SAFETY DATA SHEET

Agilent Technologies

LC - MS Caffeine Standards Kit, Part Number 8500-6917

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

1.1 Product identifier

Product name : LC - MS Caffeine Standards Kit, Part Number 8500-6917

Part no. (chemical kit) : 8500-6917

Part no. :

Caffeine Standard #1 (0.5 µg/mL)	8500-6917-1
Caffeine Standard #2 (1 µg/mL)	8500-6917-2
Caffeine Standard #3 (5 µg/mL)	8500-6917-3
Caffeine Standard #4 (25 µg/mL)	8500-6917-4
Caffeine Standard #5 (50 µg/mL)	8500-6917-5

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

Material uses : Reagents and Standards for Analytical Chemistry Laboratory Use

Caffeine Standard #1 (0.5 µg/mL)	5 ml
Caffeine Standard #2 (1 µg/mL)	5 ml
Caffeine Standard #3 (5 µg/mL)	5 ml
Caffeine Standard #4 (25 µg/mL)	5 ml
Caffeine Standard #5 (50 µg/mL)	5 ml

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

2.1 Classification of the substance or mixture

Product definition :

Caffeine Standard #1 (0.5 µg/mL)	Mixture
Caffeine Standard #2 (1 µg/mL)	Mixture
Caffeine Standard #3 (5 µg/mL)	Mixture
Caffeine Standard #4 (25 µg/mL)	Mixture
Caffeine Standard #5 (50 µg/mL)	Mixture

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

Not classified.

SECTION 2: Hazards identification

See Section 16 for the full text of the H statements declared above.
See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Signal word	:	Caffeine Standard #1 (0.5 µg/mL)	No signal word.
		Caffeine Standard #2 (1 µg/mL)	No signal word.
		Caffeine Standard #3 (5 µg/mL)	No signal word.
		Caffeine Standard #4 (25 µg/mL)	No signal word.
		Caffeine Standard #5 (50 µg/mL)	No signal word.
Hazard statements	:	Caffeine Standard #1 (0.5 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #2 (1 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #3 (5 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #4 (25 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #5 (50 µg/mL)	No known significant effects or critical hazards.

Precautionary statements

Prevention	:	Caffeine Standard #1 (0.5 µg/mL)	Not applicable.
		Caffeine Standard #2 (1 µg/mL)	Not applicable.
		Caffeine Standard #3 (5 µg/mL)	Not applicable.
		Caffeine Standard #4 (25 µg/mL)	Not applicable.
		Caffeine Standard #5 (50 µg/mL)	Not applicable.
Response	:	Caffeine Standard #1 (0.5 µg/mL)	Not applicable.
		Caffeine Standard #2 (1 µg/mL)	Not applicable.
		Caffeine Standard #3 (5 µg/mL)	Not applicable.
		Caffeine Standard #4 (25 µg/mL)	Not applicable.
		Caffeine Standard #5 (50 µg/mL)	Not applicable.
Storage	:	Caffeine Standard #1 (0.5 µg/mL)	Not applicable.
		Caffeine Standard #2 (1 µg/mL)	Not applicable.
		Caffeine Standard #3 (5 µg/mL)	Not applicable.
		Caffeine Standard #4 (25 µg/mL)	Not applicable.
		Caffeine Standard #5 (50 µg/mL)	Not applicable.

SECTION 2: Hazards identification

Disposal	:	Caffeine Standard #1 (0.5 µg/mL)	Not applicable.
		Caffeine Standard #2 (1 µg/mL)	Not applicable.
		Caffeine Standard #3 (5 µg/mL)	Not applicable.
		Caffeine Standard #4 (25 µg/mL)	Not applicable.
		Caffeine Standard #5 (50 µg/mL)	Not applicable.
Supplemental label elements	:	Caffeine Standard #1 (0.5 µg/mL)	Not applicable.
		Caffeine Standard #2 (1 µg/mL)	Not applicable.
		Caffeine Standard #3 (5 µg/mL)	Not applicable.
		Caffeine Standard #4 (25 µg/mL)	Not applicable.
		Caffeine Standard #5 (50 µg/mL)	Not applicable.
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	:	Caffeine Standard #1 (0.5 µg/mL)	Not applicable.
		Caffeine Standard #2 (1 µg/mL)	Not applicable.
		Caffeine Standard #3 (5 µg/mL)	Not applicable.
		Caffeine Standard #4 (25 µg/mL)	Not applicable.
		Caffeine Standard #5 (50 µg/mL)	Not applicable.

Special packaging requirements

Tactile warning of danger	:	Caffeine Standard #1 (0.5 µg/mL)	Not applicable.
		Caffeine Standard #2 (1 µg/mL)	Not applicable.
		Caffeine Standard #3 (5 µg/mL)	Not applicable.
		Caffeine Standard #4 (25 µg/mL)	Not applicable.
		Caffeine Standard #5 (50 µg/mL)	Not applicable.

2.3 Other hazards

Other hazards which do not result in classification	:	Caffeine Standard #1 (0.5 µg/mL)	None known.
		Caffeine Standard #2 (1 µg/mL)	None known.
		Caffeine Standard #3 (5 µg/mL)	None known.
		Caffeine Standard #4 (25 µg/mL)	None known.
		Caffeine Standard #5 (50 µg/mL)	None known.

SECTION 3: Composition/information on ingredients

3.1 Substances : Caffeine Standard #1 (0.5 µg/mL) Mixture
Caffeine Standard #2 (1 µg/mL) Mixture
Caffeine Standard #3 (5 µg/mL) Mixture
Caffeine Standard #4 (25 µg/mL) Mixture
Caffeine Standard #5 (50 µg/mL) Mixture

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit 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
[6] Additional disclosure due to company policy

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

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact :

Caffeine Standard #1 (0.5 µg/mL)	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.
Caffeine Standard #2 (1 µg/mL)	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.
Caffeine Standard #3 (5 µg/mL)	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.
Caffeine Standard #4 (25 µg/mL)	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.
Caffeine Standard #5 (50 µg/mL)	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation :

Caffeine Standard #1 (0.5 µg/mL)	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Caffeine Standard #2 (1 µg/mL)	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Caffeine Standard #3 (5 µg/mL)	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Caffeine Standard #4 (25 µg/mL)	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Caffeine Standard #5 (50 µg/mL)	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact :

Caffeine Standard #1 (0.5 µg/mL)	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Caffeine Standard #2 (1 µg/mL)	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Caffeine Standard #3 (5 µg/mL)	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Caffeine Standard #4	Flush contaminated skin with plenty of water. Remove

SECTION 4: First aid measures

		(25 µg/mL)	contaminated clothing and shoes. Get medical attention if symptoms occur.
		Caffeine Standard #5 (50 µg/mL)	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	:	Caffeine Standard #1 (0.5 µg/mL)	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.
		Caffeine Standard #2 (1 µg/mL)	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.
		Caffeine Standard #3 (5 µg/mL)	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.
		Caffeine Standard #4 (25 µg/mL)	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.
		Caffeine Standard #5 (50 µg/mL)	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	:	Caffeine Standard #1 (0.5 µg/mL)	No action shall be taken involving any personal risk or without suitable training.
		Caffeine Standard #2 (1 µg/mL)	No action shall be taken involving any personal risk or without suitable training.
		Caffeine Standard #3 (5 µg/mL)	No action shall be taken involving any personal risk or without suitable training.
		Caffeine Standard #4 (25 µg/mL)	No action shall be taken involving any personal risk or without suitable training.
		Caffeine Standard #5 (50 µg/mL)	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	:	Caffeine Standard #1 (0.5 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #2 (1 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #3 (5 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #4 (25 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #5 (50 µg/mL)	No known significant effects or critical hazards.

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Inhalation	:	Caffeine Standard #1 (0.5 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #2 (1 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #3 (5 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #4 (25 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #5 (50 µg/mL)	No known significant effects or critical hazards.
Skin contact	:	Caffeine Standard #1 (0.5 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #2 (1 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #3 (5 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #4 (25 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #5 (50 µg/mL)	No known significant effects or critical hazards.
Ingestion	:	Caffeine Standard #1 (0.5 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #2 (1 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #3 (5 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #4 (25 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #5 (50 µg/mL)	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	:	Caffeine Standard #1 (0.5 µg/mL)	No specific data.
		Caffeine Standard #2 (1 µg/mL)	No specific data.
		Caffeine Standard #3 (5 µg/mL)	No specific data.
		Caffeine Standard #4 (25 µg/mL)	No specific data.
		Caffeine Standard #5 (50 µg/mL)	No specific data.
Inhalation	:	Caffeine Standard #1 (0.5 µg/mL)	No specific data.
		Caffeine Standard #2 (1 µg/mL)	No specific data.
		Caffeine Standard #3 (5 µg/mL)	No specific data.
		Caffeine Standard #4 (25 µg/mL)	No specific data.
		Caffeine Standard #5 (50 µg/mL)	No specific data.
Skin contact	:	Caffeine Standard #1 (0.5 µg/mL)	No specific data.
		Caffeine Standard #2 (1 µg/mL)	No specific data.
		Caffeine Standard #3 (5 µg/mL)	No specific data.
		Caffeine Standard #4 (25 µg/mL)	No specific data.
		Caffeine Standard #5	No specific data.

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		(50 µg/mL)	
Ingestion	:	Caffeine Standard #1 (0.5 µg/mL)	No specific data.
		Caffeine Standard #2 (1 µg/mL)	No specific data.
		Caffeine Standard #3 (5 µg/mL)	No specific data.
		Caffeine Standard #4 (25 µg/mL)	No specific data.
		Caffeine Standard #5 (50 µg/mL)	No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	:	Caffeine Standard #1 (0.5 µg/mL)	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Caffeine Standard #2 (1 µg/mL)	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Caffeine Standard #3 (5 µg/mL)	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Caffeine Standard #4 (25 µg/mL)	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Caffeine Standard #5 (50 µg/mL)	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	:	Caffeine Standard #1 (0.5 µg/mL)	No specific treatment.
		Caffeine Standard #2 (1 µg/mL)	No specific treatment.
		Caffeine Standard #3 (5 µg/mL)	No specific treatment.
		Caffeine Standard #4 (25 µg/mL)	No specific treatment.
		Caffeine Standard #5 (50 µg/mL)	No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	:	Caffeine Standard #1 (0.5 µg/mL)	Use an extinguishing agent suitable for the surrounding fire.
		Caffeine Standard #2 (1 µg/mL)	Use an extinguishing agent suitable for the surrounding fire.
		Caffeine Standard #3 (5 µg/mL)	Use an extinguishing agent suitable for the surrounding fire.
		Caffeine Standard #4 (25 µg/mL)	Use an extinguishing agent suitable for the surrounding fire.
		Caffeine Standard #5 (50 µg/mL)	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	:	Caffeine Standard #1 (0.5 µg/mL)	None known.
		Caffeine Standard #2 (1 µg/mL)	None known.
		Caffeine Standard #3 (5 µg/mL)	None known.
		Caffeine Standard #4 (25 µg/mL)	None known.
		Caffeine Standard #5 (50 µg/mL)	None known.

5.2 Special hazards arising from the substance or mixture

SECTION 5: Firefighting measures

Hazards from the substance or mixture	:	Caffeine Standard #1 (0.5 µg/mL)	In a fire or if heated, a pressure increase will occur and the container may burst.
		Caffeine Standard #2 (1 µg/mL)	In a fire or if heated, a pressure increase will occur and the container may burst.
		Caffeine Standard #3 (5 µg/mL)	In a fire or if heated, a pressure increase will occur and the container may burst.
		Caffeine Standard #4 (25 µg/mL)	In a fire or if heated, a pressure increase will occur and the container may burst.
		Caffeine Standard #5 (50 µg/mL)	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous combustion products	:	Caffeine Standard #1 (0.5 µg/mL)	No specific data.
		Caffeine Standard #2 (1 µg/mL)	No specific data.
		Caffeine Standard #3 (5 µg/mL)	No specific data.
		Caffeine Standard #4 (25 µg/mL)	No specific data.
		Caffeine Standard #5 (50 µg/mL)	No specific data.

5.3 Advice for firefighters

Special precautions for fire-fighters	:	Caffeine Standard #1 (0.5 µg/mL)	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.
		Caffeine Standard #2 (1 µg/mL)	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.
		Caffeine Standard #3 (5 µg/mL)	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.
		Caffeine Standard #4 (25 µg/mL)	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.
		Caffeine Standard #5 (50 µg/mL)	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	:	Caffeine Standard #1 (0.5 µg/mL)	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.
		Caffeine Standard #2 (1 µg/mL)	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.
		Caffeine Standard #3 (5 µg/mL)	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.
		Caffeine Standard #4 (25 µg/mL)	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

SECTION 5: Firefighting measures

	basic level of protection for chemical incidents.
Caffeine Standard #5 (50 µg/mL)	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	: Caffeine Standard #1 (0.5 µg/mL)	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.
	Caffeine Standard #2 (1 µg/mL)	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.
	Caffeine Standard #3 (5 µg/mL)	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.
	Caffeine Standard #4 (25 µg/mL)	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.
	Caffeine Standard #5 (50 µg/mL)	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
For emergency responders	: Caffeine Standard #1 (0.5 µg/mL)	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".
	Caffeine Standard #2 (1 µg/mL)	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".
	Caffeine Standard #3 (5 µg/mL)	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".
	Caffeine Standard #4 (25 µg/mL)	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".
	Caffeine Standard #5 (50 µg/mL)	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

6.2 Environmental precautions

Caffeine Standard #1 (0.5 µg/mL)	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).
Caffeine Standard #2 (1 µg/mL)	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).
Caffeine Standard #3 (5 µg/mL)	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).
Caffeine Standard #4 (25 µg/mL)	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).
Caffeine Standard #5 (50 µg/mL)	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 material for containment and cleaning up

Methods for cleaning up

Caffeine Standard #1 (0.5 µg/mL)	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.
Caffeine Standard #2 (1 µg/mL)	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.
Caffeine Standard #3 (5 µg/mL)	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.
Caffeine Standard #4 (25 µg/mL)	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.
Caffeine Standard #5 (50 µg/mL)	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

SECTION 7: Handling and storage

Protective measures	:	Caffeine Standard #1 (0.5 µg/mL)	Put on appropriate personal protective equipment (see Section 8).
		Caffeine Standard #2 (1 µg/mL)	Put on appropriate personal protective equipment (see Section 8).
		Caffeine Standard #3 (5 µg/mL)	Put on appropriate personal protective equipment (see Section 8).
		Caffeine Standard #4 (25 µg/mL)	Put on appropriate personal protective equipment (see Section 8).
		Caffeine Standard #5 (50 µg/mL)	Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	:	Caffeine Standard #1 (0.5 µg/mL)	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.
		Caffeine Standard #2 (1 µg/mL)	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.
		Caffeine Standard #3 (5 µg/mL)	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.
		Caffeine Standard #4 (25 µg/mL)	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.
		Caffeine Standard #5 (50 µg/mL)	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.

7.2 Conditions for safe storage, including any incompatibilities

Storage	:	Caffeine Standard #1 (0.5 µg/mL)	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. See Section 10 for incompatible materials before handling or use.
		Caffeine Standard #2 (1 µg/mL)	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. See Section 10 for incompatible materials

SECTION 7: Handling and storage

	before handling or use.
Caffeine Standard #3 (5 µg/mL)	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. See Section 10 for incompatible materials before handling or use.
Caffeine Standard #4 (25 µg/mL)	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. See Section 10 for incompatible materials before handling or use.
Caffeine Standard #5 (50 µg/mL)	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. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

Recommendations	: Caffeine Standard #1 (0.5 µg/mL)	Industrial applications, Professional applications.
	Caffeine Standard #2 (1 µg/mL)	Industrial applications, Professional applications.
	Caffeine Standard #3 (5 µg/mL)	Industrial applications, Professional applications.
	Caffeine Standard #4 (25 µg/mL)	Industrial applications, Professional applications.
	Caffeine Standard #5 (50 µg/mL)	Industrial applications, Professional applications.
Industrial sector specific solutions	: Caffeine Standard #1 (0.5 µg/mL)	Not applicable.
	Caffeine Standard #2 (1 µg/mL)	Not applicable.
	Caffeine Standard #3 (5 µg/mL)	Not applicable.
	Caffeine Standard #4 (25 µg/mL)	Not applicable.
	Caffeine Standard #5 (50 µg/mL)	Not applicable.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

No exposure limit value known.

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

DNELs/DMELs

No DNELs/DMELs available.

PNECs

No PNECs available

8.2 Exposure controls

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Individual protection measures

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

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

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

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

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

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

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	:	Caffeine Standard #1 (0.5 µg/mL)	Liquid.
		Caffeine Standard #2 (1 µg/mL)	Liquid.
		Caffeine Standard #3 (5 µg/mL)	Liquid.
		Caffeine Standard #4 (25 µg/mL)	Liquid.
		Caffeine Standard #5 (50 µg/mL)	Liquid.
Colour	:	Caffeine Standard #1 (0.5 µg/mL)	Not available.
		Caffeine Standard #2 (1 µg/mL)	Not available.
		Caffeine Standard #3 (5 µg/mL)	Not available.
		Caffeine Standard #4 (25 µg/mL)	Not available.
		Caffeine Standard #5 (50 µg/mL)	Not available.
Odour	:	Caffeine Standard #1 (0.5 µg/mL)	Not available.
		Caffeine Standard #2 (1 µg/mL)	Not available.
		Caffeine Standard #3 (5 µg/mL)	Not available.
		Caffeine Standard #4 (25 µg/mL)	Not available.
		Caffeine Standard #5 (50 µg/mL)	Not available.
Odour threshold	:	Caffeine Standard #1 (0.5 µg/mL)	Not available.
		Caffeine Standard #2 (1 µg/mL)	Not available.
		Caffeine Standard #3 (5 µg/mL)	Not available.
		Caffeine Standard #4 (25 µg/mL)	Not available.
		Caffeine Standard #5 (50 µg/mL)	Not available.
pH	:	Caffeine Standard #1 (0.5 µg/mL)	Not available.
		Caffeine Standard #2 (1 µg/mL)	Not available.
		Caffeine Standard #3 (5 µg/mL)	Not available.
		Caffeine Standard #4 (25 µg/mL)	Not available.
		Caffeine Standard #5 (50 µg/mL)	Not available.
Melting point/freezing point	:	Caffeine Standard #1 (0.5 µg/mL)	0°C
		Caffeine Standard #2 (1 µg/mL)	0°C
		Caffeine Standard #3 (5 µg/mL)	0°C
		Caffeine Standard #4 (25 µg/mL)	0°C

SECTION 9: Physical and chemical properties

		Caffeine Standard #5 (50 µg/mL)	0°C
Initial boiling point and boiling range	:	Caffeine Standard #1 (0.5 µg/mL)	100°C
		Caffeine Standard #2 (1 µg/mL)	100°C
		Caffeine Standard #3 (5 µg/mL)	100°C
		Caffeine Standard #4 (25 µg/mL)	100°C
		Caffeine Standard #5 (50 µg/mL)	100°C
Flash point	:	Caffeine Standard #1 (0.5 µg/mL)	Not available.
		Caffeine Standard #2 (1 µg/mL)	Not available.
		Caffeine Standard #3 (5 µg/mL)	Not available.
		Caffeine Standard #4 (25 µg/mL)	Not available.
		Caffeine Standard #5 (50 µg/mL)	Not available.
Evaporation rate	:	Caffeine Standard #1 (0.5 µg/mL)	Not available.
		Caffeine Standard #2 (1 µg/mL)	Not available.
		Caffeine Standard #3 (5 µg/mL)	Not available.
		Caffeine Standard #4 (25 µg/mL)	Not available.
		Caffeine Standard #5 (50 µg/mL)	Not available.
Flammability (solid, gas)	:	Caffeine Standard #1 (0.5 µg/mL)	Not applicable.
		Caffeine Standard #2 (1 µg/mL)	Not applicable.
		Caffeine Standard #3 (5 µg/mL)	Not applicable.
		Caffeine Standard #4 (25 µg/mL)	Not applicable.
		Caffeine Standard #5 (50 µg/mL)	Not applicable.
Upper/lower flammability or explosive limits	:	Caffeine Standard #1 (0.5 µg/mL)	Not available.
		Caffeine Standard #2 (1 µg/mL)	Not available.
		Caffeine Standard #3 (5 µg/mL)	Not available.
		Caffeine Standard #4 (25 µg/mL)	Not available.
		Caffeine Standard #5 (50 µg/mL)	Not available.
Vapour pressure	:	Caffeine Standard #1 (0.5 µg/mL)	Not available.
		Caffeine Standard #2 (1 µg/mL)	Not available.
		Caffeine Standard #3 (5 µg/mL)	Not available.
		Caffeine Standard #4 (25 µg/mL)	Not available.

SECTION 9: Physical and chemical properties

		Caffeine Standard #5 (50 µg/mL)	Not available.
Vapour density	:	Caffeine Standard #1 (0.5 µg/mL)	Not available.
		Caffeine Standard #2 (1 µg/mL)	Not available.
		Caffeine Standard #3 (5 µg/mL)	Not available.
		Caffeine Standard #4 (25 µg/mL)	Not available.
		Caffeine Standard #5 (50 µg/mL)	Not available.
Relative density	:	Caffeine Standard #1 (0.5 µg/mL)	Not available.
		Caffeine Standard #2 (1 µg/mL)	Not available.
		Caffeine Standard #3 (5 µg/mL)	Not available.
		Caffeine Standard #4 (25 µg/mL)	Not available.
		Caffeine Standard #5 (50 µg/mL)	Not available.
Solubility(ies)	:	Caffeine Standard #1 (0.5 µg/mL)	Easily soluble in the following materials: cold water and hot water.
		Caffeine Standard #2 (1 µg/mL)	Easily soluble in the following materials: cold water and hot water.
		Caffeine Standard #3 (5 µg/mL)	Easily soluble in the following materials: cold water and hot water.
		Caffeine Standard #4 (25 µg/mL)	Easily soluble in the following materials: cold water and hot water.
		Caffeine Standard #5 (50 µg/mL)	Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	:	Caffeine Standard #1 (0.5 µg/mL)	Not available.
		Caffeine Standard #2 (1 µg/mL)	Not available.
		Caffeine Standard #3 (5 µg/mL)	Not available.
		Caffeine Standard #4 (25 µg/mL)	Not available.
		Caffeine Standard #5 (50 µg/mL)	Not available.
Auto-ignition temperature	:	Caffeine Standard #1 (0.5 µg/mL)	Not available.
		Caffeine Standard #2 (1 µg/mL)	Not available.
		Caffeine Standard #3 (5 µg/mL)	Not available.
		Caffeine Standard #4 (25 µg/mL)	Not available.
		Caffeine Standard #5 (50 µg/mL)	Not available.
Decomposition temperature	:	Caffeine Standard #1 (0.5 µg/mL)	Not available.
		Caffeine Standard #2 (1 µg/mL)	Not available.
		Caffeine Standard #3 (5 µg/mL)	Not available.
		Caffeine Standard #4 (25 µg/mL)	Not available.
		Caffeine Standard #5	Not available.

SECTION 9: Physical and chemical properties

		(50 µg/mL)	
Viscosity	:	Caffeine Standard #1 (0.5 µg/mL)	Not available.
		Caffeine Standard #2 (1 µg/mL)	Not available.
		Caffeine Standard #3 (5 µg/mL)	Not available.
		Caffeine Standard #4 (25 µg/mL)	Not available.
		Caffeine Standard #5 (50 µg/mL)	Not available.
Explosive properties	:	Caffeine Standard #1 (0.5 µg/mL)	Not available.
		Caffeine Standard #2 (1 µg/mL)	Not available.
		Caffeine Standard #3 (5 µg/mL)	Not available.
		Caffeine Standard #4 (25 µg/mL)	Not available.
		Caffeine Standard #5 (50 µg/mL)	Not available.
Oxidising properties	:	Caffeine Standard #1 (0.5 µg/mL)	Not available.
		Caffeine Standard #2 (1 µg/mL)	Not available.
		Caffeine Standard #3 (5 µg/mL)	Not available.
		Caffeine Standard #4 (25 µg/mL)	Not available.
		Caffeine Standard #5 (50 µg/mL)	Not available.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity	:	Caffeine Standard #1 (0.5 µg/mL)	No specific test data related to reactivity available for this product or its ingredients.
		Caffeine Standard #2 (1 µg/mL)	No specific test data related to reactivity available for this product or its ingredients.
		Caffeine Standard #3 (5 µg/mL)	No specific test data related to reactivity available for this product or its ingredients.
		Caffeine Standard #4 (25 µg/mL)	No specific test data related to reactivity available for this product or its ingredients.
		Caffeine Standard #5 (50 µg/mL)	No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	:	Caffeine Standard #1 (0.5 µg/mL)	The product is stable.
		Caffeine Standard #2 (1 µg/mL)	The product is stable.
		Caffeine Standard #3 (5 µg/mL)	The product is stable.
		Caffeine Standard #4 (25 µg/mL)	The product is stable.
		Caffeine Standard #5 (50 µg/mL)	The product is stable.

SECTION 10: Stability and reactivity

10.3 Possibility of hazardous reactions	:	Caffeine Standard #1 (0.5 µg/mL)	Under normal conditions of storage and use, hazardous reactions will not occur.
		Caffeine Standard #2 (1 µg/mL)	Under normal conditions of storage and use, hazardous reactions will not occur.
		Caffeine Standard #3 (5 µg/mL)	Under normal conditions of storage and use, hazardous reactions will not occur.
		Caffeine Standard #4 (25 µg/mL)	Under normal conditions of storage and use, hazardous reactions will not occur.
		Caffeine Standard #5 (50 µg/mL)	Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	:	Caffeine Standard #1 (0.5 µg/mL)	No specific data.
		Caffeine Standard #2 (1 µg/mL)	No specific data.
		Caffeine Standard #3 (5 µg/mL)	No specific data.
		Caffeine Standard #4 (25 µg/mL)	No specific data.
		Caffeine Standard #5 (50 µg/mL)	No specific data.
10.5 Incompatible materials	:	Caffeine Standard #1 (0.5 µg/mL)	May react or be incompatible with oxidising materials.
		Caffeine Standard #2 (1 µg/mL)	May react or be incompatible with oxidising materials.
		Caffeine Standard #3 (5 µg/mL)	May react or be incompatible with oxidising materials.
		Caffeine Standard #4 (25 µg/mL)	May react or be incompatible with oxidising materials.
		Caffeine Standard #5 (50 µg/mL)	May react or be incompatible with oxidising materials.
10.6 Hazardous decomposition products	:	Caffeine Standard #1 (0.5 µg/mL)	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Caffeine Standard #2 (1 µg/mL)	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Caffeine Standard #3 (5 µg/mL)	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Caffeine Standard #4 (25 µg/mL)	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Caffeine Standard #5 (50 µg/mL)	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

Not available.

Acute toxicity estimates

Not available.

Irritation/Corrosion

Conclusion/Summary : Not available.

Sensitiser

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

SECTION 11: Toxicological information

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure	:	Caffeine Standard #1 (0.5 µg/mL)	Not available.
		Caffeine Standard #2 (1 µg/mL)	Not available.
		Caffeine Standard #3 (5 µg/mL)	Not available.
		Caffeine Standard #4 (25 µg/mL)	Not available.
		Caffeine Standard #5 (50 µg/mL)	Not available.

Potential acute health effects

Inhalation	:	Caffeine Standard #1 (0.5 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #2 (1 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #3 (5 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #4 (25 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #5 (50 µg/mL)	No known significant effects or critical hazards.
Ingestion	:	Caffeine Standard #1 (0.5 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #2 (1 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #3 (5 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #4 (25 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #5 (50 µg/mL)	No known significant effects or critical hazards.
Skin contact	:	Caffeine Standard #1 (0.5 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #2 (1 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #3 (5 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #4 (25 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #5 (50 µg/mL)	No known significant effects or critical hazards.

SECTION 11: Toxicological information

Eye contact	:	Caffeine Standard #1 (0.5 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #2 (1 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #3 (5 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #4 (25 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #5 (50 µg/mL)	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation	:	Caffeine Standard #1 (0.5 µg/mL)	No specific data.
		Caffeine Standard #2 (1 µg/mL)	No specific data.
		Caffeine Standard #3 (5 µg/mL)	No specific data.
		Caffeine Standard #4 (25 µg/mL)	No specific data.
		Caffeine Standard #5 (50 µg/mL)	No specific data.
Ingestion	:	Caffeine Standard #1 (0.5 µg/mL)	No specific data.
		Caffeine Standard #2 (1 µg/mL)	No specific data.
		Caffeine Standard #3 (5 µg/mL)	No specific data.
		Caffeine Standard #4 (25 µg/mL)	No specific data.
		Caffeine Standard #5 (50 µg/mL)	No specific data.
Skin contact	:	Caffeine Standard #1 (0.5 µg/mL)	No specific data.
		Caffeine Standard #2 (1 µg/mL)	No specific data.
		Caffeine Standard #3 (5 µg/mL)	No specific data.
		Caffeine Standard #4 (25 µg/mL)	No specific data.
		Caffeine Standard #5 (50 µg/mL)	No specific data.
Eye contact	:	Caffeine Standard #1 (0.5 µg/mL)	No specific data.
		Caffeine Standard #2 (1 µg/mL)	No specific data.
		Caffeine Standard #3 (5 µg/mL)	No specific data.
		Caffeine Standard #4 (25 µg/mL)	No specific data.
		Caffeine Standard #5 (50 µg/mL)	No specific data.

Delayed and immediate effects as well as 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	: Caffeine Standard #1 (0.5 µg/mL)	No known significant effects or critical hazards.
	Caffeine Standard #2 (1 µg/mL)	No known significant effects or critical hazards.
	Caffeine Standard #3 (5 µg/mL)	No known significant effects or critical hazards.
	Caffeine Standard #4 (25 µg/mL)	No known significant effects or critical hazards.
	Caffeine Standard #5 (50 µg/mL)	No known significant effects or critical hazards.
Carcinogenicity	: Caffeine Standard #1 (0.5 µg/mL)	No known significant effects or critical hazards.
	Caffeine Standard #2 (1 µg/mL)	No known significant effects or critical hazards.
	Caffeine Standard #3 (5 µg/mL)	No known significant effects or critical hazards.
	Caffeine Standard #4 (25 µg/mL)	No known significant effects or critical hazards.
	Caffeine Standard #5 (50 µg/mL)	No known significant effects or critical hazards.
Mutagenicity	: Caffeine Standard #1 (0.5 µg/mL)	No known significant effects or critical hazards.
	Caffeine Standard #2 (1 µg/mL)	No known significant effects or critical hazards.
	Caffeine Standard #3 (5 µg/mL)	No known significant effects or critical hazards.
	Caffeine Standard #4 (25 µg/mL)	No known significant effects or critical hazards.
	Caffeine Standard #5 (50 µg/mL)	No known significant effects or critical hazards.
Teratogenicity	: Caffeine Standard #1 (0.5 µg/mL)	No known significant effects or critical hazards.
	Caffeine Standard #2 (1 µg/mL)	No known significant effects or critical hazards.
	Caffeine Standard #3 (5 µg/mL)	No known significant effects or critical hazards.
	Caffeine Standard #4 (25 µg/mL)	No known significant effects or critical hazards.
	Caffeine Standard #5 (50 µg/mL)	No known significant effects or critical hazards.
Developmental effects	: Caffeine Standard #1 (0.5 µg/mL)	No known significant effects or critical hazards.
	Caffeine Standard #2 (1 µg/mL)	No known significant effects or critical hazards.
	Caffeine Standard #3 (5 µg/mL)	No known significant effects or critical hazards.
	Caffeine Standard #4 (25 µg/mL)	No known significant effects or critical hazards.
	Caffeine Standard #5 (50 µg/mL)	No known significant effects or critical hazards.

SECTION 11: Toxicological information

Fertility effects	:	Caffeine Standard #1 (0.5 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #2 (1 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #3 (5 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #4 (25 µg/mL)	No known significant effects or critical hazards.
		Caffeine Standard #5 (50 µg/mL)	No known significant effects or critical hazards.

SECTION 12: Ecological information

12.1 Toxicity

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Not available.

12.3 Bioaccumulative potential

Not available.

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 : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

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. 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

ADR/RID / IMDG / IATA : Not regulated.

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

14.7 Transport in bulk according to Annex II of Marpol 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

Annex XIV

None of the components are listed.

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 :

Caffeine Standard #1 (0.5 µg/mL)	Not applicable.
Caffeine Standard #2 (1 µg/mL)	Not applicable.
Caffeine Standard #3 (5 µg/mL)	Not applicable.
Caffeine Standard #4 (25 µg/mL)	Not applicable.
Caffeine Standard #5 (50 µg/mL)	Not applicable.

Other EU regulations

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia : All components are listed or exempted.

SECTION 15: Regulatory information

Canada : All components are listed or exempted.

China : All components are listed or exempted.

Europe : All components are listed or exempted.

Japan : **Japan inventory (ENCS)**: All components are listed or exempted.
Japan inventory (ISHL): All components are listed or exempted.

Malaysia : Not determined.

New Zealand : All components are listed or exempted.

Philippines : All components are listed or exempted.

Republic of Korea : All components are listed or exempted.

Taiwan : All components are listed or exempted.

Thailand : Not determined.

Turkey : All components are listed or exempted.

United States : All components are listed or exempted.

Viet Nam : Not determined.

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
Not classified.	

Full text of abbreviated H statements

Not applicable.

Full text of classifications [CLP/GHS]

Not applicable.

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