



Metabolomics QC Kits

For Untargeted/Targeted
Mass Spectrometry



Materials for testing assay effectiveness and platform performance are paramount to obtaining quality data. Under routine implementation, such materials can provide a reliable measure of the efficiency of a specific method, while flagging deficiencies or errors in an analytical platform (e.g., LC- or GC-MS/MS). To help aid these performance assessments in MS metabolomics and additionally provide the potential of metabolite quantification, Cambridge Isotope Laboratories, Inc. (CIL) is pleased to offer two metabolomics QC kits (**MSK-QC-KIT**, **MSK-QReSS™-KIT**) for untargeted/targeted MS-based applications.

Example Features and Benefits

- Mixes (in neat form) with user manual
- Predominantly ¹³C and/or ¹⁵N metabolites
- Offers flexibility in use and application
- Reduces development time and cost
- Provides enhanced reproducibility

MSK-QC-KIT ← [Click for additional information](#)

This kit contains the following materials and tools:

- 2 vials of stable isotope-labeled metabolites (dried down)
- Detailed user manual

Table. Mix composition. Reconstitution in 1 mL of solvent (e.g., 50% methanol) yields the concentrations specified.

Description	Conc. (µg/mL)	Vial
L-Alanine (¹³ C ₃ , 99%)	4	1
L-Leucine (¹³ C ₆ , 99%)	4	1
L-Phenylalanine (¹³ C ₆ , 99%)	4	1
L-Tryptophan (¹³ C ₁₁ , 99%)	40	1
L-Tyrosine (¹³ C ₆ , 99%)	4	1
Caffeine (¹³ C ₃ , 99%)	4	2
D-Glucose (¹³ C ₆ , 99%)	4	2
Sodium benzoate (¹³ C ₆ , 99%)	4	2
Sodium citrate (¹³ C ₃ , 99%)	4	2
Sodium octanoate (¹³ C ₈ , 99%)	4	2
Sodium propionate (¹³ C ₃ , 99%)	4	2
Stearic acid, sodium salt (¹³ C ₁₈ , 98%)	0.4	2
Succinic acid, disodium salt (¹³ C ₄ , 99%)	4	2
D-Sucrose (¹³ C ₆ , 98%)	4	2

Individual vials and companion unlabeled mixtures may also be available. Please inquire.

*Chemical purity (CP) is 98% or greater, unless otherwise indicated.
For research use only. Not for use in diagnostic procedures.*

MSK-QReSS-KIT ← [Click for additional information](#)

This kit contains the following materials and tools:

- 2 vials of stable isotope-labeled metabolites (dried down)
- Detailed user manual

Table. Mix composition. Reconstitution in 1 mL of solvent (e.g., 50% methanol) yields the concentrations specified.

Description	Conc. (µg/mL)	Vial
L-Alanine (¹³ C ₃ , 99%; ¹⁵ N, 99%)	100	1
1,4-Butanediamine-2HCl (¹³ C ₄ , 99%)	10	1
Creatinine (N-methyl-D ₃ , 98%)	100	1
Ethanolamine-HCl (1,1,2,2-D ₄ , 98%)	10	1
Guanosine·2H ₂ O (¹⁵ N ₅ , 96-98%)	2	1
Hypoxanthine (¹³ C ₅ , 99%)	10	1
L-Leucine (¹³ C ₆ , 99%)	5	1
L-Phenylalanine (ring- ¹³ C ₆ , 99%)	100	1
Thymine (1,3- ¹⁵ N ₂ , 98%)	20	1
L-Tryptophan (¹³ C ₁₁ , 99%)	100	1
L-Tyrosine (ring- ¹³ C ₆ , 99%)	100	1
Vitamin B ₃ (¹³ C ₆ , 99%)	5	1
Citric acid (1,5,6-carboxyl- ¹³ C ₃ , 99%)	10	2
Fumaric acid (¹³ C ₄ , 99%)	100	2
Indole-3-acetic acid (phenyl- ¹³ C ₆ , 99%)	5	2
α-Ketoglutaric acid, disodium salt (1,2,3,4- ¹³ C ₄ , 99%) CP 97%	100	2
Sodium palmitate (U- ¹³ C ₁₆ , 98%)	10	2
Sodium pyruvate (¹³ C ₃ , 99%)	100	2

Application Note

Percy, A.J.; Proos, R.; Demianova, Z.; Backiel, K.; Ubhi, B.K. **2021**. Standardizing quantitative metabolomics analyses through the QReSS™ kit. (CIL note #49)