

# SAFETY DATA SHEET

ID Sample Kit, Part Number 191120500

## 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

<b>Product name</b>	: ID Sample Kit, Part Number 191120500		
<b>Part No. (Kit)</b>	: 191120500		
<b>Part No.</b>	: 4Hz 1% H <sub>2</sub> O/D <sub>2</sub> O	191120701	
	1H S/N	191120770	
	1H Lineshape	191120789	
	ID 1	191120796	
	ID 2	191120797	
	68.5mM sucrose	191120710	

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

Identified uses		
Analytical chemistry.		
1.7mm		
4Hz 1% H <sub>2</sub> O/D <sub>2</sub> O	71	µl
1H S/N	71	µl
1H Lineshape	71	µl
ID 1	71	µl
ID 2	71	µl
68.5mM sucrose	71	µl

### 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

<b>Product definition</b>	: 4Hz 1% H <sub>2</sub> O/D <sub>2</sub> O	Mixture (encapsulated in article)
	1H S/N	Mixture (encapsulated in article)
	1H Lineshape	Mixture (encapsulated in article)
	ID 1	Mixture (encapsulated in article)
	ID 2	Mixture (encapsulated in article)
	68.5mM sucrose	Mixture (encapsulated in article)

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

**SECTION 2: Hazards identification**

**1H S/N**

H302	ACUTE TOXICITY (oral) - Category 4
H315	SKIN CORROSION/IRRITATION - Category 2
H351	CARCINOGENICITY - Category 2
H373	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
H412	LONG-TERM AQUATIC HAZARD - Category 3

**1H Lineshape**

H225	FLAMMABLE LIQUIDS - Category 2
H319	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
H351	CARCINOGENICITY - Category 2
H336	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
H412	LONG-TERM AQUATIC HAZARD - Category 3

**ID 1**

H302	ACUTE TOXICITY (oral) - Category 4
H315	SKIN CORROSION/IRRITATION - Category 2
H351	CARCINOGENICITY - Category 2
H373	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
H412	LONG-TERM AQUATIC HAZARD - Category 3

**ID 2**

H319	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
H373	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

<b>Ingredients of unknown ecotoxicity</b>	: 4Hz 1% H2O/D2O	Not applicable.
	1H S/N	Not applicable.
	1H Lineshape	Not applicable.
	ID 1	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 1%
	ID 2	Not applicable.
	68.5mM sucrose	Not applicable.

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

4Hz 1% H2O/D2O	The product is not classified as dangerous according to Directive 1999/45/EC and its amendments.
1H S/N	The product is classified as dangerous according to Directive 1999/45/EC and its amendments.
1H Lineshape	The product is classified as dangerous according to Directive 1999/45/EC and its amendments.
ID 1	The product is classified as dangerous according to Directive 1999/45/EC and its amendments.
ID 2	The product is not classified as dangerous according to Directive 1999/45/EC and its amendments.
68.5mM sucrose	The product is not classified as dangerous according to Directive 1999/45/EC and its amendments.

<b>Classification</b>	: 4Hz 1% H2O/D2O	Not classified.
	1H S/N	Carc. Cat. 3; R40 Xn; R22, R48/20/22 Xi; R38
	1H Lineshape	F; R11 Carc. Cat. 3; R40 Xi; R36 R66, R67
	ID 1	Carc. Cat. 3; R40 Xn; R22, R48/20/22 Xi; R38
	ID 2	Not classified.
	68.5mM sucrose	Not classified.

**SECTION 2: Hazards identification**

<b>Physical/chemical hazards</b>	: 4Hz 1% H2O/D2O 1H S/N 1H Lineshape ID 1 ID 2 68.5mM sucrose	Not applicable. Not applicable. Highly flammable. Not applicable. Not applicable. Not applicable.
<b>Human health hazards</b>	: 4Hz 1% H2O/D2O 1H S/N  1H Lineshape  ID 1  ID 2 68.5mM sucrose	Not applicable. Limited evidence of a carcinogenic effect. Harmful if swallowed. Harmful: danger of serious damage to health in case of prolonged exposure through inhalation and if swallowed. Irritating to skin.  Limited evidence of a carcinogenic effect. Irritating to eyes. Repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness. Limited evidence of a carcinogenic effect. Harmful if swallowed. Harmful: danger of serious damage to health in case of prolonged exposure through inhalation and if swallowed. Irritating to skin.  Not applicable. Not applicable.

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**

<b>Hazard pictograms</b>	:	
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<b>Signal word</b>	: 4Hz 1% H2O/D2O 1H S/N 1H Lineshape ID 1 ID 2 68.5mM sucrose	No signal word. Warning Danger Warning Warning No signal word.
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<b>Hazard statements</b>	: 4Hz 1% H2O/D2O 1H S/N  1H Lineshape  ID 1  ID 2	No known significant effects or critical hazards. <b>GHS07</b> - Harmful if swallowed. Causes skin irritation. <b>GHS08</b> - Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure. Harmful to aquatic life with long lasting effects. <b>GHS02</b> - Highly flammable liquid and vapour. <b>GHS07</b> - Causes serious eye irritation. May cause drowsiness or dizziness. <b>GHS08</b> - Suspected of causing cancer. Harmful to aquatic life with long lasting effects. <b>GHS07</b> - Harmful if swallowed. Causes skin irritation. <b>GHS08</b> - Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure. Harmful to aquatic life with long lasting effects. <b>GHS07</b> - Causes serious eye irritation.
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**SECTION 2: Hazards identification**

**GHS08 -**

May cause damage to organs through prolonged or repeated exposure.

No known significant effects or critical hazards.

**Precautionary statements**

**Prevention**

68.5mM sucrose

: 4Hz 1% H2O/D2O  
1H S/N

Not applicable.

P201 - Obtain special instructions before use.

P280 - Wear protective gloves.

P273 - Avoid release to the environment.

P260 - Do not breathe vapour.

1H Lineshape

P201 - Obtain special instructions before use.

P280 - Wear protective gloves. Wear eye or face protection.

P210 - Keep away from heat, sparks, open flames and hot surfaces. - No smoking.

P241 - Use explosion-proof electrical, ventilating, lighting and all material-handling equipment.

P273 - Avoid release to the environment.

ID 1

P201 - Obtain special instructions before use.

P280 - Wear protective gloves.

P273 - Avoid release to the environment.

P260 - Do not breathe vapour.

ID 2

P280 - Wear eye or face protection.

P260 - Do not breathe vapour.

P264 - Wash hands thoroughly after handling.

68.5mM sucrose

Not applicable.

**Response**

: 4Hz 1% H2O/D2O  
1H S/N

Not applicable.

P314 - Get medical attention if you feel unwell.

P301 + P312 - IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell.

1H Lineshape

P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

ID 1

P314 - Get medical attention if you feel unwell.

P301 + P312 - IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell.

ID 2

P314 - Get medical attention if you feel unwell.

P305 + P351 - IF IN EYES: Rinse cautiously with water for several minutes.

68.5mM sucrose

Not applicable.

**Storage**

: 4Hz 1% H2O/D2O  
1H S/N

Not applicable.

P405 - Store locked up.

1H Lineshape

P235 - Keep cool.

ID 1

P405 - Store locked up.

ID 2

Not applicable.

68.5mM sucrose

Not applicable.

**Disposal**

: 4Hz 1% H2O/D2O  
1H S/N

Not applicable.

P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

1H Lineshape

P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

ID 1

P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

ID 2

P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

68.5mM sucrose

Not applicable.

ID Sample Kit, Part Number 191120500

## SECTION 2: Hazards identification

<b>Hazardous ingredients</b>	: <b>1H S/N</b> ( <sup>2</sup> H)Chloroform	
	<b>1H Lineshape</b> ( <sup>2</sup> H <sub>6</sub> )Acetone Trichloromethane	
	<b>ID 1</b> ( <sup>2</sup> H)Chloroform	
	<b>ID 2</b> di[( <sup>2</sup> H <sub>3</sub> )Methyl] sulphoxide	
<b>Supplemental label elements</b>	: 4Hz 1% H2O/D2O 1H S/N 1H Lineshape ID 1 ID 2 68.5mM sucrose	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
<b>Special packaging requirements</b>		
<b>Tactile warning of danger</b>	: 4Hz 1% H2O/D2O 1H S/N 1H Lineshape ID 1 ID 2 68.5mM sucrose	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.

### 2.3 Other hazards

<b>Other hazards which do not result in classification</b>	: 4Hz 1% H2O/D2O 1H S/N 1H Lineshape	None known. None known. Prolonged or repeated contact may dry skin and cause irritation.
	ID 1 ID 2 68.5mM sucrose	None known. None known. None known.

## 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.

<b>Substance/mixture</b>	: 4Hz 1% H2O/D2O 1H S/N 1H Lineshape ID 1 ID 2 68.5mM sucrose	Mixture (encapsulated in article) Mixture (encapsulated in article) Mixture (encapsulated in article) Mixture (encapsulated in article) Mixture (encapsulated in article) Mixture (encapsulated in article)
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Product/ingredient name	Identifiers	%	Classification		Type
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	
<b>1H S/N</b> ( <sup>2</sup> H)Chloroform	EC: 200-663-8 CAS: 865-49-6 Index: 602-006-00-4	>=90	Carc. Cat. 3; R40 Xn; R22, R48/20/22 Xi; R38	Acute Tox. 4, H302 Skin Irrit. 2, H315 Carc. 2, H351 STOT RE 2, H373	[1] [2]
<b>1H Lineshape</b> ( <sup>2</sup> H <sub>6</sub> )Acetone	EC: 200-662-2 CAS: 666-52-4 Index: 606-001-00-8	>=90	F; R11 Xi; R36 R66, R67	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 (Narcotic effects)	[1] [2]
Trichloromethane	EC: 200-663-8	>=1 -	Carc. Cat. 3; R40	Acute Tox. 4, H302	[1] [2]

ID Sample Kit, Part Number 191120500

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

<b>ID 1</b> ( <sup>2</sup> H)Chloroform	CAS: 67-66-3 Index: 602-006-00-4	<5	Xn; R22, R48/20/22 Xi; R38	Skin Irrit. 2, H315 Carc. 2, H351 STOT RE 2, H373	
Iodomethane ( <sup>13</sup> C)	EC: 200-663-8 CAS: 865-49-6 Index: 602-006-00-4	>=90	Carc. Cat. 3; R40 Xn; R22, R48/20/22 Xi; R38	Acute Tox. 4, H302 Skin Irrit. 2, H315 Carc. 2, H351 STOT RE 2, H373	[1] [2]
Trimethyl phosphite	EC: 200-819-5 CAS: 4227-95-6 Index: 602-005-00-9	>=1 - <3	Carc. Cat. 3; R40 T; R23/25 Xn; R21 Xi; R37/38	Acute Tox. 3, H301 Acute Tox. 4, H312 Acute Tox. 3, H331 Skin Irrit. 2, H315 Carc. 2, H351 STOT SE 3, H335 (Respiratory tract irritation)	[1]
di[( <sup>2</sup> H <sub>3</sub> )Methyl] sulphoxide	EC: 204-471-5 CAS: 121-45-9	>=1 - <3	R10 Xn; R21/22 Xi; R36/37/38	Fam. Liq. 3, H226 Acute Tox. 4, H302 Acute Tox. 3, H311 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 (Respiratory tract irritation)	[1]
Benzamide ( <sup>15</sup> N)	EC: 200-664-3 CAS: 2206-27-1	>=90	Not classified.	Eye Irrit. 2, H319 STOT RE 2, H373 (kidneys and liver) (oral)	[1]
	CAS: 31656-62-9	>=1 - <3	Xn; R22  <b>See Section 16 for the full text of the R-phrases declared above.</b>	Acute Tox. 4, H302  <b>See Section 16 for the full text of the H statements declared above.</b>	[1]

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**

<b>Eye contact</b>	: 4Hz 1% H2O/D2O	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.
	1H S/N	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.
	1H Lineshape	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.
	ID 1	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove

**SECTION 4: First aid measures**

**Inhalation**

ID 2

68.5mM sucrose

: 4Hz 1% H2O/D2O

1H S/N

1H Lineshape

ID 1

ID 2

68.5mM sucrose

any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

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.

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.

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

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. 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. 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.

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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. If necessary, call a poison center or physician. 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. 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.

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. 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. 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.

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.

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

**SECTION 4: First aid measures**

<b>Skin contact</b>	: 4Hz 1% H2O/D2O	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	1H S/N	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	1H Lineshape	Wash skin thoroughly with soap and water or use recognised skin cleanser. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	ID 1	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	ID 2	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.
	68.5mM sucrose	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
<b>Ingestion</b>	: 4Hz 1% H2O/D2O	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.
	1H S/N	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. If necessary, call a poison center or physician. 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.
	1H Lineshape	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. If necessary, call a poison center or physician. 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.
	ID 1	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,



**SECTION 4: First aid measures**

the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. 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.

ID 2  
 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. 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** : 4Hz 1% H2O/D2O

1H S/N  
 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.

1H Lineshape  
 No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

ID 1  
 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.

ID 2  
 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.

68.5mM sucrose  
 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** : 4Hz 1% H2O/D2O No known significant effects or critical hazards.  
 1H S/N Causes serious eye irritation.  
 1H Lineshape Causes serious eye irritation.  
 ID 1 Causes serious eye irritation.  
 ID 2 Causes eye irritation.  
 68.5mM sucrose No known significant effects or critical hazards.

**Inhalation** : 4Hz 1% H2O/D2O No known significant effects or critical hazards.  
 1H S/N Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.  
 1H Lineshape Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.  
 ID 1 Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.  
 ID 2 No known significant effects or critical hazards.

**SECTION 4: First aid measures**

	68.5mM sucrose	No known significant effects or critical hazards.
<b>Skin contact</b>	: 4Hz 1% H2O/D2O	No known significant effects or critical hazards.
	1H S/N	Causes skin irritation.
	1H Lineshape	Defatting to the skin. May cause skin dryness and irritation.
	ID 1	Causes skin irritation.
	ID 2	No known significant effects or critical hazards.
<b>Ingestion</b>	68.5mM sucrose	No known significant effects or critical hazards.
	: 4Hz 1% H2O/D2O	No known significant effects or critical hazards.
	1H S/N	Harmful if swallowed. Irritating to mouth, throat and stomach.
	1H Lineshape	Can cause central nervous system (CNS) depression. Irritating to mouth, throat and stomach.
	ID 1	Harmful if swallowed. Irritating to mouth, throat and stomach.
	ID 2	May be irritating to mouth, throat and stomach.
	68.5mM sucrose	No known significant effects or critical hazards.
<b><u>Over-exposure signs/symptoms</u></b>		
<b>Eye contact</b>	: 4Hz 1% H2O/D2O	No specific data.
	1H S/N	Adverse symptoms may include the following: pain or irritation watering redness
	1H Lineshape	Adverse symptoms may include the following: pain or irritation watering redness
	ID 1	Adverse symptoms may include the following: pain or irritation watering redness
	ID 2	Adverse symptoms may include the following: irritation watering redness
<b>Inhalation</b>	68.5mM sucrose	No specific data.
	: 4Hz 1% H2O/D2O	No specific data.
	1H S/N	No specific data.
	1H Lineshape	Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
	ID 1	No specific data.
	ID 2	No specific data.
<b>Skin contact</b>	68.5mM sucrose	No specific data.
	: 4Hz 1% H2O/D2O	No specific data.
	1H S/N	Adverse symptoms may include the following: irritation redness
	1H Lineshape	Adverse symptoms may include the following: irritation dryness cracking
	ID 1	Adverse symptoms may include the following: irritation redness
	ID 2	No specific data.
	68.5mM sucrose	No specific data.

**SECTION 4: First aid measures**

<b>Ingestion</b>	: 4Hz 1% H2O/D2O	No specific data.
	1H S/N	No specific data.
	1H Lineshape	No specific data.
	ID 1	No specific data.
	ID 2	No specific data.
	68.5mM sucrose	No specific data.

**4.3 Indication of any immediate medical attention and special treatment needed**

<b>Notes to physician</b>	: 4Hz 1% H2O/D2O	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	1H S/N	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.
	1H Lineshape	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.
	ID 1	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.
	ID 2	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	68.5mM sucrose	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
<b>Specific treatments</b>	: 4Hz 1% H2O/D2O	No specific treatment.
	1H S/N	No specific treatment.
	1H Lineshape	No specific treatment.
	ID 1	No specific treatment.
	ID 2	No specific treatment.
	68.5mM sucrose	No specific treatment.

**SECTION 5: Firefighting measures****5.1 Extinguishing media**

<b>Suitable extinguishing media</b>	: 4Hz 1% H2O/D2O	Use an extinguishing agent suitable for the surrounding fire.
	1H S/N	Use an extinguishing agent suitable for the surrounding fire.
	1H Lineshape	Use dry chemical, CO <sub>2</sub> , water spray (fog) or foam.
	ID 1	Use an extinguishing agent suitable for the surrounding fire.
	ID 2	Use an extinguishing agent suitable for the surrounding fire.
	68.5mM sucrose	Use an extinguishing agent suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	: 4Hz 1% H2O/D2O	None known.
	1H S/N	None known.
	1H Lineshape	Do not use water jet.
	ID 1	None known.
	ID 2	None known.
	68.5mM sucrose	None known.

**5.2 Special hazards arising from the substance or mixture**

<b>Hazards from the substance or mixture</b>	: 4Hz 1% H2O/D2O	In a fire or if heated, a pressure increase will occur and the container may burst.
	1H S/N	In a fire or if heated, a pressure increase will occur and the container may burst. 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.
	1H Lineshape	Highly flammable liquid and vapour. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard. 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.
	ID 1	In a fire or if heated, a pressure increase will occur and the

**SECTION 5: Firefighting measures**

		container may burst. 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.
	ID 2	In a fire or if heated, a pressure increase will occur and the container may burst.
	68.5mM sucrose	In a fire or if heated, a pressure increase will occur and the container may burst.
<b>Hazardous combustion products</b>	: 4Hz 1% H2O/D2O 1H S/N	No specific data. Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds carbonyl halides
	1H Lineshape	Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds carbonyl halides
	ID 1	Decomposition products may include the following materials: carbon dioxide carbon monoxide phosphorus oxides halogenated compounds carbonyl halides
	ID 2	Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides
	68.5mM sucrose	No specific data.

**5.3 Advice for firefighters**

<b>Special precautions for fire-fighters</b>	: 4Hz 1% H2O/D2O 1H S/N 1H Lineshape	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.
	ID 1	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.
	ID 2	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.
	68.5mM sucrose	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.
<b>Special protective equipment for fire-fighters</b>	: 4Hz 1% H2O/D2O 1H S/N	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.
		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 5: Firefighting measures**

1H Lineshape	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.
ID 1	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.
ID 2	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.
68.5mM sucrose	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**

<b>For non-emergency personnel</b>	: 4Hz 1% H2O/D2O	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.
1H S/N		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. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
1H Lineshape		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 vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
ID 1		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. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
ID 2		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. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
68.5mM sucrose		No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering.

**SECTION 6: Accidental release measures****For emergency responders**

: 4Hz 1% H2O/D2O

Do not touch or walk through spilt material. Put on appropriate personal protective equipment.

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".

1H S/N

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".

1H Lineshape

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".

ID 1

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".

ID 2

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".

68.5mM sucrose

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**

: 4Hz 1% H2O/D2O

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).

1H S/N

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.

1H Lineshape

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.

ID 1

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.

ID 2

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).

68.5mM sucrose

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**

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**SECTION 6: Accidental release measures**

<b>Methods for cleaning up</b>	: 4Hz 1% H2O/D2O	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.
	1H S/N	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.
	1H Lineshape	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. 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.
	ID 1	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.
	ID 2	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.
	68.5mM sucrose	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**

<b>Protective measures</b>	: 4Hz 1% H2O/D2O	Put on appropriate personal protective equipment (see Section 8).
	1H S/N	Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
	1H Lineshape	Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any

**SECTION 7: Handling and storage****Advice on general occupational hygiene**

		other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
	ID 1	Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
	ID 2	Put on appropriate personal protective equipment (see Section 8). Do not breathe vapour or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
	68.5mM sucrose	Put on appropriate personal protective equipment (see Section 8).
	: 4Hz 1% H2O/D2O	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.
	1H S/N	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.
	1H Lineshape	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.
	ID 1	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.
	ID 2	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.
	68.5mM sucrose	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.



**SECTION 7: Handling and storage**

<b>7.2 Conditions for safe storage, including any incompatibilities</b>	: 4Hz 1% H <sub>2</sub> O/D <sub>2</sub> O	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.
	1H S/N	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. Store locked up. 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.
	1H Lineshape	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. Store locked up. 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.
	ID 1	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. Store locked up. 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.
	ID 2	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.
	68.5mM sucrose	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.

**7.3 Specific end use(s)**

<b>Recommendations</b>	: 4Hz 1% H <sub>2</sub> O/D <sub>2</sub> O	Industrial applications, Professional applications.
	1H S/N	Industrial applications, Professional applications.
	1H Lineshape	Industrial applications, Professional applications.
	ID 1	Industrial applications, Professional applications.
	ID 2	Industrial applications, Professional applications.
	68.5mM sucrose	Industrial applications, Professional applications.

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## SECTION 7: Handling and storage

**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 parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
<b>1H S/N</b> ( <sup>2</sup> H)Chloroform	<b>EU OEL (Europe, 12/2009). Absorbed through skin. Notes: list of indicative occupational exposure limit values</b> TWA: 2 ppm 8 hours. TWA: 10 mg/m <sup>3</sup> 8 hours.
<b>1H Lineshape</b> ( <sup>2</sup> H <sub>6</sub> )Acetone  Trichloromethane	<b>EU OEL (Europe, 12/2009). Notes: list of indicative occupational exposure limit values</b> TWA: 500 ppm 8 hours. TWA: 1210 mg/m <sup>3</sup> 8 hours. <b>EU OEL (Europe, 12/2009). Absorbed through skin. Notes: list of indicative occupational exposure limit values</b> TWA: 10 mg/m <sup>3</sup> 8 hours. TWA: 2 ppm 8 hours.
<b>ID 1</b> ( <sup>2</sup> H)Chloroform	<b>EU OEL (Europe, 12/2009). Absorbed through skin. Notes: list of indicative occupational exposure limit values</b> TWA: 2 ppm 8 hours. TWA: 10 mg/m <sup>3</sup> 8 hours.

#### **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** : Use only with adequate ventilation. 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.

#### Individual protection measures

**SECTION 8: Exposure controls/personal protection**

- 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: chemical splash 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. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.
- 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**

<b>Physical state</b>	: 4Hz 1% H <sub>2</sub> O/D <sub>2</sub> O	Liquid.
	1H S/N	Liquid.
	1H Lineshape	Liquid.
	ID 1	Liquid.
	ID 2	Liquid. [Clear.]
	68.5mM sucrose	Liquid. [Clear.]
<b>Colour</b>	: 4Hz 1% H <sub>2</sub> O/D <sub>2</sub> O	Not available.
	1H S/N	Not available.
	1H Lineshape	Not available.
	ID 1	Not available.
	ID 2	Colourless.
	68.5mM sucrose	Not available.
<b>Odour</b>	: 4Hz 1% H <sub>2</sub> O/D <sub>2</sub> O	Not available.
	1H S/N	Not available.
	1H Lineshape	Not available.
	ID 1	Not available.
	ID 2	Ripe olive.
	68.5mM sucrose	Not available.
<b>Odour threshold</b>	: 4Hz 1% H <sub>2</sub> O/D <sub>2</sub> O	Not available.
	1H S/N	Not available.
	1H Lineshape	Not available.
	ID 1	Not available.
	ID 2	Not available.
	68.5mM sucrose	Not available.

**SECTION 9: Physical and chemical properties**

<b>pH</b>	: 4Hz 1% H2O/D2O	Not available.
	1H S/N	Not available.
	1H Lineshape	Not available.
	ID 1	Not available.
	ID 2	Not available.
<b>Melting point/freezing point</b>	68.5mM sucrose	Not available.
	: 4Hz 1% H2O/D2O	Not available.
	1H S/N	-64°C
	1H Lineshape	-95°C
	ID 1	-64°C
<b>Initial boiling point and boiling range</b>	ID 2	18 to 18.54°C
	68.5mM sucrose	0°C
	: 4Hz 1% H2O/D2O	101.4°C
	1H S/N	60.9°C
	1H Lineshape	55.5°C
<b>Flash point</b>	ID 1	60.9°C
	ID 2	189°C
	68.5mM sucrose	100°C
	: 4Hz 1% H2O/D2O	Not available.
	1H S/N	Not available.
<b>Evaporation rate</b>	1H Lineshape	Closed cup: -17°C
	ID 1	Not available.
	ID 2	Closed cup: 88°C
	68.5mM sucrose	Not available.
	: 4Hz 1% H2O/D2O	Not available.
<b>Flammability (solid, gas)</b>	1H S/N	Not available.
	1H Lineshape	Flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.
	ID 1	Not available.
	ID 2	Flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.
	68.5mM sucrose	Not available.
<b>Upper/lower flammability or explosive limits</b>	: 4Hz 1% H2O/D2O	Not available.
	1H S/N	Not available.
	1H Lineshape	Not available.
	ID 1	Not available.
	ID 2	Lower: 3%
<b>Vapour pressure</b>	68.5mM sucrose	Not available.
	: 4Hz 1% H2O/D2O	Not available.
	1H S/N	Not available.
	1H Lineshape	Not available.
	ID 1	Not available.
<b>Vapour density</b>	ID 2	0.061 kPa [room temperature]
	68.5mM sucrose	Not available.
	: 4Hz 1% H2O/D2O	Not available.
	1H S/N	Not available.
	1H Lineshape	Not available.
	ID 1	Not available.
	ID 2	1.04 [Air = 1]
	68.5mM sucrose	Not available.

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**SECTION 9: Physical and chemical properties**

<b>Relative density</b>	: 4Hz 1% H2O/D2O	1.107
	1H S/N	1.5
	1H Lineshape	0.872
	ID 1	1500
	ID 2	1.18
	68.5mM sucrose	Not available.
<b>Solubility(ies)</b>	: 4Hz 1% H2O/D2O	Easily soluble in the following materials: cold water and hot water.
	1H S/N	Very slightly soluble in the following materials: cold water and hot water.
	1H Lineshape	Easily soluble in the following materials: cold water, hot water and acetone.
	ID 1	Very slightly soluble in the following materials: cold water and hot water.
	ID 2	Soluble in the following materials: cold water and hot water.
	68.5mM sucrose	Easily soluble in the following materials: cold water and hot water.
<b>Partition coefficient: n-octanol/water</b>	: 4Hz 1% H2O/D2O	Not available.
	1H S/N	Not available.
	1H Lineshape	Not available.
	ID 1	Not available.
	ID 2	Not available.
	68.5mM sucrose	Not available.
<b>Auto-ignition temperature</b>	: 4Hz 1% H2O/D2O	Not available.
	1H S/N	Not available.
	1H Lineshape	Not available.
	ID 1	Not available.
	ID 2	215°C
	68.5mM sucrose	Not available.
<b>Decomposition temperature</b>	: 4Hz 1% H2O/D2O	Not available.
	1H S/N	Not available.
	1H Lineshape	Not available.
	ID 1	Not available.
	ID 2	Not available.
	68.5mM sucrose	Not available.
<b>Viscosity</b>	: 4Hz 1% H2O/D2O	Not available.
	1H S/N	Not available.
	1H Lineshape	Not available.
	ID 1	Not available.
	ID 2	Not available.
	68.5mM sucrose	Not available.
<b>Explosive properties</b>	: 4Hz 1% H2O/D2O	Not available.
	1H S/N	Not available.
	1H Lineshape	Vapours may form explosive mixtures with air.
	ID 1	Not available.
	ID 2	Not available.
	68.5mM sucrose	Not available.

**9.2 Other information**

No additional information.

**SECTION 10: Stability and reactivity**

<b>10.1 Reactivity</b>	: 4Hz 1% H2O/D2O	No specific test data related to reactivity available for this product or its ingredients.
	1H S/N	No specific test data related to reactivity available for this product or its ingredients.
	1H Lineshape	No specific test data related to reactivity available for this product or its ingredients.
	ID 1	No specific test data related to reactivity available for this product or its ingredients.
	ID 2	No specific test data related to reactivity available for this product or its ingredients.

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## SECTION 10: Stability and reactivity

	68.5mM sucrose	No specific test data related to reactivity available for this product or its ingredients.
<b>10.2 Chemical stability</b>	: 4Hz 1% H2O/D2O 1H S/N 1H Lineshape ID 1 ID 2 68.5mM sucrose	The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	: 4Hz 1% H2O/D2O  1H S/N  1H Lineshape  ID 1  ID 2  68.5mM sucrose	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.
<b>10.4 Conditions to avoid</b>	: 4Hz 1% H2O/D2O 1H S/N 1H Lineshape  ID 1 ID 2 68.5mM sucrose	No specific data. No specific data. Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. No specific data. No specific data. No specific data.
<b>10.5 Incompatible materials</b>	: 4Hz 1% H2O/D2O 1H S/N 1H Lineshape  ID 1 ID 2 68.5mM sucrose	No specific data. No specific data. Reactive or incompatible with the following materials: oxidizing materials No specific data. No specific data. No specific data.
<b>10.6 Hazardous decomposition products</b>	: 4Hz 1% H2O/D2O 1H S/N  1H Lineshape  ID 1  ID 2  68.5mM sucrose	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. 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

**SECTION 11: Toxicological information**

Product/ingredient name	Result	Species	Dose	Exposure
<b>1H S/N</b> ( <sup>2</sup> H)Chloroform	LC50 Inhalation Vapour	Rat	47702 mg/m <sup>3</sup>	4 hours
	LD50 Dermal	Rabbit	>20 g/kg	-
	LD50 Oral	Rat	300 mg/kg	-
<b>1H Lineshape</b> ( <sup>2</sup> H <sub>6</sub> )Acetone Trichloromethane	LD50 Oral	Rat	5800 mg/kg	-
	LC50 Inhalation Vapour	Rat	47702 mg/m <sup>3</sup>	4 hours
	LD50 Dermal	Rabbit	>20 g/kg	-
	LD50 Oral	Rat	300 mg/kg	-
<b>ID 1</b> ( <sup>2</sup> H)Chloroform	LC50 Inhalation Vapour	Rat	47702 mg/m <sup>3</sup>	4 hours
	LD50 Dermal	Rabbit	>20 g/kg	-
	LD50 Oral	Rat	300 mg/kg	-
Iodomethane ( <sup>13</sup> C)	LC50 Inhalation Vapour	Rat	1300 mg/m <sup>3</sup>	4 hours
Trimethyl phosphite	LD50 Oral	Rat	76 mg/kg	-
	LC50 Inhalation Vapour	Rat	182000 mg/m <sup>3</sup>	1 hours
	LD50 Dermal	Rabbit	933.8 mg/kg	-
<b>ID 2</b> di[( <sup>2</sup> H <sub>3</sub> )Methyl] sulphoxide	LD50 Dermal	Rat	40000 mg/kg	-
	LD50 Oral	Rat	14500 mg/kg	-

**Acute toxicity estimates**

Route	ATE value
<b>1H S/N</b> Oral	500.5 mg/kg
<b>1H Lineshape</b> Oral	50000 mg/kg
<b>ID 1</b> Oral Dermal Inhalation (vapours)	477.3 mg/kg 50505.5 mg/kg 300 mg/l
<b>ID 2</b> Oral	25000 mg/kg

**Irritation/Corrosion**

Product/ingredient name	Result	Species	Score	Exposure	Observation
<b>1H S/N</b> ( <sup>2</sup> H)Chloroform	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
<b>1H Lineshape</b> ( <sup>2</sup> H <sub>6</sub> )Acetone	Eyes - Mild irritant	Human	-	186300 parts per million	-
	Eyes - Mild irritant	Rabbit	-	10 microliters	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Eyes - Severe irritant	Rabbit	-	20 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	395 milligrams	-
Trichloromethane	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-

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**SECTION 11: Toxicological information**

<b>ID 1</b> ( <sup>2</sup> H)Chloroform	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
Iodomethane ( <sup>13</sup> C)	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Severe irritant	Rabbit	-	100 milligrams	-
	Skin - Mild irritant	Rat	-	30 minutes 1 Grams	-
Trimethyl phosphite	Skin - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Human	-	10 minutes 1 Grams	-
	Eyes - Mild irritant	Rabbit	-	0.1 Milliliters	-
	Skin - Severe irritant	Rabbit	-	500 milligrams	-
<b>ID 2</b> di[( <sup>2</sup> H <sub>3</sub> )Methyl] sulphoxide	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Mild irritant	Rabbit	-	100 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	100 milligrams	-

**Sensitiser**

**Conclusion/Summary** : Not available.

**Chronic toxicity / Carcinogenicity / Mutagenicity / Teratogenicity / Reproductive toxicity**

Not available.

**Specific target organ toxicity (single exposure)**

Product/ingredient name	Category	Route of exposure	Target organs
<b>1H Lineshape</b> ( <sup>2</sup> H <sub>6</sub> )Acetone	Category 3	Not applicable.	Narcotic effects
<b>ID 1</b> Iodomethane ( <sup>13</sup> C)	Category 3	Not applicable.	Respiratory tract irritation
Trimethyl phosphite	Category 3	Not applicable.	Respiratory tract irritation

**Specific target organ toxicity (repeated exposure)**

Product/ingredient name	Category	Route of exposure	Target organs
<b>1H S/N</b> ( <sup>2</sup> H)Chloroform	Category 2	Not determined	Not determined
<b>1H Lineshape</b> Trichloromethane	Category 2	Not determined	Not determined
<b>ID 1</b> ( <sup>2</sup> H)Chloroform	Category 2	Not determined	Not determined
<b>ID 2</b> di[( <sup>2</sup> H <sub>3</sub> )Methyl] sulphoxide	Category 2	Oral	kidneys and liver

**Aspiration hazard**

Not available.



**SECTION 11: Toxicological information**

**Information on the likely routes of exposure** : Not available.

Potential acute health effects

<b>Inhalation</b>	: 4Hz 1% H2O/D2O	No known significant effects or critical hazards.
	1H S/N	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
	1H Lineshape	Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
	ID 1	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
	ID 2	No known significant effects or critical hazards.
	68.5mM sucrose	No known significant effects or critical hazards.
<b>Ingestion</b>	: 4Hz 1% H2O/D2O	No known significant effects or critical hazards.
	1H S/N	Harmful if swallowed. Irritating to mouth, throat and stomach.
	1H Lineshape	Can cause central nervous system (CNS) depression. Irritating to mouth, throat and stomach.
	ID 1	Harmful if swallowed. Irritating to mouth, throat and stomach.
	ID 2	May be irritating to mouth, throat and stomach.
	68.5mM sucrose	No known significant effects or critical hazards.
<b>Skin contact</b>	: 4Hz 1% H2O/D2O	No known significant effects or critical hazards.
	1H S/N	Causes skin irritation.
	1H Lineshape	Defatting to the skin. May cause skin dryness and irritation.
	ID 1	Causes skin irritation.
	ID 2	No known significant effects or critical hazards.
	68.5mM sucrose	No known significant effects or critical hazards.
<b>Eye contact</b>	: 4Hz 1% H2O/D2O	No known significant effects or critical hazards.
	1H S/N	Causes serious eye irritation.
	1H Lineshape	Causes serious eye irritation.
	ID 1	Causes serious eye irritation.
	ID 2	Causes eye irritation.
	68.5mM sucrose	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

<b>Inhalation</b>	: 4Hz 1% H2O/D2O	No specific data.
	1H S/N	No specific data.
	1H Lineshape	Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
	ID 1	No specific data.
	ID 2	No specific data.
	68.5mM sucrose	No specific data.
<b>Ingestion</b>	: 4Hz 1% H2O/D2O	No specific data.
	1H S/N	No specific data.
	1H Lineshape	No specific data.
	ID 1	No specific data.
	ID 2	No specific data.
	68.5mM sucrose	No specific data.
<b>Skin contact</b>	: 4Hz 1% H2O/D2O	No specific data.
	1H S/N	Adverse symptoms may include the following: irritation redness
	1H Lineshape	Adverse symptoms may include the following: irritation dryness cracking
	ID 1	Adverse symptoms may include the following: irritation

**SECTION 11: Toxicological information**

	ID 2	redness
	68.5mM sucrose	No specific data.
<b>Eye contact</b>	: 4Hz 1% H2O/D2O	No specific data.
	1H S/N	Adverse symptoms may include the following: pain or irritation watering redness
	1H Lineshape	Adverse symptoms may include the following: pain or irritation watering redness
	ID 1	Adverse symptoms may include the following: pain or irritation watering redness
	ID 2	Adverse symptoms may include the following: irritation watering redness
	68.5mM sucrose	No specific data.
<b><u>Delayed and immediate effects and also chronic effects from short and long term exposure</u></b>		
<b><u>Short term exposure</u></b>		
	<b>Potential immediate effects</b>	: Not available.
	<b>Potential delayed effects</b>	: Not available.
<b><u>Long term exposure</u></b>		
	<b>Potential immediate effects</b>	: Not available.
	<b>Potential delayed effects</b>	: Not available.
<b><u>Potential chronic health effects</u></b>		
<b>General</b>	: 4Hz 1% H2O/D2O	No known significant effects or critical hazards.
	1H S/N	May cause damage to organs through prolonged or repeated exposure.
	1H Lineshape	Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
	ID 1	May cause damage to organs through prolonged or repeated exposure.
	ID 2	May cause damage to organs through prolonged or repeated exposure.
	68.5mM sucrose	No known significant effects or critical hazards.
<b>Carcinogenicity</b>	: 4Hz 1% H2O/D2O	No known significant effects or critical hazards.
	1H S/N	Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
	1H Lineshape	Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
	ID 1	Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
	ID 2	No known significant effects or critical hazards.
	68.5mM sucrose	No known significant effects or critical hazards.
<b>Mutagenicity</b>	: 4Hz 1% H2O/D2O	No known significant effects or critical hazards.
	1H S/N	No known significant effects or critical hazards.
	1H Lineshape	No known significant effects or critical hazards.
	ID 1	No known significant effects or critical hazards.
	ID 2	No known significant effects or critical hazards.
	68.5mM sucrose	No known significant effects or critical hazards.

## SECTION 11: Toxicological information

<b>Teratogenicity</b>	: 4Hz 1% H2O/D2O 1H S/N 1H Lineshape ID 1 ID 2 68.5mM sucrose	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. No known significant effects or critical hazards.
<b>Developmental effects</b>	: 4Hz 1% H2O/D2O 1H S/N 1H Lineshape ID 1 ID 2 68.5mM sucrose	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. No known significant effects or critical hazards.
<b>Fertility effects</b>	: 4Hz 1% H2O/D2O 1H S/N 1H Lineshape ID 1 ID 2 68.5mM sucrose	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. No known significant effects or critical hazards.
<b>Toxicokinetics</b>		
<b>Absorption</b>	: 4Hz 1% H2O/D2O 1H S/N 1H Lineshape ID 1 ID 2 68.5mM sucrose	Not available. Not available. Not available. Not available. Not available. Not available.
<b>Distribution</b>	: 4Hz 1% H2O/D2O 1H S/N 1H Lineshape ID 1 ID 2 68.5mM sucrose	Not available. Not available. Not available. Not available. Not available. Not available.
<b>Metabolism</b>	: 4Hz 1% H2O/D2O 1H S/N 1H Lineshape ID 1 ID 2 68.5mM sucrose	Not available. Not available. Not available. Not available. Not available. Not available.
<b>Elimination</b>	: 4Hz 1% H2O/D2O 1H S/N 1H Lineshape ID 1 ID 2 68.5mM sucrose	Not available. Not available. Not available. Not available. Not available. Not available.
<b>Other information</b>	: Not available.	

## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
<b>1H S/N</b> ( <sup>2</sup> H)Chloroform	Acute EC50 13.3 mg/l Fresh water	Algae - Chlamydomonas reinhardtii - Exponential growth phase	72 hours
	Acute LC50 81.5 mg/l Marine water	Crustaceans - Penaeus duorarum	48 hours
	Acute LC50 29000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 13300 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours
	Chronic EC10 3.61 mg/l Fresh water	Algae - Chlamydomonas reinhardtii - Exponential growth phase	72 hours
<b>1H Lineshape</b>	Chronic NOEC 6300 µg/l Fresh water	Daphnia - Daphnia magna	21 days

## SECTION 12: Ecological information

<sup>(2)H<sub>6</sub></sup> Acetone	Acute EC50 20.565 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute LC50 6000000 µg/l Fresh water	Crustaceans - Gammarus pulex	48 hours
Trichloromethane	Acute LC50 10000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 100000 µg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Chronic NOEC 4.95 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.1 ml/L Fresh water	Daphnia - Daphnia magna - Neonate	21 days
	Acute EC50 13.3 mg/l Fresh water	Algae - Chlamydomonas reinhardtii - Exponential growth phase	72 hours
	Acute EC50 2.803 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours
	Acute LC50 63800 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 13.3 ppm Fresh water	Fish - Lepomis macrochirus	96 hours
	Chronic EC10 3.61 mg/l Fresh water	Algae - Chlamydomonas reinhardtii - Exponential growth phase	72 hours
	Chronic NOEC 6300 µg/l Fresh water	Daphnia - Daphnia magna	21 days
<b>ID 1</b> <sup>(2)H</sup> Chloroform	Acute EC50 13.3 mg/l Fresh water	Algae - Chlamydomonas reinhardtii - Exponential growth phase	72 hours
	Acute LC50 81.5 mg/l Marine water	Crustaceans - Penaeus duorarum	48 hours
	Acute LC50 29000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 13300 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours
	Chronic EC10 3.61 mg/l Fresh water	Algae - Chlamydomonas reinhardtii - Exponential growth phase	72 hours
<b>ID 2</b> di[( <sup>2)H<sub>3</sub>)Methyl] sulphoxide</sup>	Chronic NOEC 6300 µg/l Fresh water	Daphnia - Daphnia magna	21 days
	Acute LC50 25000 ppm Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
Benzamide ( <sup>15</sup> N)	Acute LC50 34000000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute LC50 661000 µg/l Fresh water	Fish - Pimephales promelas	96 hours

### 12.2 Persistence and degradability

**Conclusion/Summary** : Not available.

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
<b>1H S/N</b> <sup>(2)H</sup> Chloroform	1.97	690	high
<b>1H Lineshape</b> <sup>(2)H<sub>6</sub></sup> Acetone	-0.23	-	low
Trichloromethane	1.97	690	high
<b>ID 1</b> <sup>(2)H</sup> Chloroform	1.97	690	high
Iodomethane ( <sup>13</sup> C)	1.57	-	low
Trimethyl phosphite	-0.73	-	low
<b>ID 2</b> di[( <sup>2)H<sub>3</sub>)Methyl] sulphoxide</sup>	-1.35	3.16	low

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**SECTION 12: Ecological information****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. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. 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.

**Additional information** : **Remarks**  
De minimis quantities**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 authorisationSubstances of very high concern

None of the components are listed.

## SECTION 15: Regulatory information

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : For use in industrial installations only.

### Other EU regulations

**Europe inventory** : Not determined.

**Black List Chemicals** : Not listed

**Priority List Chemicals** : Listed

**Integrated pollution prevention and control list (IPPC) - Air** : Listed

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

Product/ingredient name	Carcinogenic effects	Mutagenic effects	Developmental effects	Fertility effects
<b>1H S/N</b> ( <sup>2</sup> H)Chloroform	Carc. 2, H351	-	-	-
<b>1H Lineshape</b> Trichloromethane	Carc. 2, H351	-	-	-
<b>ID 1</b> ( <sup>2</sup> H)Chloroform Iodomethane ( <sup>13</sup> C)	Carc. 2, H351	-	-	-
	Carc. 2, H351	-	-	-

**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
<b>1H S/N</b> Acute Tox. 4, H302 Skin Irrit. 2, H315 Carc. 2, H351 STOT RE 2, H373 Aquatic Chronic 3, H412	Calculation method Calculation method Calculation method Calculation method Calculation method
<b>1H Lineshape</b> Flam. Liq. 2, H225 Eye Irrit. 2, H319 Carc. 2, H351 STOT SE 3, H336 (Narcotic effects) Aquatic Chronic 3, H412	On basis of test data Calculation method Calculation method Calculation method Calculation method
<b>ID 1</b>	

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**SECTION 16: Other information**

Acute Tox. 4, H302 Skin Irrit. 2, H315 Carc. 2, H351 STOT RE 2, H373 Aquatic Chronic 3, H412	Calculation method Calculation method Calculation method Calculation method Calculation method
<b>ID 2</b> Eye Irrit. 2, H319 STOT RE 2, H373	Calculation method Calculation method

<b>Full text of abbreviated H statements</b>	<b>: 1H S/N</b>	
	H302	Harmful if swallowed.
	H315	Causes skin irritation.
	H351	Suspected of causing cancer.
	H373	May cause damage to organs through prolonged or repeated exposure.
	H412	Harmful to aquatic life with long lasting effects.
	<b>1H Lineshape</b>	
	H225	Highly flammable liquid and vapour.
	H302	Harmful if swallowed.
	H315	Causes skin irritation.
	H319	Causes serious eye irritation.
	H336 (Narcotic effects)	May cause drowsiness or dizziness. (Narcotic effects)
	H351	Suspected of causing cancer.
	H373	May cause damage to organs through prolonged or repeated exposure.
	H412	Harmful to aquatic life with long lasting effects.
	<b>ID 1</b>	
	H226	Flammable liquid and vapour.
	H301	Toxic if swallowed.
	H302	Harmful if swallowed.
	H302 (oral)	Harmful if swallowed.
	H311 (dermal)	Toxic in contact with skin.
	H312	Harmful in contact with skin.
	H315	Causes skin irritation.
	H319	Causes serious eye irritation.
	H331	Toxic if inhaled.
	H335 (Respiratory tract irritation)	May cause respiratory irritation. (Respiratory tract irritation)
	H351	Suspected of causing cancer.
	H373	May cause damage to organs through prolonged or repeated exposure.
	H412	Harmful to aquatic life with long lasting effects.
	<b>ID 2</b>	
	H302	Harmful if swallowed.
	H319	Causes serious eye irritation.
	H373	May cause damage to organs through prolonged or repeated exposure.
	H373 (kidneys and liver) (oral)	May cause damage to organs through prolonged or repeated exposure if swallowed. (kidneys and liver)

<b>Full text of classifications [CLP/GHS]</b>	<b>: 1H S/N</b>	
	Acute Tox. 4, H302	ACUTE TOXICITY (oral) - Category 4
	Aquatic Chronic 3, H412	LONG-TERM AQUATIC HAZARD - Category 3
	Carc. 2, H351	CARCINOGENICITY - Category 2
	Skin Irrit. 2, H315	SKIN CORROSION/IRRITATION - Category 2
	STOT RE 2, H373	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
	<b>1H Lineshape</b>	
	Acute Tox. 4, H302	ACUTE TOXICITY (oral) - Category 4
	Aquatic Chronic 3, H412	LONG-TERM AQUATIC HAZARD - Category 3
	Carc. 2, H351	CARCINOGENICITY - Category 2
	Eye Irrit. 2, H319	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2

**SECTION 16: Other information**

<p>Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT RE 2, H373</p> <p>STOT SE 3, H336 (Narcotic effects)</p> <p><b>ID 1</b> Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 3, H331 Acute Tox. 4, H302 Acute Tox. 4, H312 Aquatic Chronic 3, H412 Carc. 2, H351 Eye Irrit. 2, H319 Flam. Liq. 3, H226 Skin Irrit. 2, H315 STOT RE 2, H373</p> <p>STOT SE 3, H335 (Respiratory tract irritation)</p> <p><b>ID 2</b> Acute Tox. 4, H302 Eye Irrit. 2, H319 STOT RE 2, H373</p> <p>STOT RE 2, H373 (kidneys and liver) (oral)</p> <p>1H Lineshape</p> <p>ID 1</p> <p>ID 2 68.5mM sucrose</p>	<p>FLAMMABLE LIQUIDS - Category 2 SKIN CORROSION/IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3</p> <p>ACUTE TOXICITY (oral) - Category 3 ACUTE TOXICITY (dermal) - Category 3 ACUTE TOXICITY (inhalation) - Category 3 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 LONG-TERM AQUATIC HAZARD - Category 3 CARCINOGENICITY - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2 FLAMMABLE LIQUIDS - Category 3 SKIN CORROSION/IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3</p> <p>ACUTE TOXICITY (oral) - Category 4 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (kidneys and liver) (oral) - Category 2</p> <p>Not applicable. R40- Limited evidence of a carcinogenic effect. R22- Harmful if swallowed. R48/20/22- Harmful: danger of serious damage to health in case of prolonged exposure through inhalation and if swallowed. R38- Irritating to skin. R11- Highly flammable. R40- Limited evidence of a carcinogenic effect. R22- Harmful if swallowed. R48/20/22- Harmful: danger of serious damage to health in case of prolonged exposure through inhalation and if swallowed. R36- Irritating to eyes. R38- Irritating to skin. R66- Repeated exposure may cause skin dryness or cracking. R67- Vapours may cause drowsiness and dizziness. R10- Flammable. R40- Limited evidence of a carcinogenic effect. R23/25- Toxic by inhalation and if swallowed. R21- Harmful in contact with skin. R22- Harmful if swallowed. R21/22- Harmful in contact with skin and if swallowed. R48/20/22- Harmful: danger of serious damage to health in case of prolonged exposure through inhalation and if swallowed. R38- Irritating to skin. R37/38- Irritating to respiratory system and skin. R36/37/38- Irritating to eyes, respiratory system and skin. R22- Harmful if swallowed. Not applicable.</p>
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Full text of abbreviated R phrases

: 4H 1% H2O/D2O  
1H S/N



ID Sample Kit, Part Number 191120500

**SECTION 16: Other information**

<b>Full text of classifications [DSD/DPD]</b>	: 4Hz 1% H2O/D2O 1H S/N	Not applicable. Carc. Cat. 3 - Carcinogen category 3 Xn - Harmful Xi - Irritant
	1H Lineshape	F - Highly flammable Carc. Cat. 3 - Carcinogen category 3 Xn - Harmful Xi - Irritant
	ID 1	Carc. Cat. 3 - Carcinogen category 3 T - Toxic Xn - Harmful Xi - Irritant
	ID 2 68.5mM sucrose	Xn - Harmful Not applicable.
<b>Date of issue/ Date of revision</b>	: 27/01/2014	
<b>Date of previous issue</b>	: 19/01/2012.	
<b>Version</b>	: 2	

Notice to reader

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