SAFETY DATA SHEET

New Zealand

Section 1. Identification

Product name **HyClone™ CD BEVS complete medium**

Catalogue Number SH31205.01

Other means of identification Not available.

Product type Powder.

Identified uses

For Further Manufacturing or Research Use. Not for Diagnostic or Therapeutic Use.

Supplier

Cytiva Austria
Kremplstr. 5
4061 Pasching
AUSTRIA
Tel. (+43) 7229 64865
Fax (+43) 7229 64866

HyClone Laboratories
925 West 1800 South
Logan, Utah 84321
Phone: (435) 792-8000

Cytiva Singapore
1 Maritime Square #13-01
Harbourfront Centre
Singapore 099253

Person who prepared the SDS :

sds_author@cytiva.com

Cytiva New Zealand
Buddle Findlay, Level 18, Pricewaterhousecooper Tower,
188 Quay Street,
Auckland, Auckland, 1010
New Zealand

Emergency telephone number

111

Section 2. Hazards identification

HSNO Classification LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3

Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 72.2%

This material is classified as hazardous according to criteria in the Hazardous Substances (Hazard Classification) Notice 2020.

GHS label elements

Signal word No signal word.

Hazard statements Harmful to aquatic life with long lasting effects.

Precautionary statements

General Do not apply directly into or onto water. Take all reasonable steps to ensure that the substance does not cause any significant adverse effects to the environment beyond the application area.

Prevention Avoid release to the environment.

Response Not applicable.

Storage Not applicable.

Disposal	Dispose of contents and container in accordance with all local, regional, national and international regulations.
Other hazards which do not result in classification	May form explosible dust-air mixture if dispersed.

Section 3. Composition/information on ingredients

Substance/mixture	Mixture
Other means of identification	Not available.

Ingredient name	% (w/w)	Identifiers
Potassium chloride	<2.9	CAS: 7447-40-7 EC: 231-211-8
sucrose	<2.9	CAS: 57-50-1 EC: 200-334-9
Phosphoric acid, monosodium salt, monohydrate	<2.4	CAS: 10049-21-5 EC: 231-449-2
L-serine	<2.3	CAS: 56-45-1 EC: 200-274-3
Poloxalene >50% in a non hazardous diluent	<2.15	CAS: 9003-11-6
L-valine	<1.75	CAS: 72-18-4 EC: 200-773-6
magnesium sulphate	<1.75	CAS: 7487-88-9 EC: 231-298-2
Copper (II) chloride, dihydrate	<0.004	CAS: 10125-13-0 EC: 231-210-2

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Ingestion	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel.
Skin contact	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Eye contact	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Inhalation	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
Ingestion	No known significant effects or critical hazards.
Skin contact	No known significant effects or critical hazards.
Eye contact	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

Over-exposure signs/symptoms

Inhalation	Adverse symptoms may include the following: respiratory tract irritation coughing
Ingestion	No specific data.
Skin	No specific data.
Eyes	Adverse symptoms may include the following: irritation redness

Indication of immediate medical attention and special treatment needed, if necessary

Specific treatments	Not available.
Notes to physician	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

Suitable	Use dry chemical powder.
Not suitable	Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture.
Specific hazards arising from the chemical	May form explosible dust-air mixture if dispersed. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Hazardous thermal decomposition products	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides phosphorus oxides halogenated compounds metal oxide/oxides
Hazchem code	Not available.
Special precautions for fire-fighters	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
Special protective equipment for fire-fighters	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing dust. Put on appropriate personal protective equipment.
For emergency responders	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Environmental precautions	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and material for containment and cleaning up

Small spill	Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.
Large spill	Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labelled waste container. Avoid creating dusty conditions and prevent wind dispersal. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Precautions for safe handling

Protective measures	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid release to the environment. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.
Advice on general occupational hygiene	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Conditions for safe storage, including any incompatibilities	Store between the following temperatures: 2 to 8°C (35.6 to 46.4°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
sucrose	**HSWA 2015 - HSW (GRWM) 2016. Workplace exposure standards (WES) (New Zealand, 11/2023)** WES-TWA 8 hours: 10 mg/m³.
Copper (II) chloride, dihydrate	**HSWA 2015 - HSW (GRWM) 2016. Workplace exposure standards (WES) (New Zealand, 11/2023) [copper and its inorganic compounds]** Skin sensitiser. WES-TWA 8 hours: 0.01 mg/m³ (as Cu). Form: The value for respirable dust..

Biological exposure indices

No exposure indices known.

Appropriate engineering controls
Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls
Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures
Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection
Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields. If operating conditions cause high dust concentrations to be produced, use dust goggles.

Skin protection

Hand protection
Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection
Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection
Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection
Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state	Solid. [Powder.]
Colour	Off-white.
Odour	Not available.
Odour threshold	Not available.
pH	3.8 to 4.2 [Conc. (% w/w): 4.8%]
Melting point/freezing point	Not available.
Boiling point or initial boiling point and boiling range	Not available.
Flash point	Not applicable.
Burning time	Not available.
Burning rate	Not available.
Evaporation rate	Not available.

Flammability	Not available.
Lower and upper explosive (flammable) limits	Not applicable.
Vapour pressure	Not available.
Relative vapour density	Not applicable.
Relative density	Not available.
Solubility in water	Not available.
Partition coefficient: n-octanol/ water	Not applicable.
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not available.
SADT	Not available.
Viscosity	Dynamic (room temperature): Not available. Kinematic (room temperature): Not available. Kinematic (40°C (104°F)): Not available.
Flow time (ISO 2431)	Not available.

Particle characteristics

Median particle size	Not available.

Section 10. Stability and reactivity

Reactivity	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	The product is stable.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Prevent dust accumulation.
Incompatible materials	Reactive or incompatible with the following materials: oxidising materials
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on likely routes of exposure

Inhalation	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
Ingestion	No known significant effects or critical hazards.
Skin contact	No known significant effects or critical hazards.
Eye contact	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation	Adverse symptoms may include the following: respiratory tract irritation coughing
Ingestion	No specific data.
Skin contact	No specific data.
Eye contact	Adverse symptoms may include the following: irritation redness

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Acute toxicity

Product/ingredient name	**Result**
Potassium chloride	**Rat - Male - Oral - LD50** 2600 mg/kg Toxic effects: Gastrointestinal - Hypermotility, diarrhea Gastrointestinal - Nausea or vomiting
sucrose	**Rat - Oral - LD50** 29700 mg/kg Toxic effects: Behavioral - Somnolence (general depressed activity) Lung, Thorax, or Respiration - Cyanosis Gastrointestinal - Hypermotility, diarrhea
Phosphoric acid, monosodium salt, monohydrate	**Rat - Oral - LD50** 8290 mg/kg **Rabbit - Dermal - LD50** 7940 mg/kg

L-serine	**Rat - Oral - LD50** 14 g/kg
Poloxalene >50% in a non hazardous diluent	**Rabbit - Dermal - LD50** 20000 mg/kg **Rat - Oral - LD50** 5700 mg/kg Toxic effects: Behavioral - Somnolence (general depressed activity) Gastrointestinal - Hypermotility, diarrhea
L-valine	**Rat - Oral - LD50** 2000 mg/kg

Conclusion/Summary[Product] Not available.

Skin corrosion/irritation

Not available.

Conclusion/Summary[Product] Not available.

Ingredient name	Conclusion/Summary
L-serine	May cause skin irritation.
L-valine	May cause skin irritation.

Serious eye damage/eye irritation

Not available.

Conclusion/Summary[Product] Not available.

Ingredient name	Conclusion/Summary
L-serine	May cause eye irritation.
L-valine	May cause eye irritation.

Respiratory corrosion/irritation

Not available.

Conclusion/Summary[Product] Not available.

Respiratory or skin sensitization

Not available.

Skin

Conclusion/Summary[Product] Not available.

Respiratory

Conclusion/Summary[Product] Not available.

Potential chronic health effects

General	Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.
Inhalation	Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.
Ingestion	No known significant effects or critical hazards.
Skin contact	No known significant effects or critical hazards.
Eye contact	No known significant effects or critical hazards.
Carcinogenicity	No known significant effects or critical hazards.
Mutagenicity	No known significant effects or critical hazards.
Developmental effects	No known significant effects or critical hazards.
Fertility effects	No known significant effects or critical hazards.

Chronic toxicity

Not available.

Conclusion/Summary[Product] Not available.

Carcinogenicity

Not available.

Conclusion/Summary[Product] Not available.

Germ cell mutagenicity

Not available.

Conclusion/Summary[Product] Not available.

Reproductive toxicity

Not available.

Conclusion/Summary[Product] Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Result
Copper (II) chloride, dihydrate	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Result
Copper (II) chloride, dihydrate	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2

Aspiration hazard

Not available.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
DPM-HyCloneTM CD BEVS complete medium	23292.6	17477.4	N/A	140.2	N/A
Potassium chloride	2600	N/A	N/A	N/A	N/A
sucrose	29700	N/A	N/A	N/A	N/A
Phosphoric acid, monosodium salt, monohydrate	8290	7940	N/A	N/A	N/A
L-serine	14000	N/A	N/A	N/A	N/A
Poloxalene >50% in a non hazardous diluent	5700	20000	N/A	N/A	N/A
L-valine	2000	N/A	N/A	N/A	N/A
magnesium sulphate	500	1100	N/A	11	N/A
Copper (II) chloride, dihydrate	100	300	N/A	N/A	N/A

Section 12. Ecological information

Ecotoxicity This material is harmful to aquatic life with long lasting effects.

Aquatic and terrestrial toxicity

Product/ingredient name	Result
Potassium chloride	**Acute - LC50 - Fresh water** Crustaceans - Water flea - *Pseudosida ramosa* - Neonate Age: ≤24 hours 9.68 mg/l [48 hours] Effect: Mortality **Acute - EC50 - Fresh water** ISO Algae - Green algae - *Desmodesmus subspicatus* 9.24 g/l [72 hours] Effect: Population **Acute - LC50 - Fresh water** Fish - Zebra danio - *Danio rerio* 509.65 mg/l [96 hours] Effect: Mortality
L-serine	**Acute - EC50** Daphnia 83 mg/l [48 hours] **Acute - NOEC**

	Algae 1000 mg/l [72 hours]
Poloxalene >50% in a non hazardous diluent	**LC50** OECD 203 [Fish, Acute Toxicity Test] Fish 10000 mg/l [96 hours]
L-valine	**LC50** Fish 10000 mg/l [96 hours]
magnesium sulphate	**Chronic - NOEC - Fresh water** Daphnia - Water flea - *Daphnia magna* - Neonate Age: <24 hours 360 mg/l [3 weeks] Effect: Reproduction **Chronic - IC10 - Fresh water** Aquatic plants - Lesser Duckweed - *Lemna aequinoctialis* 1.9 mg/l [96 hours] Effect: Population **Acute - IC50 - Fresh water** Aquatic plants - Lesser Duckweed - *Lemna aequinoctialis* 4.4 mg/l [96 hours] Effect: Population **Acute - LC50 - Fresh water** Fish - Purple Spotted Gudgeon - *Mogurnda mogurnda* - Larvae 40 mg/l [96 hours] Effect: Mortality **Acute - EC50 - Fresh water** Daphnia - Water flea - *Daphnia magna* 343.56 mg/l [48 hours] Effect: Intoxication
Copper (II) chloride, dihydrate	**Acute - EC50 - Marine water** US EPA Algae - Diatom - *Skeletonema costatum* Age: 3 days 9.52 ppb [72 hours] Effect: Population **Chronic - NOEC - Marine water** US EPA Crustaceans - Harpacticoid copepod - *Tisbe battagliai* Age: <24 hours 18 ppb [21 days] Effect: Mortality

Conclusion/Summary[Product] Not available.

Ingredient name	Conclusion/Summary
L-serine	Naturally occurring substance
L-valine	Naturally occurring substance

Persistence/degradability

Product/ingredient name	Result
L-valine	82% [28 days]

Conclusion/Summary[Product] Not available.

Ingredient name	Conclusion/Summary
L-serine	Not expected to bioaccumulate. Naturally occurring substance
Poloxalene >50% in a non hazardous diluent	Not expected to bioaccumulate.
L-valine	Not expected to bioaccumulate. Naturally occurring substance

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
L-valine	-	-	Readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
sucrose	-3.7	-	Low
L-serine	-3.07	0.609	Low
L-valine	-2.26	0.846	Low

Mobility in soil

Soil/water partition coefficient Not available.

Other adverse effects No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*
New Zealand Class	Not regulated.	-	-	-
		No.		
IATA Class	Not regulated.	-	-	-
		-		
		No.		
IMDG Class	Not regulated.	-	-	-
		No.		

PG* : Packing group

Special precautions for user **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments Not available.

Section 15. Regulatory information

HSNO Approval Number Not available.

HSNO Group Standard Not available.

HSNO Classification LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

New Zealand Not determined.

Australia Not determined.

United States Not determined.

Canada inventory Not determined.

China At least one component is not listed.

Japan **Japan inventory (CSCL)**: Not determined.
Japan inventory (ISHL): Not determined.

Section 16. Other information

History

Date of printing	27 January 2026
Date of issue/ Date of revision	27 January 2026
Date of previous issue	No previous validation
Version	1
Key to abbreviations	ADG = Australian Dangerous Goods ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail UN = United Nations
References	Not available.

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.