
Safety Data Sheet (according to 1907/2006/EC, Article 31)
Revision: 2.4 | Revision date: 02/April/2021

Catalog number	Product name
hC001-XXXX	Whole blood processing kit (human)
hC002-XXXX	Whole blood processing kit (human)/Gen2
mC001-XXXX	Whole blood processing kit (murine)
mC002-XXXX	Whole blood processing kit (murine)/Gen2
	Components
hC001-XXXX -F01	Fix concentrate (human)
hC002-XXXX -F01	
mC001-XXXX -F01	Fix concentrate (murine)
mC002-XXXX -F01	

XXXX

Corresponds to variable kit size


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SECTION 1: Identification of the substance/mixture and of the company/undertaking			
1.1. Product identifiers			
Product name:	Fix concentrate		
Product number:	hC001-XXXX -F01/mC001-XXXX -F01		
Brand:	Cytodelics		
1.2. Relevant identified uses of the substance or mixture and uses advised against			
Identified uses:	Fixation of biological materials; research use only		
1.3. Details of the supplier of the safety data sheet			
Company:	Cytodelics AB		
	Forskargatan 20J		
	151 36 Södertälje		
	Sweden		
Telephone:	+46(0) 708517856		
Fax:	Not available		
Email:	info@cytodelics.com		
1.4. Emergency telephone number			
Emergency phone:	In case of a chemical emergency, spill, fire, or exposure		
	Country	Phone numbers	
	Australia	1800 127 406	+64 4 917 9888
	New Zealand	0800 764 766	0800 243 622
	Finland	09 471 977	09 4711
	Sweden	112	
	Norway	22 59 13 00	113
	Denmark	82 12 12 12	
	Czech Republic	224 919 293	224 915 402
	France	0145425959	
SECTION 2: Hazards identification			
2.1. Classification of the substance or mixture			
According to the GHS and CLP this substance: <ul style="list-style-type: none"> • is toxic if swallowed, • is toxic in contact with skin, • causes severe skin burns and eye damage, • is toxic if inhaled, • may cause cancer, • is suspected of causing genetic defects and • may cause an allergic skin reaction. <p>Additionally, the classification provided by companies to ECHA in REACH registrations identifies that this substance is fatal if inhaled, causes damage to organs, causes serious eye damage and is suspected of causing cancer.</p>			
GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)	Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311 Serious eye irritation (Category 2), H319 Skin sensitization (Category 1), H317		

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	Skin irritation (Category 2), H315 Germ cell mutagenicity (Category 2), H341 Carcinogenicity (Category 1A), H350 Specific target organ toxicity - single exposure (Category 3), H335 Acute aquatic toxicity (Category 3), H402 <i>For the full text of the H-Statements mentioned in this Section, see Section 16.</i>
Classification – EC 1272/2008	H351, H331, H311, H301, H314, H317, H341, H350, H370, H402
2.2. Label elements	
Hazard pictograms:	
Signal word:	Danger
Hazard statements:	
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H351	Suspected of causing cancer.
H370	Causes damage to organs.
H400	Very toxic to aquatic life.
EUH 208	Contains formaldehyde. May produce an allergic reaction.
Precautionary statements:	
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P260	Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.

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P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.			
P281	Use personal protective equipment as required.			
P301 + P310 + P330	IF SWALLOWED: Immediately call a POISON CENTER/doctor. Rinse mouth.			
P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.			
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.			
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.			
P305 + P351 + P338 + P310	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.			
P307 + P311	IF exposed: Call a POISON CENTER or doctor/ physician.			
P333 + P313	If skin irritation or rash occurs: Get medical advice/ attention.			
P362	Take off contaminated clothing and wash before reuse.			
P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.			
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.			
P403 + P235	Store in a well-ventilated place. Keep cool.			
P405	Store locked up.			
P501	Dispose of contents/ container to an approved waste disposal plant.			
2.3. Other hazards				
SECTION 3: Composition/information on ingredients				
3.1. Substances (EC 1272/2008)		Not applicable		
3.2. Mixtures				
Identification name	Index number in CLP Annex VI	CAS number	EC number	Weight % content (or range)
Formaldehyde	605-001-00-5	50-00-0	200-001-8	< 10 %
SECTION 4: First aid measures				
4.1. Description of first aid measures				
Inhalation:	Move the exposed person to fresh air. If breathing stops, provide artificial respiration.			
Eye contact:	Rinse immediately with plenty of water for 15 minutes holding the eyelids open. Seek medical attention. Continue rinsing eyes during transport to hospital.			

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Skin contact:	Remove all contaminated clothes and footwear immediately unless stuck to skin. Wash off immediately with plenty of soap and water. Seek medical attention if irritation or symptoms persist.
Ingestion:	DO NOT INDUCE VOMITING. Never give anything by mouth to an unconscious person. Rinse mouth thoroughly. Call for medical help immediately. Make victim drink water (maximum of 2 drinking glasses) Subsequently administer: activated charcoal (20 - 40 g in 10 % slurry)
General information:	If you feel unwell, seek medical advice (show the label where possible).
4.2. Most important symptoms and effects, both acute and delayed	
The most important known symptoms and effects are described in the labeling (see section 2.2.) and/or in section 2.1.	
4.3. Indication of any immediate medical attention and special treatment needed	
No data available	
SECTION 5: Fire-fighting measures	
5.1. Extinguishing media	
Suitable extinguishing media:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media:	No information available
5.2. Special hazards arising from the substance or mixture	Combustible material. Risk of ignition. Containers may explode when heated. Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition. Vapours are heavier than air and may spread along floors. Can form explosive gas-air mixtures.
5.3. Advice for fire-fighters	Wear self-contained respiratory protective device. ^[1] _[SEP] In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing. ^[1] _[SEP]
SECTION 6: Accidental release measures	
6.1. Personal precautions, protective equipment and emergency procedures	Wear suitable protective clothing. Avoid breathing vapors, mist or gas. Avoid formation of dust. Ensure adequate ventilation of the working area. Evacuate personnel to a safe area.
6.2. Environmental precautions	Prevent further spillage if safe. Do not allow product to enter drains.
6.3. Methods and material for containment and cleaning up	Remove all sources of ignition. Avoid raising dust. Sweep up. Soak up with inert absorbent material. Transfer to suitable, labeled containers for disposal.
6.4. Reference to other sections	See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. ^[1] _[SEP]
SECTION 7: Handling and storage	

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7.1. Precautions for safe handling	Ensure good ventilation/exhaustion at the workplace. Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Do not breathe vapors or spray mist. Do not ingest. Keep away from open flames, hot surfaces and sources of ignition. Take measures to prevent the build up of electrostatic charge.
7.2. Conditions for safe storage, including any incompatibilities	Keep containers tightly closed in a dry, cool (5-8°C) and well-ventilated place. Keep away from heat and sources of ignition or oxidizing agents. Containers, which are opened, must be carefully resealed and kept upright to prevent leakage. ^[1] _{SEP}
7.3. Specific end use(s)	Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters					
Exposure limit values		Limit value - Eight hours		Limit value - Short term	
		ppm	mg/m ³	ppm	mg/m ³
	Australia	1	1,2	2	2,5
	Austria	0,5	0,6	0,5	0,6
	Belgium			0,3	0,38
	Canada - Ontario			1	
				1,5 (1)	
	Canada - Québec			2 (1)	3 (1)
	Denmark	0,3	0,4	0,3	0,4
	Finland	0,3	0,37	1 (1)	1,2 (1)
	France	0,5		1	
	Germany (AGS)	0,3	0,37	0,6 (1)	0,74 (1)
	Germany (DFG)	0,3	0,37	0,6 (1)(2)	0,74 (1)(2)
	Hungary		0,6		0,6
	Ireland	2	2,5	2 (1)	2,5 (1)
	Japan	0,1			
	Latvia		0,5		
	New Zealand	0,33 (1)		1 (3)	
			0,5 (2)		
	People's Republic of China				0,5 (1)
	Poland		0,5		1
	Singapore			0,3	0,37
	South Korea	0,5	0,75	1	1,5
Spain			0,3	0,37	
Sweden	0,3	0,37	0,6 (1)	0,74 (1)	

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e) Melting point/freezing point	No data available
f) Initial boiling point and boiling range	> 93 °C (199.4 °F)
g) Flash point	64 °C (147 °F) - closed cup
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	Upper explosion limit: 73 %(V) (910g/m ³) Lower explosion limit: 7 %(V) (87g/m ³)
k) Vapour pressure	69 hPa (52 mmHg) at 37 °C (99 °F) 22.7 - 26.7 hPa (17-20 mmHg) at 20 °C (68 °F)
l) Vapour density	1.04 - (Air = 1.0)
m) Relative density	1.016 g/cm ³ at 20 °C (68 °F)
n) Water solubility	Freely soluble
o) Partition coefficient: n- octanol/water	log Kow: 0.35
p) Auto-ignition temperature	395 °C (1 013.25 hPa)
q) Decomposition temperature	No data available
r) Viscosity	2.083 - 2.835 mPa s
s) Explosive properties	No data available
t) Oxidizing properties	No data available
9.2 Other information	
Hazardous chemical reactions:	Risk of explosion in contact with: nitric acid, hydrogen peroxide, nitromethane, performic acid, peracetic acid, phenol, nitrogen dioxide (180 °C).
The substance polymerize in contact with:	alkalies, nitrides, polymerization initiators
The substance can react dangerously with:	Strong oxidizing agents, potassium permanganate, magnesium carbonate, sodium hydroxide, perchloric acid + aniline, hydrochloric acid
SECTION 10: Stability and reactivity	
10.1. Reactivity	Polar solvents, such as alcohols, amines or acids, either catalyze the polymerization of formaldehyde or react with it to form methylol compounds or methylene derivatives.
10.2. Chemical stability	Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure
10.3. Possibility of hazardous reactions	Risk of explosion in contact with: nitric acid, hydrogen peroxide, nitromethane, performic acid, peracetic acid, phenol, nitrogen dioxide (180 °C).
10.4. Conditions to avoid	Heat, flame and sparks
10.5. Incompatible materials	Strong oxidizing agents, phenol, potassium permanganate, magnesium carbonate, sodium hydroxide, perchloric acid + aniline, hydrochloric acid (strong acids)
10.6. Hazardous decomposition products	Formic acid, methanol, carbon dioxide, Carbon monoxide, formaldehyde

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SECTION 11: Toxicological information	
11.1. Information on toxicological effects	
Acute toxicity	LD50 oral (rat): 100 mg/kg; LD50 oral (male Wistar rat): 640 mg/kg; LC50 inhalation (rabbit): 270 µL/kg; LC50 inhalation (Wistar rat): < 463 ppm Irritation data: eye (rabbit) 75µg; severe; Investigated as a tumorigen, mutagen and reproductive effector No human data available
Skin corrosion/irritation	Irritant – corrosive (exposure time dependent effect)
Serious eye damage/irritation	Irritant – corrosive (exposure time dependent effect)
Respiratory or skin sensitization	Sensitizing to skin and respiratory system. Formaldehyde can induce and aggravate asthma in mice.
Germ cell mutagenicity	Mutagenic effects possible from formaldehyde, the decomposition product of paraformaldehyde.
Carcinogenicity	Paraformaldehyde/formaldehyde are suspected carcinogens.
Reproductive toxicity	Reproductive effects possible from formaldehyde, the decomposition products of paraformaldehyde.
STOT-single exposure	No data available
STOT-repeated exposure	<u>Oral exposure:</u> drinking water (rat): local effects in the stomach (0.19%; > 82 mg/kg/d); no effects (0.026%; 15-21 mg/kg/d) <u>Skin:</u> No effects (mice): 200 µL of 1% formaldehyde/ twice weekly/60 weeks; Hyperplasia of the epidermis: 200 µL of 10% formaldehyde/ twice weekly/60 weeks
Aspiration hazard	No data available
SECTION 12: Ecological information	
12.1. Toxicity	LC50 - 96h - fish - 10-100 mg/L LC50 - 96h - fathead minnow: 24.1 mg/L (flow-through); LC50 - 96h - bluegill: 0.10 mg/L (flow-through); EC50 - 96h - water flea: 20 mg/L
12.2. Persistence and degradability	Readily biodegradable. Not persistent in the environment. When released into the air, formaldehyde is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals, be readily degraded by photolysis, be readily removed from the atmosphere by dry and wet deposition and have a half-life of less than 1 day.
12.3. Bioaccumulative potential	Due to the distribution coefficient n-octanol/water an accumulation in organisms is not expected.

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12.4. Mobility in soil	<p>Based on log Kow = 0.35 formaldehyde is expected to have very high mobility in soil (SRC). Formaldehyde gas adsorbs on clay minerals to a degree at high gas concentrations, which is an important quality in its use as a soil fumigant. In addition, formaldehyde may interact with humic substances in soil resulting in decreased mobility.</p> <p>When released into the soil, formaldehyde is expected to leach into groundwater. When released into water, formaldehyde is expected to readily biodegrade and is not expected to evaporate significantly.</p> <p>Utilizing the Japanese MITI test, 91% of the Theoretical BOD was reached in 2 weeks indicating that biodegradation is an important environmental fate process in soil (SRC).</p>
12.5. Results of PBT and vPvB assessment	Not considered as PBT or vPvB
12.6. Other adverse effects	
SECTION 13: Disposal considerations	
13.1. Waste treatment methods	
Product / Packaging disposal: Waste codes / waste designations according to LoW:	No data available
13.1.2 Waste treatment-relevant information:	Dispose of in compliance with all local and national regulations. Contact a licensed waste disposal company. Dispose of this material and its container to hazardous or special waste collection point.
13.1.3 Sewage disposal-relevant information:	Do not allow undiluted or un-neutralized formalin to reach sewage water or drainage ditch. All effluent releases that may contain formalin must be directed to a wastewater treatment plant.
13.1.4 Other disposal recommendations:	No data available
SECTION 14: Transport information	
14.1. UN number	Not subject to the requirements of ADR, ADN, IMDG or IATA regulations
14.2. UN proper shipping name	Not applicable
14.3. Transport hazard class(es)	Not applicable
14.4. Packing group	Not applicable
14.5. Environmental hazards	Not applicable
14.6. Special precautions for user	Not applicable
14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable

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SECTION 15: Regulatory information	
15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture	All components of this product are on the ECHA public inventory. Listed in the Australian Inventory of Chemical Substances (AICS) Labelling according to Regulation (EC) No 1272/2008. This safety datasheet complies with the requirements of Commission Regulation (EU) 2015/830.
15.2. Chemical safety assessment	No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.
SECTION 16: Other information	
<p>Only trained personnel should use this material. ^[1]To the best of our knowledge, the information contained herein is accurate. However, neither Cytodelics AB, nor any of its subsidiaries assumes any liabilities 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.</p>	
Additional information	
<p>ECHA information on registered substances http://echa.europa.eu/web/guest/information-on-chemicals/registered-substances OSHA https://www.osha.gov/OshDoc/data_General_Facts/formaldehyde-factsheet.pdf OECD eChemPortal http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en IFA GESTIS database on hazardous substances http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp IARC (WHO) http://monographs.iarc.fr/ENG/Monographs/vol100F/mono100F-29.pdf</p>	