infrequent disorder with rates related to ndustrial bronchitis is a disorder that occurs as a mpletely reversible after exposure ceases. The		
SODIUM AZIDE Vintessential Acetic Acid Analysis Kit Vial 2 Coenzyme (liquid) & ADENOSINE 5'-TRIPHOSPHATE DISODIUM SALT	the concentration of and duration of exposure to the irritating result of exposure due to high concentrations of irritating disorder is characterized by difficulty breathing, cough a	ating substance. On the other hand, i substance (often particles) and is co nd mucus production. he, irritability, arrhythmias, dyspnae,	ation is an infrequent disorder with rates related to ndustrial bronchitis is a disorder that occurs as a mpletely reversible after exposure ceases. The		
Vintessential Acetic Acid Analysis Kit Vial 2 Coenzyme (liquid) & ADENOSINE 5'-TRIPHOSPHATE DISODIUM SALT	the concentration of and duration of exposure to the irrita result of exposure due to high concentrations of irritating disorder is characterized by difficulty breathing, cough a General anaesthesia, somnolence, convulsions, headac	ating substance. On the other hand, i y substance (often particles) and is co nd mucus production. he, irritability, arrhythmias, dyspnae, ure search.	ation is an infrequent disorder with rates related to ndustrial bronchitis is a disorder that occurs as a impletely reversible after exposure ceases. The respiratory stimulation, diarrhoea recorded.		
Vintessential Acetic Acid Analysis Kit Vial 2 Coenzyme (liquid) & ADENOSINE 5'-TRIPHOSPHATE DISODIUM	the concentration of and duration of exposure to the irrita result of exposure due to high concentrations of irritating disorder is characterized by difficulty breathing, cough a General anaesthesia, somnolence, convulsions, headac No significant acute toxicological data identified in literat	ating substance. On the other hand, i substance (often particles) and is co nd mucus production. he, irritability, arrhythmias, dyspnae,	ation is an infrequent disorder with rates related to ndustrial bronchitis is a disorder that occurs as a mpletely reversible after exposure ceases. The		
Vintessential Acetic Acid Analysis Kit Vial 2 Coenzyme (liquid) & ADENOSINE 5'-TRIPHOSPHATE DISODIUM SALT Acute Toxicity	the concentration of and duration of exposure to the irrita result of exposure due to high concentrations of irritating disorder is characterized by difficulty breathing, cough a General anaesthesia, somnolence, convulsions, headac No significant acute toxicological data identified in literat	ating substance. On the other hand, i y substance (often particles) and is cond mucus production. he, irritability, arrhythmias, dyspnae, ure search. Carcinogenicity	ation is an infrequent disorder with rates related to ndustrial bronchitis is a disorder that occurs as a impletely reversible after exposure ceases. The respiratory stimulation, diarrhoea recorded.		
Vintessential Acetic Acid Analysis Kit Vial 2 Coenzyme (liquid) & ADENOSINE 5'-TRIPHOSPHATE DISODIUM SALT Acute Toxicity Skin Irritation/Corrosion	the concentration of and duration of exposure to the irritaresult of exposure due to high concentrations of irritating disorder is characterized by difficulty breathing, cough at General anaesthesia, somnolence, convulsions, headact No significant acute toxicological data identified in literat	ating substance. On the other hand, i substance (often particles) and is cond mucus production. he, irritability, arrhythmias, dyspnae, ure search. Carcinogenicity Reproductivity	ation is an infrequent disorder with rates related to ndustrial bronchitis is a disorder that occurs as a mpletely reversible after exposure ceases. The respiratory stimulation, diarrhoea recorded.		

Legena:

Toxicity	

Vintessential Acetic Acid	Endpoint	Test Duration (hr)		Species		Value	Source
Analysis Kit Vial 2 Coenzyme (liquid)	Not Available	Not Available		Not Available Not Available		Not Available	Not Available
	Endpoint	Test Duration (hr)		Species	Val	ue	Source
	EC50	48h		Crustacea	840	)00mg/l	1
diethylene glycol	NOEC(ECx)	192h		Algae or other aquatic plants	800	)mg/l	1
	LC50	96h		Fish	>10	)0mg/l	4
	EC50	96h		Algae or other aquatic plants	650	00-13000mg/l	2
adenosine 5'-triphosphate	Endpoint	Test Duration (hr)		Species		Value	Source
	NOEC(ECx)	24h		Crustacea		42.8mg/l	2
disodium salt	EC50	72h		Algae or other aquatic plants		>100mg/l	2
	EC50	48h		Crustacea		>43.8mg/l	2
	Endpoint	Test Duration (hr)	5	Species	Val	ue	Source
	EC50	48h	(	Crustacea	>=(	).4<0.6mg/l	2
sodium azide	EC50(ECx)	96h	A	Algae or other aquatic plants	0.2	42-0.429mg/l	4
	LC50	96h	F	Fish	0.6	8mg/l	2
	EC50	96h	ŀ	Algae or other aquatic plants	0.2	42-0.429mg/l	4
Legend:	Ecotox databas			d Substances - Ecotoxicological Inform rd Assessment Data 6. NITE (Japan) ·			

#### DO NOT discharge into sewer or waterways.

#### Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
diethylene glycol	LOW	LOW
adenosine 5'-triphosphate disodium salt	HIGH	HIGH
sodium azide	LOW	LOW

## **Bioaccumulative potential**

Ingredient	Bioaccumulation
diethylene glycol	LOW (BCF = 180)
adenosine 5'-triphosphate disodium salt	LOW (LogKOW = -3.6136)
sodium azide	LOW (LogKOW = 0.1631)

## Mobility in soil

Ingredient	Mobility
diethylene glycol	HIGH (KOC = 1)
adenosine 5'-triphosphate disodium salt	LOW (KOC = 10)
sodium azide	HIGH (KOC = 1.342)

## **SECTION 13 Disposal considerations**

	<ul> <li>Containers may still present a chemical hazard/ danger when empty.</li> <li>Return to supplier for reuse/ recycling if possible.</li> <li>Otherwise:</li> </ul>
	If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.
	Where possible retain label warnings and SDS and observe all notices pertaining to the product.
	Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in the
Product / Packaging disposal	area. In some areas, certain wastes must be tracked.
	A Hierarchy of Controls seems to be common - the user should investigate:
	Reduction
	▶ Reuse
	▶ Recycling
	<ul> <li>Disposal (if all else fails)</li> </ul>
	This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been

contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.
DO NOT allow wash water from cleaning or process equipment to enter drains.
It may be necessary to collect all wash water for treatment before disposal.
In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
Where in doubt contact the responsible authority.
Recycle wherever possible.
Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.
<ul> <li>Dispose of by: burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or incineration in a licensed apparatus (after admixture with suitable combustible material).</li> </ul>
Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.

## **SECTION 14 Transport information**

Labels Required		
Marine Pollutant	NO	
HAZCHEM	Not Applicable	

#### Land transport (ADG): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

## Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

#### Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Transport in bulk according to Annex II of MARPOL and the IBC code Not Applicable

#### Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
diethylene glycol	Not Available
adenosine 5'-triphosphate disodium salt	Not Available
sodium azide	Not Available

#### Transport in bulk in accordance with the ICG Code

Product name	Ship Type
diethylene glycol	Not Available
adenosine 5'-triphosphate disodium salt	Not Available
sodium azide	Not Available

## **SECTION 15 Regulatory information**

Japan - ENCS

Korea - KECI

## Safety, health and environmental regulations / legislation specific for the substance or mixture

diethylene glycol is found on the following regulatory lists					
	rmation System (HCIS) - Hazardous Chemicals Scheduling of Medicines and Poisons (SUSMP) -	Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 6			
Schedule 10 / Appendix C	<b>3 ·</b> · · · · · · · · · · · · · · · · ·	Australian Inventory of Industrial Chemicals (AIIC)			
Australia Standard for the Uniform Schedule 5	Scheduling of Medicines and Poisons (SUSMP) -				
adenosine 5'-triphosphate disod	ium salt is found on the following regulatory lists				
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 4		Australian Inventory of Industrial Chemicals (AIIC)			
sodium azide is found on the foll	sodium azide is found on the following regulatory lists				
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals		Australian Inventory of Industrial Chemicals (AIIC)			
National Inventory Status					
National Inventory	Status				
Australia - AIIC / Australia Non-Industrial Use	Yes				
Canada - DSL	Yes				
Canada - NDSL	No (diethylene glycol; adenosine 5'-triphosphate disodium salt; sodium azide)				
China - IECSC	Yes				
Europe - EINEC / ELINCS / NLP	Yes				

 New Zealand - NZIoC
 Yes

 Philippines - PICCS
 No (adenosine 5'-triphosphate disodium salt)

Yes

Yes

National Inventory	Status	
USA - TSCA	SA - TSCA Yes	
Taiwan - TCSI	iwan - TCSI Yes	
Mexico - INSQ	Yes	
Vietnam - NCI	Yes	
Russia - FBEPH	FBEPH No (adenosine 5'-triphosphate disodium salt)	
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.	

## **SECTION 16 Other information**

Revision Date	12/10/2021
Initial Date	01/13/2017

## SDS Version Summary

Version	Date of Update	Sections Updated
3.1	11/01/2019	One-off system update. NOTE: This may or may not change the GHS classification
4.1	12/10/2021	Classification change due to full database hazard calculation/update.

#### Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

#### Definitions and abbreviations

PC-TWA: Permissible Concentration-Time Weighted Average
PC-STEL: Permissible Concentration-Short Term Exposure Limit
IARC: International Agency for Research on Cancer
ACGIH: American Conference of Governmental Industrial Hygienists
STEL: Short Term Exposure Limit
TEEL: Temporary Emergency Exposure Limit
IDLH: Immediately Dangerous to Life or Health Concentrations
ES: Exposure Standard
OSF: Odour Safety Factor
NOAEL :No Observed Adverse Effect Level
LOAEL: Lowest Observed Adverse Effect Level
TLV: Threshold Limit Value
LOD: Limit Of Detection
OTV: Odour Threshold Value
BCF: BioConcentration Factors
Bel: Biological Exposure Index
AIIC: Australian Inventory of Industrial Chemicals
DSL: Domestic Substances List
NDSL: Non-Domestic Substances List
IECSC: Inventory of Existing Chemical Substance in China
EINECS: European INventory of Existing Commercial chemical Substances
ELINCS: European List of Notified Chemical Substances
NLP: No-Longer Polymers
ENCS: Existing and New Chemical Substances Inventory
KECI: Korea Existing Chemicals Inventory
NZIOC: New Zealand Inventory of Chemicals
PICCS: Philippine Inventory of Chemicals and Chemical Substances
TSCA: Toxic Substances Control Act
TCSI: Taiwan Chemical Substance Inventory
INSQ: Inventario Nacional de Sustancias Químicas
NCI: National Chemical Inventory
FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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