SAFETY DATA SHEET

Agilent Technologies

4mm Probe Sample Kit - IFC, Part Number 190350505

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 : 4mm Probe Sample Kit - IFC, Part Number 190350505

Part No. (Kit) : 190350505

Part No. :

4Hz 1% H2O/D2O	190835301
Sodium Acetate	190835304
1H S/N	190835370
ID 1	190835396
ID 2	190835397

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

Identified uses	
Analytical chemistry.	
4Hz 1% H2O/D2O	450 µl
Sodium Acetate	450 µl
1H S/N	450 µl
ID 1	450 µl
ID 2	450 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

Product definition :

4Hz 1% H2O/D2O	Mixture (encapsulated in article)
Sodium Acetate	(encapsulated in article)Mixture
1H S/N	Mixture (encapsulated in article)
ID 1	Mixture (encapsulated in article)
ID 2	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
H319	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
H351	CARCINOGENICITY - Category 2
H335 and H336	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Respiratory tract irritation and Narcotic effects] - Category 3
H373	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) [kidneys and liver] - Category 2

ID 1

H301	ACUTE TOXICITY: ORAL - Category 3
H315	SKIN CORROSION/IRRITATION - Category 2
H319	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
H351	CARCINOGENICITY - Category 2
H335 and H336	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Respiratory tract irritation and Narcotic effects] - Category 3
H373	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) [kidneys and liver] - Category 2

ID 2

H373o	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE): ORAL [kidneys and liver] - Category 2

Ingredients of unknown ecotoxicity :

4Hz 1% H2O/D2O	Not applicable.
Sodium Acetate	Not applicable.
1H S/N	Not applicable.
ID 1	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 2%
ID 2	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.
Sodium Acetate	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.
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.

Classification :

4Hz 1% H2O/D2O	Not classified.
Sodium Acetate	Not classified.
1H S/N	Carc. Cat. 3; R40 Xn; R22, R48/20/22 Xi; R38
ID 1	Carc. Cat. 3; R40 Xn; R22, R48/20/22 Xi; R38
ID 2	Not classified.

Human health hazards :

4Hz 1% H2O/D2O	Not applicable.
Sodium Acetate	Not applicable.
1H S/N	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.
ID 1	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.
ID 2	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.

SECTION 2: Hazards identification

2.2 Label elements

Hazard pictograms :

Signal word	: 4Hz 1% H2O/D2O	No signal word.
	Sodium Acetate	No signal word.
	1H S/N	Warning
	ID 1	Danger
	ID 2	Warning
Hazard statements	: 4Hz 1% H2O/D2O	No known significant effects or critical hazards.
	Sodium Acetate	No known significant effects or critical hazards.
	1H S/N	**GHS07** - Harmful if swallowed. Causes skin irritation. May cause respiratory irritation. Causes serious eye irritation. May cause drowsiness or dizziness. **GHS08** - Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure. (kidneys, liver)
	ID 1	**GHS06** - Toxic if swallowed. **GHS07** - Causes skin irritation. May cause respiratory irritation. Causes serious eye irritation. May cause drowsiness or dizziness. **GHS08** - Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure. (kidneys, liver)
	ID 2	**GHS08** - May cause damage to organs through prolonged or repeated exposure if swallowed. (kidneys, liver)

Precautionary statements

Prevention	: 4Hz 1% H2O/D2O	Not applicable.
	Sodium Acetate	Not applicable.
	1H S/N	P201 - Obtain special instructions before use. P280 - Wear protective gloves. P273 - Avoid release to the environment. P260 - Do not breathe vapour.
	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.
Response	: 4Hz 1% H2O/D2O	Not applicable.
	Sodium Acetate	Not applicable.
	1H S/N	P314 - Get medical attention if you feel unwell. P301 + P312 - IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell.
	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.

SECTION 2: Hazards identification

Storage	:	4Hz 1% H2O/D2O	Not applicable.
		Sodium Acetate	Not applicable.
		1H S/N	P405 - Store locked up.
		ID 1	P405 - Store locked up.
		ID 2	Not applicable.
Disposal	:	4Hz 1% H2O/D2O	Not applicable.
		Sodium Acetate	Not applicable.
		1H S/N	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.
Hazardous ingredients	:	**1H S/N** (^{2}H)Chloroform	
		ID 1 (^{2}H)Chloroform Iodomethane (^{13} C)	
		ID 2 di[($^{2}H_3$)Methyl] sulphoxide	
Supplemental label elements	:	4Hz 1% H2O/D2O	Not applicable.
		Sodium Acetate	Not applicable.
		1H S/N	Not applicable.
		ID 1	Not applicable.
		ID 2	Not applicable.
Special packaging requirements			
Tactile warning of danger	:	4Hz 1% H2O/D2O	Not applicable.
		Sodium Acetate	Not applicable.
		1H S/N	Not applicable.
		ID 1	Not applicable.
		ID 2	Not applicable.

2.3 Other hazards

Other hazards which do not result in classification	:	4Hz 1% H2O/D2O	Not available.
		Sodium Acetate	Not available.
		1H S/N	Not available.
		ID 1	Not available.
		ID 2	Not available.

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	:	4Hz 1% H2O/D2O	Mixture (encapsulated in article)
		Sodium Acetate	(encapsulated in article)Mixture
		1H S/N	Mixture (encapsulated in article)
		ID 1	Mixture (encapsulated in article)
		ID 2	Mixture (encapsulated in article)

Product/ingredient name	Identifiers	%	Classification		Type
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	

SECTION 3: Composition/information on ingredients

1H S/N					
(^{2}H)Chloroform	EC: 212-742-4 CAS: 865-49-6 Index: 602-006-00-4	>=90	Carc. Cat. 3; R40 Xn; R22, R48/20/22 Xi; R38	Acute Tox. 3, H301 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Carc. 2, H351 STOT SE 3, H335 and H336 STOT RE 2, H373	[1] [2]
ID 1					
(^{2}H)Chloroform	EC: 212-742-4 CAS: 865-49-6 Index: 602-006-00-4	>=90	Carc. Cat. 3; R40 Xn; R22, R48/20/22 Xi; R38	Acute Tox. 3, H301 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Carc. 2, H351 STOT SE 3, H335 and H336 STOT RE 2, H373	[1] [2]
Iodomethane (^{13} C)	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. 2, H330 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Carc. 2, H351 STOT SE 3, H335	[1] [2]
Trimethyl phosphite	EC: 204-471-5 CAS: 121-45-9	1-3	R10 Xn; R21/22 Xi; R36/37/38	Flam. Liq. 3, H226 Acute Tox. 4, H302 Acute Tox. 3, H311 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335	[1] [2]
ID 2					
di[($^{2}H_{3}$)Methyl] sulphoxide	EC: 200-664-3 CAS: 2206-27-1	>=90	Not classified.	STOT RE 2, H373o	[1]
Benzamide (^{15}N)	CAS: 31656-62-9	1-3	Xn; R22	Acute Tox. 4, H302	[1]
			See Section 16 for the full text of the R-phrases declared above.	**See Section 16 for the full text of the H statements declared above.**	

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

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

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact :

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.

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.

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.

ID 1 — Immediately flush eyes with plenty of water, occasionally

SECTION 4: First aid measures

			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 2	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.
Inhalation	:	4Hz 1% H2O/D2O	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		Sodium Acetate	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		1H S/N	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.
		ID 1	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.
		ID 2	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.
Skin contact	:	4Hz 1% H2O/D2O	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		Sodium Acetate	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.
		ID 1	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at

SECTION 4: First aid measures

			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.
Ingestion	:	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.
		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.
		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.
		ID 1	Get medical attention immediately. Call a poison center or physician. 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. 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.

SECTION 4: First aid measures

Protection of first-aiders :	4Hz 1% H2O/D2O	No action shall be taken involving any personal risk or without suitable training.
	Sodium Acetate	No action shall be taken involving any personal risk or without suitable training.
	1H S/N	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. 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 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.

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

Over-exposure signs/symptoms

Eye contact :	4Hz 1% H2O/D2O	No specific data.
	Sodium Acetate	No specific data.
	1H S/N	Adverse symptoms may include the following: pain or irritation watering redness
	ID 1	Adverse symptoms may include the following: pain or irritation watering redness

SECTION 4: First aid measures

		ID 2	No specific data.
Inhalation	:	4Hz 1% H2O/D2O	No specific data.
		Sodium Acetate	No specific data.
		1H S/N	Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
		ID 1	Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
		ID 2	No specific data.
Skin contact	:	4Hz 1% H2O/D2O	No specific data.
		Sodium Acetate	No specific data.
		1H S/N	Adverse symptoms may include the following: irritation redness
		ID 1	Adverse symptoms may include the following: irritation redness
		ID 2	No specific data.
Ingestion	:	4Hz 1% H2O/D2O	No specific data.
		Sodium Acetate	No specific data.
		1H S/N	No specific data.
		ID 1	No specific data.
		ID 2	No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

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

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	:	4Hz 1% H2O/D2O	Use an extinguishing agent suitable for the surrounding fire.
		Sodium Acetate	Use an extinguishing agent suitable for the surrounding fire.
		1H S/N	Use an extinguishing agent suitable for the surrounding fire.
		ID 1	Use an extinguishing agent suitable for the surrounding fire.
		ID 2	Use an extinguishing agent suitable for the surrounding fire.

SECTION 5: Firefighting measures

Unsuitable extinguishing media	:	4Hz 1% H2O/D2O	None known.
		Sodium Acetate	None known.
		1H S/N	None known.
		ID 1	None known.
		ID 2	None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	:	4Hz 1% H2O/D2O	In a fire or if heated, a pressure increase will occur and the container may burst.
		Sodium Acetate	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.
		ID 1	In a fire or if heated, a pressure increase will occur and the container may burst.
		ID 2	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous combustion products	:	4Hz 1% H2O/D2O	No specific data.
		Sodium Acetate	No specific data.
		1H S/N	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

5.3 Advice for firefighters

Special precautions for fire-fighters	:	4Hz 1% H2O/D2O	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.
		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.
		1H S/N	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.
Special protective equipment for fire-fighters	:	4Hz 1% H2O/D2O	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.
		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 5: Firefighting measures

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.
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.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel :	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.
	Sodium Acetate	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.
	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. Do not breathe 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.
For emergency responders :	4Hz 1% H2O/D2O	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".
	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".
	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".

SECTION 6: Accidental release measures

	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".
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).
	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).
	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).
	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).
	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).

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up :	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.
	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.
	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. Avoid creating dusty conditions and prevent wind dispersal. 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. Avoid creating dusty conditions and prevent wind dispersal. 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. Use spark-proof tools and explosion-proof equipment. 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	:	4Hz 1% H2O/D2O	Put on appropriate personal protective equipment (see Section 8).
		Sodium Acetate	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. 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. 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. 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. 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.
Advice on general occupational hygiene	:	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.
		Sodium Acetate	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.
		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.

SECTION 7: Handling and storage

7.2 Conditions for safe storage, including any incompatibilities	: 4Hz 1% H2O/D2O	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.
	Sodium Acetate	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.
	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.

7.3 Specific end use(s)

Recommendations	: 4Hz 1% H2O/D2O	Industrial applications, Professional applications.
	Sodium Acetate	Industrial applications, Professional applications.
	1H S/N	Industrial applications, Professional applications.
	ID 1	Industrial applications, Professional applications.
	ID 2	Industrial applications, Professional applications.
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
1H S/N (^{2}H)Chloroform	**EU OEL (Europe, 12/2009). Absorbed through skin. Notes: list of indicative occupational exposure limit values** TWA: 2 PPM 8 hour(s). TWA: 10 MG/M3 8 hour(s).
ID 1 (^{2}H)Chloroform	**EU OEL (Europe, 12/2009). Absorbed through skin. Notes: list of indicative occupational exposure limit values** TWA: 2 PPM 8 hour(s). TWA: 10 MG/M3 8 hour(s).
Iodomethane (^{13} C)	**ACGIH TLV (United States, 2/2010). Absorbed through skin.** TWA: 2 ppm 8 hour(s).
Trimethyl phosphite	**ACGIH TLV (United States, 2/2010).** TWA: 2 ppm 8 hour(s). TWA: 10 mg/m³ 8 hour(s).

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 European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

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.

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.

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.

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.

SECTION 8: Exposure controls/personal protection

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	: 4Hz 1% H2O/D2O	Liquid.
	Sodium Acetate	Liquid.
	1H S/N	Liquid.
	ID 1	Liquid.
	ID 2	Liquid. [Clear.]
Colour	: 4Hz 1% H2O/D2O	Not available.
	Sodium Acetate	Colourless.
	1H S/N	Not available.
	ID 1	Not available.
	ID 2	Colourless.
Odour	: 4Hz 1% H2O/D2O	Not available.
	Sodium Acetate	Not available.
	1H S/N	Not available.
	ID 1	Not available.
	ID 2	Ripe olive.
Odour threshold	: 4Hz 1% H2O/D2O	Not available.
	Sodium Acetate	Not available.
	1H S/N	Not available.
	ID 1	Not available.
	ID 2	Not available.
pH	: 4Hz 1% H2O/D2O	Not available.
	Sodium Acetate	7
	1H S/N	Not available.
	ID 1	Not available.
	ID 2	Not available.
Melting point/freezing point	: 4Hz 1% H2O/D2O	Not available.
	Sodium Acetate	3.81°C
	1H S/N	-64°C
	ID 1	-64°C
	ID 2	18 to 18.54°C
Initial boiling point and boiling range	: 4Hz 1% H2O/D2O	101.4°C
	Sodium Acetate	101.42°C
	1H S/N	60.9°C
	ID 1	60.9°C
	ID 2	189°C
Flash point	: 4Hz 1% H2O/D2O	Not available.
	Sodium Acetate	Not available.
	1H S/N	Not available.
	ID 1	Not available.
	ID 2	Closed cup: 88°C
Evaporation rate	: 4Hz 1% H2O/D2O	Not available.
	Sodium Acetate	Not available.
	1H S/N	Not available.
	ID 1	Not available.
	ID 2	Not available.

SECTION 9: Physical and chemical properties

Flammability (solid, gas)	:	4Hz 1% H2O/D2O	Not available.
		Sodium Acetate	Not available.
		1H S/N	Not available.
		ID 1	Not available.
		ID 2	Flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.
Upper/lower flammability or explosive limits	:	4Hz 1% H2O/D2O	Not available.
		Sodium Acetate	Not available.
		1H S/N	Not available.
		ID 1	Not available.
		ID 2	Lower: 3%
Vapour pressure	:	4Hz 1% H2O/D2O	Not available.
		Sodium Acetate	Not available.
		1H S/N	Not available.
		ID 1	Not available.
		ID 2	0.061 kPa [20°C]
Vapour density	:	4Hz 1% H2O/D2O	Not available.
		Sodium Acetate	Not available.
		1H S/N	Not available.
		ID 1	Not available.
		ID 2	1.04 [Air = 1]
Relative density	:	4Hz 1% H2O/D2O	1.107
		Sodium Acetate	1.1
		1H S/N	1.5
		ID 1	1500
		ID 2	1.18
Solubility(ies)	:	4Hz 1% H2O/D2O	Easily soluble in the following materials: cold water and hot water.
		Sodium Acetate	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.
		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.
Partition coefficient: n-octanol/water	:	4Hz 1% H2O/D2O	Not available.
		Sodium Acetate	Not available.
		1H S/N	Not available.
		ID 1	Not available.
		ID 2	Not available.
Auto-ignition temperature	:	4Hz 1% H2O/D2O	Not available.
		Sodium Acetate	Not available.
		1H S/N	Not available.
		ID 1	Not available.
		ID 2	215°C
Decomposition temperature	:	4Hz 1% H2O/D2O	Not available.
		Sodium Acetate	Not available.
		1H S/N	Not available.
		ID 1	Not available.
		ID 2	Not available.
Viscosity	:	4Hz 1% H2O/D2O	Not available.
		Sodium Acetate	Not available.
		1H S/N	Not available.
		ID 1	Not available.
		ID 2	Not available.
Explosive properties	:	4Hz 1% H2O/D2O	Not available.
		Sodium Acetate	Not available.
		1H S/N	Not available.
		ID 1	Not available.
		ID 2	Not available.

SECTION 9: Physical and chemical properties

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity	:	4Hz 1% H2O/D2O	No specific test data related to reactivity available for this product or its ingredients.
		Sodium Acetate	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.
		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.
10.2 Chemical stability	:	4Hz 1% H2O/D2O	The product is stable.
		Sodium Acetate	The product is stable.
		1H S/N	The product is stable.
		ID 1	The product is stable.
		ID 2	The product is stable.
10.3 Possibility of hazardous reactions	:	4Hz 1% H2O/D2O	Under normal conditions of storage and use, hazardous reactions will not occur.
		Sodium Acetate	Under normal conditions of storage and use, hazardous reactions will not occur.
		1H S/N	Under normal conditions of storage and use, hazardous reactions will not occur.
		ID 1	Under normal conditions of storage and use, hazardous reactions will not occur.
		ID 2	Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	:	4Hz 1% H2O/D2O	No specific data.
		Sodium Acetate	No specific data.
		1H S/N	No specific data.
		ID 1	No specific data.
		ID 2	No specific data.
10.5 Incompatible materials	:	4Hz 1% H2O/D2O	No specific data.
		Sodium Acetate	No specific data.
		1H S/N	No specific data.
		ID 1	No specific data.
		ID 2	Reactive or incompatible with the following materials: oxidizing materials
10.6 Hazardous decomposition products	:	4Hz 1% H2O/D2O	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Sodium Acetate	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		1H S/N	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		ID 1	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		ID 2	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
1H S/N				
(^{2}H)Chloroform	LC50 Inhalation Vapour	Rat	47702 mg/m3	4 hours
	LD50 Dermal	Rabbit	>20 g/kg	-
	LD50 Oral	Rat	300 mg/kg	-
ID 1				
(^{2}H)Chloroform	LC50 Inhalation Vapour	Rat	47702 mg/m3	4 hours
	LD50 Dermal	Rabbit	>20 g/kg	-
	LD50 Oral	Rat	300 mg/kg	-
Iodomethane (^{13} C)	LC50 Inhalation Vapour	Rat	1300 mg/m3	4 hours
	LD50 Oral	Rat	76 mg/kg	-
Trimethyl phosphite	LC50 Inhalation Vapour	Rat	182000 mg/m3	1 hours
	LD50 Dermal	Rabbit	933.8 mg/kg	-
	LD50 Oral	Rat	1350 mg/kg	-
ID 2				
di[(^{2}H$_3$)Methyl] sulphoxide	LD50 Dermal	Rat	40000 mg/kg	-
	LD50 Oral	Rat	14500 mg/kg	-

Acute toxicity estimates

Route	ATE value
1H S/N	
Oral	300.3 mg/kg
ID 1	
Oral	294.2 mg/kg
Dermal	50505.5 mg/kg
Inhalation (vapours)	130 mg/l
ID 2	
Oral	25000 mg/kg

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
1H S/N					
(^{2}H)Chloroform	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
ID 1					
(^{2}H)Chloroform	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
Iodomethane (^{13} C)	Eyes - Severe irritant	Rabbit	-	-	-
	Skin - Mild irritant	Rat	-	-	-
	Skin - Severe irritant	Rabbit	-	-	-
Trimethyl phosphite	Eyes - Mild irritant	Rabbit	-	0.1 Mililiters	-
	Skin - Severe irritant	Rabbit	-	500 milligrams	-
ID 2					
di[(^{2}H$_3$)Methyl] sulphoxide	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Mild irritant	Rabbit	-	100 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

SECTION 11: Toxicological information

	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
1H S/N			
(^{2}H)Chloroform	Category 3	Not determined	Respiratory tract irritation and Narcotic effects
ID 1			
(^{2}H)Chloroform	Category 3	Not determined	Respiratory tract irritation and Narcotic effects
Iodomethane (^{13} C)	Category 3	Not determined	Respiratory tract irritation
Trimethyl phosphite	Category 3	Not determined	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
1H S/N			
(^{2}H)Chloroform	Category 2	Not determined	kidneys and liver
ID 1			
(^{2}H)Chloroform	Category 2	Not determined	kidneys and liver
ID 2			
di[($^{2}H_3$)Methyl] sulphoxide	Category 2	Oral	kidneys and liver

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Inhalation :

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

Ingestion :

4Hz 1% H2O/D2O	No known significant effects or critical hazards.
Sodium Acetate	No known significant effects or critical hazards.
1H S/N	Harmful if swallowed. Can cause central nervous system (CNS) depression. Irritating to mouth, throat and stomach.
ID 1	Toxic if swallowed. Can cause central nervous system (CNS) depression. Irritating to mouth, throat and stomach.
ID 2	No known significant effects or critical hazards.

SECTION 11: Toxicological information

Skin contact	: 4Hz 1% H2O/D2O	No known significant effects or critical hazards.
	Sodium Acetate	No known significant effects or critical hazards.
	1H S/N	Causes skin irritation.
	ID 1	Causes skin irritation.
	ID 2	No known significant effects or critical hazards.
Eye contact	: 4Hz 1% H2O/D2O	No known significant effects or critical hazards.
	Sodium Acetate	No known significant effects or critical hazards.
	1H S/N	Causes serious eye irritation.
	ID 1	Causes serious eye irritation.
	ID 2	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation	: 4Hz 1% H2O/D2O	No specific data.
	Sodium Acetate	No specific data.
	1H S/N	Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
	ID 1	Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
	ID 2	No specific data.
Ingestion	: 4Hz 1% H2O/D2O	No specific data.
	Sodium Acetate	No specific data.
	1H S/N	No specific data.
	ID 1	No specific data.
	ID 2	No specific data.
Skin contact	: 4Hz 1% H2O/D2O	No specific data.
	Sodium Acetate	No specific data.
	1H S/N	Adverse symptoms may include the following: irritation redness
	ID 1	Adverse symptoms may include the following: irritation redness
	ID 2	No specific data.
Eye contact	: 4Hz 1% H2O/D2O	No specific data.
	Sodium Acetate	No specific data.
	1H S/N	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	No specific data.

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

SECTION 11: Toxicological information

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General	: 4Hz 1% H2O/D2O	No known significant effects or critical hazards.
	Sodium Acetate	No known significant effects or critical hazards.
	1H S/N	May cause damage to organs through prolonged or repeated exposure.
	ID 1	May cause damage to organs through prolonged or repeated exposure.
	ID 2	May cause damage to organs through prolonged or repeated exposure if swallowed.
Carcinogenicity	: 4Hz 1% H2O/D2O	No known significant effects or critical hazards.
	Sodium Acetate	No known significant effects or critical hazards.
	1H S/N	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.
Mutagenicity	: 4Hz 1% H2O/D2O	No known significant effects or critical hazards.
	Sodium Acetate	No known significant effects or critical hazards.
	1H S/N	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.
Teratogenicity	: 4Hz 1% H2O/D2O	No known significant effects or critical hazards.
	Sodium Acetate	No known significant effects or critical hazards.
	1H S/N	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.
Developmental effects	: 4Hz 1% H2O/D2O	No known significant effects or critical hazards.
	Sodium Acetate	No known significant effects or critical hazards.
	1H S/N	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.
Fertility effects	: 4Hz 1% H2O/D2O	No known significant effects or critical hazards.
	Sodium Acetate	No known significant effects or critical hazards.
	1H S/N	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.

Toxicokinetics

Absorption	: 4Hz 1% H2O/D2O	Not available.
	Sodium Acetate	Not available.
	1H S/N	Not available.
	ID 1	Not available.
	ID 2	Not available.
Distribution	: 4Hz 1% H2O/D2O	Not available.
	Sodium Acetate	Not available.
	1H S/N	Not available.
	ID 1	Not available.
	ID 2	Not available.
Metabolism	: 4Hz 1% H2O/D2O	Not available.
	Sodium Acetate	Not available.
	1H S/N	Not available.
	ID 1	Not available.
	ID 2	Not available.
Elimination	: 4Hz 1% H2O/D2O	Not available.
	Sodium Acetate	Not available.
	1H S/N	Not available.
	ID 1	Not available.
	ID 2	Not available.

SECTION 11: Toxicological information

Other information : Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
1H S/N			
(^{2}H)Chloroform	Acute EC50 13.3 mg/L Fresh water	Algae - Chlamydomonas reinhardtii - Exponential growth phase - 7 days	72 hours
	Acute LC50 81.5 mg/L Marine water	Crustaceans - Penaeus duorarum - 35 to 50 mm	48 hours
	Acute LC50 29000 ug/L Fresh water	Daphnia - Daphnia magna - <=24 hours	48 hours
	Acute LC50 13300 ug/L Fresh water	Fish - Lepomis macrochirus - 17.1 cm - 126.4 g	96 hours
	Chronic NOEC 6300 ug/L Fresh water	Daphnia - Daphnia magna - <=24 hours	21 days
ID 1			
(^{2}H)Chloroform	Acute EC50 13.3 mg/L Fresh water	Algae - Chlamydomonas reinhardtii - Exponential growth phase - 7 days	72 hours
	Acute LC50 81.5 mg/L Marine water	Crustaceans - Penaeus duorarum - 35 to 50 mm	48 hours
	Acute LC50 29000 ug/L Fresh water	Daphnia - Daphnia magna - <=24 hours	48 hours
	Acute LC50 13300 ug/L Fresh water	Fish - Lepomis macrochirus - 17.1 cm - 126.4 g	96 hours
	Chronic NOEC 6300 ug/L Fresh water	Daphnia - Daphnia magna - <=24 hours	21 days
ID 2			
di[($^{2}H_3$)Methyl] sulphoxide	Acute LC50 25000 ppm Fresh water	Daphnia - Daphnia magna - Neonate - <24 hours	48 hours
	Acute LC50 34000000 ug/L Fresh water	Fish - Pimephales promelas - 31 days - 15.8 mm - 0.062 g	96 hours
	Chronic NOEC <0.1 g/L Fresh water	Fish - Danio rerio - Embryo - 4 to 6 hours	30 days
Benzamide (^{15}N)	Acute LC50 661000 ug/L Fresh water	Fish - Pimephales promelas - 35 days	96 hours

12.2 Persistence and degradability

Conclusion/Summary : Not available.

12.3 Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
1H S/N			
(^{2}H)Chloroform	1.97	-	low
ID 1			
(^{2}H)Chloroform	1.97	-	low
Iodomethane (^{13}C)	1.51 to 1.69	-	low
Trimethyl phosphite	-0.73	-	low
ID 2			
di[($^{2}H_3$)Methyl] sulphoxide	-1.35	-	low

12.4 Mobility in soil

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

SECTION 12: Ecological information

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. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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.

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.

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 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 : Not determined.

SECTION 15: Regulatory information

Black List Chemicals : Not listed

Priority List Chemicals : Not 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
1H S/N				
(^{2}H)Chloroform	Carc. 2, H351	-	-	-
ID 1				
(^{2}H)Chloroform	Carc. 2, H351	-	-	-
Iodomethane (^{13} C)	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
1H S/N	
Acute Tox. 4, H302	Calculation method
Skin Irrit. 2, H315	Calculation method
Eye Irrit. 2, H319	Calculation method
Carc. 2, H351	Calculation method
STOT SE 3, H335 and H336	Calculation method
STOT RE 2, H373	Calculation method
ID 1	
Acute Tox. 3, H301	Calculation method
Skin Irrit. 2, H315	Calculation method
Eye Irrit. 2, H319	Calculation method
Carc. 2, H351	Calculation method
STOT SE 3, H335 and H336	Calculation method
STOT RE 2, H373	Calculation method
ID 2	
STOT RE 2, H373o	Calculation method

Full text of abbreviated H statements : **1H S/N**

H301	Toxic if swallowed.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335 and H336	May cause respiratory irritation. May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.

SECTION 16: Other information

ID 1

H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H335	May cause respiratory irritation.
H335 and H336	May cause respiratory irritation. May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.

ID 2

H302	Harmful if swallowed.
H373o	May cause damage to organs through prolonged or repeated exposure if swallowed.

Full text of classifications [CLP/GHS] :

1H S/N

Acute Tox. 3, H301	ACUTE TOXICITY: ORAL - Category 3
Acute Tox. 4, H302	ACUTE TOXICITY: ORAL - Category 4
Carc. 2, H351	CARCINOGENICITY - Category 2
Eye Irrit. 2, H319	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
Skin Irrit. 2, H315	SKIN CORROSION/IRRITATION - Category 2
STOT RE 2, H373	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) [kidneys and liver] - Category 2
STOT SE 3, H335 and H336	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Respiratory tract irritation and Narcotic effects] - Category 3

ID 1

Acute Tox. 2, H330	ACUTE TOXICITY: INHALATION - Category 2
Acute Tox. 3, H301	ACUTE TOXICITY: ORAL - Category 3
Acute Tox. 3, H311	ACUTE TOXICITY: SKIN - Category 3
Acute Tox. 4, H302	ACUTE TOXICITY: ORAL - Category 4
Acute Tox. 4, H312	ACUTE TOXICITY: SKIN - Category 4
Carc. 2, H351	CARCINOGENICITY - Category 2
Eye Irrit. 2, H319	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
Flam. Liq. 3, H226	FLAMMABLE LIQUIDS - Category 3
Skin Irrit. 2, H315	SKIN CORROSION/IRRITATION - Category 2
STOT RE 2, H373	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) [kidneys and liver] - Category 2
STOT SE 3, H335	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Respiratory tract irritation] - Category 3
STOT SE 3, H335 and H336	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Respiratory tract irritation and Narcotic effects] - Category 3

ID 2

Acute Tox. 4, H302	ACUTE TOXICITY: ORAL - Category 4
STOT RE 2, H373o	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE): ORAL [kidneys and liver] - Category 2

Full text of abbreviated R phrases :

4Hz 1% H2O/D2O	Not applicable.
Sodium Acetate	Not applicable.
1H S/N	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.
ID 1	R10- Flammable. R40- Limited evidence of a carcinogenic effect.

SECTION 16: Other information

			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.
		ID 2	R22- Harmful if swallowed.
Full text of classifications [DSD/DPD]	:	4Hz 1% H2O/D2O	Not applicable.
		Sodium Acetate	Not applicable.
		1H S/N	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	Xn - Harmful
Date of issue/ Date of revision	:	30/12/2013	
Date of previous issue	:	15/11/2011.	
Version	:	2	

Notice to reader

Disclaimer: The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.