

SAFETY DATA SHEET

IFC Sample Kit, Part Number 190418701

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

This product is considered an article. This Safety Data Sheet is written based on the encapsulated substance or mixture in this article.

1.1 Product identifier

Product name	: IFC Sample Kit, Part Number 190418701		
Part No. (Kit)	: 190418701		
Part No.	: Sucrose Sample	190336500	
	Purchase SPEC		
	99% D2O Sample	190356900	
	0.2% v/v H2O in D2O	190521700	
	Microflow sample		
	50mM, 1% H2O/D2O	190555700	
	Sodium Acetate Solution		
	10 mM 13C Enriched	190605300	
	Sodium Acetate		

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

Identified uses

Analytical chemistry.
 Sucrose Sample Purchase SPEC
 99% D2O Sample
 0.2% v/v H2O in D2O Microflow
 sample
 50mM, 1% H2O/D2O Sodium
 Acetate Solution
 10 mM 13C Enriched Sodium
 Acetate

1.3 Details of the supplier of the safety data sheet

Agilent Technologies Manufacturing GmbH & Co. KG
 Hewlett-Packard-Str. 8
 76337 Waldbronn
 Germany
 0800 603 1000

e-mail address of person responsible for this SDS : pdl-msds_author@agilent.com

1.4 Emergency telephone number

Emergency telephone number (with hours of operation) : CHEMTREC®: +(44)-870-8200418

SECTION 2: Hazards identification

This article, when used under reasonable conditions and in accordance with the directions for use, should not present a health hazard. The substance or mixture is encapsulated in the article. Only if released due to use or processing of the article in a manner not in accordance with the product's directions for use it may present potential health and safety hazards.

2.1 Classification of the substance or mixture

SECTION 2: Hazards identification

Product definition	:	Sucrose Sample Purchase SPEC	Mono-constituent substance (encapsulated in article)
		99% D2O Sample	Mixture (encapsulated in article)
		0.2% v/v H2O in D2O	Mixture (encapsulated in article)
		Microflow sample	
		50mM,1% H2O/D2O	Mixture (encapsulated in article)
		Sodium Acetate Solution	
		10 mM 13C Enriched	Mixture (encapsulated in article)
		Sodium Acetate	

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Sucrose Sample Purchase

SPEC

H373 SPECIFIC TARGET ORGAN II TOXICITY (REPEATED EXPOSURE) (gastrointestinal tract) (oral) - Category 2

Classification according to Directive 1999/45/EC [DPD]

Sucrose Sample Purchase SPEC	The product is not classified as dangerous according to Directive 67/548/EEC and its amendments.
99% D2O Sample	The product is not classified as dangerous according to Directive 1999/45/EC and its amendments.
0.2% v/v H2O in D2O Microflow sample	The product is not classified as dangerous according to Directive 1999/45/EC and its amendments.
50mM,1% H2O/D2O Sodium Acetate Solution	The product is not classified as dangerous according to Directive 1999/45/EC and its amendments.
10 mM 13C Enriched Sodium Acetate	The product is not classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification	:	Sucrose Sample Purchase SPEC	Not classified.
		99% D2O Sample	Not classified.
		0.2% v/v H2O in D2O	Not classified.
		Microflow sample	
		50mM,1% H2O/D2O	Not classified.
		Sodium Acetate Solution	
		10 mM 13C Enriched	Not classified.
		Sodium Acetate	

See Section 16 for the full text of the R phrases or H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms



Signal word	:	Sucrose Sample Purchase SPEC	Warning
		99% D2O Sample	No signal word.
		0.2% v/v H2O in D2O	No signal word.
		Microflow sample	
		50mM,1% H2O/D2O	No signal word.
		Sodium Acetate Solution	
		10 mM 13C Enriched	No signal word.
		Sodium Acetate	

Hazard statements	:	Sucrose Sample Purchase SPEC	GHS08 - May cause damage to organs through prolonged or repeated exposure if swallowed. (gastrointestinal tract)
		99% D2O Sample	No known significant effects or critical hazards.
		0.2% v/v H2O in D2O	No known significant effects or critical hazards.
		Microflow sample	
		50mM,1% H2O/D2O	No known significant effects or critical hazards.
		Sodium Acetate Solution	
		10 mM 13C Enriched	No known significant effects or critical hazards.

SECTION 2: Hazards identification

Sodium Acetate

Precautionary statements

Prevention	:	Sucrose Sample Purchase SPEC 99% D2O Sample 0.2% v/v H2O in D2O Microflow sample 50mM,1% H2O/D2O Sodium Acetate Solution 10 mM 13C Enriched Sodium Acetate	P260 - Do not breathe dust or mist. Not applicable. Not applicable. Not applicable. Not applicable.
Response	:	Sucrose Sample Purchase SPEC 99% D2O Sample 0.2% v/v H2O in D2O Microflow sample 50mM,1% H2O/D2O Sodium Acetate Solution 10 mM 13C Enriched Sodium Acetate	P314 - Get medical attention if you feel unwell. Not applicable. Not applicable. Not applicable. Not applicable.
Storage	:	Sucrose Sample Purchase SPEC 99% D2O Sample 0.2% v/v H2O in D2O Microflow sample 50mM,1% H2O/D2O Sodium Acetate Solution 10 mM 13C Enriched Sodium Acetate	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
Disposal	:	Sucrose Sample Purchase SPEC 99% D2O Sample 0.2% v/v H2O in D2O Microflow sample 50mM,1% H2O/D2O Sodium Acetate Solution 10 mM 13C Enriched Sodium Acetate	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. Not applicable. Not applicable. Not applicable. Not applicable.
Hazardous ingredients	:	Sucrose Sample Purchase SPEC Sucrose	
Supplemental label elements	:	Sucrose Sample Purchase SPEC 99% D2O Sample 0.2% v/v H2O in D2O Microflow sample 50mM,1% H2O/D2O Sodium Acetate Solution 10 mM 13C Enriched Sodium Acetate	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
Special packaging requirements			
Tactile warning of danger	:	Sucrose Sample Purchase SPEC 99% D2O Sample 0.2% v/v H2O in D2O Microflow sample 50mM,1% H2O/D2O Sodium Acetate Solution 10 mM 13C Enriched Sodium Acetate	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.

2.3 Other hazards

IFC Sample Kit, Part Number 190418701

SECTION 2: Hazards identification

Other hazards which do not result in classification	: Sucrose Sample	Fine dust clouds may form explosive mixtures with air.
	Purchase SPEC	Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat.
	99% D2O Sample	None known.
	0.2% v/v H2O in D2O	None known.
	Microflow sample	
	50mM, 1% H2O/D2O	None known.
	Sodium Acetate Solution	
10 mM 13C Enriched	None known.	
Sodium Acetate		

SECTION 3: Composition/information on ingredients

This article, when used under reasonable conditions and in accordance with the directions for use, should not present a health hazard. The substance or mixture is encapsulated in the article. Only if released due to use or processing of the article in a manner not in accordance with the product's directions for use it may present potential health and safety hazards.

Substance/mixture	: Sucrose Sample	Mono-constituent substance (encapsulated in article)
	Purchase SPEC	
	99% D2O Sample	Mixture (encapsulated in article)
	0.2% v/v H2O in D2O	Mixture (encapsulated in article)
	Microflow sample	
	50mM, 1% H2O/D2O	Mixture (encapsulated in article)
	Sodium Acetate Solution	
10 mM 13C Enriched	Mixture (encapsulated in article)	
Sodium Acetate		

Product/ingredient name	Identifiers	%	Classification		Type
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	
Sucrose Sample Purchase SPEC Sucrose	EC: 200-334-9 CAS: 57-50-1	100	Not classified. See Section 16 for the full text of the R-phrases declared above.	STOT RE 2, H373 (gastrointestinal tract) (oral) See Section 16 for the full text of the H statements declared above.	[A]

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.

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern

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

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact	: Sucrose Sample	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell.
	Purchase SPEC	
	99% D2O Sample	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.
	0.2% v/v H2O in D2O	Immediately flush eyes with plenty of water, occasionally

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SECTION 4: First aid measures

	Microflow sample	lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	50mM, 1% H ₂ O/D ₂ O Sodium Acetate Solution	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.
	10 mM 13C Enriched Sodium Acetate	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.
Inhalation	: Sucrose Sample Purchase SPEC	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention following exposure or if feeling unwell. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
	99% D ₂ O Sample	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	0.2% v/v H ₂ O in D ₂ O Microflow sample	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	50mM, 1% H ₂ O/D ₂ O Sodium Acetate Solution	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	10 mM 13C Enriched Sodium Acetate	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	: Sucrose Sample Purchase SPEC	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	99% D ₂ O Sample	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	0.2% v/v H ₂ O in D ₂ O Microflow sample	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	50mM, 1% H ₂ O/D ₂ O Sodium Acetate Solution	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	10 mM 13C Enriched Sodium Acetate	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	: Sucrose Sample Purchase SPEC	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention following exposure or if feeling unwell. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
	99% D ₂ O Sample	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not

SECTION 4: First aid measures

0.2% v/v H2O in D2O Microflow sample	induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur. Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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. Get medical attention if symptoms occur.
50mM, 1% H2O/D2O Sodium Acetate Solution	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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. Get medical attention if symptoms occur.
10 mM 13C Enriched Sodium Acetate	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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. Get medical attention if symptoms occur.
Protection of first-aiders : Sucrose Sample Purchase SPEC	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
99% D2O Sample	No action shall be taken involving any personal risk or without suitable training.
0.2% v/v H2O in D2O Microflow sample	No action shall be taken involving any personal risk or without suitable training.
50mM, 1% H2O/D2O Sodium Acetate Solution	No action shall be taken involving any personal risk or without suitable training.
10 mM 13C Enriched Sodium Acetate	No action shall be taken involving any personal risk or without suitable training.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact	: Sucrose Sample Purchase SPEC	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.
	99% D2O Sample	No known significant effects or critical hazards.
	0.2% v/v H2O in D2O Microflow sample	No known significant effects or critical hazards.
	50mM, 1% H2O/D2O Sodium Acetate Solution	No known significant effects or critical hazards.
	10 mM 13C Enriched Sodium Acetate	No known significant effects or critical hazards.
Inhalation	: Sucrose Sample Purchase SPEC	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
	99% D2O Sample	No known significant effects or critical hazards.
	0.2% v/v H2O in D2O Microflow sample	No known significant effects or critical hazards.
	50mM, 1% H2O/D2O Sodium Acetate Solution	No known significant effects or critical hazards.
	10 mM 13C Enriched Sodium Acetate	No known significant effects or critical hazards.
Skin contact	: Sucrose Sample Purchase SPEC	No known significant effects or critical hazards.
	99% D2O Sample	No known significant effects or critical hazards.
	0.2% v/v H2O in D2O Microflow sample	No known significant effects or critical hazards.
	50mM, 1% H2O/D2O Sodium Acetate Solution	No known significant effects or critical hazards.
	10 mM 13C Enriched Sodium Acetate	No known significant effects or critical hazards.

SECTION 4: First aid measures

Ingestion	:	Sucrose Sample	No known significant effects or critical hazards.
		Purchase SPEC	
		99% D2O Sample	No known significant effects or critical hazards.
		0.2% v/v H2O in D2O	No known significant effects or critical hazards.
		Microflow sample	
		50mM, 1% H2O/D2O	No known significant effects or critical hazards.
Sodium Acetate Solution	:	10 mM 13C Enriched	No known significant effects or critical hazards.
		Sodium Acetate	
		Sodium Acetate	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	:	Sucrose Sample	Adverse symptoms may include the following: irritation redness	
		Purchase SPEC		
		99% D2O Sample		No specific data.
		0.2% v/v H2O in D2O		No specific data.
		Microflow sample		
		50mM, 1% H2O/D2O		No specific data.
Sodium Acetate Solution	:	10 mM 13C Enriched	No specific data.	
		Sodium Acetate		
		Sodium Acetate	No specific data.	

Inhalation	:	Sucrose Sample	Adverse symptoms may include the following: respiratory tract irritation coughing	
		Purchase SPEC		
		99% D2O Sample		No specific data.
		0.2% v/v H2O in D2O		No specific data.
		Microflow sample		
		50mM, 1% H2O/D2O		No specific data.
Sodium Acetate Solution	:	10 mM 13C Enriched	No specific data.	
		Sodium Acetate		
		Sodium Acetate	No specific data.	

Skin contact	:	Sucrose Sample	No specific data.
		Purchase SPEC	
		99% D2O Sample	No specific data.
		0.2% v/v H2O in D2O	No specific data.
		Microflow sample	
		50mM, 1% H2O/D2O	No specific data.
Sodium Acetate Solution	:	10 mM 13C Enriched	No specific data.
		Sodium Acetate	
		Sodium Acetate	No specific data.

Ingestion	:	Sucrose Sample	No specific data.
		Purchase SPEC	
		99% D2O Sample	No specific data.
		0.2% v/v H2O in D2O	No specific data.
		Microflow sample	
		50mM, 1% H2O/D2O	No specific data.
Sodium Acetate Solution	:	10 mM 13C Enriched	No specific data.
		Sodium Acetate	
		Sodium Acetate	No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	:	Sucrose Sample	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.	
		Purchase SPEC		
		99% D2O Sample		Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		0.2% v/v H2O in D2O		Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Microflow sample		Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		50mM, 1% H2O/D2O		Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Sodium Acetate Solution	:	10 mM 13C Enriched	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.	
		Sodium Acetate		
		Sodium Acetate	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.	

SECTION 4: First aid measures

Specific treatments	: Sucrose Sample Purchase SPEC 99% D2O Sample 0.2% v/v H2O in D2O Microflow sample 50mM, 1% H2O/D2O Sodium Acetate Solution 10 mM 13C Enriched Sodium Acetate	No specific treatment. No specific treatment. No specific treatment. No specific treatment. No specific treatment. No specific treatment.
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SECTION 5: Firefighting measures**5.1 Extinguishing media**

Suitable extinguishing media	: Sucrose Sample Purchase SPEC 99% D2O Sample 0.2% v/v H2O in D2O Microflow sample 50mM, 1% H2O/D2O Sodium Acetate Solution 10 mM 13C Enriched Sodium Acetate	Use dry chemical powder. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: Sucrose Sample Purchase SPEC 99% D2O Sample 0.2% v/v H2O in D2O Microflow sample 50mM, 1% H2O/D2O Sodium Acetate Solution 10 mM 13C Enriched Sodium Acetate	Do not use water jet. None known. None known. None known. None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	: Sucrose Sample Purchase SPEC 99% D2O Sample 0.2% v/v H2O in D2O Microflow sample 50mM, 1% H2O/D2O Sodium Acetate Solution 10 mM 13C Enriched Sodium Acetate	Fine dust clouds may form explosive mixtures with air. In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous combustion products	: Sucrose Sample Purchase SPEC 99% D2O Sample 0.2% v/v H2O in D2O Microflow sample 50mM, 1% H2O/D2O Sodium Acetate Solution 10 mM 13C Enriched Sodium Acetate	Decomposition products may include the following materials: carbon dioxide carbon monoxide No specific data. No specific data. No specific data. No specific data.

5.3 Advice for firefighters

Special precautions for fire-fighters	: Sucrose Sample Purchase SPEC 99% D2O Sample	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. 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.
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SECTION 5: Firefighting measures

Special protective equipment for fire-fighters	0.2% v/v H ₂ O in D ₂ O Microflow sample	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.
	50mM, 1% H ₂ O/D ₂ O Sodium Acetate Solution	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.
	10 mM ¹³ C Enriched Sodium Acetate	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.
	: Sucrose Sample Purchase SPEC	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
	99% D ₂ O Sample	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
	0.2% v/v H ₂ O in D ₂ O Microflow sample	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
	50mM, 1% H ₂ O/D ₂ O Sodium Acetate Solution	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
10 mM ¹³ C Enriched Sodium Acetate	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.	

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	: Sucrose Sample Purchase SPEC	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. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
	99% D ₂ O Sample	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. Put on appropriate personal protective equipment.
	0.2% v/v H ₂ O in D ₂ O Microflow sample	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. Put on appropriate personal protective equipment.
	50mM, 1% H ₂ O/D ₂ O Sodium Acetate Solution	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. Put on

SECTION 6: Accidental release measures

	10 mM ¹³ C Enriched Sodium Acetate	appropriate personal protective equipment. 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. Put on appropriate personal protective equipment.
For emergency responders	: Sucrose Sample Purchase SPEC	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".
	99% D2O Sample	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".
	0.2% v/v H2O in D2O Microflow sample	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".
	50mM, 1% H2O/D2O Sodium Acetate Solution	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".
	10 mM ¹³ C Enriched Sodium Acetate	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".
6.2 Environmental precautions	: Sucrose Sample Purchase SPEC	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).
	99% D2O Sample	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).
	0.2% v/v H2O in D2O Microflow sample	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).
	50mM, 1% H2O/D2O Sodium Acetate Solution	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).
	10 mM ¹³ C Enriched Sodium Acetate	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).
6.3 Methods and materials for containment and cleaning up		
Methods for cleaning up	: Sucrose Sample Purchase SPEC	Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor.
	99% D2O Sample	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	0.2% v/v H2O in D2O Microflow sample	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

SECTION 6: Accidental release measures

50mM, 1% H ₂ O/D ₂ O Sodium Acetate Solution	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
10 mM ¹³ C Enriched Sodium Acetate	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

6.4 Reference to other sections : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures	: Sucrose Sample Purchase SPEC	Put on appropriate personal protective equipment (see Section 8). Do not breathe dust. Do not ingest. Avoid contact with eyes, skin and clothing. 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.
	99% D ₂ O Sample	Put on appropriate personal protective equipment (see Section 8).
	0.2% v/v H ₂ O in D ₂ O Microflow sample	Put on appropriate personal protective equipment (see Section 8).
	50mM, 1% H ₂ O/D ₂ O Sodium Acetate Solution	Put on appropriate personal protective equipment (see Section 8).
	10 mM ¹³ C Enriched Sodium Acetate	Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	: Sucrose Sample Purchase SPEC	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.
	99% D ₂ O Sample	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.
	0.2% v/v H ₂ O in D ₂ O Microflow sample	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.
	50mM, 1% H ₂ O/D ₂ O Sodium Acetate Solution	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

SECTION 7: Handling and storage

	<p>10 mM ¹³C Enriched Sodium Acetate</p>	<p>protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. 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.</p>
<p>7.2 Conditions for safe storage, including any incompatibilities</p>	<p>: Sucrose Sample Purchase SPEC</p>	<p>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 oxidizing 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.</p>
	<p>99% D2O Sample</p>	<p>Store in accordance with local regulations. 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. 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.</p>
	<p>0.2% v/v H₂O in D₂O Microflow sample</p>	<p>Store in accordance with local regulations. 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. 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.</p>
	<p>50mM, 1% H₂O/D₂O Sodium Acetate Solution</p>	<p>Store in accordance with local regulations. 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. 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.</p>
	<p>10 mM ¹³C Enriched Sodium Acetate</p>	<p>Store in accordance with local regulations. 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. 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.</p>

7.3 Specific end use(s)

SECTION 7: Handling and storage

Recommendations	: Sucrose Sample Purchase SPEC	Industrial applications, Professional applications.
	99% D2O Sample	Industrial applications, Professional applications.
	0.2% v/v H2O in D2O	Industrial applications, Professional applications.
	Microflow sample	
	50mM, 1% H2O/D2O	Industrial applications, Professional applications.
	Sodium Acetate Solution	
	10 mM 13C Enriched	Industrial applications, Professional applications.
	Sodium Acetate	
Industrial sector specific solutions	: Not applicable.	

SECTION 8: Exposure controls/personal protection

Since the hazardous ingredient in this article is encapsulated, the risk of exposure by inhalation, ingestion, skin contact and eyes contact is minimum.

8.1 Control parametersOccupational exposure limits

No exposure limit value known.

Recommended monitoring procedures

: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Derived effect levels

No DNELs available.

Predicted effect concentrations

No PNECs available.

8.2 Exposure controls**Appropriate engineering controls**

: 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.

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.

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.

SECTION 8: Exposure controls/personal protection

- 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** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- 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.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties****Appearance**

Physical state	Sucrose Sample	Solid. [Crystals. / Powder.]
	Purchase SPEC	
	99% D2O Sample	Liquid.
	0.2% v/v H2O in D2O	Liquid.
	Microflow sample	
	50mM, 1% H2O/D2O	Liquid.
Colour	Sodium Acetate Solution	
	10 mM 13C Enriched Sodium Acetate	Liquid.
	Sucrose Sample	White.
	Purchase SPEC	
	99% D2O Sample	Colourless.
	0.2% v/v H2O in D2O	Colourless.
Odour	Microflow sample	
	50mM, 1% H2O/D2O	Colourless.
	Sodium Acetate Solution	
	10 mM 13C Enriched Sodium Acetate	Colourless.
	Sucrose Sample	Odourless.
	Purchase SPEC	
Odour threshold	99% D2O Sample	Not available.
	0.2% v/v H2O in D2O	Not available.
	Microflow sample	
	50mM, 1% H2O/D2O	Not available.
	Sodium Acetate Solution	
	10 mM 13C Enriched Sodium Acetate	Not available.

SECTION 9: Physical and chemical properties

pH	: Sucrose Sample	Not available.
	Purchase SPEC	
	99% D2O Sample	7
	0.2% v/v H2O in D2O	6 to 8
	Microflow sample	
	50mM,1% H2O/D2O	7
Melting point/freezing point	Sodium Acetate Solution	
	10 mM 13C Enriched Sodium Acetate	7
	: Sucrose Sample	185.5°C
	Purchase SPEC	
	99% D2O Sample	3.81°C
	0.2% v/v H2O in D2O	3.81°C
Initial boiling point and boiling range	Microflow sample	
	50mM,1% H2O/D2O	3.81°C
	Sodium Acetate Solution	
	10 mM 13C Enriched Sodium Acetate	3.81°C
	: Sucrose Sample	Not available.
	Purchase SPEC	
Flash point	99% D2O Sample	101.42°C
	0.2% v/v H2O in D2O	101.42°C
	Microflow sample	
	50mM,1% H2O/D2O	101.42°C
	Sodium Acetate Solution	
	10 mM 13C Enriched Sodium Acetate	101.42°C
Evaporation rate	: Sucrose Sample	Not available.
	Purchase SPEC	
	99% D2O Sample	Not available.
	0.2% v/v H2O in D2O	Not available.
	Microflow sample	
	50mM,1% H2O/D2O	Not available.
Flammability (solid, gas)	Sodium Acetate Solution	
	10 mM 13C Enriched Sodium Acetate	Not available.
	: Sucrose Sample	Emits toxic fumes when heated to decomposition.
	Purchase SPEC	
	99% D2O Sample	Not available.
	0.2% v/v H2O in D2O	Not available.
	Microflow sample	
	50mM,1% H2O/D2O	Not available.
	Sodium Acetate Solution	
	10 mM 13C Enriched Sodium Acetate	Not available.

SECTION 9: Physical and chemical properties

Upper/lower flammability or explosive limits	: Sucrose Sample Purchase SPEC 99% D2O Sample 0.2% v/v H2O in D2O Microflow sample 50mM,1% H2O/D2O Sodium Acetate Solution 10 mM 13C Enriched Sodium Acetate	Not available. Not available. Not available. Not available. Not available. Not available.
Vapour pressure	: Sucrose Sample Purchase SPEC 99% D2O Sample 0.2% v/v H2O in D2O Microflow sample 50mM,1% H2O/D2O Sodium Acetate Solution 10 mM 13C Enriched Sodium Acetate	Not available. Not available. Not available. Not available. Not available. Not available.
Vapour density	: Sucrose Sample Purchase SPEC 99% D2O Sample 0.2% v/v H2O in D2O Microflow sample 50mM,1% H2O/D2O Sodium Acetate Solution 10 mM 13C Enriched Sodium Acetate	Not available. Not available. Not available. Not available. Not available. Not available.
Relative density	: Sucrose Sample Purchase SPEC 99% D2O Sample 0.2% v/v H2O in D2O Microflow sample 50mM,1% H2O/D2O Sodium Acetate Solution 10 mM 13C Enriched Sodium Acetate	1.59 1.1044 [(D ₂ O)] 1.1044 [(D ₂ O)] 1.1044 [D ₂ O] 1.1044 [D ₂ O]
Solubility(ies)	: Sucrose Sample Purchase SPEC 99% D2O Sample 0.2% v/v H2O in D2O Microflow sample 50mM,1% H2O/D2O Sodium Acetate Solution 10 mM 13C Enriched Sodium Acetate	Easily soluble in the following materials: cold water, hot water and methanol. Insoluble in the following materials: diethyl ether. Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: Sucrose Sample Purchase SPEC 99% D2O Sample 0.2% v/v H2O in D2O Microflow sample 50mM,1% H2O/D2O Sodium Acetate Solution 10 mM 13C Enriched Sodium Acetate	-3.7 Not available. Not available. Not available. Not available. Not available.

SECTION 9: Physical and chemical properties

Auto-ignition temperature	: Sucrose Sample	Not available.
	Purchase SPEC	
	99% D2O Sample	Not available.
	0.2% v/v H2O in D2O	Not available.
	Microflow sample	
	50mM,1% H2O/D2O	Not available.
	Sodium Acetate Solution	
Decomposition temperature	: Sucrose Sample	186°C
	Purchase SPEC	
	99% D2O Sample	Not available.
	0.2% v/v H2O in D2O	Not available.
	Microflow sample	
	50mM,1% H2O/D2O	Not available.
	Sodium Acetate Solution	
Viscosity	: Sucrose Sample	Not available.
	Purchase SPEC	
	99% D2O Sample	Not available.
	0.2% v/v H2O in D2O	Not available.
	Microflow sample	
	50mM,1% H2O/D2O	Not available.
	Sodium Acetate Solution	
Explosive properties	: Sucrose Sample	Not available.
	Purchase SPEC	
	99% D2O Sample	Not available.
	0.2% v/v H2O in D2O	Not available.
	Microflow sample	
	50mM,1% H2O/D2O	Not available.
	Sodium Acetate Solution	
10 mM 13C Enriched Sodium Acetate	Not available.	

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity	: Sucrose Sample	No specific test data related to reactivity available for this product or its ingredients.
	Purchase SPEC	
	99% D2O Sample	No specific test data related to reactivity available for this product or its ingredients.
	0.2% v/v H2O in D2O	No specific test data related to reactivity available for this product or its ingredients.
	Microflow sample	
	50mM,1% H2O/D2O	No specific test data related to reactivity available for this product or its ingredients.
	Sodium Acetate Solution	
10 mM 13C Enriched Sodium Acetate	No specific test data related to reactivity available for this product or its ingredients.	

SECTION 10: Stability and reactivity

10.2 Chemical stability	: Sucrose Sample Purchase SPEC 99% D2O Sample 0.2% v/v H2O in D2O Microflow sample 50mM, 1% H2O/D2O Sodium Acetate Solution 10 mM 13C Enriched Sodium Acetate	The product is stable. The product is stable. The product is stable. The product is stable. The product is stable.
10.3 Possibility of hazardous reactions	: Sucrose Sample Purchase SPEC 99% D2O Sample 0.2% v/v H2O in D2O Microflow sample 50mM, 1% H2O/D2O Sodium Acetate Solution 10 mM 13C Enriched Sodium Acetate	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	: Sucrose Sample Purchase SPEC 99% D2O Sample 0.2% v/v H2O in D2O Microflow sample 50mM, 1% H2O/D2O Sodium Acetate Solution 10 mM 13C Enriched Sodium Acetate	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. No specific data. No specific data. No specific data. No specific data.
10.5 Incompatible materials	: Sucrose Sample Purchase SPEC 99% D2O Sample 0.2% v/v H2O in D2O Microflow sample 50mM, 1% H2O/D2O Sodium Acetate Solution 10 mM 13C Enriched Sodium Acetate	Reactive or incompatible with the following materials: oxidizing materials No specific data. No specific data. No specific data. No specific data.
10.6 Hazardous decomposition products	: Sucrose Sample Purchase SPEC 99% D2O Sample 0.2% v/v H2O in D2O Microflow sample 50mM, 1% H2O/D2O Sodium Acetate Solution 10 mM 13C Enriched Sodium Acetate	Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Sucrose Sample Purchase SPEC Sucrose	LD50 Oral	Rat	29700 mg/kg	-

Acute toxicity estimates

Not available.

Irritation/Corrosion

Conclusion/Summary : Not available.

Sensitiser

Conclusion/Summary : Not available.

Chronic toxicity / Carcinogenicity / Mutagenicity / Teratogenicity / Reproductive toxicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Sucrose Sample Purchase SPEC Sucrose	Category 2	Oral	gastrointestinal tract

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Inhalation	: Sucrose Sample Purchase SPEC	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
	99% D2O Sample	No known significant effects or critical hazards.
	0.2% v/v H2O in D2O	No known significant effects or critical hazards.
	Microflow sample	
	50mM, 1% H2O/D2O	No known significant effects or critical hazards.
	Sodium Acetate Solution	
	10 mM 13C Enriched	No known significant effects or critical hazards.
	Sodium Acetate	
Ingestion	: Sucrose Sample Purchase SPEC	No known significant effects or critical hazards.
	99% D2O Sample	No known significant effects or critical hazards.
	0.2% v/v H2O in D2O	No known significant effects or critical hazards.
	Microflow sample	
	50mM, 1% H2O/D2O	No known significant effects or critical hazards.
	Sodium Acetate Solution	
	10 mM 13C Enriched	No known significant effects or critical hazards.
	Sodium Acetate	
Skin contact	: Sucrose Sample Purchase SPEC	No known significant effects or critical hazards.
	99% D2O Sample	No known significant effects or critical hazards.
	0.2% v/v H2O in D2O	No known significant effects or critical hazards.
	Microflow sample	
	50mM, 1% H2O/D2O	No known significant effects or critical hazards.
	Sodium Acetate Solution	
	10 mM 13C Enriched	No known significant effects or critical hazards.
	Sodium Acetate	

SECTION 11: Toxicological information

Eye contact	: Sucrose Sample Purchase SPEC	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.
	99% D2O Sample	No known significant effects or critical hazards.
	0.2% v/v H2O in D2O	No known significant effects or critical hazards.
	Microflow sample	
	50mM, 1% H2O/D2O	No known significant effects or critical hazards.
	Sodium Acetate Solution	
	10 mM 13C Enriched	No known significant effects or critical hazards.
	Sodium Acetate	

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation	: Sucrose Sample Purchase SPEC	Adverse symptoms may include the following: respiratory tract irritation coughing
	99% D2O Sample	No specific data.
	0.2% v/v H2O in D2O	No specific data.
	Microflow sample	
	50mM, 1% H2O/D2O	No specific data.
	Sodium Acetate Solution	
	10 mM 13C Enriched	No specific data.
	Sodium Acetate	
Ingestion	: Sucrose Sample Purchase SPEC	No specific data.
	99% D2O Sample	No specific data.
	0.2% v/v H2O in D2O	No specific data.
	Microflow sample	
	50mM, 1% H2O/D2O	No specific data.
	Sodium Acetate Solution	
	10 mM 13C Enriched	No specific data.
	Sodium Acetate	
Skin contact	: Sucrose Sample Purchase SPEC	No specific data.
	99% D2O Sample	No specific data.
	0.2% v/v H2O in D2O	No specific data.
	Microflow sample	
	50mM, 1% H2O/D2O	No specific data.
	Sodium Acetate Solution	
	10 mM 13C Enriched	No specific data.
	Sodium Acetate	
Eye contact	: Sucrose Sample Purchase SPEC	Adverse symptoms may include the following: irritation redness
	99% D2O Sample	No specific data.
	0.2% v/v H2O in D2O	No specific data.
	Microflow sample	
	50mM, 1% H2O/D2O	No specific data.
	Sodium Acetate Solution	
	10 mM 13C Enriched	No specific data.
	Sodium Acetate	

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

SECTION 11: Toxicological information

General	: Sucrose Sample Purchase SPEC 99% D2O Sample 0.2% v/v H2O in D2O Microflow sample 50mM, 1% H2O/D2O Sodium Acetate Solution 10 mM 13C Enriched Sodium Acetate	May cause damage to organs through prolonged or repeated exposure if swallowed. Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Carcinogenicity	: Sucrose Sample Purchase SPEC 99% D2O Sample 0.2% v/v H2O in D2O Microflow sample 50mM, 1% H2O/D2O Sodium Acetate Solution 10 mM 13C Enriched Sodium Acetate	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Mutagenicity	: Sucrose Sample Purchase SPEC 99% D2O Sample 0.2% v/v H2O in D2O Microflow sample 50mM, 1% H2O/D2O Sodium Acetate Solution 10 mM 13C Enriched Sodium Acetate	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Teratogenicity	: Sucrose Sample Purchase SPEC 99% D2O Sample 0.2% v/v H2O in D2O Microflow sample 50mM, 1% H2O/D2O Sodium Acetate Solution 10 mM 13C Enriched Sodium Acetate	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Developmental effects	: Sucrose Sample Purchase SPEC 99% D2O Sample 0.2% v/v H2O in D2O Microflow sample 50mM, 1% H2O/D2O Sodium Acetate Solution 10 mM 13C Enriched Sodium Acetate	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Fertility effects	: Sucrose Sample Purchase SPEC 99% D2O Sample 0.2% v/v H2O in D2O Microflow sample 50mM, 1% H2O/D2O Sodium Acetate Solution 10 mM 13C Enriched Sodium Acetate	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<u>Toxicokinetics</u>		
Absorption	: Sucrose Sample Purchase SPEC 99% D2O Sample 0.2% v/v H2O in D2O Microflow sample 50mM, 1% H2O/D2O Sodium Acetate Solution 10 mM 13C Enriched	Not available. Not available. Not available. Not available. Not available.

SECTION 11: Toxicological information

	Sodium Acetate	
Distribution	: Sucrose Sample	Not available.
	Purchase SPEC	
	99% D2O Sample	Not available.
	0.2% v/v H2O in D2O	Not available.
	Microflow sample	
	50mM, 1% H2O/D2O	Not available.
	Sodium Acetate Solution	
	10 mM 13C Enriched	Not available.
	Sodium Acetate	
Metabolism	: Sucrose Sample	Not available.
	Purchase SPEC	
	99% D2O Sample	Not available.
	0.2% v/v H2O in D2O	Not available.
	Microflow sample	
	50mM, 1% H2O/D2O	Not available.
	Sodium Acetate Solution	
	10 mM 13C Enriched	Not available.
	Sodium Acetate	
Elimination	: Sucrose Sample	Not available.
	Purchase SPEC	
	99% D2O Sample	Not available.
	0.2% v/v H2O in D2O	Not available.
	Microflow sample	
	50mM, 1% H2O/D2O	Not available.
	Sodium Acetate Solution	
	10 mM 13C Enriched	Not available.
	Sodium Acetate	
Other information	: Not available.	

SECTION 12: Ecological information**12.1 Toxicity**

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Conclusion/Summary : Not available.

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Sucrose Sample Purchase SPEC			
Sucrose	-3.7	-	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal : 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.

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : 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

This Safety Data Sheet (EU_English) is written based on the encapsulated substance or mixture in this article. Since the hazardous ingredient is encapsulated, the risk of exposure by inhalation, ingestion, skin contact and eyes contact is minimum.

Regulatory information

ADR/RID / IMDG / IATA : Not regulated.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Other EU regulations

Europe inventory : All components are listed or exempted.

Black List Chemicals : Not listed

Priority List Chemicals : Not listed

Integrated pollution prevention and control list (IPPC) - Air : Not listed

Integrated pollution prevention and control list (IPPC) - Water : Not listed

15.2 Chemical Safety Assessment : This product contains substances for which Chemical Safety Assessments might still be required.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
 DNEL = Derived No Effect Level
 EUH statement = CLP-specific Hazard statement
 PNEC = Predicted No Effect Concentration
 RRN = REACH Registration Number

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Sucrose Sample Purchase SPEC STOT RE 2, H373 (gastrointestinal tract) (oral)	Expert judgment

Full text of abbreviated H statements : **Sucrose Sample Purchase SPEC**
 H373 (gastrointestinal tract) (oral) May cause damage to organs through prolonged or repeated exposure if swallowed. (gastrointestinal tract)

Full text of classifications [CLP/GHS] : **Sucrose Sample Purchase SPEC**
 STOT RE 2, H373 (gastrointestinal tract) (oral) SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (gastrointestinal tract) (oral) - Category 2

Full text of abbreviated R phrases : Sucrose Sample Purchase SPEC Not applicable.
 99% D2O Sample Not applicable.
 0.2% v/v H2O in D2O Not applicable.
 Microflow sample
 50mM, 1% H2O/D2O Not applicable.
 Sodium Acetate Solution
 10 mM 13C Enriched Not applicable.
 Sodium Acetate

Full text of classifications [DSD/DPD] : Sucrose Sample Purchase SPEC Not applicable.
 99% D2O Sample Not applicable.
 0.2% v/v H2O in D2O Not applicable.
 Microflow sample
 50mM, 1% H2O/D2O Not applicable.
 Sodium Acetate Solution
 10 mM 13C Enriched Not applicable.
 Sodium Acetate

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