

SAFETY DATA SHEET

Amino Acids Kit, Part Number 5063-6588

Section 1. Identification

Product identifier	: Amino Acids Kit, Part Number 5063-6588	
Part no. (chemical kit)	: 5063-6588	
Part no.	: Sarcosine	Not available.
	L-Tryptophan	Not available.
	L-Norvaline	Not available.
	L-Glutamine	Not available.
	L-Asparagine	Not available.
	L-4-Hydroxyproline	Not available.
	3,3'-Dithiodipropionic Acid	5062-2479
	Fmoc reagent 10 ampoules 1ml ea for AAA	5061-3337
	OPA reagent, 10 mg/ml, 6 ampoules	5061-3335
	AA, std 10pmol 10/PK	5061-3334
	AA, std 25pmol 10/PK	5061-3333
	AA, standard 100PMOL 10/PK	5061-3332
	td 1nmol 10/PK	5061-3330
	AA, standard 250PMOL 10/PK	5061-3331

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

Identified uses	: Reagents and Standards for Analytical Chemistry Laboratory Use	
	Sarcosine	1 g
	L-Tryptophan	1 g
	L-Norvaline	1 g
	L-Glutamine	1 g
	L-Asparagine	1 g
	L-4-Hydroxyproline	1 g
	3,3'-Dithiodipropionic Acid	1 x 5 g
	Fmoc reagent 10 ampoules 1ml ea for AAA	10 x 1 ml
	OPA reagent, 10 mg/ml, 6 ampoules	6 x 1 ml
	AA, std 10pmol 10/PK	10 x 1 ml
	AA, std 25pmol 10/PK	10 x 1 ml
	AA, standard 100PMOL 10/PK	10 x 1 ml
	td 1nmol 10/PK	10 x 1 ml
	AA, standard 250PMOL 10/PK	10 x 1 ml

Supplier/Manufacturer : Agilent Technologies, Inc.
5301 Stevens Creek Blvd
Santa Clara, CA 95051, USA
800-227-9770

Emergency telephone number (with hours of operation) : CHEMTREC®: 1-800-424-9300

Section 2. Hazard identification

Classification of the substance or mixture

Section 2. Hazard identification

Sarcosine	COMBUSTIBLE DUSTS - Category 1
L-Tryptophan	COMBUSTIBLE DUSTS - Category 1
L-Norvaline	COMBUSTIBLE DUSTS - Category 1
L-Glutamine	COMBUSTIBLE DUSTS - Category 1
L-Asparagine	COMBUSTIBLE DUSTS - Category 1
L-4-Hydroxyproline	COMBUSTIBLE DUSTS - Category 1
3,3'-Dithiodipropionic Acid	COMBUSTIBLE DUSTS - Category 1
H315	SKIN IRRITATION - Category 2
H319	EYE IRRITATION - Category 2A
H335	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
FMOc reagent 10 ampoules 1ml ea for AAA	
H225	FLAMMABLE LIQUIDS - Category 2
H302	ACUTE TOXICITY (oral) - Category 4
H312	ACUTE TOXICITY (dermal) - Category 4
H332	ACUTE TOXICITY (inhalation) - Category 4
H319	EYE IRRITATION - Category 2A
H373	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
OPA reagent, 10 mg/ml, 6 ampoules	
H290	CORROSIVE TO METALS - Category 1
H302	ACUTE TOXICITY (oral) - Category 4
H314	SKIN CORROSION - Category 1A
H318	SERIOUS EYE DAMAGE - Category 1
H317	SKIN SENSITIZATION - Category 1A
H360	TOXIC TO REPRODUCTION - Category 1
	Health Hazards Not Otherwise Classified - Category 1
H411	AQUATIC HAZARD (LONG-TERM) - Category 2
AA, std 10pmol 10/PK	
H290	CORROSIVE TO METALS - Category 1
AA, std 25pmol 10/PK	
H290	CORROSIVE TO METALS - Category 1
AA, standard 100PMOL 10/PK	
H290	CORROSIVE TO METALS - Category 1
td 1nmol 10/PK	
H290	CORROSIVE TO METALS - Category 1
AA, standard 250PMOL	

Section 2. Hazard identification

10/PK

H290

CORROSIVE TO METALS - Category 1

GHS label elements

Hazard pictograms

: 3,3'-Dithiodipropionic Acid

FMOc reagent 10 ampoules
1ml ea for AAAOPA reagent, 10 mg/ml, 6
ampoules

AA, std 10pmol 10/PK



AA, std 25pmol 10/PK

AA, standard 100PMOL
10/PK

td 1nmol 10/PK

AA, standard 250PMOL
10/PK

Signal word

: Sarcosine	Warning
L-Tryptophan	Warning
L-Norvaline	Warning
L-Glutamine	Warning
L-Asparagine	Warning
L-4-Hydroxyproline	Warning
3,3'-Dithiodipropionic Acid	Warning
FMOc reagent 10 ampoules 1ml ea for AAA	Danger
OPA reagent, 10 mg/ml, 6 ampoules	Danger
AA, std 10pmol 10/PK	Warning
AA, std 25pmol 10/PK	Warning
AA, standard 100PMOL 10/PK	Warning

Section 2. Hazard identification

	td 1nmol 10/PK	Warning
	AA, standard 250PMOL 10/PK	Warning
Hazard statements	: Sarcosine	May form combustible dust concentrations in air.
	L-Tryptophan	May form combustible dust concentrations in air.
	L-Norvaline	May form combustible dust concentrations in air.
	L-Glutamine	May form combustible dust concentrations in air.
	L-Asparagine	May form combustible dust concentrations in air.
	L-4-Hydroxyproline	May form combustible dust concentrations in air.
	3,3'-Dithiodipropionic Acid	H315 - Causes skin irritation. H319 - Causes serious eye irritation. H335 - May cause respiratory irritation.
	Fmoc reagent 10 ampoules 1ml ea for AAA	May form combustible dust concentrations in air. H225 - Highly flammable liquid and vapor. H302 + H312 + H332 - Harmful if swallowed, in contact with skin or if inhaled. H319 - Causes serious eye irritation. H373 - May cause damage to organs through prolonged or repeated exposure. H290 - May be corrosive to metals.
	OPA reagent, 10 mg/ml, 6 ampoules	H302 - Harmful if swallowed. H314 - Causes severe skin burns and eye damage. H317 - May cause an allergic skin reaction. H360 - May damage fertility or the unborn child. H411 - Toxic to aquatic life with long lasting effects. Causes severe digestive tract burns. H290 - May be corrosive to metals. H290 - May be corrosive to metals. H290 - May be corrosive to metals.
	AA, std 10pmol 10/PK	H290 - May be corrosive to metals.
	AA, std 25pmol 10/PK	H290 - May be corrosive to metals.
	AA, standard 100PMOL 10/PK	H290 - May be corrosive to metals.
	td 1nmol 10/PK	H290 - May be corrosive to metals.
	AA, standard 250PMOL 10/PK	H290 - May be corrosive to metals.
Precautionary statements		
Prevention	: Sarcosine	Not applicable.
	L-Tryptophan	Not applicable.
	L-Norvaline	Not applicable.
	L-Glutamine	Not applicable.
	L-Asparagine	Not applicable.
	L-4-Hydroxyproline	Not applicable.
	3,3'-Dithiodipropionic Acid	P280 - Wear protective gloves. Wear eye or face protection. P261 - Avoid breathing dust or mist. P264 - Wash thoroughly after handling.
	Fmoc reagent 10 ampoules 1ml ea for AAA	P280 - Wear protective gloves and protective clothing. Wear eye or face protection. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P260 - Do not breathe vapor. P270 - Do not eat, drink or smoke when using this product. P264 - Wash thoroughly after handling.
	OPA reagent, 10 mg/ml, 6 ampoules	P201 - Obtain special instructions before use. P280 - Wear protective gloves, protective clothing and eye or face protection. P234 - Keep only in original packaging.

Section 2. Hazard identification

Response

AA, std 10pmol 10/PK
 AA, std 25pmol 10/PK
 AA, standard 100PMOL
 10/PK
 td 1nmol 10/PK
 AA, standard 250PMOL
 10/PK

: Sarcosine
 L-Tryptophan
 L-Norvaline
 L-Glutamine
 L-Asparagine
 L-4-Hydroxyproline
 3,3'-Dithiodipropionic Acid

Fmoc reagent 10 ampoules
 1ml ea for AAA

OPA reagent, 10 mg/ml, 6
 ampoules

P273 - Avoid release to the environment.
 P261 - Avoid breathing vapor.
 P270 - Do not eat, drink or smoke when using this
 product.
 P264 - Wash thoroughly after handling.
 P234 - Keep only in original packaging.
 P234 - Keep only in original packaging.
 P234 - Keep only in original packaging.

P234 - Keep only in original packaging.
 P234 - Keep only in original packaging.

Not applicable.
 Not applicable.
 Not applicable.
 Not applicable.
 Not applicable.
 Not applicable.
 P304 + P312 - IF INHALED: Call a POISON
 CENTER or doctor if you feel unwell.
 P362 + P364 - Take off contaminated clothing and
 wash it before reuse.
 P302 + P352 - IF ON SKIN: Wash with plenty of
 water.
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously
 with water for several minutes. Remove contact
 lenses, if present and easy to do. Continue rinsing.
 P337 + P313 - If eye irritation persists: Get medical
 advice or attention.
 P314 - Get medical advice or attention if you feel
 unwell.
 P304 + P312 - IF INHALED: Call a POISON
 CENTER or doctor if you feel unwell.
 P302 + P312 - IF ON SKIN: Call a POISON CENTER
 or doctor if you feel unwell.
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously
 with water for several minutes. Remove contact
 lenses, if present and easy to do. Continue rinsing.
 P337 + P313 - If eye irritation persists: Get medical
 advice or attention.
 P391 - Collect spillage.

P390 - Absorb spillage to prevent material damage.
 P308 + P313 - IF exposed or concerned: Get medical
 advice or attention.
 P304 + P310 - IF INHALED: Immediately call a
 POISON CENTER or doctor.
 P301 + P310, P330, P331 - IF SWALLOWED:
 Immediately call a POISON CENTER or doctor.
 Rinse mouth. Do NOT induce vomiting.
 P303 + P361 + P353, P310 - IF ON SKIN (or hair):
 Take off immediately all contaminated clothing. Rinse
 skin with water. Immediately call a POISON
 CENTER or doctor.
 P363 - Wash contaminated clothing before reuse.
 P302 + P352 - IF ON SKIN: Wash with plenty of
 water.
 P333 + P313 - If skin irritation or rash occurs: Get
 medical advice or attention.
 P305 + P351 + P338, P310 - IF IN EYES: Rinse

Section 2. Hazard identification

		cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.
	AA, std 10pmol 10/PK	P390 - Absorb spillage to prevent material damage.
	AA, std 25pmol 10/PK	P390 - Absorb spillage to prevent material damage.
	AA, standard 100PMOL 10/PK	P390 - Absorb spillage to prevent material damage.
	td 1nmol 10/PK	P390 - Absorb spillage to prevent material damage.
	AA, standard 250PMOL 10/PK	P390 - Absorb spillage to prevent material damage.
Storage	: Sarcosine	Not applicable.
	L-Tryptophan	Not applicable.
	L-Norvaline	Not applicable.
	L-Glutamine	Not applicable.
	L-Asparagine	Not applicable.
	L-4-Hydroxyproline	Not applicable.
	3,3'-Dithiodipropionic Acid	P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
	Fmoc reagent 10 ampoules 1ml ea for AAA	Not applicable.
	OPA reagent, 10 mg/ml, 6 ampoules	Not applicable.
	AA, std 10pmol 10/PK	Not applicable.
	AA, std 25pmol 10/PK	Not applicable.
	AA, standard 100PMOL 10/PK	Not applicable.
	td 1nmol 10/PK	Not applicable.
	AA, standard 250PMOL 10/PK	Not applicable.
Disposal	: Sarcosine	Not applicable.
	L-Tryptophan	Not applicable.
	L-Norvaline	Not applicable.
	L-Glutamine	Not applicable.
	L-Asparagine	Not applicable.
	L-4-Hydroxyproline	Not applicable.
	3,3'-Dithiodipropionic Acid	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	Fmoc reagent 10 ampoules 1ml ea for AAA	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	OPA reagent, 10 mg/ml, 6 ampoules	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	AA, std 10pmol 10/PK	Not applicable.
	AA, std 25pmol 10/PK	Not applicable.
	AA, standard 100PMOL 10/PK	Not applicable.
	td 1nmol 10/PK	Not applicable.
	AA, standard 250PMOL 10/PK	Not applicable.
Supplemental label elements	: Sarcosine	Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent dust accumulation.
	L-Tryptophan	Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent dust accumulation.
	L-Norvaline	Keep container tightly closed. Keep away from heat,

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	L-Glutamine	hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent dust accumulation. Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent dust accumulation.
	L-Asparagine	hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent dust accumulation. Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent dust accumulation.
	L-4-Hydroxyproline	hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent dust accumulation. Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent dust accumulation.
	3,3'-Dithiodipropionic Acid	hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent dust accumulation. Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent dust accumulation.
	FMOc reagent 10 ampoules 1ml ea for AAA	None known.
	OPA reagent, 10 mg/ml, 6 ampoules	Do not taste or swallow. Wash thoroughly after handling.
	AA, std 10pmol 10/PK	None known.
	AA, std 25pmol 10/PK	None known.
	AA, standard 100PMOL 10/PK	None known.
	td 1nmol 10/PK	None known.
	AA, standard 250PMOL 10/PK	None known.
Other hazards which do not result in classification	: Sarcosine	None known.
	L-Tryptophan	None known.
	L-Norvaline	None known.
	L-Glutamine	None known.
	L-Asparagine	None known.
	L-4-Hydroxyproline	None known.
	3,3'-Dithiodipropionic Acid	None known.
	FMOc reagent 10 ampoules 1ml ea for AAA	None known.
	OPA reagent, 10 mg/ml, 6 ampoules	None known.
	AA, std 10pmol 10/PK	None known.
	AA, std 25pmol 10/PK	None known.
	AA, standard 100PMOL 10/PK	None known.
	td 1nmol 10/PK	None known.
	AA, standard 250PMOL 10/PK	None known.

Section 3. Composition/information on ingredients

Substance/mixture	: Sarcosine	Substance
	L-Tryptophan	Substance
	L-Norvaline	Substance
	L-Glutamine	Substance
	L-Asparagine	Substance
	L-4-Hydroxyproline	Substance
	3,3'-Dithiodipropionic Acid	Substance
	FMOc reagent 10 ampoules 1ml ea for AAA	Mixture
	OPA reagent, 10 mg/ml, 6 ampoules	Mixture
	AA, std 10pmol 10/PK	Mixture
	AA, std 25pmol 10/PK	Mixture
	AA, standard 100PMOL	Mixture

Section 3. Composition/information on ingredients

10/PK
td 1nmol 10/PK
AA, standard 250PMOL
10/PK

Mixture
Mixture

Ingredient name	Synonyms	% (w/w)	CAS number
Sarcosine			
Sarcosine	Sarcosine	100	107-97-1
L-Tryptophan			
L-Tryptophan	L-Tryptophan	100	73-22-3
L-Norvaline			
Norvaline	L-Norvaline	100	6600-40-4
L-Glutamine			
Levoglutamide	L-Glutamine	100	56-85-9
L-Asparagine			
Asparagine	L-Asparagine	100	70-47-3
L-4-Hydroxyproline			
L-4-Hydroxyproline	L-4-Hydroxyproline	100	51-35-4
3,3'-Dithiodipropionic Acid			
3,3'-dithiobispropionic acid	3,3'-Dithiodipropionic Acid	100	1119-62-6
FMOc reagent 10 ampoules 1ml ea for AAA			
Acetonitrile	Acetonitrile	≥80	75-05-8
OPA reagent, 10 mg/ml, 6 ampoules			
Potassium hydroxide	Potassium hydroxide	≥5 - ≤10	1310-58-3
boric acid	Boric Acid	≥1 - ≤5	10043-35-3
3-Mercaptopropionic acid	3-Mercaptopropionic acid	≥1 - ≤5	107-96-0
Methanol	Methanol	≥1 - ≤5	67-56-1
Phthalaldehyde	o-Phthalaldehyde	≥1 - ≤5	643-79-8
Potassium thiocyanate	Potassium thiocyanate	≥1 - ≤5	333-20-0
Dodecan-1-ol, ethoxylated	Poly(oxy-1,2-ethanediyl), .alpha.-	≥0.1 - ≤1	9002-92-0

Section 3. Composition/information on ingredients

	dodecyl-.omega.-hydroxy-		
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Ranges if listed above for hazardous ingredient(s) are prescribed ranges. The actual concentration(s) or actual concentration range(s) are being withheld as a trade secret.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

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

Section 4. First-aid measures

Description of necessary first aid measures

Eye contact

Sarcosine	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.
L-Tryptophan	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.
L-Norvaline	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.
L-Glutamine	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.
L-Asparagine	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.
L-4-Hydroxyproline	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.
3,3'-Dithiodipropionic Acid	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.
Fmoc reagent 10 ampoules 1ml ea for AAA	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.
OPA reagent, 10 mg/ml, 6 ampoules	Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician.
AA, std 10pmol 10/PK	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.
AA, std 25pmol 10/PK	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.
AA, standard 100PMOL	Immediately flush eyes with plenty of water,

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	10/PK	occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	td 1nmol 10/PK	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.
	AA, standard 250PMOL 10/PK	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	: Sarcosine	Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.
	L-Tryptophan	Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.
	L-Norvaline	Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.
	L-Glutamine	Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.
	L-Asparagine	Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.
	L-4-Hydroxyproline	Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.
	3,3'-Dithiodipropionic Acid	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,

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FMOOC reagent 10 ampoules
1ml ea for AAA

belt or waistband.

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 following exposure or if feeling unwell. 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.

OPA reagent, 10 mg/ml, 6
ampoules

Get medical attention immediately. Call a poison center or physician. 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. 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.

AA, std 10pmol 10/PK

Remove victim to fresh air and keep at rest in a position comfortable for breathing.

AA, std 25pmol 10/PK

Remove victim to fresh air and keep at rest in a position comfortable for breathing.

AA, standard 100PMOL
10/PK

Remove victim to fresh air and keep at rest in a position comfortable for breathing.

td 1nmol 10/PK

Remove victim to fresh air and keep at rest in a position comfortable for breathing.

AA, standard 250PMOL
10/PK

Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Skin contact

: Sarcosine

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

L-Tryptophan

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

L-Norvaline

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

L-Glutamine

Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

L-Asparagine

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get

Section 4. First-aid measures

L-4-Hydroxyproline	medical attention if symptoms occur. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
3,3'-Dithiodipropionic Acid	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.
FMOc reagent 10 ampoules 1ml ea for AAA	Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
OPA reagent, 10 mg/ml, 6 ampoules	Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
AA, std 10pmol 10/PK	Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
AA, std 25pmol 10/PK	Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
AA, standard 100PMOL 10/PK	Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
td 1nmol 10/PK	Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
AA, standard 250PMOL 10/PK	Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion : Sarcosine	Wash out mouth with water. 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.
L-Tryptophan	Wash out mouth with water. 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.
L-Norvaline	Wash out mouth with water. 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.
L-Glutamine	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce

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	vomiting unless directed to do so by medical personnel.
L-Asparagine	Wash out mouth with water. 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.
L-4-Hydroxyproline	Wash out mouth with water. 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.
3,3'-Dithiodipropionic Acid	Wash out mouth with water. Remove dentures if any. 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 adverse health effects persist or are severe. 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.
FMOc reagent 10 ampoules 1ml ea for AAA	Wash out mouth with water. Remove dentures if any. 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.
OPA reagent, 10 mg/ml, 6 ampoules	Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. 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. Chemical burns must be treated promptly by a 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.
AA, std 10pmol 10/PK	Wash out mouth with water. 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.

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AA, std 25pmol 10/PK	Wash out mouth with water. 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.
AA, standard 100PMOL 10/PK	Wash out mouth with water. 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.
td 1nmol 10/PK	Wash out mouth with water. 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.
AA, standard 250PMOL 10/PK	Wash out mouth with water. 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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact

: Sarcosine	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.
L-Tryptophan	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.
L-Norvaline	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.
L-Glutamine	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.
L-Asparagine	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.
L-4-Hydroxyproline	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.
3,3'-Dithiodipropionic Acid FMOC reagent 10 ampoules 1ml ea for AAA	Causes serious eye irritation. Causes serious eye irritation.
OPA reagent, 10 mg/ml, 6 ampoules	Causes serious eye damage.
AA, std 10pmol 10/PK	No known significant effects or critical hazards.
AA, std 25pmol 10/PK	No known significant effects or critical hazards.
AA, standard 100PMOL 10/PK	No known significant effects or critical hazards.
td 1nmol 10/PK	No known significant effects or critical hazards.
AA, standard 250PMOL 10/PK	No known significant effects or critical hazards.

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Inhalation	: Sarcosine	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
	L-Tryptophan	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
	L-Norvaline	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
	L-Glutamine	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
	L-Asparagine	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
	L-4-Hydroxyproline	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
	3,3'-Dithiodipropionic Acid FMOC reagent 10 ampoules 1ml ea for AAA	May cause respiratory irritation. Harmful if inhaled.
	OPA reagent, 10 mg/ml, 6 ampoules	No known significant effects or critical hazards.
	AA, std 10pmol 10/PK	No known significant effects or critical hazards.
	AA, std 25pmol 10/PK	No known significant effects or critical hazards.
	AA, standard 100PMOL 10/PK	No known significant effects or critical hazards.
	td 1nmol 10/PK	No known significant effects or critical hazards.
AA, standard 250PMOL 10/PK	No known significant effects or critical hazards.	
Skin contact	: Sarcosine	No known significant effects or critical hazards.
	L-Tryptophan	No known significant effects or critical hazards.
	L-Norvaline	No known significant effects or critical hazards.
	L-Glutamine	No known significant effects or critical hazards.
	L-Asparagine	No known significant effects or critical hazards.
	L-4-Hydroxyproline	No known significant effects or critical hazards.
	3,3'-Dithiodipropionic Acid FMOC reagent 10 ampoules 1ml ea for AAA	Causes skin irritation. Harmful in contact with skin.
	OPA reagent, 10 mg/ml, 6 ampoules	Causes severe burns. May cause an allergic skin reaction.
	AA, std 10pmol 10/PK	No known significant effects or critical hazards.
	AA, std 25pmol 10/PK	No known significant effects or critical hazards.
	AA, standard 100PMOL 10/PK	No known significant effects or critical hazards.
	td 1nmol 10/PK	No known significant effects or critical hazards.
AA, standard 250PMOL 10/PK	No known significant effects or critical hazards.	
Ingestion	: Sarcosine	No known significant effects or critical hazards.
	L-Tryptophan	No known significant effects or critical hazards.
	L-Norvaline	No known significant effects or critical hazards.
	L-Glutamine	No known significant effects or critical hazards.
	L-Asparagine	No known significant effects or critical hazards.
	L-4-Hydroxyproline	No known significant effects or critical hazards.
	3,3'-Dithiodipropionic Acid FMOC reagent 10 ampoules 1ml ea for AAA	No known significant effects or critical hazards. Harmful if swallowed.
	OPA reagent, 10 mg/ml, 6 ampoules	Severely corrosive to the digestive tract. Causes severe burns. Harmful if swallowed.
	AA, std 10pmol 10/PK	No known significant effects or critical hazards.

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AA, std 25pmol 10/PK	No known significant effects or critical hazards.
AA, standard 100PMOL 10/PK	No known significant effects or critical hazards.
td 1nmol 10/PK	No known significant effects or critical hazards.
AA, standard 250PMOL 10/PK	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact

: Sarcosine	Adverse symptoms may include the following: irritation redness
L-Tryptophan	Adverse symptoms may include the following: irritation redness
L-Norvaline	Adverse symptoms may include the following: irritation redness
L-Glutamine	Adverse symptoms may include the following: irritation redness
L-Asparagine	Adverse symptoms may include the following: irritation redness
L-4-Hydroxyproline	Adverse symptoms may include the following: irritation redness
3,3'-Dithiodipropionic Acid	Adverse symptoms may include the following: pain or irritation watering redness
FMOc reagent 10 ampoules 1ml ea for AAA	Adverse symptoms may include the following: pain or irritation watering redness
OPA reagent, 10 mg/ml, 6 ampoules	Adverse symptoms may include the following: pain watering redness
AA, std 10pmol 10/PK	No specific data.
AA, std 25pmol 10/PK	No specific data.
AA, standard 100PMOL 10/PK	No specific data.
td 1nmol 10/PK	No specific data.
AA, standard 250PMOL 10/PK	No specific data.

Inhalation

: Sarcosine	Adverse symptoms may include the following: respiratory tract irritation coughing
L-Tryptophan	Adverse symptoms may include the following: respiratory tract irritation coughing
L-Norvaline	Adverse symptoms may include the following: respiratory tract irritation coughing
L-Glutamine	Adverse symptoms may include the following: respiratory tract irritation coughing
L-Asparagine	Adverse symptoms may include the following:

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		respiratory tract irritation coughing
	L-4-Hydroxyproline	Adverse symptoms may include the following: respiratory tract irritation coughing
	3,3'-Dithiodipropionic Acid	Adverse symptoms may include the following: respiratory tract irritation coughing
	FMOc reagent 10 ampoules 1ml ea for AAA	No specific data.
	OPA reagent, 10 mg/ml, 6 ampoules	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
	AA, std 10pmol 10/PK	No specific data.
	AA, std 25pmol 10/PK	No specific data.
	AA, standard 100PMOL 10/PK	No specific data.
	td 1nmol 10/PK	No specific data.
	AA, standard 250PMOL 10/PK	No specific data.
Skin contact	: Sarcosine	No specific data.
	L-Tryptophan	No specific data.
	L-Norvaline	No specific data.
	L-Glutamine	No specific data.
	L-Asparagine	No specific data.
	L-4-Hydroxyproline	No specific data.
	3,3'-Dithiodipropionic Acid	Adverse symptoms may include the following: irritation redness
	FMOc reagent 10 ampoules 1ml ea for AAA	No specific data.
	OPA reagent, 10 mg/ml, 6 ampoules	Adverse symptoms may include the following: pain or irritation redness blistering may occur reduced fetal weight increase in fetal deaths skeletal malformations
	AA, std 10pmol 10/PK	No specific data.
	AA, std 25pmol 10/PK	No specific data.
	AA, standard 100PMOL 10/PK	No specific data.
	td 1nmol 10/PK	No specific data.
	AA, standard 250PMOL 10/PK	No specific data.
Ingestion	: Sarcosine	No specific data.
	L-Tryptophan	No specific data.
	L-Norvaline	No specific data.
	L-Glutamine	No specific data.
	L-Asparagine	No specific data.
	L-4-Hydroxyproline	No specific data.
	3,3'-Dithiodipropionic Acid	No specific data.
	FMOc reagent 10 ampoules 1ml ea for AAA	No specific data.
	OPA reagent, 10 mg/ml, 6 ampoules	Adverse symptoms may include the following: stomach pains

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	reduced fetal weight increase in fetal deaths skeletal malformations
AA, std 10pmol 10/PK	No specific data.
AA, std 25pmol 10/PK	No specific data.
AA, standard 100PMOL 10/PK	No specific data.
td 1nmol 10/PK	No specific data.
AA, standard 250PMOL 10/PK	No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	: Sarcosine	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.
	L-Tryptophan	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.
	L-Norvaline	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.
	L-Glutamine	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.
	L-Asparagine	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.
	L-4-Hydroxyproline	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.
	3,3'-Dithiodipropionic Acid	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	FMOc reagent 10 ampoules 1ml ea for AAA	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.
	OPA reagent, 10 mg/ml, 6 ampoules	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.
	AA, std 10pmol 10/PK	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	AA, std 25pmol 10/PK	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	AA, standard 100PMOL 10/PK	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	td 1nmol 10/PK	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

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	AA, standard 250PMOL 10/PK	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: Sarcosine	No specific treatment.
	L-Tryptophan	No specific treatment.
	L-Norvaline	No specific treatment.
	L-Glutamine	No specific treatment.
	L-Asparagine	No specific treatment.
	L-4-Hydroxyproline	No specific treatment.
	3,3'-Dithiodipropionic Acid	No specific treatment.
	Fmoc reagent 10 ampoules 1ml ea for AAA	No specific treatment.
	OPA reagent, 10 mg/ml, 6 ampoules	No specific treatment.
	AA, std 10pmol 10/PK	No specific treatment.
	AA, std 25pmol 10/PK	No specific treatment.
	AA, standard 100PMOL 10/PK	No specific treatment.
	td 1nmol 10/PK	No specific treatment.
	AA, standard 250PMOL 10/PK	No specific treatment.
Protection of first-aiders	: Sarcosine	No action shall be taken involving any personal risk or without suitable training.
	L-Tryptophan	No action shall be taken involving any personal risk or without suitable training.
	L-Norvaline	No action shall be taken involving any personal risk or without suitable training.
	L-Glutamine	No action shall be taken involving any personal risk or without suitable training.
	L-Asparagine	No action shall be taken involving any personal risk or without suitable training.
	L-4-Hydroxyproline	No action shall be taken involving any personal risk or without suitable training.
	3,3'-Dithiodipropionic Acid	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.
	Fmoc reagent 10 ampoules 1ml ea for AAA	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. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
	OPA reagent, 10 mg/ml, 6 ampoules	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. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
	AA, std 10pmol 10/PK	No action shall be taken involving any personal risk or without suitable training.
	AA, std 25pmol 10/PK	No action shall be taken involving any personal risk or without suitable training.
	AA, standard 100PMOL	No action shall be taken involving any personal risk

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10/PK td 1nmol 10/PK	or without suitable training. No action shall be taken involving any personal risk or without suitable training.
AA, standard 250PMOL 10/PK	No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	: Sarcosine	Use dry chemical powder.
	L-Tryptophan	Use dry chemical powder.
	L-Norvaline	Use dry chemical powder.
	L-Glutamine	Use dry chemical powder.
	L-Asparagine	Use dry chemical powder.
	L-4-Hydroxyproline	Use dry chemical powder.
	3,3'-Dithiodipropionic Acid	Use dry chemical powder.
	Fmoc reagent 10 ampoules 1ml ea for AAA	Use dry chemical, CO ₂ , water spray (fog) or foam.
	OPA reagent, 10 mg/ml, 6 ampoules	Use an extinguishing agent suitable for the surrounding fire.
	AA, std 10pmol 10/PK	Use an extinguishing agent suitable for the surrounding fire.
	AA, std 25pmol 10/PK	Use an extinguishing agent suitable for the surrounding fire.
	AA, standard 100PMOL 10/PK	Use an extinguishing agent suitable for the surrounding fire.
	td 1nmol 10/PK	Use an extinguishing agent suitable for the surrounding fire.
	AA, standard 250PMOL 10/PK	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: Sarcosine	Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture.
	L-Tryptophan	Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture.
	L-Norvaline	Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture.
	L-Glutamine	Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture.
	L-Asparagine	Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture.
	L-4-Hydroxyproline	Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture.
	3,3'-Dithiodipropionic Acid	Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture.
	Fmoc reagent 10 ampoules 1ml ea for AAA	Do not use water jet.
	OPA reagent, 10 mg/ml, 6 ampoules	None known.
	AA, std 10pmol 10/PK	None known.
	AA, std 25pmol 10/PK	None known.
	AA, standard 100PMOL 10/PK	None known.
	td 1nmol 10/PK	None known.
	AA, standard 250PMOL 10/PK	None known.

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Specific hazards arising from the chemical	: Sarcosine	May form explosible dust-air mixture if dispersed.
	L-Tryptophan	May form explosible dust-air mixture if dispersed.
	L-Norvaline	May form explosible dust-air mixture if dispersed.
	L-Glutamine	May form explosible dust-air mixture if dispersed.
	L-Asparagine	May form explosible dust-air mixture if dispersed.
	L-4-Hydroxyproline	May form explosible dust-air mixture if dispersed.
	3,3'-Dithiodipropionic Acid	May form explosible dust-air mixture if dispersed.
	FMOc reagent 10 ampoules 1ml ea for AAA	Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.
	OPA reagent, 10 mg/ml, 6 ampoules	In a fire or if heated, a pressure increase will occur and the container may burst. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
	AA, std 10pmol 10/PK	In a fire or if heated, a pressure increase will occur and the container may burst.
AA, std 25pmol 10/PK	In a fire or if heated, a pressure increase will occur and the container may burst.	
AA, standard 100PMOL 10/PK	In a fire or if heated, a pressure increase will occur and the container may burst.	
td 1nmol 10/PK	In a fire or if heated, a pressure increase will occur and the container may burst.	
AA, standard 250PMOL 10/PK	In a fire or if heated, a pressure increase will occur and the container may burst.	
Hazardous thermal decomposition products	: Sarcosine	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides
	L-Tryptophan	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides
	L-Norvaline	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides
	L-Glutamine	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides
	L-Asparagine	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides
	L-4-Hydroxyproline	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides
	3,3'-Dithiodipropionic Acid	Decomposition products may include the following

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	materials: carbon dioxide carbon monoxide sulfur oxides
FMOc reagent 10 ampoules 1ml ea for AAA	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides cyanides
OPA reagent, 10 mg/ml, 6 ampoules	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides metal oxide/oxides Formaldehyde.
AA, std 10pmol 10/PK	No specific data.
AA, std 25pmol 10/PK	No specific data.
AA, standard 100PMOL 10/PK	No specific data.
td 1nmol 10/PK	No specific data.
AA, standard 250PMOL 10/PK	No specific data.

Special protective actions for fire-fighters

: Sarcosine	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
L-Tryptophan	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
L-Norvaline	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
L-Glutamine	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
L-Asparagine	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
L-4-Hydroxyproline	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

Section 5. Fire-fighting measures

		without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
	3,3'-Dithiodipropionic Acid	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
	FMOc reagent 10 ampoules 1ml ea for AAA	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
	OPA reagent, 10 mg/ml, 6 ampoules	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.
	AA, std 10pmol 10/PK	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.
	AA, std 25pmol 10/PK	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.
	AA, standard 100PMOL 10/PK	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.
	td 1nmol 10/PK	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.
	AA, standard 250PMOL 10/PK	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	: Sarcosine	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	L-Tryptophan	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	L-Norvaline	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	L-Glutamine	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	L-Asparagine	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	L-4-Hydroxyproline	Fire-fighters should wear appropriate protective

Section 5. Fire-fighting measures

	equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
3,3'-Dithiodipropionic Acid	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
FMOc reagent 10 ampoules 1ml ea for AAA	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
OPA reagent, 10 mg/ml, 6 ampoules	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
AA, std 10pmol 10/PK	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
AA, std 25pmol 10/PK	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
AA, standard 100PMOL 10/PK	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
td 1nmol 10/PK	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
AA, standard 250PMOL 10/PK	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	: Sarcosine	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 spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing dust. Put on appropriate personal protective equipment.
	L-Tryptophan	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 spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing dust. Put on appropriate personal protective equipment.
	L-Norvaline	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 spilled material. Shut off all ignition sources.

Section 6. Accidental release measures

L-Glutamine	No flares, smoking or flames in hazard area. Avoid breathing dust. Put on appropriate personal protective equipment. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources.
L-Asparagine	No flares, smoking or flames in hazard area. Avoid breathing dust. Put on appropriate personal protective equipment. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources.
L-4-Hydroxyproline	No flares, smoking or flames in hazard area. Avoid breathing dust. Put on appropriate personal protective equipment. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources.
3,3'-Dithiodipropionic Acid	No flares, smoking or flames in hazard area. Avoid breathing dust. Put on appropriate personal protective equipment. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources.
FMOC reagent 10 ampoules 1ml ea for AAA	No flares, smoking or flames in hazard area. Avoid breathing dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. 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 spilled material. Shut off all ignition sources.
OPA reagent, 10 mg/ml, 6 ampoules	No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate.
AA, std 10pmol 10/PK	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 spilled material. Put on appropriate personal protective equipment.

Section 6. Accidental release measures

AA, std 25pmol 10/PK	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 spilled material. Put on appropriate personal protective equipment.
AA, standard 100PMOL 10/PK	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 spilled material. Put on appropriate personal protective equipment.
td 1nmol 10/PK	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 spilled material. Put on appropriate personal protective equipment.
AA, standard 250PMOL 10/PK	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 spilled material. Put on appropriate personal protective equipment.
For emergency responders : Sarcosine	If specialized 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".
L-Tryptophan	If specialized 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".
L-Norvaline	If specialized 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".
L-Glutamine	If specialized 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".
L-Asparagine	If specialized 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".
L-4-Hydroxyproline	If specialized 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".
3,3'-Dithiodipropionic Acid	If specialized 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".
Fmoc reagent 10 ampoules 1ml ea for AAA	If specialized 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".
OPA reagent, 10 mg/ml, 6 ampoules	If specialized 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

AA, std 10pmol 10/PK	If specialized 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".
AA, std 25pmol 10/PK	If specialized 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".
AA, standard 100PMOL 10/PK	If specialized 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".
td 1nmol 10/PK	If specialized 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".
AA, standard 250PMOL 10/PK	If specialized 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".

Environmental precautions : Sarcosine	Avoid dispersal of spilled 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).
L-Tryptophan	Avoid dispersal of spilled 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).
L-Norvaline	Avoid dispersal of spilled 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).
L-Glutamine	Avoid dispersal of spilled 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).
L-Asparagine	Avoid dispersal of spilled 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).
L-4-Hydroxyproline	Avoid dispersal of spilled 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).
3,3'-Dithiodipropionic Acid	Avoid dispersal of spilled 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).
Fmoc reagent 10 ampoules 1ml ea for AAA	Avoid dispersal of spilled 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).

Section 6. Accidental release measures

OPA reagent, 10 mg/ml, 6 ampoules	soil or air). Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.
AA, std 10pmol 10/PK	Avoid dispersal of spilled 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).
AA, std 25pmol 10/PK	Avoid dispersal of spilled 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).
AA, standard 100PMOL 10/PK	Avoid dispersal of spilled 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).
td 1nmol 10/PK	Avoid dispersal of spilled 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).
AA, standard 250PMOL 10/PK	Avoid dispersal of spilled 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).

Methods and materials for containment and cleaning up

Methods for cleaning up	: Sarcosine	Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
	L-Tryptophan	Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
	L-Norvaline	Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
	L-Glutamine	Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
	L-Asparagine	Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste

Section 6. Accidental release measures

L-4-Hydroxyproline	disposal contractor. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
3,3'-Dithiodipropionic Acid	disposal contractor. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
FMOc reagent 10 ampoules 1ml ea for AAA	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
OPA reagent, 10 mg/ml, 6 ampoules	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. Absorb spillage to prevent material damage. Dispose of via a licensed waste disposal contractor.
AA, std 10pmol 10/PK	Stop leak if without risk. Move containers from spill area. The spilled material may be neutralized with sodium carbonate, sodium bicarbonate or sodium hydroxide. Absorb spillage to prevent material damage. Dispose of via a licensed waste disposal contractor.
AA, std 25pmol 10/PK	Stop leak if without risk. Move containers from spill area. The spilled material may be neutralized with sodium carbonate, sodium bicarbonate or sodium hydroxide. Absorb spillage to prevent material damage. Dispose of via a licensed waste disposal contractor.
AA, standard 100PMOL 10/PK	Stop leak if without risk. Move containers from spill area. The spilled material may be neutralized with sodium carbonate, sodium bicarbonate or sodium hydroxide. Absorb spillage to prevent material damage. Dispose of via a licensed waste disposal contractor.
td 1nmol 10/PK	Stop leak if without risk. Move containers from spill area. The spilled material may be neutralized with sodium carbonate, sodium bicarbonate or sodium hydroxide. Absorb spillage to prevent material damage. Dispose of via a licensed waste disposal contractor.
AA, standard 250PMOL 10/PK	Stop leak if without risk. Move containers from spill area. The spilled material may be neutralized with sodium carbonate, sodium bicarbonate or sodium hydroxide. Absorb spillage to prevent material damage. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Precautions for safe handling

Protective measures	: Sarcosine	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.
	L-Tryptophan	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.
	L-Norvaline	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse

Section 7. Handling and storage

L-Glutamine

container.

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

L-Asparagine

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

L-4-Hydroxyproline

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse

Section 7. Handling and storage

3,3'-Dithiodipropionic Acid	<p>container.</p> <p>Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.</p>
FMOC reagent 10 ampoules 1ml ea for AAA	<p>Put on appropriate personal protective equipment (see Section 8). Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.</p>
OPA reagent, 10 mg/ml, 6 ampoules	<p>Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. 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 vapor or mist. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. Absorb spillage to prevent material damage.</p>
AA, std 10pmol 10/PK	<p>Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept</p>

Section 7. Handling and storage

AA, std 25pmol 10/PK	tightly closed when not in use. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container. Absorb spillage to prevent material damage.
	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container. Absorb spillage to prevent material damage.
AA, standard 100PMOL 10/PK	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container. Absorb spillage to prevent material damage.
td 1nmol 10/PK	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container. Absorb spillage to prevent material damage.
AA, standard 250PMOL 10/PK	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container. Absorb spillage to prevent material damage.
Advice on general occupational hygiene	<p data-bbox="488 1388 634 1415">: Sarcosine</p> <p data-bbox="873 1388 1487 1593">Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.</p> <p data-bbox="506 1600 659 1627">L-Tryptophan</p> <p data-bbox="873 1600 1487 1806">Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.</p> <p data-bbox="506 1812 651 1839">L-Norvaline</p> <p data-bbox="873 1812 1487 1990">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</p>

Section 7. Handling and storage

L-Glutamine	additional information on hygiene measures. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
L-Asparagine	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.
L-4-Hydroxyproline	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.
3,3'-Dithiodipropionic Acid	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.
Fmoc reagent 10 ampoules 1ml ea for AAA	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.
OPA reagent, 10 mg/ml, 6 ampoules	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.
AA, std 10pmol 10/PK	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.
AA, std 25pmol 10/PK	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.
AA, standard 100PMOL 10/PK	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face

Section 7. Handling and storage

td 1nmol 10/PK

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.

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.

AA, standard 250PMOL
10/PK

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.

Conditions for safe storage, including any incompatibilities : Sarcosine

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

L-Tryptophan

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

L-Norvaline

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

L-Glutamine

Store in accordance with local regulations. Store in a segregated and approved area. Store in original

Section 7. Handling and storage

L-Asparagine	<p>container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p> <p>Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
L-4-Hydroxyproline	<p>Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
3,3'-Dithiodipropionic Acid	<p>Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
FMOC reagent 10 ampoules 1ml ea for AAA	<p>Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled</p>

Section 7. Handling and storage

OPA reagent, 10 mg/ml, 6 ampoules

containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. Store between the following temperatures: 2 to 8°C (35.6 to 46.4°F). 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 in a corrosion resistant container with a resistant inner liner. Store locked up. Keep away from metals. 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

AA, std 10pmol 10/PK

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 in a corrosion resistant container with a resistant inner liner. Separate from alkalis. Keep away from metals. 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

AA, std 25pmol 10/PK

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 in a corrosion resistant container with a resistant inner liner. Separate from alkalis. Keep away from metals. 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

AA, standard 100PMOL 10/PK

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 in a corrosion resistant container with a resistant inner liner. Separate from alkalis. Keep away from metals. 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

td 1nmol 10/PK

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

Section 7. Handling and storage

AA, standard 250PMOL
10/PK

drink. Store in a corrosion resistant container with a resistant inner liner. Separate from alkalis. Keep away from metals. 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

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 in a corrosion resistant container with a resistant inner liner. Separate from alkalis. Keep away from metals. 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

[Control parameters](#)

[Occupational exposure limits](#)

Ingredient name	Exposure limits
<p>FMOC reagent 10 ampoules 1ml ea for AAA Acetonitrile</p>	<p>CA Alberta Provincial (Canada, 6/2018). 8 hrs OEL: 34 mg/m³ 8 hours. 8 hrs OEL: 20 ppm 8 hours.</p> <p>CA British Columbia Provincial (Canada, 6/2022). Absorbed through skin. TWA: 20 ppm 8 hours.</p> <p>CA Ontario Provincial (Canada, 6/2019). Absorbed through skin. TWA: 20 ppm 8 hours.</p> <p>CA Quebec Provincial (Canada, 6/2022). Absorbed through skin. TWA_{EV}: 20 ppm 8 hours.</p> <p>CA Saskatchewan Provincial (Canada, 7/2013). Absorbed through skin. STEL: 30 ppm 15 minutes. TWA: 20 ppm 8 hours.</p>
<p>OPA reagent, 10 mg/ml, 6 ampoules Potassium hydroxide</p>	<p>CA Alberta Provincial (Canada, 6/2018). C: 2 mg/m³</p> <p>CA British Columbia Provincial (Canada, 6/2022). C: 2 mg/m³</p> <p>CA Ontario Provincial (Canada, 6/2019). Ceiling Limit: 2 mg/m³</p> <p>CA Quebec Provincial (Canada, 6/2022). STEV: 2 mg/m³ 15 minutes.</p> <p>CA Saskatchewan Provincial (Canada,</p>

Section 8. Exposure controls/personal protection

boric acid

7/2013).

CEIL: 2 mg/m³

CA British Columbia Provincial (Canada, 6/2022). [Borate compounds, Inorganic Inhalable]

TWA: 2 mg/m³ 8 hours. Form: InhalableSTEL: 6 mg/m³ 15 minutes. Form: Inhalable

CA Saskatchewan Provincial (Canada, 7/2013). [Borate compounds, inorganic Inhalable fraction]

STEL: 6 mg/m³ 15 minutes. Form: Inhalable fractionTWA: 2 mg/m³ 8 hours. Form: Inhalable fraction

CA Ontario Provincial (Canada, 6/2019). [Borate compounds, Inorganic]

TWA: 2 mg/m³ 8 hours. Form: Inhalable particulate matter.STEL: 6 mg/m³ 15 minutes. Form: Inhalable particulate matter.

CA Quebec Provincial (Canada, 6/2022). [borate, inorganic compounds (including boric acid)]

STEVEV: 6 mg/m³ 15 minutes. Form: inhalable dustTWAEEV: 2 mg/m³ 8 hours. Form: inhalable dust

Methanol

CA Alberta Provincial (Canada, 6/2018). Absorbed through skin.

8 hrs OEL: 262 mg/m³ 8 hours.

8 hrs OEL: 200 ppm 8 hours.

15 min OEL: 250 ppm 15 minutes.

15 min OEL: 328 mg/m³ 15 minutes.

CA British Columbia Provincial (Canada, 6/2022). Absorbed through skin.

TWA: 200 ppm 8 hours.

STEL: 250 ppm 15 minutes.

CA Ontario Provincial (Canada, 6/2019). Absorbed through skin.

TWA: 200 ppm 8 hours.

STEL: 250 ppm 15 minutes.

CA Quebec Provincial (Canada, 6/2022). Absorbed through skin.

TWAEEV: 200 ppm 8 hours.

TWAEEV: 262 mg/m³ 8 hours.

STEVEV: 250 ppm 15 minutes.

STEVEV: 328 mg/m³ 15 minutes.

CA Saskatchewan Provincial (Canada, 7/2013). Absorbed through skin.

STEL: 250 ppm 15 minutes.

TWA: 200 ppm 8 hours.

Phthalaldehyde

CA British Columbia Provincial (Canada, 6/2022). Absorbed through skin. Skin sensitizer. Inhalation sensitizer. Notes: No British Columbia exposure limit at this time

Potassium thiocyanate

CA Quebec Provincial (Canada, 6/2022). [Cyanides] Absorbed through skin.

Section 8. Exposure controls/personal protection

STEV: 10 ppm, (as CN) 15 minutes.
STEV: 11 mg/m³, (as CN) 15 minutes.

Biological exposure indices

No exposure indices known.

- Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- 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.

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. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- 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.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Section 9. Physical and chemical properties and safety characteristics

Physical state	: Sarcosine	Solid. [Powder. Deliquescent solid.]
	L-Tryptophan	Solid. [Crystalline powder.]
	L-Norvaline	Solid. [Crystalline powder.]
	L-Glutamine	Solid. [Needles.]
	L-Asparagine	Solid. [Crystals.]
	L-4-Hydroxyproline	Solid. [Crystals.]
	3,3'-Dithiodipropionic Acid	Solid. [Powder.]
	FMOc reagent 10 ampoules 1ml ea for AAA	Liquid. [Clear.]
	OPA reagent, 10 mg/ml, 6 ampoules	Liquid.
	AA, std 10pmol 10/PK	Liquid.
	AA, std 25pmol 10/PK	Liquid.
	AA, standard 100PMOL 10/PK	Liquid.
	td 1nmol 10/PK	Liquid.
	AA, standard 250PMOL 10/PK	Liquid.
	Color	: Sarcosine
L-Tryptophan		White to yellowish.
L-Norvaline		Not available.
L-Glutamine		Not available.
L-Asparagine		Not available.
L-4-Hydroxyproline		White.
3,3'-Dithiodipropionic Acid		White.
FMOc reagent 10 ampoules 1ml ea for AAA		Colorless.
OPA reagent, 10 mg/ml, 6 ampoules		Yellow. [Light]
AA, std 10pmol 10/PK		Colorless.
AA, std 25pmol 10/PK		Colorless.
AA, standard 100PMOL 10/PK		Colorless.
td 1nmol 10/PK		Colorless.
AA, standard 250PMOL 10/PK		Colorless.
Odor		: Sarcosine
	L-Tryptophan	Odorless.
	L-Norvaline	Not available.
	L-Glutamine	Not available.
	L-Asparagine	Not available.
	L-4-Hydroxyproline	Odorless.
	3,3'-Dithiodipropionic Acid	Unpleasant. [Strong]
	FMOc reagent 10 ampoules 1ml ea for AAA	Ethereal. [Slight]
	OPA reagent, 10 mg/ml, 6 ampoules	Slight
	AA, std 10pmol 10/PK	Not available.
	AA, std 25pmol 10/PK	Not available.
	AA, standard 100PMOL 10/PK	Not available.
	td 1nmol 10/PK	Not available.
	AA, standard 250PMOL 10/PK	Not available.

Section 9. Physical and chemical properties and safety characteristics

Odor threshold	: Sarcosine	Not available.
	L-Tryptophan	Not available.
	L-Norvaline	Not available.
	L-Glutamine	Not available.
	L-Asparagine	Not available.
	L-4-Hydroxyproline	Not available.
	3,3'-Dithiodipropionic Acid	Not available.
	Fmoc reagent 10 ampoules 1ml ea for AAA	70 ppm
	OPA reagent, 10 mg/ml, 6 ampoules	Not available.
	AA, std 10pmol 10/PK	Not available.
	AA, std 25pmol 10/PK	Not available.
	AA, standard 100PMOL 10/PK	Not available.
	td 1nmol 10/PK	Not available.
	AA, standard 250PMOL 10/PK	Not available.
pH	: Sarcosine	Not available.
	L-Tryptophan	5.5 to 7 [Conc. (% w/w): 1%]
	L-Norvaline	Not available.
	L-Glutamine	Not available.
	L-Asparagine	Not available.
	L-4-Hydroxyproline	Not available.
	3,3'-Dithiodipropionic Acid	Not available.
	Fmoc reagent 10 ampoules 1ml ea for AAA	Not available.
	OPA reagent, 10 mg/ml, 6 ampoules	10.4
	AA, std 10pmol 10/PK	1.5
	AA, std 25pmol 10/PK	1.5
	AA, standard 100PMOL 10/PK	1.5
	td 1nmol 10/PK	1.5
	AA, standard 250PMOL 10/PK	1.5
Melting point/freezing point	: Sarcosine	208 to 212°C (406.4 to 413.6°F)
	L-Tryptophan	278.3 to 279.3°C (532.9 to 534.7°F) [EU A.1]
	L-Norvaline	300°C (572°F)
	L-Glutamine	Decomposes
	L-Asparagine	234 to 235°C (453.2 to 455°F)
	L-4-Hydroxyproline	274°C (525.2°F)
	3,3'-Dithiodipropionic Acid	155 to 158°C (311 to 316.4°F)
	Fmoc reagent 10 ampoules 1ml ea for AAA	-45°C (-49°F)
	OPA reagent, 10 mg/ml, 6 ampoules	Not available.
	AA, std 10pmol 10/PK	0°C (32°F)
	AA, std 25pmol 10/PK	0°C (32°F)
	AA, standard 100PMOL 10/PK	0°C (32°F)
	td 1nmol 10/PK	0°C (32°F)
	AA, standard 250PMOL 10/PK	0°C (32°F)

Section 9. Physical and chemical properties and safety characteristics

Boiling point, initial boiling point, and boiling range	Sarcosine	Not available.
	L-Tryptophan	Not available.
	L-Norvaline	Not available.
	L-Glutamine	Not available.
	L-Asparagine	Not available.
	L-4-Hydroxyproline	Not available.
	3,3'-Dithiodipropionic Acid	Not available.
	Fmoc reagent 10 ampoules 1ml ea for AAA	81.6°C (178.9°F)
	OPA reagent, 10 mg/ml, 6 ampoules	Not available.
	AA, std 10pmol 10/PK	100°C (212°F)
	AA, std 25pmol 10/PK	100°C (212°F)
	AA, standard 100PMOL 10/PK	100°C (212°F)
	td 1nmol 10/PK	100°C (212°F)
	AA, standard 250PMOL 10/PK	100°C (212°F)

Flash point	Sarcosine	Not applicable.
	L-Tryptophan	Not applicable.
	L-Norvaline	Not applicable.
	L-Glutamine	Not applicable.
	L-Asparagine	Not applicable.
	L-4-Hydroxyproline	Not applicable.
	3,3'-Dithiodipropionic Acid	Not applicable.
	Fmoc reagent 10 ampoules 1ml ea for AAA	Closed cup: 2°C (35.6°F)
	OPA reagent, 10 mg/ml, 6 ampoules	Not available.
	AA, std 10pmol 10/PK	Not available.
	AA, std 25pmol 10/PK	Not available.
	AA, standard 100PMOL 10/PK	Not available.
	td 1nmol 10/PK	Not available.
	AA, standard 250PMOL 10/PK	Not available.

Ingredient name	Closed cup			Open cup		
	°C	°F	Method	°C	°F	Method
OPA reagent, 10 mg/ml, 6 ampoules						
Methanol	9.7	49.5	Abel-Pensky	-	-	-
Phthalaldehyde	>110	>230	Setaflash	-	-	-

Evaporation rate	Sarcosine	Not available.
	L-Tryptophan	Not available.
	L-Norvaline	Not available.
	L-Glutamine	Not available.
	L-Asparagine	Not available.
	L-4-Hydroxyproline	Not available.
	3,3'-Dithiodipropionic Acid	Not available.
	Fmoc reagent 10 ampoules 1ml ea for AAA	5.79 (butyl acetate = 1)
OPA reagent, 10 mg/ml, 6	<1 (butyl acetate = 1)	

Section 9. Physical and chemical properties and safety characteristics

	ampoules	
	AA, std 10pmol 10/PK	Not available.
	AA, std 25pmol 10/PK	Not available.
	AA, standard 100PMOL 10/PK	Not available.
	td 1nmol 10/PK	Not available.
	AA, standard 250PMOL 10/PK	Not available.
Flammability	: Sarcosine	Not available.
	L-Tryptophan	Not available.
	L-Norvaline	Not available.
	L-Glutamine	Not available.
	L-Asparagine	Not available.
	L-4-Hydroxyproline	Not available.
	3,3'-Dithiodipropionic Acid	Not available.
	Fmoc reagent 10 ampoules 1ml ea for AAA	Not applicable.
	OPA reagent, 10 mg/ml, 6 ampoules	Not applicable.
	AA, std 10pmol 10/PK	Not applicable.
	AA, std 25pmol 10/PK	Not applicable.
	AA, standard 100PMOL 10/PK	Not applicable.
	td 1nmol 10/PK	Not applicable.
	AA, standard 250PMOL 10/PK	Not applicable.
Lower and upper explosion limit/flammability limit	: Sarcosine	Not applicable.
	L-Tryptophan	Not applicable.
	L-Norvaline	Not applicable.
	L-Glutamine	Not applicable.
	L-Asparagine	Not applicable.
	L-4-Hydroxyproline	Not applicable.
	3,3'-Dithiodipropionic Acid	Not applicable.
	Fmoc reagent 10 ampoules 1ml ea for AAA	Lower: 4.4%
		Upper: 16%
	OPA reagent, 10 mg/ml, 6 ampoules	Not available.
	AA, std 10pmol 10/PK	Not available.
	AA, std 25pmol 10/PK	Not available.
	AA, standard 100PMOL 10/PK	Not available.
	td 1nmol 10/PK	Not available.
	AA, standard 250PMOL 10/PK	Not available.
Vapor pressure	: L-Tryptophan	0 kPa (0 mm Hg)
	L-Glutamine	0.0000000025 kPa (0.000000019 mm Hg)
	L-Asparagine	0.0000000064 kPa (0.000000048 mm Hg)
	L-4-Hydroxyproline	0 kPa (0 mm Hg)

Section 9. Physical and chemical properties and safety characteristics

Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
FMOC reagent 10 ampoules 1ml ea for AAA						
Acetonitrile	70.89	9.5	-	-	-	-
OPA reagent, 10 mg/ml, 6 ampoules						
Methanol	126.96	16.9	-	-	-	-
water	17.5	2.3	-	92.258	12.3	-
AA, std 10pmol 10/PK						
water	17.5	2.3	-	92.258	12.3	-
AA, std 25pmol 10/PK						
water	17.5	2.3	-	92.258	12.3	-
AA, standard 100PMOL 10/PK						
water	17.5	2.3	-	92.258	12.3	-
td 1nmol 10/PK						
water	17.5	2.3	-	92.258	12.3	-
AA, standard 250PMOL 10/PK						
water	17.5	2.3	-	92.258	12.3	-

Relative vapor density

Sarcosine	Not applicable.
L-Tryptophan	Not applicable.
L-Norvaline	Not applicable.
L-Glutamine	Not applicable.
L-Asparagine	Not applicable.
L-4-Hydroxyproline	4.5 [Air = 1]
3,3'-Dithiodipropionic Acid	Not applicable.
FMOC reagent 10 ampoules 1ml ea for AAA	Not available.
OPA reagent, 10 mg/ml, 6 ampoules	Not available.
AA, std 10pmol 10/PK	Not available.

Section 9. Physical and chemical properties and safety characteristics

	AA, std 25pmol 10/PK	Not available.
	AA, standard 100PMOL 10/PK	Not available.
	td 1nmol 10/PK	Not available.
	AA, standard 250PMOL 10/PK	Not available.
Relative density	: Sarcosine	Not available.
	L-Tryptophan	1.34
	L-Norvaline	Not available.
	L-Glutamine	1.469 [OECD 109]
	L-Asparagine	1.54 [OECD 109]
	L-4-Hydroxyproline	1.479 [OECD 109]
	3,3'-Dithiodipropionic Acid	Not available.
	Fmoc reagent 10 ampoules 1ml ea for AAA	0.78
	OPA reagent, 10 mg/ml, 6 ampoules	1.045
	AA, std 10pmol 10/PK	Not available.
	AA, std 25pmol 10/PK	Not available.
	AA, standard 100PMOL 10/PK	Not available.
	td 1nmol 10/PK	Not available.
	AA, standard 250PMOL 10/PK	Not available.

Solubility(ies)

Media	Result
Sarcosine water	Soluble
L-Tryptophan water	Soluble
diethyl ether	Insoluble
L-Norvaline water	Soluble
L-Glutamine water	Soluble
L-Asparagine water	Soluble
methanol	Insoluble
diethyl ether	Insoluble
L-4-Hydroxyproline water	Soluble
3,3'-Dithiodipropionic Acid water	Soluble
Fmoc reagent 10 ampoules 1ml ea for AAA water	Soluble
OPA reagent, 10 mg/ml, 6 ampoules water	Soluble
AA, std 10pmol 10/PK water	Soluble
AA, std 25pmol 10/PK water	Soluble
AA, standard 100PMOL 10/PK water	Soluble
td 1nmol 10/PK water	Soluble
AA, standard 250PMOL 10/PK	

Section 9. Physical and chemical properties and safety characteristics

Viscosity	: Sarcosine	Not applicable.
	L-Tryptophan	Not applicable.
	L-Norvaline	Not applicable.
	L-Glutamine	Not applicable.
	L-Asparagine	Not applicable.
	L-4-Hydroxyproline	Not applicable.
	3,3'-Dithiodipropionic Acid	Not applicable.
	Fmoc reagent 10 ampoules 1ml ea for AAA	Not available.
	OPA reagent, 10 mg/ml, 6 ampoules	Not available.
	AA, std 10pmol 10/PK	Not available.
	AA, std 25pmol 10/PK	Not available.
	AA, standard 100PMOL 10/PK	Not available.
	td 1nmol 10/PK	Not available.
	AA, standard 250PMOL 10/PK	Not available.

Particle characteristics

Median particle size	: Sarcosine	Not available.
	L-Tryptophan	Not available.
	L-Norvaline	Not available.
	L-Glutamine	Not available.
	L-Asparagine	Not available.
	L-4-Hydroxyproline	Not available.
	3,3'-Dithiodipropionic Acid	Not available.
	Fmoc reagent 10 ampoules 1ml ea for AAA	Not applicable.
	OPA reagent, 10 mg/ml, 6 ampoules	Not applicable.
	AA, std 10pmol 10/PK	Not applicable.
	AA, std 25pmol 10/PK	Not applicable.
	AA, standard 100PMOL 10/PK	Not applicable.
	td 1nmol 10/PK	Not applicable.
	AA, standard 250PMOL 10/PK	Not applicable.

Section 10. Stability and reactivity

Reactivity	: Sarcosine	No specific test data related to reactivity available for this product or its ingredients.
	L-Tryptophan	No specific test data related to reactivity available for this product or its ingredients.
	L-Norvaline	No specific test data related to reactivity available for this product or its ingredients.
	L-Glutamine	No specific test data related to reactivity available for this product or its ingredients.
	L-Asparagine	No specific test data related to reactivity available for this product or its ingredients.
	L-4-Hydroxyproline	No specific test data related to reactivity available for this product or its ingredients.
	3,3'-Dithiodipropionic Acid	No specific test data related to reactivity available for this product or its ingredients.
	Fmoc reagent 10 ampoules 1ml ea for AAA	No specific test data related to reactivity available for this product or its ingredients.
	OPA reagent, 10 mg/ml, 6 ampoules	No specific test data related to reactivity available for this product or its ingredients.

Section 10. Stability and reactivity

AA, std 10pmol 10/PK	No specific test data related to reactivity available for this product or its ingredients.
AA, std 25pmol 10/PK	No specific test data related to reactivity available for this product or its ingredients.
AA, standard 100PMOL 10/PK	No specific test data related to reactivity available for this product or its ingredients.
td 1nmol 10/PK	No specific test data related to reactivity available for this product or its ingredients.
AA, standard 250PMOL 10/PK	No specific test data related to reactivity available for this product or its ingredients.

Chemical stability

: Sarcosine	The product is stable.
L-Tryptophan	The product is stable.
L-Norvaline	The product is stable.
L-Glutamine	The product is stable.
L-Asparagine	The product is stable.
L-4-Hydroxyproline	The product is stable.
3,3'-Dithiodipropionic Acid	The product is stable.
Fmoc reagent 10 ampoules 1ml ea for AAA	The product is stable.
OPA reagent, 10 mg/ml, 6 ampoules	The product is stable.
AA, std 10pmol 10/PK	The product is stable.
AA, std 25pmol 10/PK	The product is stable.
AA, standard 100PMOL 10/PK	The product is stable.
td 1nmol 10/PK	The product is stable.
AA, standard 250PMOL 10/PK	The product is stable.

Possibility of hazardous reactions

: Sarcosine	Under normal conditions of storage and use, hazardous reactions will not occur.
L-Tryptophan	Under normal conditions of storage and use, hazardous reactions will not occur.
L-Norvaline	Under normal conditions of storage and use, hazardous reactions will not occur.
L-Glutamine	Under normal conditions of storage and use, hazardous reactions will not occur.
L-Asparagine	Under normal conditions of storage and use, hazardous reactions will not occur.
L-4-Hydroxyproline	Under normal conditions of storage and use, hazardous reactions will not occur.
3,3'-Dithiodipropionic Acid	Under normal conditions of storage and use, hazardous reactions will not occur.
Fmoc reagent 10 ampoules 1ml ea for AAA	Under normal conditions of storage and use, hazardous reactions will not occur.
OPA reagent, 10 mg/ml, 6 ampoules	Under normal conditions of storage and use, hazardous reactions will not occur.
AA, std 10pmol 10/PK	Under normal conditions of storage and use, hazardous reactions will not occur.
AA, std 25pmol 10/PK	Under normal conditions of storage and use, hazardous reactions will not occur.
AA, standard 100PMOL 10/PK	Under normal conditions of storage and use, hazardous reactions will not occur.
td 1nmol 10/PK	Under normal conditions of storage and use, hazardous reactions will not occur.
AA, standard 250PMOL 10/PK	Under normal conditions of storage and use, hazardous reactions will not occur.

Section 10. Stability and reactivity

Conditions to avoid	: Sarcosine	Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust accumulation.
	L-Tryptophan	Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust accumulation.
	L-Norvaline	Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust accumulation.
	L-Glutamine	Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust accumulation.
	L-Asparagine	Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust accumulation.
	L-4-Hydroxyproline	Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust accumulation.
	3,3'-Dithiodipropionic Acid	Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust accumulation.
	FMOc reagent 10 ampoules 1ml ea for AAA	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Store away from direct sunlight.
	OPA reagent, 10 mg/ml, 6 ampoules	No specific data.
	AA, std 10pmol 10/PK	No specific data.
	AA, std 25pmol 10/PK	No specific data.
	AA, standard 100PMOL 10/PK	No specific data.
	td 1nmol 10/PK	No specific data.

Section 10. Stability and reactivity

	AA, standard 250PMOL 10/PK	No specific data.
Incompatible materials	: Sarcosine	Reactive or incompatible with the following materials: oxidizing materials
	L-Tryptophan	Reactive or incompatible with the following materials: oxidizing materials
	L-Norvaline	Reactive or incompatible with the following materials: oxidizing materials
	L-Glutamine	Reactive or incompatible with the following materials: oxidizing materials
	L-Asparagine	Reactive or incompatible with the following materials: oxidizing materials
	L-4-Hydroxyproline	Reactive or incompatible with the following materials: oxidizing materials
	3,3'-Dithiodipropionic Acid	Reactive or incompatible with the following materials: oxidizing materials
	Fmoc reagent 10 ampoules 1ml ea for AAA	Reactive or incompatible with the following materials: oxidizing materials
	OPA reagent, 10 mg/ml, 6 ampoules	Reactive or incompatible with the following materials: metals
	AA, std 10pmol 10/PK	Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. Reactive or incompatible with the following materials: alkalis metals
	AA, std 25pmol 10/PK	Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. Reactive or incompatible with the following materials: alkalis metals
	AA, standard 100PMOL 10/PK	Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. Reactive or incompatible with the following materials: alkalis metals
	td 1nmol 10/PK	Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. Reactive or incompatible with the following materials: alkalis metals
	AA, standard 250PMOL 10/PK	Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. Reactive or incompatible with the following materials: alkalis metals


Section 10. Stability and reactivity

Hazardous decomposition products	: Sarcosine	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	L-Tryptophan	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	L-Norvaline	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	L-Glutamine	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	L-Asparagine	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	L-4-Hydroxyproline	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	3,3'-Dithiodipropionic Acid	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	FMOC reagent 10 ampoules 1ml ea for AAA	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	OPA reagent, 10 mg/ml, 6 ampoules	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	AA, std 10pmol 10/PK	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	AA, std 25pmol 10/PK	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	AA, standard 100PMOL 10/PK	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	td 1nmol 10/PK	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	AA, standard 250PMOL 10/PK	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
 L-Tryptophan L-Tryptophan	LD50 Oral	Rat	>16 g/kg	-
L-Glutamine Levoglutamide	LD50 Oral	Rat	7500 mg/kg	-
FMOC reagent 10 ampoules 1ml ea for AAA Acetonitrile	LC50 Inhalation Vapor	Rat	17100 ppm	4 hours
	LD50 Oral	Rat	2460 mg/kg	-

Section 11. Toxicological information

OPA reagent, 10 mg/ml, 6 ampoules Potassium hydroxide boric acid	LD50 Oral	Rat	273 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat - Male, Female	>2.12 mg/l	4 hours
3-Mercaptopropionic acid	LD50 Dermal	Rabbit - Male, Female	>2000 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat - Male, Female	1818 mg/m ³	4 hours
Methanol	LD50 Oral	Rat	96 mg/kg	-
	LC50 Inhalation Vapor	Rat	189.95 mg/l	1 hours
	LC50 Inhalation Vapor	Rat	145000 ppm	1 hours
	LC50 Inhalation Vapor	Rat	83.84 mg/l	4 hours
	LC50 Inhalation Vapor	Rat	64000 ppm	4 hours
	LD50 Dermal	Rabbit	15800 mg/kg	-
Phthalaldehyde	LD50 Oral	Rat	5600 mg/kg	-
	LD50 Dermal	Rat	>2000 mg/kg	-
Potassium thiocyanate	LD50 Oral	Rat	238.12 mg/kg	-
	LD50 Oral	Rat	854 mg/kg	-
Dodecan-1-ol, ethoxylated	LD50 Dermal	Rat - Male, Female	>2000 mg/kg	-
	LD50 Oral	Rat - Female	1000 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
FMOc reagent 10 ampoules 1ml ea for AAA Acetonitrile	Eyes - Moderate irritant	Rabbit	-	24 hours 100 uL	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
OPA reagent, 10 mg/ml, 6 ampoules Potassium hydroxide	Eyes - Moderate irritant	Rabbit	-	24 hours 1 mg	-
	Skin - Severe irritant	Guinea pig	-	24 hours 50 mg	-
	Skin - Severe irritant	Rabbit	-	24 hours 50 mg	-
Methanol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Eyes - Moderate irritant	Rabbit	-	40 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 mg	-
Dodecan-1-ol, ethoxylated	Eyes - Severe irritant	Rabbit	-	24 hours 750 ug	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-

Sensitization

Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Section 11. Toxicological information

Classification

Product/ingredient name	IARC	NTP	ACGIH
Fmoc reagent 10 ampoules 1ml ea for AAA Acetonitrile	-	-	A4
OPA reagent, 10 mg/ml, 6 ampoules boric acid	-	-	A4

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
3,3'-Dithiodipropionic Acid 3,3'-dithiobispropionic acid	Category 3	-	Respiratory tract irritation
OPA reagent, 10 mg/ml, 6 ampoules Methanol	Category 1	-	central nervous system (CNS), optic nerve
Phthalaldehyde	Category 3	-	Respiratory tract irritation
Dodecan-1-ol, ethoxylated	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Fmoc reagent 10 ampoules 1ml ea for AAA Acetonitrile	Category 2	-	blood system, central nervous system (CNS), kidneys, liver

Aspiration hazard

Not available.

Information on the likely routes of exposure

Sarcosine	Not available.
L-Tryptophan	Not available.
L-Norvaline	Not available.
L-Glutamine	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
L-Asparagine	Not available.
L-4-Hydroxyproline	Not available.
3,3'-Dithiodipropionic Acid	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
Fmoc reagent 10 ampoules 1ml ea for AAA	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
OPA reagent, 10 mg/ml, 6 ampoules	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
AA, std 10pmol 10/PK	Not available.
AA, std 25pmol 10/PK	Not available.
AA, standard 100PMOL	Not available.

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10/PK
td 1nmol 10/PK
AA, standard 250PMOL
10/PK

Not available.
Not available.

Potential acute health effects

Eye contact

: Sarcosine Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

L-Tryptophan Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

L-Norvaline Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

L-Glutamine Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

L-Asparagine Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

L-4-Hydroxyproline Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

3,3'-Dithiodipropionic Acid
FMOC reagent 10 ampoules
1ml ea for AAA Causes serious eye irritation.
OPA reagent, 10 mg/ml, 6
ampoules Causes serious eye damage.

AA, std 10pmol 10/PK No known significant effects or critical hazards.
AA, std 25pmol 10/PK No known significant effects or critical hazards.
AA, standard 100PMOL
10/PK No known significant effects or critical hazards.
td 1nmol 10/PK No known significant effects or critical hazards.
AA, standard 250PMOL
10/PK No known significant effects or critical hazards.

Inhalation

: Sarcosine Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

L-Tryptophan Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

L-Norvaline Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

L-Glutamine Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

L-Asparagine Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

L-4-Hydroxyproline Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

3,3'-Dithiodipropionic Acid
FMOC reagent 10 ampoules
1ml ea for AAA May cause respiratory irritation.
OPA reagent, 10 mg/ml, 6
ampoules Harmful if inhaled.
AA, std 10pmol 10/PK No known significant effects or critical hazards.
AA, std 10pmol 10/PK No known significant effects or critical hazards.

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	AA, std 25pmol 10/PK	No known significant effects or critical hazards.
	AA, standard 100PMOL 10/PK	No known significant effects or critical hazards.
	td 1nmol 10/PK	No known significant effects or critical hazards.
	AA, standard 250PMOL 10/PK	No known significant effects or critical hazards.
Skin contact	: Sarcosine	No known significant effects or critical hazards.
	L-Tryptophan	No known significant effects or critical hazards.
	L-Norvaline	No known significant effects or critical hazards.
	L-Glutamine	No known significant effects or critical hazards.
	L-Asparagine	No known significant effects or critical hazards.
	L-4-Hydroxyproline	No known significant effects or critical hazards.
	3,3'-Dithiodipropionic Acid	Causes skin irritation.
	Fmoc reagent 10 ampoules 1ml ea for AAA	Harmful in contact with skin.
	OPA reagent, 10 mg/ml, 6 ampoules	Causes severe burns. May cause an allergic skin reaction.
	AA, std 10pmol 10/PK	No known significant effects or critical hazards.
	AA, std 25pmol 10/PK	No known significant effects or critical hazards.
	AA, standard 100PMOL 10/PK	No known significant effects or critical hazards.
	td 1nmol 10/PK	No known significant effects or critical hazards.
	AA, standard 250PMOL 10/PK	No known significant effects or critical hazards.
Ingestion	: Sarcosine	No known significant effects or critical hazards.
	L-Tryptophan	No known significant effects or critical hazards.
	L-Norvaline	No known significant effects or critical hazards.
	L-Glutamine	No known significant effects or critical hazards.
	L-Asparagine	No known significant effects or critical hazards.
	L-4-Hydroxyproline	No known significant effects or critical hazards.
	3,3'-Dithiodipropionic Acid	No known significant effects or critical hazards.
	Fmoc reagent 10 ampoules 1ml ea for AAA	Harmful if swallowed.
	OPA reagent, 10 mg/ml, 6 ampoules	Severely corrosive to the digestive tract. Causes severe burns. Harmful if swallowed.
	AA, std 10pmol 10/PK	No known significant effects or critical hazards.
	AA, std 25pmol 10/PK	No known significant effects or critical hazards.
	AA, standard 100PMOL 10/PK	No known significant effects or critical hazards.
	td 1nmol 10/PK	No known significant effects or critical hazards.
	AA, standard 250PMOL 10/PK	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: Sarcosine	Adverse symptoms may include the following: irritation redness
	L-Tryptophan	Adverse symptoms may include the following: irritation redness
	L-Norvaline	Adverse symptoms may include the following: irritation redness
	L-Glutamine	Adverse symptoms may include the following: irritation redness
	L-Asparagine	Adverse symptoms may include the following: irritation

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	L-4-Hydroxyproline	redness Adverse symptoms may include the following: irritation
	3,3'-Dithiodipropionic Acid	redness Adverse symptoms may include the following: pain or irritation watering redness
	Fmoc reagent 10 ampoules 1ml ea for AAA	Adverse symptoms may include the following: pain or irritation watering redness
	OPA reagent, 10 mg/ml, 6 ampoules	Adverse symptoms may include the following: pain watering redness
	AA, std 10pmol 10/PK	No specific data.
	AA, std 25pmol 10/PK	No specific data.
	AA, standard 100PMOL 10/PK	No specific data.
	td 1nmol 10/PK	No specific data.
	AA, standard 250PMOL 10/PK	No specific data.
Inhalation	: Sarcosine	Adverse symptoms may include the following: respiratory tract irritation coughing
	L-Tryptophan	Adverse symptoms may include the following: respiratory tract irritation coughing
	L-Norvaline	Adverse symptoms may include the following: respiratory tract irritation coughing
	L-Glutamine	Adverse symptoms may include the following: respiratory tract irritation coughing
	L-Asparagine	Adverse symptoms may include the following: respiratory tract irritation coughing
	L-4-Hydroxyproline	Adverse symptoms may include the following: respiratory tract irritation coughing
	3,3'-Dithiodipropionic Acid	Adverse symptoms may include the following: respiratory tract irritation coughing
	Fmoc reagent 10 ampoules 1ml ea for AAA	No specific data.
	OPA reagent, 10 mg/ml, 6 ampoules	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
	AA, std 10pmol 10/PK	No specific data.
	AA, std 25pmol 10/PK	No specific data.
	AA, standard 100PMOL 10/PK	No specific data.
	td 1nmol 10/PK	No specific data.
	AA, standard 250PMOL	No specific data.

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	10/PK	
Skin contact	: Sarcosine	No specific data.
	L-Tryptophan	No specific data.
	L-Norvaline	No specific data.
	L-Glutamine	No specific data.
	L-Asparagine	No specific data.
	L-4-Hydroxyproline	No specific data.
	3,3'-Dithiodipropionic Acid	Adverse symptoms may include the following: irritation redness
	FMOc reagent 10 ampoules 1ml ea for AAA	No specific data.
	OPA reagent, 10 mg/ml, 6 ampoules	Adverse symptoms may include the following: pain or irritation redness blistering may occur reduced fetal weight increase in fetal deaths skeletal malformations
	AA, std 10pmol 10/PK	No specific data.
	AA, std 25pmol 10/PK	No specific data.
	AA, standard 100PMOL 10/PK	No specific data.
	td 1nmol 10/PK	No specific data.
	AA, standard 250PMOL 10/PK	No specific data.
Ingestion	: Sarcosine	No specific data.
	L-Tryptophan	No specific data.
	L-Norvaline	No specific data.
	L-Glutamine	No specific data.
	L-Asparagine	No specific data.
	L-4-Hydroxyproline	No specific data.
	3,3'-Dithiodipropionic Acid	No specific data.
	FMOc reagent 10 ampoules 1ml ea for AAA	No specific data.
	OPA reagent, 10 mg/ml, 6 ampoules	Adverse symptoms may include the following: stomach pains reduced fetal weight increase in fetal deaths skeletal malformations
	AA, std 10pmol 10/PK	No specific data.
	AA, std 25pmol 10/PK	No specific data.
	AA, standard 100PMOL 10/PK	No specific data.
	td 1nmol 10/PK	No specific data.
	AA, standard 250PMOL 10/PK	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	: Sarcosine	Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.
	L-Tryptophan	Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.
	L-Norvaline	Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.
	L-Glutamine	Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.
	L-Asparagine	Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.
	L-4-Hydroxyproline	Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.
	3,3'-Dithiodipropionic Acid	Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.
	FMOc reagent 10 ampoules 1ml ea for AAA	May cause damage to organs through prolonged or repeated exposure.
	OPA reagent, 10 mg/ml, 6 ampoules	Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
	AA, std 10pmol 10/PK	No known significant effects or critical hazards.
	AA, std 25pmol 10/PK	No known significant effects or critical hazards.
	AA, standard 100PMOL 10/PK	No known significant effects or critical hazards.
	td 1nmol 10/PK	No known significant effects or critical hazards.
	AA, standard 250PMOL 10/PK	No known significant effects or critical hazards.
Carcinogenicity	: Sarcosine	No known significant effects or critical hazards.
	L-Tryptophan	No known significant effects or critical hazards.
	L-Norvaline	No known significant effects or critical hazards.
	L-Glutamine	No known significant effects or critical hazards.
	L-Asparagine	No known significant effects or critical hazards.
	L-4-Hydroxyproline	No known significant effects or critical hazards.
	3,3'-Dithiodipropionic Acid	No known significant effects or critical hazards.
	FMOc reagent 10 ampoules 1ml ea for AAA	No known significant effects or critical hazards.
	OPA reagent, 10 mg/ml, 6 ampoules	No known significant effects or critical hazards.
	AA, std 10pmol 10/PK	No known significant effects or critical hazards.
	AA, std 25pmol 10/PK	No known significant effects or critical hazards.
	AA, standard 100PMOL 10/PK	No known significant effects or critical hazards.
	td 1nmol 10/PK	No known significant effects or critical hazards.
	AA, standard 250PMOL 10/PK	No known significant effects or critical hazards.
Mutagenicity	: Sarcosine	No known significant effects or critical hazards.
	L-Tryptophan	No known significant effects or critical hazards.
	L-Norvaline	No known significant effects or critical hazards.
	L-Glutamine	No known significant effects or critical hazards.
	L-Asparagine	No known significant effects or critical hazards.
	L-4-Hydroxyproline	No known significant effects or critical hazards.
	3,3'-Dithiodipropionic Acid	No known significant effects or critical hazards.
	FMOc reagent 10 ampoules 1ml ea for AAA	No known significant effects or critical hazards.
	OPA reagent, 10 mg/ml, 6 ampoules	No known significant effects or critical hazards.

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	AA, std 10pmol 10/PK	No known significant effects or critical hazards.
	AA, std 25pmol 10/PK	No known significant effects or critical hazards.
	AA, standard 100PMOL 10/PK	No known significant effects or critical hazards.
	td 1nmol 10/PK	No known significant effects or critical hazards.
	AA, standard 250PMOL 10/PK	No known significant effects or critical hazards.
Reproductive toxicity	: Sarcosine	No known significant effects or critical hazards.
	L-Tryptophan	No known significant effects or critical hazards.
	L-Norvaline	No known significant effects or critical hazards.
	L-Glutamine	No known significant effects or critical hazards.
	L-Asparagine	No known significant effects or critical hazards.
	L-4-Hydroxyproline	No known significant effects or critical hazards.
	3,3'-Dithiodipropionic Acid	No known significant effects or critical hazards.
	FMOC reagent 10 ampoules 1ml ea for AAA	No known significant effects or critical hazards.
	OPA reagent, 10 mg/ml, 6 ampoules	May damage fertility or the unborn child.
	AA, std 10pmol 10/PK	No known significant effects or critical hazards.
	AA, std 25pmol 10/PK	No known significant effects or critical hazards.
	AA, standard 100PMOL 10/PK	No known significant effects or critical hazards.
	td 1nmol 10/PK	No known significant effects or critical hazards.
	AA, standard 250PMOL 10/PK	No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
L-Glutamine Levoglutamide	7500	N/A	N/A	N/A	N/A
FMOC reagent 10 ampoules 1ml ea for AAA FMOC reagent 10 ampoules 1ml ea for AAA	502.5	1105.5	N/A	11.1	N/A
Acetonitrile	500	1100	N/A	11	N/A
OPA reagent, 10 mg/ml, 6 ampoules OPA reagent, 10 mg/ml, 6 ampoules	1501.1	12231.3	N/A	150.0	56.6
Potassium hydroxide	273	N/A	N/A	N/A	N/A
boric acid	5100	N/A	N/A	N/A	N/A
3-Mercaptopropionic acid	96	N/A	N/A	N/A	1.818
Methanol	100	300	N/A	3	N/A
Phthalaldehyde	238.12	2500	N/A	N/A	N/A
Potassium thiocyanate	854	1100	N/A	N/A	1.5
Dodecan-1-ol, ethoxylated	1000	2500	N/A	N/A	N/A

Section 11. Toxicological information

Other information	: Fmoc reagent 10 ampoules 1ml ea for AAA	Adverse symptoms may include the following: May cause headache, weakness, dizziness, shortness of breath, cyanosis, rapid heart beat, unconsciousness and possible death.
	OPA reagent, 10 mg/ml, 6 ampoules	Adverse symptoms may include the following: blurred or double vision, Eye contact can result in corneal damage or blindness. Repeated or prolonged exposure to the substance can produce liver damage. May cause eye irritation. Repeated or prolonged exposure to the substance can produce reproductive system damage. Narcotic effect. May cause nervous system disturbances.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
L-Glutamine Levoglutamide	Acute EC50 >100 mg/l Fresh water	Algae	72 hours
	Acute EC50 >100 mg/l Fresh water	Daphnia	48 hours
	Acute NOEC 100 mg/l Fresh water	Algae	72 hours
	Acute NOEC 100 mg/l Fresh water	Daphnia	48 hours
L-Asparagine Asparagine	Acute EC50 >100 mg/l Fresh water	Algae - <i>Pseudokirchneriella subcapitata</i>	72 hours
	Acute NOEC 100 mg/l Fresh water	Algae - <i>Pseudokirchneriella subcapitata</i>	72 hours
L-4-Hydroxyproline L-4-Hydroxyproline	Acute EC50 71.6 mg/l Fresh water	Algae - <i>Pseudokirchneriella subcapitata</i>	72 hours
	Acute EC50 >100 mg/l Fresh water	Daphnia	48 hours
	Acute NOEC 25 mg/l Fresh water	Algae - <i>Pseudokirchneriella subcapitata</i>	72 hours
	Acute NOEC 100 mg/l Fresh water	Daphnia	48 hours
Fmoc reagent 10 ampoules 1ml ea for AAA Acetonitrile	Acute IC50 3685000 µg/l Fresh water	Aquatic plants - <i>Lemna minor</i>	96 hours
	Acute LC50 3600000 µg/l Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute LC50 1000000 µg/l Fresh water	Fish - <i>Pimephales promelas</i>	96 hours
	Chronic NOEC 1000000 µg/l Fresh water	Aquatic plants - <i>Lemna minor</i>	96 hours
	Chronic NOEC 160000 µg/l Fresh water	Daphnia - <i>Daphnia magna</i>	21 days
OPA reagent, 10 mg/ml, 6 ampoules Potassium hydroxide boric acid	Acute LC50 80 ppm Fresh water	Fish - <i>Gambusia affinis</i> - Adult	96 hours
	Acute LC50 45.5 mg/l Fresh water	Crustaceans - <i>Ceriodaphnia dubia</i>	48 hours
	Acute LC50 133000 µg/l Fresh water	Daphnia - <i>Daphnia magna</i> - Neonate	48 hours
	Acute LC50 75 mg/l Marine water	Fish - <i>Pagrus major</i>	96 hours
	Chronic NOEC 6000 µg/l Fresh water	Daphnia - <i>Daphnia magna</i>	21 days
3-Mercaptopropionic acid	Chronic NOEC 2100 µg/l Fresh water	Fish - <i>Oncorhynchus mykiss</i>	87 days
	Acute EC50 26 mg/l Fresh water	Algae	72 hours
	Acute EC50 9 mg/l Fresh water	Daphnia	48 hours
	Acute LC50 98 mg/l Fresh water	Fish	96 hours

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Methanol	Acute NOEC 4.1 mg/l Fresh water	Algae	72 hours
	Acute EC50 2736 mg/l Marine water	Algae - <i>Ulva pertusa</i>	96 hours
	Acute LC50 2500000 µg/l Marine water	Crustaceans - <i>Crangon crangon</i> - Adult	48 hours
Phthalaldehyde	Acute LC50 3289 mg/l Fresh water	Daphnia - <i>Daphnia magna</i> - Neonate	48 hours
	Acute LC50 290 mg/l Fresh water	Fish - <i>Danio rerio</i> - Egg	96 hours
	Chronic NOEC 9.96 mg/l Marine water	Algae - <i>Ulva pertusa</i>	96 hours
Potassium thiocyanate	Acute EC50 90 ppb Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute LC50 20 ppb Fresh water	Fish - <i>Oncorhynchus mykiss</i>	96 hours
	Acute LC50 11000 µg/l Fresh water	Daphnia - <i>Daphnia pulex</i>	48 hours
Dodecan-1-ol, ethoxylated	Acute LC50 13.3 mg/l Fresh water	Fish - <i>Salvelinus fontinalis</i>	96 hours
	Chronic NOEC 1100 µg/l Fresh water	Fish - <i>Lepomis macrochirus</i> - Juvenile (Fledgling, Hatchling, Weanling)	124 days
	Acute LC50 6460 µg/l Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute LC50 1500 µg/l Fresh water	Fish - <i>Salmo salar</i> - Parr	96 hours

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
L-Tryptophan L-Tryptophan	OECD 301B Ready Biodegradability - CO ₂ Evolution Test	77 % - 28 days	-	-
FMOc reagent 10 ampoules 1ml ea for AAA Acetonitrile	OECD 310 Ready Biodegradability - CO ₂ in Sealed Vessels (Headspace Test)	70 % - Readily - 21 days	-	Activated sludge
OPA reagent, 10 mg/ml, 6 ampoules 3-Mercaptopropionic acid	301A Ready Biodegradability - DOC Die-Away Test	96 % - Readily - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
L-Tryptophan L-Tryptophan	-	-	Readily
L-Glutamine Levoglutamide	-	-	Readily
L-Asparagine Asparagine	-	-	Readily
L-4-Hydroxyproline L-4-Hydroxyproline	-	-	Readily

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3,3'-Dithiodipropionic Acid 3,3'-dithiobispropionic acid	-	-	Readily
FMOG reagent 10 ampoules 1ml ea for AAA Acetonitrile	-	-	Readily
OPA reagent, 10 mg/ml, 6 ampoules boric acid	-	-	Not readily
3-Mercaptopropionic acid	-	-	Readily
Methanol	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Sarcosine Sarcosine	-2.78	-	Low
L-Tryptophan L-Tryptophan	-1.06	-	Low
L-Norvaline Norvaline	-2.11	-	Low
L-Glutamine Levoglutamide	-3.64	-	Low
L-Asparagine Asparagine	-3.82	-	Low
L-4-Hydroxyproline L-4-Hydroxyproline	-3.17	-	Low
FMOG reagent 10 ampoules 1ml ea for AAA FMOG reagent 10 ampoules 1ml ea for AAA	<1	-	Low
Acetonitrile	-0.34	3	Low
OPA reagent, 10 mg/ml, 6 ampoules boric acid	-1.09	-	Low
3-Mercaptopropionic acid	-2.32	-	Low
Methanol	-0.77	<10	Low
Phthalaldehyde	0.99	-	Low
Potassium thiocyanate	-2.52	-	Low

Mobility in soil

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

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

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized 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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. 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 spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

TDG / IMDG / IATA : Not regulated.

Additional information

Remarks: De minimis quantities

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.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

Canadian lists

Canadian NPRI : The following components are listed: acetonitrile

CEPA Toxic substances : None of the components are listed.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

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

Canada : Not determined.

United States : Not determined.

Section 16. Other information

History

Date of issue/Date of revision : 12/12/2023

Date of previous issue : 04/28/2023

Version : 6.1

Key to abbreviations : ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 HPR = Hazardous Products Regulations
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 LogPow = logarithm of the octanol/water partition coefficient
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 N/A = Not available
 UN = United Nations

Procedure used to derive the classification

Classification	Justification
Sarcosine COMBUSTIBLE DUSTS - Category 1	On basis of test data
L-Tryptophan COMBUSTIBLE DUSTS - Category 1	On basis of test data
L-Norvaline COMBUSTIBLE DUSTS - Category 1	On basis of test data
L-Glutamine COMBUSTIBLE DUSTS - Category 1	On basis of test data
L-Asparagine COMBUSTIBLE DUSTS - Category 1	On basis of test data
L-4-Hydroxyproline COMBUSTIBLE DUSTS - Category 1	On basis of test data
3,3'-Dithiodipropionic Acid COMBUSTIBLE DUSTS - Category 1 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	On basis of test data Expert judgment Expert judgment Expert judgment
FMOc reagent 10 ampoules 1ml ea for AAA FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method
OPA reagent, 10 mg/ml, 6 ampoules CORROSIVE TO METALS - Category 1 ACUTE TOXICITY (oral) - Category 4 SKIN CORROSION - Category 1A	Expert judgment Calculation method Calculation method

Section 16. Other information

SERIOUS EYE DAMAGE - Category 1	Calculation method
SKIN SENSITIZATION - Category 1A	Calculation method
TOXIC TO REPRODUCTION - Category 1	Calculation method
Health Hazards Not Otherwise Classified - Category 1	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 2	Calculation method
AA, std 10pmol 10/PK	
CORROSIVE TO METALS - Category 1	Expert judgment
AA, std 25pmol 10/PK	
CORROSIVE TO METALS - Category 1	Expert judgment
AA, standard 100PMOL 10/PK	
CORROSIVE TO METALS - Category 1	Expert judgment
td 1nmol 10/PK	
CORROSIVE TO METALS - Category 1	Expert judgment
AA, standard 250PMOL 10/PK	
CORROSIVE TO METALS - Category 1	Expert judgment

✔ Indicates information that has changed from previously issued version.

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