



# Metabolomics QC Standard Mix 1

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations  
Issue date: 5/20/2016 Revision date: 4/22/2024 Supersedes: 3/18/2024 Version: 2.1

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
Product name : Metabolomics QC Standard Mix 1  
Product code : MSK-QC1

#### 1.2. Recommended use and restrictions on use

No additional information available

#### 1.3. Supplier

Cambridge Isotope Laboratories, Inc.  
50 Frontage Rd  
01810  
ANDOVER, MA, 01810  
USA  
T 1-800-322-1174  
[cilsales@isotope.com](mailto:cilsales@isotope.com) - [www.isotope.com](http://www.isotope.com)

#### 1.4. Emergency telephone number

Emergency number : 1-703-741-5970  
Chemtrec 1-800-424-9300 24 hours

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS US classification

Not classified

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labeling

No labeling applicable

#### 2.3. Other hazards which do not result in classification

No additional information available

#### 2.4. Unknown acute toxicity (GHS US)

Not applicable

### SECTION 3: Composition/Information on ingredients

#### 3.1. Substances

Not applicable

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### 3.2. Mixtures

Name	Product identifier	%	GHS US classification
L-TRYPTOPHAN (13C11, 99%)	CAS-No.: 73-22-3 (Unlabeled)	71.14	Not classified
L-TYROSINE (RING-13C6, 99%)	CAS-No.: 201595-63-3	7.38	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335
L-ALANINE (13C3, 99%)	CAS-No.: 100108-77-8	7.26	Not classified
L-PHENYLALANINE (RING-13C6, 99%)	CAS-No.: 63-91-2 (Unlabeled)	7.12	Not classified
L-LEUCINE (13C6, 99%)	CAS-No.: 201740-84-3	7.11	Not classified

Full text of hazard classes and H-statements : see section 16

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

First-aid measures general	: Move out of dangerous area. Consult a physician and show this safety data sheet.
First-aid measures after inhalation	: If breathed in, move person to fresh air. If not breathing, give artificial respiration. Consult a physician.
First-aid measures after skin contact	: Wash with soap and plenty of water. Consult a physician.
First-aid measures after eye contact	: Flush eye with water for 15 minutes. Get medical attention.
First-aid measures after ingestion	: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### 4.2. Most important symptoms and effects (acute and delayed)

Potential Adverse human health effects and symptoms	: This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.
Symptoms/effects after inhalation	: May be harmful if inhaled. May cause respiratory tract irritation.
Symptoms/effects after skin contact	: May be harmful if absorbed through skin. May cause skin irritation.
Symptoms/effects after eye contact	: May cause eye irritation.
Symptoms/effects after ingestion	: May be harmful if swallowed.

### 4.3. Immediate medical attention and special treatment, if necessary

No additional information available

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

### 5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire : Carbon oxides (CO, CO2). Nitrogen oxides. Phosgene.

### 5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

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### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

Emergency procedures : Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Avoid breathing dust.

##### 6.1.2. For emergency responders

No additional information available

#### 6.2. Environmental precautions

Do not let product enter drains.

#### 6.3. Methods and material for containment and cleaning up

For containment : Take up mechanically (sweeping, shoveling) and collect in suitable container for disposal.

#### 6.4. Reference to other sections

For further information refer to section 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep container tightly closed in a cool, dry and well-ventilated place.  
Storage conditions : Store in freezer (-20°C). Protect from light.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

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No additional information available

##### L-LEUCINE (13C6, 99%) (201740-84-3)

###### USA - ACGIH - Occupational Exposure Limits

ACGIH chemical category	No component of this product present at levels greater than or equal to 0.1% is identifiable as a carcinogen or potential carcinogen by ACGIH.
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##### L-ALANINE (13C3, 99%) (100108-77-8)

No additional information available

##### L-TYROSINE (RING-13C6, 99%) (201595-63-3)

###### USA - ACGIH - Occupational Exposure Limits

ACGIH chemical category	No component of this product present at levels greater than or equal to 0.1% is identifiable as a carcinogen or potential carcinogen by ACGIH.
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### L-PHENYLALANINE (RING-13C6, 99%) (63-91-2 (Unlabeled))

#### USA - ACGIH - Occupational Exposure Limits

ACGIH chemical category

No component of this product present at levels greater than or equal to 0.1% is identifiable as a carcinogen or potential carcinogen by ACGIH.

### L-TRYPTOPHAN (13C11, 99%) (73-22-3 (Unlabeled))

No additional information available

## 8.2. Appropriate engineering controls

No additional information available

## 8.3. Individual protection measures/Personal protective equipment

### Personal protective equipment:

Safety glasses. Gloves. Respiratory protection of the dependent type. Self-contained breathing apparatus. Protective clothing.

#### Hand protection:

Wear suitable protective clothing and gloves

#### Eye protection:

Wear safety glasses with side shields (or goggles) and a face shield.

#### Skin and body protection:

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

#### Respiratory protection:

When appropriate, use NIOSH/CEN approved respirator.

### Personal protective equipment symbol(s):



## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Solid.
Color	: White to off-white
Odor	: No data available
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Solubility	: No data available

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Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

See storage and expiration date on CoA.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

No additional information available

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

No additional information available

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

#### L-LEUCINE (13C6, 99%) (201740-84-3)

LD50 oral rat	> 16000 mg/kg male and female
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#### L-ALANINE (13C3, 99%) (100108-77-8)

LD50 oral rat	> 5110 mg/kg male and female
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#### L-TRYPTOPHAN (13C11, 99%) (73-22-3 (Unlabeled))

LD50 oral rat	> 16000 mg/kg Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste): Eye: Ptosis. Behavioral: Coma. Nutritional and Gross Metabolic: Changes in: Body temperature decrease.
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Skin corrosion/irritation	: Not classified
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L-ALANINE (13C3, 99%) (100108-77-8)	
pH	5.5 – 7 at 89.1 g/l at 25 °C (77 °F)
L-PHENYLALANINE (RING-13C6, 99%) (63-91-2 (Unlabeled))	
pH	5 – 7 at 16.5 g/l at 25 °C (77 °F)
Serious eye damage/irritation	: Not classified
L-ALANINE (13C3, 99%) (100108-77-8)	
pH	5.5 – 7 at 89.1 g/l at 25 °C (77 °F)
L-PHENYLALANINE (RING-13C6, 99%) (63-91-2 (Unlabeled))	
pH	5 – 7 at 16.5 g/l at 25 °C (77 °F)
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
L-TYROSINE (RING-13C6, 99%) (201595-63-3)	
National Toxicology Program (NTP) Status	No component of this product present at levels greater than or equal to 0.1 % is identified as a known or anticipated carcinogen by NTP.
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
L-TYROSINE (RING-13C6, 99%) (201595-63-3)	
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure	: Not classified
L-LEUCINE (13C6, 99%) (201740-84-3)	
NOAEL (oral,rat,90 days)	3840 mg/kg bodyweight/day female
Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
Potential Adverse human health effects and symptoms	: This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.
Symptoms/effects after inhalation	: May be harmful if inhaled. May cause respiratory tract irritation.
Symptoms/effects after skin contact	: May be harmful if absorbed through skin. May cause skin irritation.
Symptoms/effects after eye contact	: May cause eye irritation.
Symptoms/effects after ingestion	: May be harmful if swallowed.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

L-ALANINE (13C3, 99%) (100108-77-8)	
EC50 - Crustacea [1]	> 100 mg/l static test - Daphnia magna (Water flea) - 48 h

### 12.2. Persistence and degradability

No additional information available

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### 12.3. Bioaccumulative potential

#### L-ALANINE (13C3, 99%) (100108-77-8)

Partition coefficient n-octanol/water (Log Pow) : -2.74 at 20 °C (68 °F)

#### L-TYROSINE (RING-13C6, 99%) (201595-63-3)

Partition coefficient n-octanol/water (Log Pow) : -2.26 at 25 °C (77 °F)

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Other adverse effects : Disposal must be done according to official regulations. Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Regional legislation (waste) : Waste materials should be disposed of under conditions which meet Federal, State, and local environmental control regulations.  
Product/Packaging disposal recommendations : Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.  
Ecology - waste materials : Dispose of as unused product.

## SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

### 14.1. UN number

Not regulated for transport

### 14.2. UN proper shipping name

Proper Shipping Name (DOT) : Not applicable  
Proper Shipping Name (TDG) : Not applicable  
Proper Shipping Name (IMDG) : Not applicable  
Proper Shipping Name (IATA) : Not applicable

### 14.3. Transport hazard class(es)

**DOT**  
Transport hazard class(es) (DOT) : Not applicable

**TDG**  
Transport hazard class(es) (TDG) : Not applicable

**IMDG**  
Transport hazard class(es) (IMDG) : Not applicable

**IATA**  
Transport hazard class(es) (IATA) : Not applicable

### 14.4. Packing group

Packing group (DOT) : Not applicable

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Packing group (TDG) : Not applicable  
Packing group (IMDG) : Not applicable  
Packing group (IATA) : Not applicable

### 14.5. Environmental hazards

Other information : No supplementary information available.

### 14.6. Special precautions for user

Special transport precautions : Not dangerous goods.

#### DOT

No data available

#### TDG

No data available

#### IMDG

No data available

#### IATA

No data available

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
L-LEUCINE (13C6, 99%)	201740-84-3	Not present	-	
L-ALANINE (13C3, 99%)	100108-77-8	Not present	-	
L-TYROSINE (RING-13C6, 99%)	201595-63-3	Not present	-	
L-PHENYLALANINE (RING-13C6, 99%)	63-91-2 (Unlabeled)	Not present	-	
L-TRYPTOPHAN (13C11, 99%)	73-22-3 (Unlabeled)	Not present	-	

#### L-LEUCINE (13C6, 99%) (201740-84-3)

SARA Section 302 Threshold Planning Quantity (TPQ)	SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302
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#### L-TYROSINE (RING-13C6, 99%) (201595-63-3)

SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard

#### L-PHENYLALANINE (RING-13C6, 99%) (63-91-2 (Unlabeled))

SARA Section 302 Threshold Planning Quantity (TPQ)	SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
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### L-TRYPTOPHAN (13C11, 99%) (73-22-3 (Unlabeled))

SARA Section 302 Threshold Planning Quantity (TPQ)

Not subject to reporting requirements of the United States SARA Section 302

### 15.2. International regulations

#### CANADA

#### L-LEUCINE (13C6, 99%) (201740-84-3)

Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)

#### L-ALANINE (13C3, 99%) (100108-77-8)

Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)

#### L-TYROSINE (RING-13C6, 99%) (201595-63-3)

Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)

#### EU-Regulations

No additional information available

#### National regulations

No additional information available

### 15.3. US State regulations

No additional information available

## SECTION 16: Other information

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Revision date : 04/22/2024

Other information : This product is not radioactive. The data given for this product are those of the corresponding unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled compounds are generally not available, but are assumed to be similar or identical to the corresponding unlabeled compound.

#### Full text of H-phrases

H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation

Safety Data Sheet (SDS), USA

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