

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**Product Identifier****Perihal Produk:****Thayer Martin, Improved Medium****Product Description:****Thayer Martin, Improved Medium****Cat No. :**

R01884, R01885, R01886, R01896, R10210, R10211, R10312, R10320, R10325

Relevant identified uses of the substance or mixture and uses advised against**Recommended Use**

Laboratory chemicals.

Uses advised against

No Information available

Details of the supplier of the safety data sheet**Company**Thermo Scientific Microbiology Sdn Bhd
No.6, Jalan TTC 6, Taman Teknologi Cheng,
Cheng, 75250 Melaka, Malaysia
+606 334 0975 .**Supplier**Remel
12076 Santa Fe Drive Lenexa,
KS 66215 United States
Telephone: 1-800-255-6730
Fax:1-800-621-8251**E-mail address**

mbd-sds@thermofisher.com

Emergency Telephone Number(603) 5122 8888
CHEMTREC Malaysia **1-800-815-308** (Malay)
CHEMTREC Malaysia (Kuala Lumpur) **+(60)-327884561** (Malay)**SECTION 2: HAZARDS IDENTIFICATION****Classification of the substance or mixture****Label Elements****Hazard Statements****Precautionary Statements****Other Hazards**

This product does not contain any known or suspected endocrine disruptors

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

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Component	CAS No	Weight %
Water	7732-18-5	95.4
Sodium chloride	7647-14-5	0.24
Vancomycin	1404-90-6	Trace
Anisomycin	22862-76-6	Trace
Colistin, sulfate (salt)	1264-72-8	Trace
Trimethoprim	738-70-5	Trace
Hemoglobins, bovine	91052-91-4	0.92
SILICON ANTIFOAM A COMPOUND	RR-38269-4	Trace
Adenine (6-Aminopurine)	73-24-5	Trace
Vitamin B12	68-19-9	Trace
L-Glutamine	56-85-9	Trace
Peptones	73049-73-7	0.61
Cysteine hydrochloride, L-(+)-, monohydrate	7048-04-6	Trace
Starch	9005-25-8	0.1
Propanoic acid, 2-oxo-, sodium salt	113-24-6	0.1
Yeast, ext.	8013-01-2	0.43
Caseins, hydrolyzates	65072-00-6	0.29
Gelatins, hydrolyzates	68410-45-7	0.29
Agar	9002-18-0	1.05
Glucose	50-99-7	Trace
Hydrogen chloride	7647-01-0	Trace
Adenosine 5'-(trihydrogen diphosphate), P'.fwdarw.5'-ester with 3-(aminocarbonyl)-1-.beta.-D-ribofuranosylpyridinium, inner salt	53-84-9	Trace
Iron(III) nitrate nonahydrate	7782-61-8	Trace
Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-4-methyl-5-(4,6,6-trihydroxy-3,5-dioxo-4,6-diphosphahex-1-yl)-, chloride, P,P'-dioxide	154-87-0	Trace
p-Aminobenzoic acid	150-13-0	Trace
6H-Purin-6-one, 2-amino-1,7-dihydro-, monohydrochloride	635-39-2	Trace
Dipotassium phosphate	7758-11-4	0.33

SECTION 4: FIRST AID MEASURES

Description of first aid measures

General Advice

Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

Eye Contact

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. Call a physician immediately.

Skin Contact

Consult a physician if necessary. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Ingestion

Do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person. Drink plenty of water.

Inhalation

Immediate medical attention is required. Remove to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Self-Protection of the First Aider

No special precautions required.

Most important symptoms and effects, both acute and delayed

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No information available.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Extinguishing media which must not be used for safety reasons

No information available.

Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous Combustion Products

None under normal use conditions.

Advice for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Ensure adequate ventilation.

Environmental precautions

See Section 12 for additional Ecological Information.

Methods and Material for Containment and Cleaning Up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

Reference to Other Sections

Refer to protective measures listed in Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Ensure adequate ventilation.

Conditions for Safe Storage, Including any Incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

Specific End Uses

Use in laboratories.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Component	Malaysia	ACGIH TLV	OSHA PEL
Vitamin B12			(Vacated) TWA: 5 mg/m ³
Starch		TWA: 10 mg/m ³	(Vacated) TWA: 15 mg/m ³ (Vacated) TWA: 5 mg/m ³ TWA: 15 mg/m ³ TWA: 5 mg/m ³
Hydrogen chloride		Ceiling: 2 ppm	Ceiling: 5 ppm Ceiling: 7 mg/m ³ (Vacated) Ceiling: 5 ppm (Vacated) Ceiling: 7 mg/m ³
Iron(III) nitrate nonahydrate		TWA: 1 mg/m ³	(Vacated) TWA: 1 mg/m ³

Component	European Union	The United Kingdom	Germany
Vitamin B12		STEL: 0.3 mg/m ³ 15 min TWA: 0.1 mg/m ³ 8 hr Resp. Sens. STEL: 15 mg/m ³ 15 min TWA: 5 mg/m ³ 8 hr Skin	TWA: 2 mg/m ³ (8 Stunden). MAK Höhepunkt: 2 mg/m ³ Haut
Starch		STEL: 30 mg/m ³ 15 min STEL: 12 mg/m ³ 15 min TWA: 10 mg/m ³ 8 hr TWA: 4 mg/m ³ 8 hr	
Hydrogen chloride	TWA: 5 ppm (8h) TWA: 8 mg/m ³ (8h) STEL: 10 ppm (15min) STEL: 15 mg/m ³ (15min)	STEL: 5 ppm 15 min STEL: 8 mg/m ³ 15 min TWA: 1 ppm 8 hr TWA: 2 mg/m ³ 8 hr	TWA: 2 ppm (8 Stunden). AGW - exposure factor 2 TWA: 3 mg/m ³ (8 Stunden). AGW - exposure factor 2 TWA: 2 ppm (8 Stunden). MAK TWA: 3.0 mg/m ³ (8 Stunden). MAK Höhepunkt: 4 ppm Höhepunkt: 6 mg/m ³
Iron(III) nitrate nonahydrate		STEL: 2 mg/m ³ 15 min TWA: 1 mg/m ³ 8 hr	

Exposure Controls

Engineering Measures

None under normal use conditions.

Personal protective equipment

Eye Protection

Wear safety glasses with side shields (or goggles)

Hand Protection

Protective gloves

Skin and body protection

Impervious gloves Impervious clothing

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves.
(Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

Respiratory Protection

No protective equipment is needed under normal use conditions

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Recommended Filter type: Particle filter

Hygiene Measures

When using do not eat, drink or smoke Provide regular cleaning of equipment, work area and clothing Avoid contact with skin, eyes or clothing Wash hands before breaks and immediately after handling the product Keep away from food, drink and animal feeding stuffs

Environmental exposure controls No information available

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance

Physical State

Solid Gel Consistency

Odor

No information available

Odor Threshold

No data available

pH

No information available

Melting Point/Range

No data available

Softening Point

No data available

Boiling Point/Range

No information available

Flash Point

No information available

Method - No information available

Evaporation Rate

No data available

Flammability (solid,gas)

No information available

Explosion Limits

No data available

Vapor Pressure

No data available

Vapor Density

No data available

(Air = 1.0)

Specific Gravity / Density

No data available

Bulk Density

No data available

Water Solubility

No information available

Solubility in other solvents

No information available

Partition Coefficient (n-octanol/water)

Component

log Pow

Trimethoprim

0.48

Adenine (6-Aminopurine)

-0.1

Vitamin B12

3.57

L-Glutamine

-4.609

Adenosine 5'-(trihydrogen diphosphate), P'.fwdarw.5'-ester with 3-(aminocarbonyl)-1-.beta.-D-ribofuran osylpyridinium, inner salt

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Autoignition Temperature

No data available

Decomposition Temperature

No data available

Viscosity

No data available

Explosive Properties

No information available

Oxidizing Properties

No information available

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SECTION 10: STABILITY AND REACTIVITY

Reactivity

None known, based on information available.

Chemical Stability

Stable under normal conditions.

Possibility of Hazardous Reactions

Hazardous Polymerization No information available.
Hazardous Reactions No information available.

Conditions to Avoid

None known.

Incompatible Materials

None known.

Hazardous Decomposition Products

None under normal use conditions.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

Acute Toxicity

Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Water	-	-	-
Sodium chloride	LD50 = 3 g/kg (Rat)	LD50 > 10000 mg/kg (Rabbit)	LC50 > 42 mg/L (Rat) 1 h
Anisomycin	LD50 = 72 mg/kg (Rat)		
Colistin, sulfate (salt)	LD50 = 121 mg/kg (Rat)		
Trimethoprim	>5300 mg/kg (Rat)		
Adenine (6-Aminopurine)	LD50 = 227 mg/kg (Rat)		
L-Glutamine	LD50 = 7500 mg/kg (Rat)		
Propanoic acid, 2-oxo-, sodium salt	5600 mg/kg (Rat)		
Agar	LD50 = 11 g/kg (Rat)		

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Glucose	25.8 g/kg (Rat)		
Hydrogen chloride	LD50 238 - 277 mg/kg (Rat)	LD50 > 5010 mg/kg (Rabbit)	LC50 = 1.68 mg/L (Rat) 1 h
Iron(III) nitrate nonahydrate	LD50 = 3250 mg/kg (Rat)		
p-Aminobenzoic acid	>6 g/kg (Rat)		
Dipotassium phosphate	8 g/kg (rat)	LD50 > 5000 mg/kg (Rabbit)	

Chronic Toxicity

Carcinogenicity

There are no known carcinogenic chemicals in this product

Legend:

X - Listed 'I' - Not Listed XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B))

Sensitization

No information available

Mutagenic Effects

No information available

Reproductive Effects

No information available

Developmental Effects

No information available

Target Organs

No information available.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity effects

Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants.

Component	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
Sodium chloride	Pimephals prome: LC50: 7650 mg/L/96h	EC50: 1000 mg/L/48h		
p-Aminobenzoic acid				= 27.4 mg/L EC50 Photobacterium phosphoreum 30 min 15 °C

Persistence and degradability

No information available

Bioaccumulative potential

No information available

Component	log Pow	Bioconcentration factor (BCF)
Trimethoprim	0.48	No data available
Adenine (6-Aminopurine)	-0.1	No data available
Vitamin B12	3.57	No data available
L-Glutamine	-4.609	No data available
Adenosine 5'-(trihydrogen diphosphate), P'.fwdarw.5'-ester with 3-(aminocarbonyl)-1-.beta.-D-ribofuranosyl pyridinium, inner salt	<-4	No data available

Mobility in soil

No information available.

Other adverse effects

No information available

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SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from Residues/Unused Products

Dispose of in accordance with local regulations

Contaminated Packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal

Other Information

According to the European Waste Catalog, Waste Codes are not product specific, but application specific Waste codes should be assigned by the user based on the application for which the product was used

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO

Not regulated

Road and Rail Transport

Not regulated

IATA

Not regulated

Special Precautions for User

No special precautions required

SECTION 15: REGULATORY INFORMATION

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

International Inventories

X = listed

Component	EINECS	TSCA	DSL	PICCS	ENCS	ISHL	IECSC	AICS	KECL
Water	231-791-2	X	X	X	X		X	X	KE-35400
Sodium chloride	-	X	X	X	X	X	X	X	KE-31387
Vancomycin	215-772-6	-	-	-	-	X	-	-	-
Anisomycin	245-269-7	-	-	-	-		X	-	-
Colistin, sulfate (salt)	215-034-3	-	-	X	-		-	-	-
Trimethoprim	-	-	X	X	-		X	X	KE-34372
Adenine (6-Aminopurine)	-	X	X	X	X	X	X	X	KE-29916
Vitamin B12	-	X	X	X	-	X	X	X	KE-11218
L-Glutamine	-	X	X	X	X	X	X	X	KE-17780
Peptones	-	X	X	X	X	X	X	X	KE-28131
Cysteine hydrochloride, L-(+)-, monohydrate	-	-	-	X	X		X	X	KE-01430
Starch	-	X	X	X	X	X	X	X	KE-32128
Propanoic acid, 2-oxo-, sodium salt	204-024-4	X	X	X	X	X	X	X	KE-27653
Yeast, ext.	-	X	X	X	-		X	X	KE-05-1355
Caseins, hydrolyzates	-	X	X	X	X	X	X	X	KE-05-0318
Gelatins, hydrolyzates	-	X	X	X	-		X	X	KE-17576
Agar	-	X	X	X	-		X	X	KE-00275
Glucose	-	X	X	X	X	X	X	X	KE-17727
Hydrogen chloride	-	X	X	X	X	X	X	X	KE-20189
Adenosine 5'-(trihydrogen diphosphate), P'.fwdarw.5'-ester with	-	X	X	-	-		X	X	KE-25879

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3-(aminocarbonyl)-1-.beta.-D-ribofuranosylpyridinium, inner salt									
Iron(III) nitrate nonahydrate	-	-	-	X	X		X	X	-
Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-4-methyl-5-(4,6,6-trihydroxy-3,5-dioxo-4,6-diphosphahex-1-yl)-, chloride, P,P'-dioxide	205-836-1	X	-	-	-		X	X	KE-01484
p-Aminobenzoic acid	205-753-0	X	X	X	X	X	X	X	KE-01199
6H-Purin-6-one, 2-amino-1,7-dihydro-, monohydrochloride	-	X	-	-	-		X	X	-
Dipotassium phosphate	-	X	X	X	X	X	X	X	KE-12167

Component	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
Hydrogen chloride	25 tonne	250 tonne		Annex I - Y34

National Regulations

Persistent Organic Pollutant
Ozone Depletion Potential

This product does not contain any known or suspected substance
This product does not contain any known or suspected substance

SECTION 16: OTHER INFORMATION

Legend

CAS - Chemical Abstracts Service

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

IECSC - Chinese Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

ENCS - Japanese Existing and New Chemical Substances

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

WEL - Workplace Exposure Limit

ACGIH - American Conference of Governmental Industrial Hygienists

RPE - Respiratory Protective Equipment

LC50 - Lethal Concentration 50%

POW - Partition coefficient Octanol:Water

TWA - Time Weighted Average

IARC - International Agency for Research on Cancer

LD50 - Lethal Dose 50%

EC50 - Effective Concentration 50%

ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road

IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code

OECD - Organisation for Economic Co-operation and Development

BCF - Bioconcentration factor

ICAO/IATA - International Civil Aviation Organization/International Air Transport Association

MARPOL - International Convention for the Prevention of Pollution from Ships

ATE - Acute Toxicity Estimate

VOC - (Volatile Organic Compound)

Key literature references and sources for data

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

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Revision Summary

Not applicable.

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In accordance with local and national regulations: Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet