



Cambridge Isotope Laboratories, Inc.

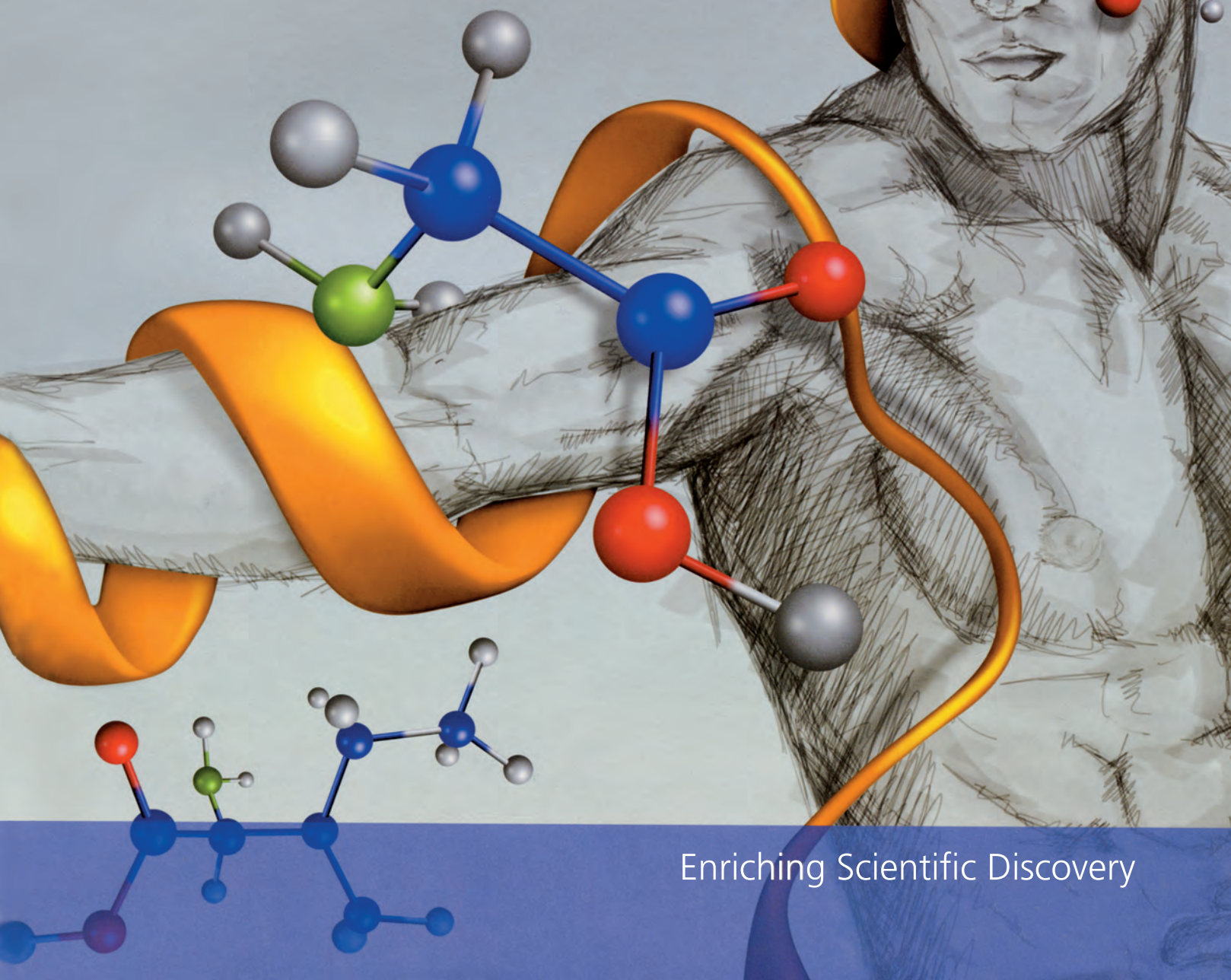
Stable Isotopes for Mass Spectrometry

Proteomics

Metabolism/Metabolomics

MS/MS Standards

Environmental Analysis



Enriching Scientific Discovery

Standards for qNMR

Quantitative ^1H -NMR (qNMR) continues to be utilized with much success in the pharmaceutical, chemical and food industries and in many facets of academic research. Regardless of the application, all qNMR methods require a calibration signal whose integrated signal intensity originates or is traceable to a known number of protons. Calibration for qNMR is made using either internal or external referencing methods. External methods rely on the use of a standard solution packaged in a defined NMR tube or capillary to obtain an integral that can be used for sample quantification, whereas internal methods rely on the use of a known amount of standard that is co-dissolved in the sample itself.

External Calibration Standards

CIL is pleased to offer external calibration standards for qNMR. The standards are formulated using CIL's high-quality $\text{DMSO}-d_6$ and benzoic acid from NIST (SRM 350(b)), a standard reference material for acidometry. Both 5 mM and 15 mM benzoic acid concentrations are available. The concentration and associated expanded uncertainty of the benzoic acid has been accurately determined using metrological techniques and verified using qNMR. The ^1H -NMR spectrum of benzoic acid in $\text{DMSO}-d_6$ is presented in Figure 1.

CIL is currently offering these standards in presealed NMR tubes. Please see the information below for details regarding NMR tubes and fill volumes. Other NMR tubes and concentrations may be available upon request.

qNMR Standard for External Referencing

Catalog No.	Description*	NMR Tube**	Part No.	Fill Volume
DLM-9491A	5 mM Benzoic acid in $\text{DMSO}-d_6$	1.7 mm O.D.	Bruker Part No. Z106462	50 μL
DLM-9491B	5 mM Benzoic acid in $\text{DMSO}-d_6$	3 mm O.D.	Wilmad Part No. 335-PP-9	160 μL
DLM-9491C	5 mM Benzoic acid in $\text{DMSO}-d_6$	5 mm O.D.	Wilmad Part No. 528-PP-8	750 μL
DLM-7061A	15 mM Benzoic acid in $\text{DMSO}-d_6$	1.7 mm O.D.	Bruker Part No. Z106462	50 μL
DLM-7061B	15 mM Benzoic acid in $\text{DMSO}-d_6$	3 mm O.D.	Wilmad Part No. 335-PP-9	160 μL
DLM-7061C	15 mM Benzoic acid in $\text{DMSO}-d_6$	5 mm O.D.	Wilmad Part No. 528-PP-8	750 μL

* The benzoic acid concentration and associated uncertainty are reported.

** All tubes are flame-sealed to ensure longevity.

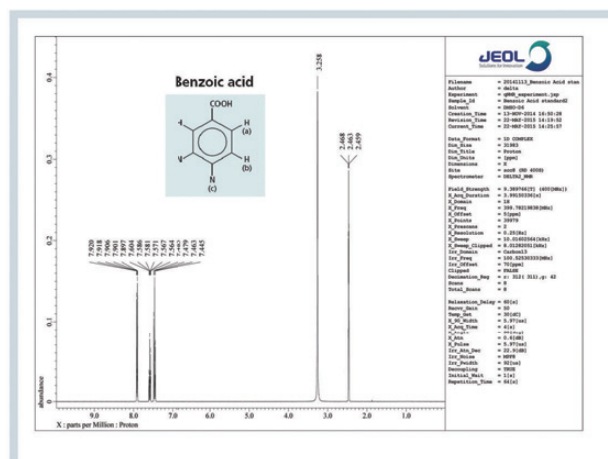


Figure 1. 400 MHz ^1H -NMR spectrum of benzoic acid in $\text{DMSO}-d_6$. Resonances from the aromatic protons of benzoic acid, HOD and $\text{DMSO}-d_6$ are assigned. The acid proton resonance from benzoic acid (~11-13 ppm) is not shown.

Other NMR
fill volumes
and tubes are
available.
Please inquire.



CIL Formulation Procedure

The procedure that CIL uses to formulate qNMR external calibration reference standard bulk solutions allows for the expanded uncertainty of the concentration of the calibration standard (e.g., benzoic acid) to be determined. Traceability to SI is maintained through the use of weight sets with calibration

traceable to NIST and laboratory balances with NIST-traceable calibration certificates, maintaining an unbroken chain of calibration to the kilogram. The factors contributing to the uncertainty of the benzoic acid concentration¹ is shown in Figure 2.

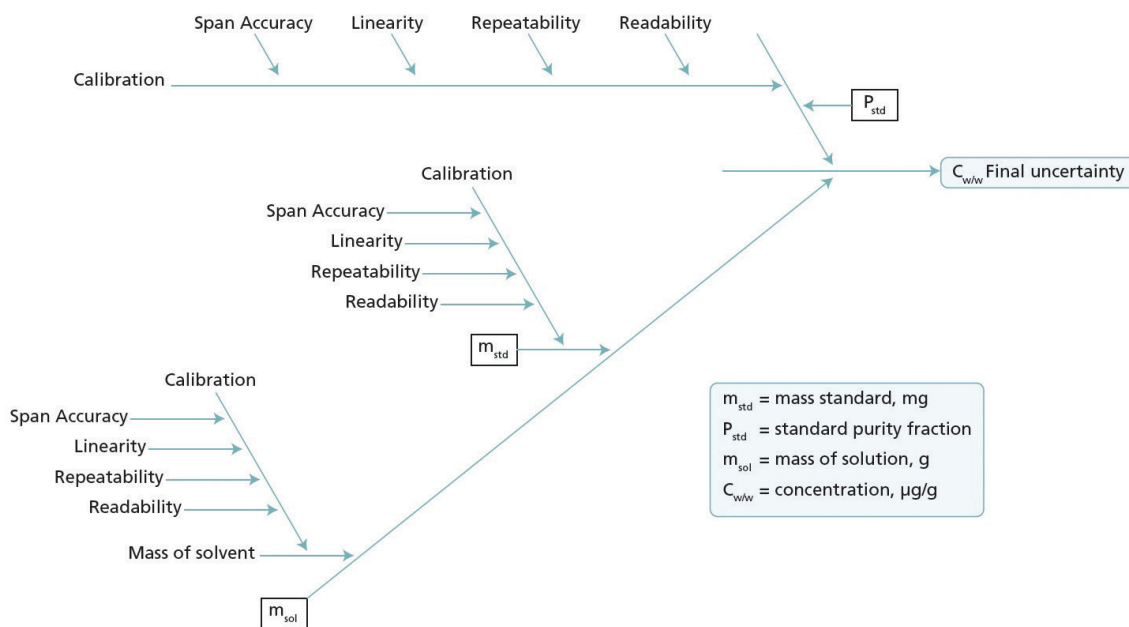


Figure 2. Cause-and-effect diagram of factors contributing to the uncertainty of the benzoic acid concentration in the qNMR standard formulation.

Reference

1. EURACHEM CITAC Guide CG 4, gQuantifying Uncertainty in Analytical Measurement, h Third Edition, QUAM:2012

qNMR Standards for Internal Referencing

The internal reference method commonly gives errors of <1% and is considered to be the most accurate and reproducible method available to obtain quantitative ^1H -NMR spectra. Unfortunately, the reference standard is typically weighed into each sample solution, an action that requires time and effort, and has been reported to the largest source of error with this method.

CIL is pleased to offer a ready-to-use DMSO- d_6 solution containing a known amount of benzoic acid for internal referencing. Because this solution is preformulated, the user does not need to weigh a

standard material. The elimination of this step will reduce effort and time in sample preparation and also may bring about more accurate results than if the user performs this formulation. To use this product, the sample must be soluble in DMSO- d_6 , physically and chemically inert toward benzoic acid and stable in acidic pH. Ideally, there will be no resonances from the sample in the region of benzoic acid aromatic protons (7.4-8.1 ppm), HOD (~3 ppm but is variable) and DMSO- d_5 (2.5 ppm). The benzoic acid concentration with associated uncertainty is presented on the certificate of analysis.

qNMR Standard for Internal Referencing

Catalog No.	Description	Ampoule	Comments
DLM-9491D	5 mM Benzoic acid in DMSO- d_6	1 g.	The benzoic acid concentration and associated uncertainty is reported.
DLM-7061D	15 mM Benzoic acid in DMSO- d_6	1 g	The benzoic acid concentration and associated uncertainty is reported.



Metabolomic QC Kit

For Untargeted/Targeted Mass Spectrometry

Catalog No. **MSK-QC-KIT**



Quality control (QC) of methods and processes is an essential factor toward the generation of reliable mass spectrometry (MS) data. In order to obtain accurate and precise metabolomic data that can be reproduced by independent laboratories around the world using different MS technologies, standardized protocols and reagents are necessary.

To that end, Cambridge Isotope Laboratories, Inc. (CIL) is pleased to offer a QC kit for untargeted and targeted MS-based metabolomic applications.

The kit contains the following materials and tools:

- 2 Vials of ^{13}C -labeled analytes (lyophilized). Refer to the table below for specifics.
- User manual
- Recommended parameters and conditions for LC-/GC-MS techniques

Table: Specific analytes contained in the two mixes and their individual concentrations upon rehydration. Rehydrating the lyophilized mixes in 1 mL of solvent yields the concentrations noted.

Description	Concentration ($\mu\text{g/mL}$)	Vial No.
L-Alanine ($^{13}\text{C}_3$, 99%)	4	1
L-Leucine ($^{13}\text{C}_6$, 99%)	4	1
L-Phenylalanine ($^{13}\text{C}_6$, 99%)	4	1
L-Tryptophan ($^{13}\text{C}_{11}$, 99%)	40	1
L-Tyrosine ($^{13}\text{C}_6$, 99%)	4	1
D-Glucose ($^{13}\text{C}_6$, 99%)	4	2
D-Sucrose ($^{13}\text{C}_6$, 99%)	4	2
Caffeine ($^{13}\text{C}_3$, 99%)	4	2
Stearic acid ($^{13}\text{C}_{18}$, 99%)	4	2
Octanoic acid ($^{13}\text{C}_8$, 99%)	4	2
Propionic acid ($^{13}\text{C}_3$, 99%)	4	2
Benzoic acid ($^{13}\text{C}_6$, 99%)	4	2
Citric acid ($^{13}\text{C}_3$, 99%)	4	2
Succinic acid ($^{13}\text{C}_4$, 99%)	4	2

Kit Features and Benefits

- Enables analytical precision to be determined
- Allows metabolite quantitation
- Identifies performance deficits
- Pinpoints method-specific issues
- Diminishes interlaboratory variability
- Improves method transferability

Looking to assess the performance of your metabolomic workflow? Use CIL's QC kit.

This QC kit is designed to evaluate the efficiency of a user's metabolomics method and LC-/GC-MS platform such that the analytical variation can be determined and corrected. Testing and validation of the kit has been performed in an array of matrices (e.g., urine, blood, and tissues), using different forms of chromatography (e.g., RP-LC and HILIC), ionization polarity (i.e., positive and negative), and modes of MS (e.g., DDA). By simply rehydrating and pooling aliquots of the supplied mixes, the isotopically labeled metabolites are ready for use either as spike-in standards to your biosample of interest (for quantitation) or for independent analysis at defined points of an analytical batch (for QC). In system suitability assessment, such metrics as retention time, peak shape, and signal intensity should be monitored over time for performance accreditation.



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Cambridge Isotope Laboratories, Inc.
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Product Data Sheet

Heavy-Labeled MS Protein Standard for Bottom-Up Proteomics

Human ApoA-1 (^{15}N , 98%)

Catalog No. NLM-9539

Significance

Apolipoprotein A-1 (ApoA-1) is the primary protein component of high-density lipoprotein (HDL) in plasma and has a specific role in lipid metabolism. It is a structural and functional protein that promotes cholesterol efflux from tissues to the liver. Testing for ApoA-1 is used to approximate HDL levels in a subject, which can be used to help determine a person's risk for developing cardiovascular disease. By combining the power of LC/MS and a heavy-labeled ApoA-1 internal standard, accurate quantitation of this protein in a biological sample is achievable using a bottom-up proteomic workflow.¹

Product Description

Human ApoA-1, uniformly labeled ^{15}N enriched, dissolved in phosphate-buffered saline at a nominal concentration of 2 mg/mL.

Product Specifications

Analytical Test	Specification
LC/MS for isotopic enrichment*	>98% ^{15}N
SDS-PAGE for purity	>90%
BCA for concentration	~2 mg/mL**

*LC/MS of tryptic peptides

**actual result reported on CoA

Additional Information

pH = 7.4

Storage: Store at -80°C ; avoid freeze-thaw cycles

Stability: 1 year if stored in recommended conditions

Molecular weight (calculated):

ApoA-1 (unlabeled) = 29.8 kDa

ApoA-1 (^{15}N) = 30.2 kDa

Protein Sequence

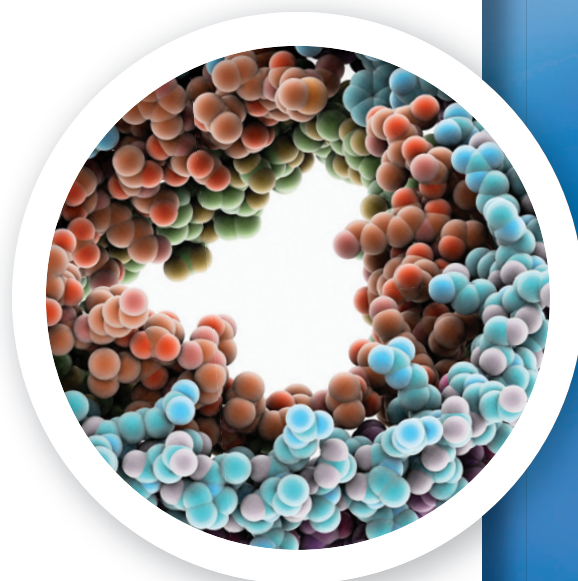
MHHHHHGLVPRGSIDEPPQSPWDRVKDLATVYVDVLKDS
GRDYVSQFEGSALGKQLNLKLLDNWDSVTSTFSKLREQLGPT
QEFWDNLEKETGLRQEMSKDLEEVKAKVQPYLDDFQKKWQ
EEMELYRQKVEPLRAELQEGARQKLHELQELSPGGEEMRDRA
RAHVDALRTHLAPYSDELRLAARLEALKENG GARLA EYHAK
ATEHLSTLSEKAKPAEDLRQGLLPVLESFKVSFLSA

Note: The underlined residues are different from wild-type ApoA-1.

The bold text is indicative of a polyhistidine tag. Because ApoA-1 has an inherent pre-pro sequence, the presence of this element on the mature protein is well tolerated.

Reference

1. Hoofnagle, A.N.; Becker, J.O.; Oda, M.N.; Cavigiolio, G.; Mayer, P.; Vaisar, T. **2012**. Multiple-reaction monitoring-mass spectrometric assays can accurately measure the relative protein abundance in complex mixtures. *Clin Chem*, 58(4):777-81.



Offered in partnership with:





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Cambridge Isotope Laboratories, Inc.
isotope.com

RESEARCH PRODUCTS

IROA[®] Biochemical Quantitation Kits for Metabolic Profiling



An innovative technology termed isotopic ratio outlier analysis (IROA) was developed to overcome the analytical challenges associated with current, stable isotope-assisted methods used in untargeted/targeted metabolic profiling.¹ These challenges minimally pertain to analytical variance, artifactual peaks, and metabolite identification. The IROA method uses metabolic incorporation of heavy (95% ¹³C) and light (5% ¹³C) nutrients, such as D-glucose and other carbon energy sources, to give rise to unique labeling patterns that can be readily identified and distinguished by MS. Such a method would be useful in interlaboratory quantitative evaluations, if widely available.

Cambridge Isotope Laboratories, Inc. (CIL) is proud to offer a series of IROA[®] Biochemical Quantitation Kits for metabolic profiling of various cell populations and biological samples.

These kits contain the reagents and tools necessary for the successful labeling, identification, and quantitation of metabolites in various cell populations (see general product info below).

¹³C biochemical quantitation kits available:

Catalog No.	Description	Price*
IROA-100-50	IROA 100 for Yeast/Fungi Metabolic Profiling Kit	\$1500
IROA-200-50	IROA 200 for Bacterial Metabolic Profiling Kit	\$1500
IROA-200-UL	IROA 200 Unlabeled Bacterial Media	\$100
IROA-300-250	IROA 300 for Mammalian Metabolic Profiling Kit	\$3594
IROA-300-UL	IROA 300 Unlabeled Mammalian Media	\$200
IROA-PHENO-95-300	IROA 300 for Phenotypic Metabolic Profiling Kit	\$2240
IROA-FLUX-05-300	IROA 300 for Fluxomic Metabolic Profiling Kit	\$1960

*USD. Pricing valid for US and Canada.



**IROA
TECHNOLOGIES**
...making metabolic profiling easy[®]

Kit Features and Benefits

- Eliminates technical and analytical variance → increases reliability
- Removes artifacts and noise → increases precision and determination of metabolome
- Reproducible identification of knowns/unknowns
- Accurate, relative quantitation
- Automated solution (via software) → saves time
- Easy statistical interpretation of sample results
- Broad applicability with experimental perturbations being user-defined

Applications

By using specific isotopic balances to create definable patterns in metabolites, these IROA Biochemical Quantitation Kits can be used to study flux, systems biology, and biomarkers in a wide variety of areas, as exemplified below (see reference 2 for an application example):

- Health and diagnostics
- Toxicology
- Pharmacology
- Drug development
- Crop breeding
- Plant biotechnology
- Biogenesis

Performing cellular metabolic profiling? Use the IROA protocol.

In the basic IROA protocol, biomolecules in two cell populations (control and experimental) are randomly labeled with stable isotopic media (¹³C-based). After a defined incubation period (with 5+ cell doublings), the experimental group is perturbed

IROA is a registered trademark of IROA Technologies.

(continued)

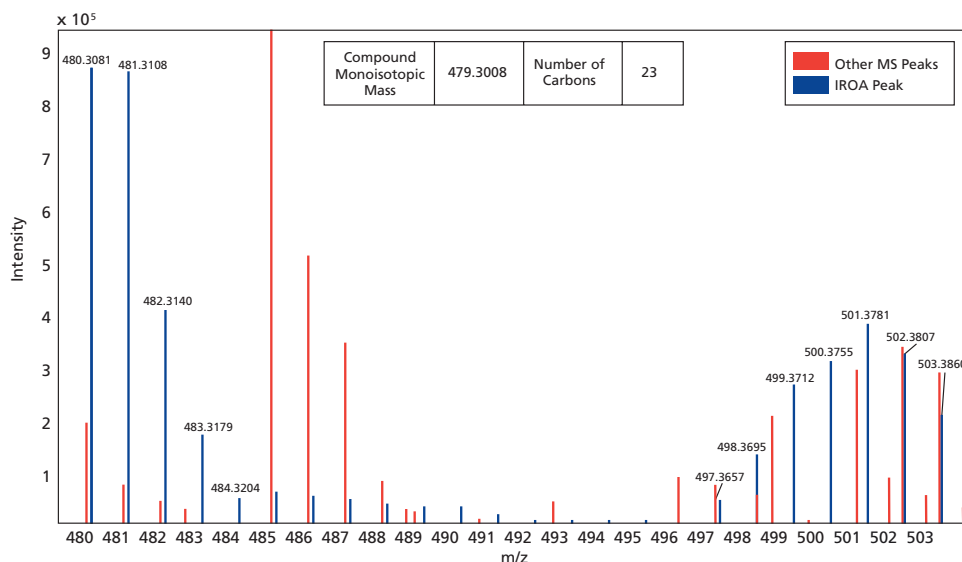


Figure. LC-MS analysis of the endometabolome of heat-shocked *Caenorhabditis elegans* grown on agar plates with IROA ^{13}C -labeled *Escherichia coli* as its food.² Based on mass spectral spacing and relative intensities, biogenic peaks (in blue) could be differentiated from artifactual noise (in red), which lead to the identification of lysophosphatidylethanolamine 18:1 having a formula of $\text{C}_{23}\text{H}_{46}\text{NO}_7\text{P}$.

(through a chemical, genetic, or environmental stressor) before uniform mixing, sample preparation, and LC-MS analysis. Note: unlabeled bacterial and mammalian media are available for cell growth testing and adaptation.

Compared to conventional labeling approaches (e.g., SILAC), the reduced enrichment enables isotopic distributions to be readily detected by MS in a predictable and distinguishable manner. These distributions can then be used to: (i) differentiate biological signals from artifacts, (ii) calculate accurate molecular formulae, and (iii) determine relative concentrations of the metabolites of biogenic origin. This data-analysis process is aided by IROA Technologies ClusterFinder™ software (see figure above). For experimental samples that cannot be labeled in culture systems (such as biopsies and large-scale fermentations), the IROA Phenotypic protocol can be applied to prepare a relevant labeled internal standard to use as a yardstick to compare differences between experimental cell populations.

Biochemical quantitation kit contents:

- Labeling media (i.e., 5% and 95% $^{13}\text{C}_6$ D-glucose)
- Kit-specific, basal media components

Kit	Kit-specific, basal media components
Yeast/Fungi Kit	Yeast nitrogen base (YNB) medium
Bacterial Kit	Amino acid mix (^{13}C , 95% and 5%)
Mammalian Kit	EBSS/RPMI 1640 vitamins, 5% and 95% ^{13}C amino acid mix and yeast extract
Phenotypic Kit	EBSS/RPMI 1640, 95% ^{13}C nutrients only
Fluxomic Kit	EBSS/RPMI 1640, 5% ^{13}C nutrients only

- Detailed operating protocol with troubleshooting guide
- Access to IROA Technologies ClusterFinder™ software → peak identification and quantitation
- Access to IROA's portal → data interpretation and statistical analysis

Overall, the IROA protocol increases the information content that can be extracted from the mass spectral signals, overcoming current analytical bottlenecks and achieving accurate metabolic profiling.

References

1. de Jong, F.A.; Beecher, C. **2012**. Addressing the current bottlenecks of metabolomics: Isotopic Ratio Outlier Analysis™, an isotopic-labeling technique for accurate biochemical profiling. *Bioanalysis*, 4, 2303-2314.
2. Stupp, G.S.; Clendinen, C.S.; Ajredini, R.; Szewc, M.A.; et al. **2013**. Isotopic Ratio Outlier Analysis Global Metabolomics of *Caenorhabditis elegans*. *Anal Chem*, 17, 11858-11865.

For more information, please visit isotope.com and iroatech.com.





CIL

Cambridge Isotope Laboratories, Inc.
isotope.comMRM Proteomics
mrmproteomics.com

RESEARCH PRODUCTS

PeptiQuant™ MRM Assay Kits – Human

Researchers in academia and life science industries continue to adopt a targeted, bottom-up MS-based proteomic workflow for candidate biomarker evaluation (from discovery to preclinical validation) and systems biology investigations. These analyses require absolute quantification of surrogate peptides in the sample matrix, a requisite that is best achieved with stable isotope-labeled standards (SIS, commonly peptides) in conjunction with an MRM or PRM detection technique. Although the use of SIS has increased the reliability of LC-MS/MS-based assays, optimal results require properly functioning equipment and a workflow with minimal human error and bias.

To help researchers establish a stable LC-MS/MS platform for bottom-up quantitative proteomics of human plasma, Cambridge Isotope Laboratories, Inc. (CIL) is pleased to offer PeptiQuant™ QC kits from MRM Proteomics Inc. These kits include the **PeptiQuant™ Monthly LC-MS Platform Performance Kit**, the **PeptiQuant™ Daily LC-MS Platform Performance Kit**, and the **PeptiQuant™ Workflow Performance Kit**. These innovative products are used to assess and track the performance of the LC-MS platform in a proteomic workflow in order to highlight any possible issues that will ultimately affect quantitation. Note: these kits are designed for matrix-specific analysis and also are available for use with mouse plasma (see PeptiQuant™ MRM Assay Kits – Mouse data sheet).

CIL is also pleased to offer the **PeptiQuant™ Biomarker Assessment Kit (BAK-76)**, to help researchers screen a multitude of proteins in human plasma samples. This turnkey solution contains the necessary materials and tools to simultaneously measure up to 76 proteins of biological importance in human plasma samples.

Benefits of PeptiQuant™ Kits

- Acquire more precise and accurate quantitative data
- Identify performance deficits related to your equipment
- Pinpoint method-specific issues that need to be addressed
- Diminish inter-laboratory variability
- Improve method transferability



PeptiQuant™ Monthly LC-MS Platform Performance Kit

Tests the effectiveness of your LC-MS platform in protein quantitation. The PeptiQuant™ Monthly LC-MS Platform Performance Kit is used to ensure the researcher is able to generate acceptable levels of quantitation when starting with prespiked, predigested human plasma. Using the reagents in the kit, the researcher can compare the obtained results for 35 different peptides to the “known” reference values. This comparison allows the user to address any issues with the performance of their LC-MS platform.

PeptiQuant™ Workflow Performance Kit

Evaluates the performance of your entire analytical workflow (from denaturation to detection) for human plasma. The PeptiQuant™ Workflow Performance Kit is used to assess the entire proteomic workflow starting with raw human plasma. The user compares the obtained results for 35 different peptides to the “known” reference values that are given in the kit. This comparison allows the user to address any issues with the performance of their LC-MS platform or workflow before running actual samples.

PeptiQuant™ Daily LC-MS Platform Performance Kit

Monitors the reproducibility of your LC-MS platform. Once baseline values are obtained, the PeptiQuant™ Daily LC-MS Platform Performance Kit can track chromatographic and MS performance on a daily basis over time.

PeptiQuant™ Biomarker Assessment Kit (BAK-76)

The PeptiQuant™ Biomarker Assessment Kit is used for quantification of up to 76 different proteins of biological importance in user-supplied plasma samples.

Similar kits
are available for
use with mouse
plasma. Please
inquire.

Cambridge Isotope Laboratories, Inc. is the exclusive distributor of MRM Proteomics Inc.

Assess the suitability of your LC-MS platform!**PeptiQuant™ Monthly LC-MS Platform Performance Kit**

The PeptiQuant™ *Monthly* LC-MS Platform Performance QC kit is used to ensure your LC-MS platform is working properly for quantitative proteomic applications. This kit will allow users to test the effectiveness of their LC-MS platform in terms of LC variability and detection sensitivity and determine quantitative parameters such as lower and upper limits of quantitation, dynamic range, analytical precision, and endogenous concentration. Differences between the obtained experimental results and the reference values given in the kit may reveal the presence of instrument-specific issues that should be addressed prior to running actual samples.

The supplied standards are lyophilized and ready for LC-MRM/MS or LC-PRM/MS analysis upon reconstitution. Users can compare their quantitative results to the “known” protein values provided in the reference kit for performance evaluation.

Each kit contains the following items:

- Predigested human plasma spiked with different concentrations of a balanced SIS peptide mixture covering four orders of magnitude (lyophilized)
- Concentration-balanced SIS peptide mixture (lyophilized)
- Dilute formic acid (solution)
- Protocols and tools on a USB drive*

Catalog No.	Description
LCMSP-M-A6490	LC-MRM/MS PeptiQuant™ Platform Performance Monthly Use Kit for the Agilent 6490
LCMSP-M-A6495	LC-MRM/MS PeptiQuant™ Platform Performance Monthly Use Kit for the Agilent 6495
LCMSP-M-SC4000	LC-MRM/MS PeptiQuant™ Comprehensive Monthly Use Kit for the SCIEX QTRAP® 4000
LCMSP-M-SC5500	LC-MRM/MS PeptiQuant™ Comprehensive Monthly Use Kit for the SCIEX QTRAP® 5500
LCMSP-M-SC6500	LC-MRM/MS PeptiQuant™ Comprehensive Monthly Use Kit for the SCIEX QTRAP® 6500
LCMSP-M-TQEX	LC-PRM/MS PeptiQuant™ Comprehensive Monthly Use Kit for the Thermo Scientific™ Q Exactive™
LCMSP-M-TVANT	LC-MRM/MS PeptiQuant™ Comprehensive Monthly Use Kit for the Thermo Scientific™ TSQ Vantage

Assess your bottom-up workflow!**PeptiQuant™ Workflow Performance Kit**

The PeptiQuant™ Workflow Performance Kit enables the evaluation of a bottom-up proteomic workflow, from sample preparation to MS detection. By using this kit, users can compare their quantitative results (e.g., precision, limit of quantitation, and protein concentration) to the “known” values for the 35 proteins in the supplied human plasma. The kit contains enough reagents to create a seven-point calibration curve. The obtained results may reveal the presence of human error, or method- and/or instrument-specific issues that should be addressed prior to performing the user's quantitative proteomics research of interest. Kits are available for either one, two, or five runs.

Each kit contains the following items:

- Human plasma (solution)
- Trypsin (lyophilized)
- Concentration-balanced SIS peptide mixture (lyophilized)
- Protocols and tools on a USB drive*

Catalog No.	Description
WFPK-A6490	LC-MRM/MS PeptiQuant™ Workflow Performance Kit for the Agilent 6490
WFPK-A6495	LC-MRM/MS PeptiQuant™ Workflow Performance Kit for the Agilent 6495
WFPK-SC4000	LC-MRM/MS PeptiQuant™ Workflow Performance Kit for the SCIEX QTRAP® 4000
WFPK-SC5500	LC-MRM/MS PeptiQuant™ Workflow Performance Kit for the SCIEX QTRAP® 5500
WFPK-SC6500	LC-MRM/MS PeptiQuant™ Workflow Performance Kit for the SCIEX QTRAP® 6500
WFPK-TQEX	LC-PRM/MS PeptiQuant™ Workflow Performance Kit for the Thermo Scientific™ Q Exactive™
WFPK-TVANT	LC-MRM/MS PeptiQuant™ Workflow Performance Kit for the Thermo Scientific™ TSQ Vantage

*Each kit comes with a USB drive that contains a detailed SOP (includes a troubleshooting guide) that is LC-MS platform specific, a platform-dependent acquisition method and acquisition worklist, a platform-dependent quantitative analysis method, Qualis-SIS input files, reference values, and a certificate of analysis for the SIS peptide mixture.

Track your LC-MS performance!**PeptiQuant™ Daily LC-MS Platform Performance Kit**

The PeptiQuant™ Daily LC-MS Platform Performance Kit is used to track the stability of the LC-MS platform. The kit contains a mixture of 35 SIS peptides in buffer to check retention times and predigested human plasma that contains these same 35 SIS peptides spiked at a concentration optimized to check system performance. LC parameters such as retention time and peak width at half height can be tracked, as well as MS parameters, such as the absolute or relative ratios of the unlabeled/labeled peptide responses (i.e., peak areas). Kits are available in one-, two-, or four-week supplies.

Each kit contains the following items:

- Predigested human plasma spiked with a balanced SIS peptide mixture (lyophilized)
- Concentration-balanced SIS peptide mixture (lyophilized)
- Dilute formic acid (solution)
- Protocols and tools on a USB drive*

Catalog No.	Description
LCMSP-D-A6490	LC-MRM/MS PeptiQuant™ Platform Performance Daily Use Kits for the Agilent 6490
LCMSP-D-A6495	LC-MRM/MS PeptiQuant™ Platform Performance Daily Use Kits for the Agilent 6495
LCMSP-D-SC4000	LC-MRM/MS PeptiQuant™ Platform Performance Daily Use Kits for the SCIEX QTRAP® 4000
LCMSP-D-SC5500	LC-MRM/MS PeptiQuant™ Platform Performance Daily Use Kit for the AB SCIEX 5500 QTRAP® System
LCMSP-D-SC6500	LC-MRM/MS PeptiQuant™ Platform Performance Daily Use Kits for the AB SCIEX 6500 QTRAP® System
LCMSP-D-TQEX	LC-PRM/MS PeptiQuant™ Platform Performance Daily Use Kit for the Thermo Scientific™ Q Exactive™
LCMSP-D-TVANT	LC-MRM/MS PeptiQuant™ Platform Performance Daily Use Kit for the Thermo Scientific™ TSQ Vantage

*Each kit comes with a USB drive that contains a detailed SOP (includes a troubleshooting guide) that is LC-MS platform specific, a platform-dependent acquisition method, a platform-dependent quantitative analysis method, reference values, and a certificate of analysis for the SIS peptide mixture.

**Custom kits
are available.
Please
inquire.**

Performing biomarker discovery or biomarker verification?**PeptiQuant™ Biomarker Assessment Kit (BAK-76)**

The PeptiQuant™ Biomarker Assessment Kit (BAK-76) has been developed for the rapid and precise quantitation of 76 plasma proteins (see figure on right and list on back) for biomarker evaluation and systems biology applications. The BAK-76 provides an easy solution for nonexpert users to rigorously assess the utility and significance of 76 high- to moderate-abundance proteins in various disease states with just 20 µL of human plasma.

Each kit contains the following items:

- Lyophilized SIS peptide mixture for spiking into control plasma sample digest after rehydration and serial dilution
- Lyophilized SIS peptide mixture for spiking into experimental plasma sample digests (n = 20 or 50) after rehydration
- Protocols and tools on a USB drive*

*Each kit comes with a USB drive that contains a detailed SOP (includes a troubleshooting guide) that is LC-MS platform specific, a platform-dependent acquisition method and acquisition worklist, a platform-dependent quantitative analysis method, Qualis-SIS input files (for control and experimental sample analysis), guideline values, and a certificate of analysis for the SIS peptide mixture.

Kits are available for 20 or 50 samples.

Catalog No.	Description
BAK-A6490-76	PeptiQuant™ Biomarker Assessment Kit for 76 proteins using a UHPLC 1290 LC and 6490 QqQ (Agilent)
BAK-A6495-76	PeptiQuant™ Biomarker Assessment Kit for 76 proteins using a UHPLC 1290 LC and 6495 QqQ (Agilent)
BAK-SC400-76	PeptiQuant™ Biomarker Assessment Kit for 76 proteins using a UHPLC 1290 LC (Agilent) and QTRAP® 4000 (SCIEX)

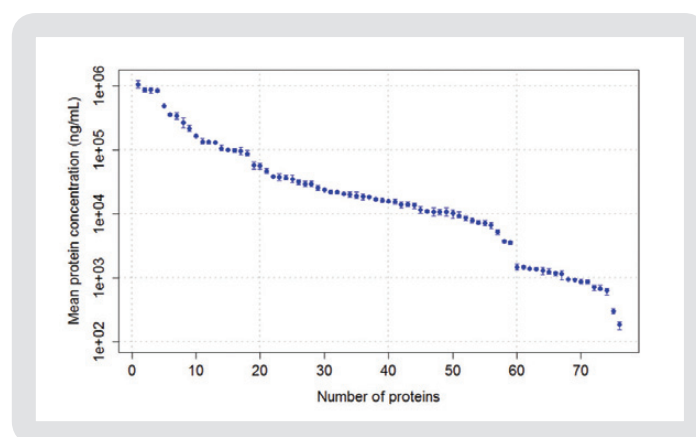


Figure. Quantitation range determined for the 76 proteins in the human plasma BAK-76. Standard deviations shown are from analytical replicate analysis (n = 5).

(continued)

76 Quantotypic Human Proteins

Afamin	Coagulation factor V	Haptoglobin
Alpha-1-antichymotrypsin	Coagulation factor X	Hemoglobin subunit alpha
Alpha-1B-glycoprotein	Coagulation factor XI	Hemopexin
Alpha-2-antiplasmin	Coagulation factor XII	Heparin cofactor 2
Alpha-2-HS-glycoprotein	Complement C1q subcomponent subunit A	Insulin-like growth factor-binding protein complex acid labile subunit
Alpha-2-macroglobulin	Complement C1q subcomponent subunit B	Insulin-like growth factor-binding protein 3
Antithrombin-III	Complement C1q subcomponent subunit C	Inter-alpha-trypsin inhibitor heavy chain H1
Apolipoprotein(a)	Complement C1r subcomponent	Inter-alpha-trypsin inhibitor heavy chain H2
Apolipoprotein A-I	Complement C1s subcomponent	Lipopolysaccharide-binding protein
Apolipoprotein A-IV	Complement C2	Lumican
Apolipoprotein B-100	Complement C3	Neuropilin-2
Apolipoprotein C-II	Complement C4-B	Pigment epithelium-derived factor
Apolipoprotein D	Complement C5	Protein AMBP
Apolipoprotein E	Complement component C8 alpha chain	Prothrombin
Apolipoprotein M	Complement component C8 beta chain	Retinol-binding protein 4
Beta-2-glycoprotein 1	Complement component C9	Serotransferrin
Beta-2-microglobulin	Complement factor B	Serum amyloid A-4 protein
Beta-Ala-His dipeptidase	Complement factor D	Sex hormone-binding globulin
C4b-binding protein alpha chain	Complement factor I	Thyroxine-binding globulin
Carbonic anhydrase 1	Corticosteroid-binding globulin	Transthyretin
Cartilage acidic protein 1	C-reactive protein	Vasorin
CD5 antigen-like	Cystatin-C	Vitamin D-binding protein
cDNA FLJ53327	Fibrinogen alpha chain	Vitamin K-dependent protein C
Ceruloplasmin	Fibronectin	Vitamin K-dependent protein S
Cholinesterase	Fibulin-1	
Clusterin	Gelsolin	

**Custom kits
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CIL

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RESEARCH PRODUCTS

PeptiQuant™ MRM Assay Kits – Mouse

Researchers in academia and life science industries continue to adopt a targeted, bottom-up MS-based proteomic workflow for biomarker discovery and validation. Biomarker validation requires absolute quantification of surrogate peptides in the sample matrix, a requirement that is best achieved with stable isotope-labeled standards (SIS, commonly peptides). Although the use of SIS has increased the reliability of LC-MRM/MS-based assays, optimal results require properly functioning equipment and a workflow with minimal human error and bias.

To help researchers establish a stable LC-MRM/MS platform for bottom-up quantitative proteomics of mouse plasma, Cambridge Isotope Laboratories, Inc. (CIL) is pleased to offer PeptiQuant™ QC kits from MRM Proteomics Inc. Note that these kits are also available for human plasma (see the PeptiQuant™ MRM Assay Kits – Human data sheet). All mouse PeptiQuant™ kits were developed using the C57BL/6 strain. The QC kits include the **PeptiQuant™ Monthly LC-MS Platform Performance Kit – Mouse**, the **PeptiQuant™ Daily LC-MS Platform Performance Kit – Mouse**, and the **PeptiQuant™ Workflow Performance Kit – Mouse**. These innovative products are used to assess and track the performance of the LC-MS platform in a proteomic workflow, which can help the user pinpoint any possible issues affecting quantitation.

CIL is also pleased to offer the **PeptiQuant™ Biomarker Assessment Kit – Mouse (BAK-81)**, to help researchers screen a multiplexed panel of proteins in mouse plasma. This turnkey solution contains the materials and tools necessary to monitor up to 81 proteins of biological importance in mouse plasma samples.

Benefits of PeptiQuant™ Kits – Mouse

- Acquire more precise and accurate quantitative data
- Identify performance deficits related to your equipment
- Pinpoint method-specific issues that need to be addressed
- Diminish interlaboratory variability
- Improve method transferability



PeptiQuant™ Monthly LC-MS Platform Performance Kit

Tests the effectiveness of your LC-MS platform in protein quantitation. The PeptiQuant™ Monthly LC-MS Platform Performance Kit is used to ensure the researcher is able to generate acceptable levels of quantitation when starting with prespiked, predigested mouse plasma. Using the reagents in the kit, the researcher can compare the obtained results for different peptides to the “known” reference values. This comparison allows the user to address any issues with the performance of their LC-MS system.

PeptiQuant™ Workflow Performance Kit

Evaluates the performance of your entire analytical workflow (from denaturation to detection) for mouse plasma analysis. The PeptiQuant™ Workflow Performance Kit is used to assess the entire proteomic workflow starting with raw mouse plasma. The user compares the obtained results for 34 different peptides to the “known” reference values that are given in the kit. This comparison allows the user to address any issues with the performance of their LC-MS platform or workflow before running actual samples.

PeptiQuant™ Daily LC-MS Platform Performance Kit

Monitors the reproducibility of your LC-MS platform. Once baseline values are obtained, the PeptiQuant™ Daily LC-MS Platform Performance Kit can track chromatographic and MS performance on a daily basis over time.

PeptiQuant™ Biomarker Assessment Kit (BAK-81)

The PeptiQuant™ Biomarker Assessment Kit is used for quantification of up to 81 different proteins of biological importance in user-supplied mouse plasma.

Similar kits
are available for
use with human
plasma. Please
inquire.

Cambridge Isotope Laboratories, Inc. is the exclusive distributor of MRM Proteomics Inc.

Assess the suitability of your LC-MS platform!**PeptiQuant™ Monthly LC-MS Platform Performance Kit – Mouse**

The PeptiQuant™ Monthly Use Kit – Mouse, developed using the C57BL/6 mouse strain, was designed to evaluate if the performance of your LC-MS platform will meet the requirements of your quantitative proteomics application. This kit will allow users to test the effectiveness of their LC-MS platform in terms of LC variability and detection sensitivity. Additionally, the PeptiQuant™ Monthly Use Kit – Mouse allows the user to monitor various quantitative parameters such as limits of quantitation, dynamic range, precision, and endogenous concentration. The use of this kit may reveal the presence of instrument-specific issues that should be addressed prior to running actual samples.

The supplied standards are lyophilized and ready for LC-MRM/MS analysis upon reconstitution. Users can compare their quantitative results to the “known” protein values provided in the reference kit for performance evaluation.

Each kit contains the following items:

- Six vials containing lyophilized mouse plasma digests that have been spiked with different concentrations of a balanced SIS peptide mixture covering two orders of magnitude
- Lyophilized SIS peptide mixture in buffer
- Dilute formic acid (solution)
- Protocols and tools on a USB drive*

Catalog No.	Description
M-LCMSP-M-A6490	LC-MRM/MS Mouse PeptiQuant™ Comprehensive Monthly Use Kit for the Agilent 6490
M-LCMSP-M-A6495	LC-MRM/MS Mouse PeptiQuant™ Comprehensive Monthly Use Kit for the Agilent 6495

Assess your bottom-up workflow!**PeptiQuant™ Workflow Performance Kit – Mouse**

The PeptiQuant™ Workflow Performance Kit – Mouse enables the evaluation of a bottom-up proteomic workflow, utilizing plasma from the C57BL/6 mouse strain. By using this kit, users can compare their quantitative results (e.g., precision, limit of quantitation, and protein concentration) to the “known” values for the 34 proteins in the supplied mouse plasma (see figure on next page). Users can generate a six-point curve over a 200-fold concentration range. The analysis of the curve prepared with the PeptiQuant™ Workflow Performance Kit – Mouse may identify the presence of human error, or method- and/or instrument-specific issues that should be addressed prior to performing the user's quantitative proteomics research of interest.

Each kit contains the following items:

- Neat mouse plasma (solution)
- Lyophilized trypsin
- Lyophilized SIS peptide mixture
- Protocols and tools on a USB drive*

Kits are available for one, two, or five runs.

Catalog No.	Description
M-WFPK-A6490	LC-MRM/MS Mouse PeptiQuant™ Workflow Performance Kit for the Agilent 6490
M-WFPK-A6495	LC-MRM/MS Mouse PeptiQuant™ Workflow Performance Kit for the Agilent 6495

*Each kit comes with a USB drive that contains a detailed SOP (includes a troubleshooting guide) that is LC-MS platform specific, a platform-dependent acquisition method and acquisition worklist, a platform-dependent quantitative analysis method, Qualis-SIS input files, reference values, and a certificate of analysis for the SIS peptide mixture.

Track your LC-MS performance!**PeptiQuant™ Daily LC-MS Platform Performance Kit – Mouse**

The PeptiQuant™ Daily LC-MS Platform Performance Kit – Mouse was developed using the C57BL/6 mouse strain. The mixture of 34 SIS peptides was designed to monitor the stability of the LC-MS platform. With the PeptiQuant™ Daily LC-MS Platform Performance Kit – Mouse, retention times and peak width at half height can be monitored to determine the efficiency of the LC, while absolute/relative responses (i.e., peak areas) of the endogenous and synthetic peptides can be tracked to evaluate your mass spectrometer's performance.

Each kit contains the following items:

- Predigested, lyophilized mouse plasma that has been spiked with SIS peptides
- Lyophilized SIS peptide mixture in buffer
- Dilute formic acid (solution)
- Protocols and tools on a USB drive*

Kits are available in one-, two-, or four-week supplies.

Catalog No.	Description
M-LCMSP-D-A6490	LC-MRM/MS Mouse PeptiQuant™ Platform Performance Daily Use Kits for the Agilent 6490
M-LCMSP-D-A6495	LC-MRM/MS Mouse PeptiQuant™ Platform Performance Daily Use Kits for the Agilent 6495

*Each kit comes with a USB drive that contains a detailed SOP (includes a troubleshooting guide) that is LC-MS platform specific, a platform-dependent acquisition method, a platform-dependent quantitative analysis method, reference values, and a certificate of analysis for the SIS peptide mixture.

**Custom kits
are available.
Please
inquire.**

Performing biomarker discovery or biomarker verification?**PeptiQuant™ Biomarker Assessment Kit – Mouse (BAK-81)**

The PeptiQuant™ Biomarker Assessment Kit – Mouse (BAK-81) has been developed for the rapid and precise quantitation of 81 mouse plasma proteins (see figure on right and list on back), valuable in molecular phenotyping and systems biology investigations. The panel of 81 high- to moderate-abundance proteins, using 101 interference-free peptides, allows for the rapid assessment of these biomarkers in the various disease states of genetically engineered mice models. The Mouse PeptiQuant™ Biomarker Assessment Kit for 81 proteins was developed using the C57BL/6 mouse strain.

Each kit contains the following items:

- Lyophilized SIS peptide mixture for spiking into your plasma control sample digests after rehydration and serial dilution
- Lyophilized SIS peptide mix for spiking into experimental sample digests (n = 20 or 50) after rehydration
- Protocols and tools on a USB drive*

*Each kit comes with a USB drive that contains a detailed SOP (includes a troubleshooting guide) that is LC-MS platform specific, a platform-dependent acquisition method and acquisition worklist, a platform-dependent quantitative analysis method, Qualis-SIS input files (for control and experimental sample analysis), guideline values, and a certificate of analysis for the SIS peptide mixture.

Kits are available for 20 or 50 samples.

Catalog No.	Description
M-BAK-A6490-81	Mouse PeptiQuant™ Biomarker Assessment Kit for 81 proteins using the Agilent 6490
M-BAK-A6495-81	Mouse PeptiQuant™ Biomarker Assessment Kit for 81 proteins using the Agilent 6495

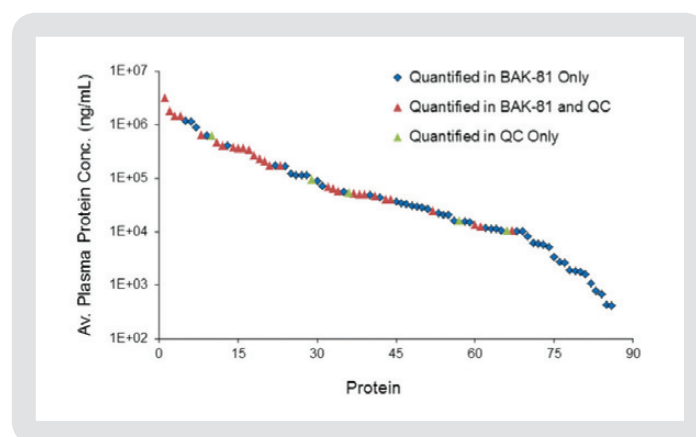


Figure. Quantitative range determined for the target proteins in the mouse plasma QC and BAK-81.

(continued)

81 Quantifiable Proteins

Adiponectin
 Afamin
 Alpha-1-acid glycoprotein 1
 Alpha-1-acid glycoprotein 2
 Alpha-2-antiplasmin
 Angiotensinogen
 Antithrombin-III
 Apolipoprotein A-II
 Apolipoprotein A-IV
 Apolipoprotein B-100
 Apolipoprotein C-I
 Apolipoprotein C-IV
 Apolipoprotein D
 Apolipoprotein E
 Apolipoprotein M
 Cadherin-5
 Carbonic anhydrase 2
 Carboxypeptidase B2
 Carboxypeptidase N subunit 2
 Carboxypeptidase Q
 CD5 antigen-like
 Ceruloplasmin
 Clusterin
 Coagulation factor IX
 Coagulation factor V
 Coagulation factor XII
 Coagulation factor XIII A chain
 Complement C1q subcomponent subunit A

Complement C1q subcomponent subunit B
 Complement C1q subcomponent subunit C
 Complement C1s-A subcomponent
 Complement C2
 Complement C3
 Complement C4-B
 Complement component C8 beta chain
 Complement component C8 gamma chain
 Complement factor H
 Complement factor I
 Corticosteroid-binding globulin
 C-reactive protein
 EGF-containing fibulin-like extracellular matrix protein 1
 Extracellular superoxide dismutase [Cu-Zn]
 Fetuin-B
 Fibrinogen beta chain
 Fibrinogen gamma chain
 Fibronectin
 Fructose-bisphosphate aldolase A
 Gamma-glutamyl hydrolase
 Gelsolin
 H-2 class I histocompatibility antigen
 Haptoglobin
 Hemopexin
 Heparin cofactor 2
 Histidine-rich glycoprotein
 Insulin-like growth factor-binding protein 3

Insulin-like growth factor-binding protein complex acid labile subunit
 Inter-alpha-trypsin inhibitor heavy chain H2
 Interleukin-1 receptor accessory protein
 Lumican
 N-acetylmuramoyl-L-alanine amidase
 Peroxiredoxin-2
 Phosphatidylcholine-sterol acyltransferase
 Phospholipid transfer protein
 Plasma kallikrein
 Plasma protease C1 inhibitor
 Platelet factor 4
 Platelet glycoprotein Ib alpha chain
 Proteasome subunit alpha type-1
 Proteasome subunit alpha type-4
 Proteasome subunit beta type-1
 Proteasome subunit beta type-4
 Protein AMBP
 Protein Z-dependent protease inhibitor
 Prothrombin
 Serotransferrin
 Serum amyloid P-component
 Serum paraoxonase/arylesterase 1
 Sulfhydryl oxidase 1
 Transthyretin
 Vitamin K-dependent protein C
 Zinc-alpha-2-glycoprotein

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 Please
 inquire.





PeptiQuant™ MRM Assay Kits – Apolipoproteins



Researchers in academia and life science industries are progressively adapting a targeted, bottom-up MS-based proteomic workflow for disease biomarker evaluation and systems biology investigations. This requires absolute quantification of surrogate peptides in the sample matrix, a requisite that is best achieved using stable isotope-labeled standards (SIS, commonly peptides) in conjunction with an MRM or PRM detection technique. Although the use of SIS has increased the reliability of LC-MS/MS-based assays, to improve the interlaboratory precision and enable more widespread use of this “absolute” quantitative technique in disease biomarker assessment studies, methods must be standardized.

CIL is pleased to offer the **PeptiQuant™ Biomarker Assessment Kit – Apolipoproteins (APO-14)**, to help researchers screen the biomarker utility of a panel of apolipoproteins in human plasma samples. Specifically, this kit contains the necessary materials (e.g., concentration-balanced SIS mixes and protocols) and tools (for acquisition and analysis) to quantify up to 14 apolipoproteins in human plasma samples.

Benefits of the PeptiQuant™ Apo-14 Kit

- Standardize biomarker assessment
- Diminish interlaboratory variability
- Improve method transferability

Performing protein biomarker evaluation?

The **PeptiQuant™ Biomarker Assessment Kit – Apolipoproteins (APO-14)** has been developed for the rapid and precise quantitation of 14 plasma apolipoproteins (see list on back) utilizing 27 surrogate peptides (see figure on back), valuable in small- and large-scale biomarker assessment (from discovery to preclinical validation) studies. The APO-14 provides an easy solution for non-expert users to rigorously assess the utility and significance of 14 apolipoproteins in various disease states with only 10 µL of human plasma per sample.

The apolipoproteins can be quantified in the user-supplied reference (or control) human plasma and the user's experimental (or patient) samples from 27 peptide surrogates using a quantitative approach involving linear regression analysis of peptide standard curves. The software tool – Qualis-SIS – facilitates automated curve generation, assay performance determination, and effortless interpretation of quantitative results. For optimal results, this kit should be partnered with the QC kits (e.g., PeptiQuant™ Daily LC-MS Platform Performance Kit) to ensure satisfactory performance of the instrument platform before proceeding.

Each Apo-14 kit contains the following items:

- Lyophilized SIS peptide mixture for spiking into a reference plasma sample digest for standard curve generation
- Lyophilized SIS peptide mixture for spiking into experimental sample digests (n = 20 or 50)
- USB drive that contains the SOP (includes a troubleshooting guide), a platform-dependent acquisition method and acquisition worklist, a platform-dependent quantitative analysis method, Qualis-SIS input files (for control and experimental analysis), guideline values, and a certificate of analysis for the SIS peptide mixture

(continued)

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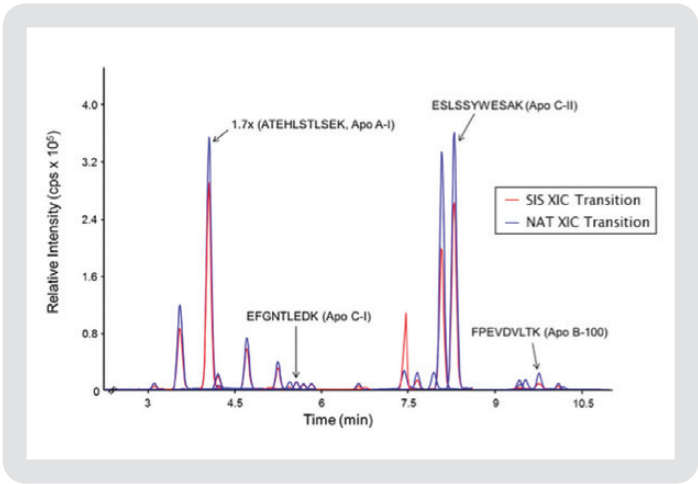


Figure. Representative XIC trace of the 27 interference-free peptides in the Apo-14 kit panel. The quantifier transitions of the synthetic (SIS) and endogenous (natural or NAT) peptides are shown only for clarity. The determined concentrations were found to range from 1.6 mg/mL (for Apo A-I) to 7.8 µg/mL (for Apo C-I) in the pooled sample analyzed.

Custom kits
are available.
Please
inquire.

Kits are available for 20 or 50 samples

Catalog No.	Description
APO-A6490-14-20	PeptiQuant™ Apolipoprotein Biomarker Assessment Kit for 14 Proteins using the Agilent 6490
APO-A6495-14-20	PeptiQuant™ Apolipoprotein Biomarker Assessment Kit for 14 Proteins using the Agilent 6495

14 Quantotypic Proteins

Apolipoprotein A-I	Apolipoprotein E
Apolipoprotein A-II	Apolipoprotein H
Apolipoprotein A-IV	Apolipoprotein J
Apolipoprotein B-100	Apolipoprotein L1
Apolipoprotein C-I	Apolipoprotein M
Apolipoprotein C-II	Apolipoprotein(a)
Apolipoprotein C-I	Beta-2-glycoprotein 1 (or Apolipoprotein H)
Apolipoprotein D	Clusterin (or Apolipoprotein J)





PeptiQuant™ MRM Assay Kits

Price List



PeptiQuant™ Monthly LC-MS Platform Performance Kit – Human

Catalog No.	Description
LCMSP-M-A6490	LC-MRM/MS PeptiQuant™ Comprehensive Monthly Use Kit for the Agilent 6490
LCMSP-M-A6495	LC-MRM/MS PeptiQuant™ Comprehensive Monthly Use Kit for the Agilent 6495
LCMSP-M-SC4000	LC-MRM/MS PeptiQuant™ Comprehensive Monthly Use Kit for the SCIEX QTRAP® 4000
LCMSP-M-SC5500	LC-MRM/MS PeptiQuant™ Comprehensive Monthly Use Kit for the SCIEX QTRAP® 5500
LCMSP-M-SC6500	LC-MRM/MS PeptiQuant™ Comprehensive Monthly Use Kit for the SCIEX QTRAP® 6500
LCMSP-M-TQEX	LC-PRM/MS PeptiQuant™ Comprehensive Monthly Use Kit for the Thermo Scientific™ Q Exactive™
LCMSP-M-TVANT	LC-MRM/MS PeptiQuant™ Comprehensive Monthly Use Kit for the Thermo Scientific™ TSQ Vantage

PeptiQuant™ Workflow Performance Kit – Human

Catalog No.	Description
WFPK-A6490-1	LC-MRM/MS PeptiQuant™ Workflow Performance Kit for the Agilent 6490, 1 run
WFPK-A6490-2	LC-MRM/MS PeptiQuant™ Workflow Performance Kit for the Agilent 6490, 2 runs
WFPK-A6490-5	LC-MRM/MS PeptiQuant™ Workflow Performance Kit for the Agilent 6490, 5 runs
WFPK-A6495-1	LC-MRM/MS PeptiQuant™ Workflow Performance Kit for the Agilent 6495, 1 run
WFPK-A6495-2	LC-MRM/MS PeptiQuant™ Workflow Performance Kit for the Agilent 6495, 2 runs
WFPK-A6495-5	LC-MRM/MS PeptiQuant™ Workflow Performance Kit for the Agilent 6495, 5 runs
WFPK-SC4000-1	LC-MRM/MS PeptiQuant™ Workflow Performance Kit for the SCIEX QTRAP® 4000, 1 run
WFPK-SC4000-2	LC-MRM/MS PeptiQuant™ Workflow Performance Kit for the SCIEX QTRAP® 4000, 2 runs
WFPK-SC4000-5	LC-MRM/MS PeptiQuant™ Workflow Performance Kit for the SCIEX QTRAP® 4000, 5 runs
WFPK-SC5500-1	LC-MRM/MS PeptiQuant™ Workflow Performance Kit for the SCIEX QTRAP® 5500, 1 run
WFPK-SC5500-2	LC-MRM/MS PeptiQuant™ Workflow Performance Kit for the SCIEX QTRAP® 5500, 2 runs
WFPK-SC5500-5	LC-MRM/MS PeptiQuant™ Workflow Performance Kit for the SCIEX QTRAP® 5500, 5 runs
WFPK-SC6500-1	LC-MRM/MS PeptiQuant™ Workflow Performance Kit for the SCIEX QTRAP® 6500, 1 run
WFPK-SC6500-2	LC-MRM/MS PeptiQuant™ Workflow Performance Kit for the SCIEX QTRAP® 6500, 2 runs
WFPK-SC6500-5	LC-MRM/MS PeptiQuant™ Workflow Performance Kit for the SCIEX QTRAP® 6500, 5 runs
WFPK-TQEX-1	LC-PRM/MS PeptiQuant™ Workflow Performance Kit for the Thermo Scientific™ Q Exactive™, 1 run
WFPK-TQEX-2	LC-PRM/MS PeptiQuant™ Workflow Performance Kit for the Thermo Scientific™ Q Exactive™, 2 runs
WFPK-TQEX-5	LC-PRM/MS PeptiQuant™ Workflow Performance Kit for the Thermo Scientific™ Q Exactive™, 5 runs
WFPK-TVANT-1	LC-MRM/MS PeptiQuant™ Workflow Performance Kit for the Thermo Scientific™ TSQ Vantage, 1 run
WFPK-TVANT-2	LC-MRM/MS PeptiQuant™ Workflow Performance Kit for the Thermo Scientific™ TSQ Vantage, 2 runs
WFPK-TVANT-5	LC-MRM/MS PeptiQuant™ Workflow Performance Kit for the Thermo Scientific™ TSQ Vantage, 5 runs

*Pricing is valid for US and Canada. Discounts are available on multiple units; please inquire.

(continued)

PeptiQuant™ Daily LC-MS Platform Performance Kit – Human

Catalog No.	Description
LCMSP-D-A6490-1	LC-MRM/MS PeptiQuant™ Platform Performance Daily Use Kits for the Agilent 6490, 1-week supply
LCMSP-D-A6490-2	LC-MRM/MS PeptiQuant™ Platform Performance Daily Use Kits for the Agilent 6490, 2-week supply
LCMSP-D-A6490-4	LC-MRM/MS PeptiQuant™ Platform Performance Daily Use Kits for the Agilent 6490, 4-week supply
LCMSP-D-A6495-1	LC-MRM/MS PeptiQuant™ Platform Performance Daily Use Kits for the Agilent 6495, 1-week supply
LCMSP-D-A6495-2	LC-MRM/MS PeptiQuant™ Platform Performance Daily Use Kits for the Agilent 6495, 2-week supply
LCMSP-D-A6495-4	LC-MRM/MS PeptiQuant™ Platform Performance Daily Use Kits for the Agilent 6495, 4-week supply
LCMSP-D-SC4000-1	LC-MRM/MS PeptiQuant™ Platform Performance Daily Use Kits for the SCIEX QTRAP® 4000, 1-week supply
LCMSP-D-SC4000-2	LC-MRM/MS PeptiQuant™ Platform Performance Daily Use Kits for the SCIEX QTRAP® 4000, 2-week supply
LCMSP-D-SC4000-4	LC-MRM/MS PeptiQuant™ Platform Performance Daily Use Kits for the SCIEX QTRAP® 4000, 4-week supply
LCMSP-D-SC5500-1	LC-MRM/MS PeptiQuant™ Platform Performance Daily Use Kit for the SCIEX QTRAP® 5500, 1-week supply
LCMSP-D-SC5500-2	LC-MRM/MS PeptiQuant™ Platform Performance Daily Use Kit for the SCIEX QTRAP® 5500, 2-week supply
LCMSP-D-SC5500-4	LC-MRM/MS PeptiQuant™ Platform Performance Daily Use Kit for the SCIEX QTRAP® 5500, 4-week supply
LCMSP-D-SC6500-1	LC-MRM/MS PeptiQuant™ Platform Performance Daily Use Kits for the SCIEX QTRAP® 6500, 1-week supply
LCMSP-D-SC6500-2	LC-MRM/MS PeptiQuant™ Platform Performance Daily Use Kits for the SCIEX QTRAP® 6500, 2-week supply
LCMSP-D-SC6500-4	LC-MRM/MS PeptiQuant™ Platform Performance Daily Use Kits for the SCIEX QTRAP® 6500, 4-week supply
LCMSP-D-TQEX-1	LC-PRM/MS PeptiQuant™ Platform Performance Daily Use Kit for the Thermo Scientific™ Q Exactive™, 1-week supply
LCMSP-D-TQEX-2	LC-PRM/MS PeptiQuant™ Platform Performance Daily Use Kit for the Thermo Scientific™ Q Exactive™, 2-week supply
LCMSP-D-TQEX-4	LC-PRM/MS PeptiQuant™ Platform Performance Daily Use Kit for the Thermo Scientific™ Q Exactive™, 4-week supply
LCMSP-D-TVANT-1	LC-MRM/MS PeptiQuant™ Platform Performance Daily Use Kit for the Thermo Scientific™ TSQ Vantage, 1-week supply
LCMSP-D-TVANT-2	LC-MRM/MS PeptiQuant™ Platform Performance Daily Use Kit for the Thermo Scientific™ TSQ Vantage, 2-week supply
LCMSP-D-TVANT-4	LC-MRM/MS PeptiQuant™ Platform Performance Daily Use Kit for the Thermo Scientific™ TSQ Vantage, 4-week supply

PeptiQuant™ Biomarker Assessment Kit (BAK-76) – Human

Catalog No.	Description
BAK-A6490-76-20	PeptiQuant™ Biomarker Assessment Kit for 76 proteins using the Agilent 6490 for 20 samples
BAK-A6490-76-50	PeptiQuant™ Biomarker Assessment Kit for 76 proteins using the Agilent 6490 for 50 samples
BAK-A6495-76-20	PeptiQuant™ Biomarker Assessment Kit for 76 proteins using the Agilent 6495 for 20 samples
BAK-A6495-76-50	PeptiQuant™ Biomarker Assessment Kit for 76 proteins using the Agilent 6495 for 50 samples

PeptiQuant™ Apolipoprotein Biomarker Assessment Kit (APO-14) – Human

Catalog No.	Description
APO-A6490-14-20	PeptiQuant™ Apolipoprotein Biomarker Assessment Kit for 14 Proteins using the Agilent 6490 for 20 samples
APO-A6490-14-50	PeptiQuant™ Apolipoprotein Biomarker Assessment Kit for 14 Proteins using the Agilent 6490 for 50 samples
APO-A6495-14-20	PeptiQuant™ Apolipoprotein Biomarker Assessment Kit for 14 Proteins using the Agilent 6495 for 20 samples
APO-A6495-14-50	PeptiQuant™ Apolipoprotein Biomarker Assessment Kit for 14 Proteins using the Agilent 6495 for 50 samples

PeptiQuant™ Biomarker Assessment Kit (BAK-81) – Mouse

Catalog No.	Description
M-BAK-A6490-76-20	Mouse PeptiQuant™ Biomarker Assessment Kit for 81 proteins using the Agilent 6490 for 20 samples
M-BAK-A6490-76-50	Mouse PeptiQuant™ Biomarker Assessment Kit for 81 proteins using the Agilent 6490 for 50 samples
M-BAK-A6495-76-20	Mouse PeptiQuant™ Biomarker Assessment Kit for 81 proteins using the Agilent 6495 for 20 samples
M-BAK-A6495-76-50	Mouse PeptiQuant™ Biomarker Assessment Kit for 81 proteins using the Agilent 6495 for 50 samples

*Pricing is valid for US and Canada. Discounts are available on multiple units; please inquire.

PeptiQuant™ *Monthly* LC-MS Platform Performance Kit – Mouse

Catalog No.	Description
M-LCMSP-M-A6490	LC-MRM/MS Mouse PeptiQuant™ Comprehensive Monthly Use Kit for the Agilent 6490
M-LCMSP-M-A6495	LC-MRM/MS Mouse PeptiQuant™ Comprehensive Monthly Use Kit for the Agilent 6495

PeptiQuant™ *Workflow* Performance Kit – Mouse

Catalog No.	Description
M-WFPK-A6490-1	LC-MRM/MS Mouse PeptiQuant™ Workflow Performance Kit for the Agilent 6490, 1 run
M-WFPK-A6490-2	LC-MRM/MS Mouse PeptiQuant™ Workflow Performance Kit for the Agilent 6490, 2 runs
M-WFPK-A6490-5	LC-MRM/MS Mouse PeptiQuant™ Workflow Performance Kit for the Agilent 6490, 5 runs
M-WFPK-A6495-1	LC-MRM/MS Mouse PeptiQuant™ Workflow Performance Kit for the Agilent 6495, 1 run
M-WFPK-A6495-2	LC-MRM/MS Mouse PeptiQuant™ Workflow Performance Kit for the Agilent 6495, 2 runs
M-WFPK-A6495-5	LC-MRM/MS Mouse PeptiQuant™ Workflow Performance Kit for the Agilent 6495, 5 runs

PeptiQuant™ *Daily* LC-MS Platform Performance Kit – Mouse

Catalog No.	Description
M-LCMSP-D-A6490-1	LC-MRM/MS Mouse PeptiQuant™ Platform Performance Daily Use Kits for the Agilent 6490, 1-week supply
M-LCMSP-D-A6490-2	LC-MRM/MS Mouse PeptiQuant™ Platform Performance Daily Use Kits for the Agilent 6490, 2-week supply
M-LCMSP-D-A6490-4	LC-MRM/MS Mouse PeptiQuant™ Platform Performance Daily Use Kits for the Agilent 6490, 4-week supply
M-LCMSP-D-A6495-1	LC-MRM/MS Mouse PeptiQuant™ Platform Performance Daily Use Kits for the Agilent 6495, 1-week supply
M-LCMSP-D-A6495-2	LC-MRM/MS Mouse PeptiQuant™ Platform Performance Daily Use Kits for the Agilent 6495, 2-week supply
M-LCMSP-D-A6495-4	LC-MRM/MS Mouse PeptiQuant™ Platform Performance Daily Use Kits for the Agilent 6495, 4-week supply

*Pricing is valid for US and Canada. Discounts are available on multiple units; please inquire.

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Amino Acids

99% Enriched Amino Acids

Higher enrichment provides improved accuracy in quantitative MS-based proteomic applications. These materials represent the highest isotopically enriched amino acids that are commercially available. These products are shaded in grey throughout the catalog.

Catalog No.	Description
DLM-9219	L-Abrine (methyl-D ₃ , 98%)
CLM-1655	D-Alanine (1- ¹³ C, 99%)
CLM-2495	D-Alanine (3- ¹³ C, 99%)
CLM-3229	D-Alanine (2,3- ¹³ C ₂ , 99%)
DLM-3545	D-Alanine (2,3,3,3-D ₄ , 98%)
DLM-7326	D-Alanine (D ₇ , 98%) (<5% L)
NLM-6762	D-Alanine (¹⁵ N, 98%)
CLM-705	DL-Alanine (1- ¹³ C, 99%)
CLM-115	DL-Alanine (2- ¹³ C, 99%)
CLM-707	DL-Alanine (3- ¹³ C, 99%)
CLM-6056	DL-Alanine (2,3- ¹³ C ₂ , 99%)
CLM-4514	DL-Alanine (¹³ C ₃ , 98%)
DLM-2760	DL-Alanine (2-D, 98%)
DLM-176	DL-Alanine (3,3,3-D ₃ , 98%)
DLM-1276	DL-Alanine (2,3,3,3-D ₄ , 97-98%)
NLM-706	DL-Alanine (¹⁵ N, 98%)
CDLM-8650	DL-Alanine (3- ¹³ C, 99%; 2-D, 96%)
CNLM-7839	DL-Alanine (1- ¹³ C, 99%; ¹⁵ N, 98%)
CNLM-3552	DL-Alanine (1,3- ¹³ C ₂ , 99%; ¹⁵ N, 99%)
CLM-116	L-Alanine (1- ¹³ C, 99%)
CLM-2016	L-Alanine (2- ¹³ C, 99%)
CLM-117	L-Alanine (3- ¹³ C, 99%)
CLM-2734	L-Alanine (2,3- ¹³ C ₂ , 99%)
CLM-2184-H	L-Alanine (¹³ C ₃ , 99%)
DLM-3101	L-Alanine (2-D, 98%)
DLM-248	L-Alanine (3,3,3-D ₃ , 99%)
DLM-250	L-Alanine (2,3,3,3-D ₄ , 98%)
DLM-251	L-Alanine (D ₇ , 98%)
NLM-454	L-Alanine (¹⁵ N, 98%)
OLM-7460	L-Alanine (¹⁸ O ₂ , 90%+)
CDLM-8649	L-Alanine (3- ¹³ C, 99%; 2-D, 96%)
CDLM-3439	L-Alanine (3- ¹³ C, 99%; 3,3,3-D ₃ , 98%)
CNLM-6993	L-Alanine (1- ¹³ C, 99%; ¹⁵ N, 98%)
CNLM-3594	L-Alanine (2- ¹³ C, 99%; ¹⁵ N, 98%)
CNLM-534-H	L-Alanine (¹³ C ₃ , 99%; ¹⁵ N, 99%)
DNLM-7178	L-Alanine (2,3,3,3-D ₄ , 98%; ¹⁵ N, 98%)
CDNLM-6800	L-Alanine (¹³ C ₃ , 97-99%; D ₄ , 97-99%; ¹⁵ N, 97-99%)
NLM-1656	β-Alanine (¹⁵ N, 98%+)
CNLM-8457	β-Alanine (1,2- ¹³ C ₂ , 99%; ¹⁵ N, 98%)
CLM-8742	L- <i>allo</i> -Isoleucine (¹³ C ₆ , 97-99%)
DLM-857	L- <i>allo</i> -Isoleucine (3-methyl-D ₃ , 98%)
DLM-1505	L- <i>allo</i> -Isoleucine (D ₁₀ , 98%)
CNLM-8670	L- <i>allo</i> -Isoleucine (¹³ C ₆ , 97-99%; ¹⁵ N, 97-99%)
CDNLM-8911	L- <i>allo</i> -Isoleucine (¹³ C ₆ , 97-99%; D ₁₀ , 97-99%; ¹⁵ N, 97-99%)
CLM-1268	L-Arginine•HCl (1- ¹³ C, 99%)
CLM-2070	L-Arginine•HCl (guanido- ¹³ C, 99%)
CLM-2051	L-Arginine•HCl (1,2- ¹³ C ₂ , 99%)

Catalog No.	Description
CLM-2265-H	L-Arginine•HCl (¹³ C ₆ , 99%)
DLM-6038	L-Arginine•HCl (4,4,5,5-D ₄ , 94%) (<5% D)
DLM-541	L-Arginine•HCl (D ₇ , 98%)
NLM-1267	L-Arginine•HCl (α- ¹⁵ N, 98%+)
NLM-395	L-Arginine•HCl (guanido- ¹⁵ N, 98%+)
NLM-396	L-Arginine•HCl (¹⁵ N ₄ , 98%)
CDLM-3789	L-Arginine•HCl (5- ¹³ C, 99%; 4,4,5,5-D ₄ , 95%)
CNLM-539-H	L-Arginine•HCl (¹³ C ₆ , 99%; ¹⁵ N ₄ , 99%)
DNLM-7543	L-Arginine•HCl (D ₇ , 98%; ¹⁵ N ₄ , 98%)
CDNLM-6801	L-Arginine•HCl (¹³ C ₆ , 97-99%; D ₇ , 97-99%; ¹⁵ N ₄ , 97-99%)
ULM-8347	L-Arginine•HCl (unlabeled)
CLM-8699-H	L-Asparagine•H ₂ O (¹³ C ₄ , 99%)
DLM-6844	L-Asparagine•H ₂ O (2,3,3-D ₃ , 94%)
NLM-2293	L-Asparagine (α- ¹⁵ N, 99%)
NLM-120	L-Asparagine•H ₂ O (amide- ¹⁵ N, 98%+)
NLM-3286	L-Asparagine•H ₂ O (¹⁵ N ₂ , 98%)
CNLM-3819-H	L-Asparagine•H ₂ O (¹³ C ₄ , 99%; ¹⁵ N ₂ , 99%)
DNLM-6932	L-Asparagine•H ₂ O (2,3,3-D ₃ , 98%; ¹⁵ N ₂ , 98%)
CDNLM-6802	L-Asparagine•H ₂ O (¹³ C ₄ , 97-99%; D ₃ , 97-99%; ¹⁵ N ₂ , 97-99%)
CLM-864	DL-Aspartic acid (2- ¹³ C, 99%)
CLM-518	DL-Aspartic acid (4- ¹³ C, 99%)
DLM-832	DL-Aspartic acid (2,3,3-D ₃ , 98%)
CLM-3616	L-Aspartic acid (1- ¹³ C, 99%)
CLM-3617	L-Aspartic acid (2- ¹³ C, 99%)
CLM-627	L-Aspartic acid (3- ¹³ C, 99%)
CLM-519	L-Aspartic acid (4- ¹³ C, 99%) CP 96%
CLM-4455	L-Aspartic acid (1,4- ¹³ C ₂ , 99%)
CLM-1801-H	L-Aspartic acid (¹³ C ₄ , 99%)
DLM-546	L-Aspartic acid (2,3,3-D ₃ , 98%)
NLM-718	L-Aspartic acid (¹⁵ N, 98%)
CNLM-544-H	L-Aspartic acid (¹³ C ₄ , 99%; ¹⁵ N, 99%)
DNLM-6931	L-Aspartic acid (2,3,3-D ₃ , 98%; ¹⁵ N, 98%)
CDNLM-6803	L-Aspartic acid (¹³ C ₄ , 97-99%; D ₃ , 97-99%; ¹⁵ N, 97-99%)
ULM-8676	L-Aspartic acid (unlabeled)
CLM-4899	L-Citrulline (ureido- ¹³ C, 99%)
DLM-3860	L-Citrulline (5,5-D ₂ , 98%)
DLM-6039	L-Citrulline (4,4,5,5-D ₄ , 95%)
NLM-6850	L-Citrulline (ureido- ¹⁵ N ₁ , 98%)
CDLM-7879	L-Citrulline (ureido- ¹³ C, 99%; 5,5-D ₂ , 98%)
CDLM-8808	L-Citrulline (ureido- ¹³ C, 99%; 3,3,4-D ₃ , 98%)
CDLM-7139	L-Citrulline (5- ¹³ C, 99%; 4,4,5,5-D ₄ , 95%)
ULM-8642	L-Citrulline (unlabeled)
CLM-3790	DL-Cysteine (1- ¹³ C, 99%)
CLM-898	DL-Cysteine (3- ¹³ C, 99%)
DLM-1180	DL-Cysteine (2-D, 98%)
DLM-899	DL-Cysteine (3,3-D ₂ , 98%)
CLM-3852	L-Cysteine (1- ¹³ C, 99%)

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Catalog No.	Description
CLM-1868	L-Cysteine (3- ¹³ C, 99%)
CLM-4320-H	L-Cysteine (¹³ C ₃ , 99%)
DLM-769	L-Cysteine (3,3-D ₂ , 98%)
DLM-6901	L-Cysteine (2,3,3-D ₃ , 98%)
NLM-2295	L-Cysteine (¹⁵ N, 98%)
CNLM-3871-H	L-Cysteine (¹³ C ₃ , 99%; ¹⁵ N, 99%)
DNLM-6902	L-Cysteine (2,3,3-D ₃ , 98%; ¹⁵ N, 98%)
CDNLM-6809	L-Cysteine (¹³ C ₃ , 97-99%; D ₃ , 97-99%; ¹⁵ N, 97-99%)
CLM-815	DL-Cystine (3,3'- ¹³ C ₂ , 98%)
DLM-1000	DL-Cystine (3,3,3',3'-D ₄ , 98%)
NLM-1668	DL-Cystine (¹⁵ N ₂ , 95%)
CLM-520	L-Cystine (3,3'- ¹³ C ₂ , 99%)
NLM-3818	L-Cystine (¹⁵ N ₂ , 98%)
CNLM-4244-H	L-Cystine (¹³ C ₆ , 99%; ¹⁵ N ₂ , 99%)
CDNLM-8659	L-Cystine (¹³ C ₆ , 98%; D ₆ , 98%; ¹⁵ N ₂ , 98%) CP 95%
CLM-3721	DL-Glutamic acid•H ₂ O (1- ¹³ C, 99%)
CLM-3632	DL-Glutamic acid (3- ¹³ C, 99%)
CLM-3028	DL-Glutamic acid (5- ¹³ C, 99%)
DLM-335	DL-Glutamic acid (2,4,4-D ₃ , 98%)
DLM-357	DL-Glutamic acid (2,3,3,4,4-D ₅ , 97%)
NLM-3279	DL-Glutamic acid (¹⁵ N, 98%)
CNLM-4292	DL-Glutamic acid•H ₂ O (1- ¹³ C, 99%; ¹⁵ N, 98%)
ULM-8940	DL-Glutamic acid•H ₂ O (unlabeled)
CLM-674	L-Glutamic acid (1- ¹³ C, 99%)
CLM-2474	L-Glutamic acid (2- ¹³ C, 99%)
CLM-4742	L-Glutamic acid (3- ¹³ C, 99%)
CLM-2431	L-Glutamic acid (4- ¹³ C, 98-99%)
CLM-613	L-Glutamic acid (5- ¹³ C, 99%)
CLM-2024	L-Glutamic acid (1,2- ¹³ C ₂ , 99%)
CLM-3646	L-Glutamic acid (3,4- ¹³ C ₂ , 99%)
CLM-1800-H	L-Glutamic acid (¹³ C ₅ , 99%)
DLM-3725	L-Glutamic acid (2,4,4-D ₃ , 97-98%)
DLM-556	L-Glutamic acid (2,3,3,4,4-D ₅ , 97-98%)
NLM-135	L-Glutamic acid (¹⁵ N, 98%)
OLM-8028	L-Glutamic acid•HCl (¹⁷ O ₄ , ~30%)
CNLM-554-H	L-Glutamic acid (¹³ C ₅ , 99%; ¹⁵ N, 99%)
DNLM-6996	L-Glutamic acid (2,3,3,4,4-D ₅ , 98%; ¹⁵ N, 98%)
CDNLM-6804	L-Glutamic acid (¹³ C ₅ , 97-99%; D ₅ , 97-99%; ¹⁵ N, 97-99%)
ULM-8675	L-Glutamic acid (unlabeled)
CLM-3612	L-Glutamine (1- ¹³ C, 99%)
CLM-3613	L-Glutamine (2- ¹³ C, 99%)
CLM-770	L-Glutamine (4- ¹³ C, 99%)
CLM-1166	L-Glutamine (5- ¹³ C, 99%)
CLM-2001	L-Glutamine (1,2- ¹³ C ₂ , 99%)
CLM-3641	L-Glutamine (3,4- ¹³ C ₂ , 99%)
CLM-1822-H	L-Glutamine (¹³ C ₅ , 99%)
DLM-1826	L-Glutamine (2,3,3,4,4-D ₅ , 97%)
NLM-1016	L-Glutamine (α- ¹⁵ N, 98%)
NLM-557	L-Glutamine (amide- ¹⁵ N, 98%+)
NLM-1328	L-Glutamine (¹⁵ N ₂ , 98%)
CNLM-1275-H	L-Glutamine (¹³ C ₅ , 99%; ¹⁵ N ₂ , 99%)
DNLM-6997	L-Glutamine (2,3,3,4,4-D ₅ , 98%; ¹⁵ N ₂ , 98%)
CDNLM-6805	L-Glutamine (¹³ C ₅ , 97-99%; D ₅ , 97-99%; ¹⁵ N ₂ , 97-99%)

Catalog No.	Description
CLM-422	Glycine (1- ¹³ C, 99%)
CLM-136	Glycine (2- ¹³ C, 99%)
CLM-1017	Glycine (1,2- ¹³ C ₂ , 97-99%)
DLM-280	Glycine (D ₅ , 98%)
DLM-1674	Glycine (2,2-D ₂ , 98%)
NLM-202	Glycine (¹⁵ N, 98%)
CDLM-6072	Glycine (1- ¹³ C, 99%; D ₅ , 98%)
CNLM-507	Glycine (1- ¹³ C, 99%; ¹⁵ N, 98%+)
CNLM-508	Glycine (2- ¹³ C, 99%; ¹⁵ N, 98%+)
CNLM-1673-H	Glycine (¹³ C ₂ , 99%; ¹⁵ N, 99%)
DNLM-6862	Glycine (2,2-D ₂ , 98%; ¹⁵ N, 98%)
CDNLM-6799	Glycine (¹³ C ₂ , 97-99%; 2,2-D ₂ , 97-99%; ¹⁵ N, 97-99%)
CNLM-7175	Glycine•HCl, ethyl ester (¹³ C ₂ , 98%; ¹⁵ N, 98%)
CLM-2636	DL-Histidine (ring-2- ¹³ C, 99%)
CLM-739	DL-Histidine•HCl (ring-2- ¹³ C, 99%)
NLM-138	DL-Histidine•2HCl (α- ¹⁵ N, 98%+)
NLM-6703	DL-Histidine•HCl•H ₂ O (ring- ¹⁵ N ₂ , 98%)
NLM-6702	DL-Histidine•HCl•H ₂ O (¹⁵ N ₃ , 98%)
CLM-4793	L-Histidine (carbonyl- ¹³ C, 99%)
CLM-1512	L-Histidine•HCl•H ₂ O (ring-2- ¹³ C, 99%) (<5% D)
CLM-2264	L-Histidine•HCl•H ₂ O (¹³ C ₆ , 97-99%) (<5% D)
NLM-2245	L-Histidine•HCl•H ₂ O (α- ¹⁵ N, 98%+)
NLM-4457	L-Histidine (ring-π- ¹⁵ N, 98%+) (<5% D)
NLM-846	L-Histidine•HCl•H ₂ O (ring-π- ¹⁵ N, 98%+) (<5% D)
NLM-4649	L-Histidine (ring-ε- ¹⁵ N, 98%+) (<5% D)
NLM-4765	L-Histidine•HCl•H ₂ O (ring- ¹⁵ N ₂ , 98%)
NLM-1513	L-Histidine•HCl•H ₂ O (¹⁵ N ₃ , 98%) (<5% D)
CNLM-758	L-Histidine•HCl•H ₂ O (¹³ C ₆ , 97-99%; ¹⁵ N ₃ , 97-99%) (<5% D)
DNLM-7366	L-Histidine•HCl•H ₂ O (D ₅ , 98%; ¹⁵ N ₃ , 98%)
CDNLM-6806	L-Histidine•HCl•H ₂ O (¹³ C ₆ , 97-99%; D ₅ , 97-99%; ¹⁵ N ₃ , 97-99%)
ULM-8798	L-Histidine (unlabeled)
DLM-2949	τ-methyl-L-Histidine (methyl-D ₃ , 98%)
CNLM-4645	L-Homoarginine•HCl (¹³ C ₇ , 98%+; ¹⁵ N ₄ , 98%+)
DLM-8259	DL-Homocysteine (3,3,4,4-D ₄ , 98%) CP 95%+
DLM-3619	DL-Homocystine (3,3,3',3',4,4,4',4'-D ₈ , 98%)
NLM-2466	L-Homoserine (¹⁵ N, 95-99%)
CLM-1026	L-Isoleucine (1- ¹³ C, 99%)
CLM-2248-H	L-Isoleucine (¹³ C ₆ , 99%)
DLM-1205	L-Isoleucine (3-methyl-D ₃ , 98%)
DLM-141	L-Isoleucine (D ₁₀ , 98%)
NLM-292	L-Isoleucine (¹⁵ N, 98%)
CNLM-561-H	L-Isoleucine (¹³ C ₆ , 99%; ¹⁵ N, 99%)
DNLM-7325	L-Isoleucine (D ₁₀ , 98%; ¹⁵ N, 98%)
CDNLM-4282	L-Isoleucine (¹³ C ₆ , 95-97%; ¹⁵ N, 96-99%; 2,3-D ₂ , 97%+)
CDNLM-6807	L-Isoleucine (¹³ C ₆ , 97-99%; D ₁₀ , 97-99%; ¹⁵ N, 97-99%)
ULM-8797	L-Isoleucine (unlabeled)
NLM-3585	D-Leucine (¹⁵ N, 98%)
CLM-204	DL-Leucine (1- ¹³ C, 99%)
CLM-207	DL-Leucine (2- ¹³ C, 99%)
NLM-355	DL-Leucine (¹⁵ N, 98%)
CNLM-807	DL-Leucine (1- ¹³ C, 99%; ¹⁵ N, 98%)
CNLM-8679	DL-Leucine (2- ¹³ C, 99%; ¹⁵ N, 98%)

CP = chemical purity

(continued)

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Catalog No.	Description
CLM-468	L-Leucine (1- ¹³ C, 99%)
CLM-2014	L-Leucine (2- ¹³ C, 99%)
CLM-3524	L-Leucine (1,2- ¹³ C ₂ , 99%)
CLM-3383	L-Leucine (3,4- ¹³ C ₂ , 99%)
CLM-2262-H	L-Leucine (¹³ C ₆ , 99%)
DLM-1259	L-Leucine (5,5,5-D ₃ , 99%)
DLM-4212	L-Leucine (isopropyl-D ₇ , 98%)
DLM-567	L-Leucine (D ₁₀ , 98%)
NLM-142	L-Leucine (¹⁵ N, 98%)
OLM-2041	L-Leucine (¹⁸ O ₂ , 94%)
CNLM-615	L-Leucine (1- ¹³ C, 99%; ¹⁵ N, 98%+)
CNLM-3450	L-Leucine (2- ¹³ C, 99%; ¹⁵ N, 95-99%)
CNLM-3451	L-Leucine (4- ¹³ C, 99%; ¹⁵ N, 99%)
CNLM-281-H	L-Leucine (¹³ C ₆ , 99%; ¹⁵ N, 99%)
COLM-7399	L-Leucine (1- ¹³ C, 99%; ¹⁷ O ₂ , 60%+)
DNLM-1895	L-Leucine (5,5,5-D ₃ , 98%; ¹⁵ N, 99%)
DNLM-4642	L-Leucine (D ₁₀ , 98%; ¹⁵ N, 97%)
CDNLM-6808	L-Leucine (¹³ C ₆ , 97-99%; D ₁₀ , 97-99%; ¹⁵ N, 97-99%)
ULM-8203	L-Leucine (unlabeled)
ULM-4889	D-Lysine•HCl (unlabeled)
CLM-749	DL-Lysine•2HCl (1- ¹³ C, 99%)
CLM-7639-H	DL-Lysine•HCl (¹³ C ₆ , 99%)
DLM-8941	DL-Lysine•2HCl (4,4,5,5-D ₄ , 96-98%)
DLM-3542	DL-Lysine•HCl (3,3,4,4,5,5,6,6-D ₈ , 98%)
DLM-8089	DL-Lysine•2HCl (D ₉ , 98%)
NLM-1683	DL-Lysine•HCl•H ₂ O (α- ¹⁵ N, 99%)
NLM-1031	DL-Lysine•2HCl (ε- ¹⁵ N, 98%)
NLM-8762	DL-Lysine•2HCl (¹⁵ N ₂ , 98%)
CNLM-3452	DL-Lysine•2HCl (1- ¹³ C, 99%; ε- ¹⁵ N, 99%)
CNLM-3453	DL-Lysine•2HCl (2- ¹³ C, 99%; ε- ¹⁵ N, 99%)
CNLM-7771-H	DL-Lysine•HCl (¹³ C ₆ , 99%; ¹⁵ N ₂ , 99%)
DNLM-7400	DL-Lysine•2HCl (D ₉ , 98%; ¹⁵ N ₂ , 98%)
CLM-653	L-Lysine•2HCl (1- ¹³ C, 99%)
CLM-633	L-Lysine•HCl (5- ¹³ C, 99%)
CLM-632	L-Lysine•2HCl (6- ¹³ C, 99%)
CLM-2247-H	L-Lysine•2HCl (¹³ C ₆ , 99%)
DLM-2640	L-Lysine•2HCl (4,4,5,5-D ₄ , 96-98%)
DLM-2641	L-Lysine•2HCl (3,3,4,4,5,5,6,6-D ₈ , 98%)
DLM-570	L-Lysine•2HCl (D ₉ , 98%)
NLM-3529	L-Lysine•HCl•H ₂ O (¹⁴ N ₂ , 99.99%)
NLM-143	L-Lysine•2HCl (α- ¹⁵ N, 95-99%)
NLM-631	L-Lysine•2HCl (ε- ¹⁵ N, 98%+)
NLM-1554	L-Lysine•2HCl (¹⁵ N ₂ , 98%+)
CNLM-291-H	L-Lysine•2HCl (¹³ C ₆ , 99%; ¹⁵ N ₂ , 99%)
DNLM-7545	L-Lysine•2HCl (D ₉ , 98%; ¹⁵ N ₂ , 98%)
CDNLM-6810	L-Lysine•2HCl (¹³ C ₆ , 97-99%; D ₉ , 97-99%; ¹⁵ N ₂ , 97-99%)
ULM-8766	L-Lysine•2HCl (unlabeled)
CLM-7356	D-Methionine (1- ¹³ C, 99%)
CLM-6191	DL-Methionine (1- ¹³ C, 99%)
CLM-3387	DL-Methionine (methyl- ¹³ C, 99%)
CLM-6570	DL-Methionine (1,2,3,4- ¹³ C ₄ , 99%)
CLM-6571	DL-Methionine (¹³ C ₅ , 99%)

Catalog No.	Description
DLM-2933	DL-Methionine (3,3,4,4-D ₄ , 98%)
DLM-6795	DL-Methionine (2,3,3,4,4-D ₅ , 98%)
DLM-9019	DL-Methionine (3,3,4,4-D ₄ ; methyl-D ₃ , 98%)
DLM-6796	DL-Methionine (2,3,3,4,4-D ₅ ; methyl-D ₃ , 98%)
NLM-1684	DL-Methionine (¹⁵ N, 98%)
CNLM-6752	DL-Methionine (1,2,3,4- ¹³ C ₄ , 99%; ¹⁵ N, 98%)
CNLM-6753	DL-Methionine (¹³ C ₅ , 98%; ¹⁵ N, 98%)
CDNLM-8026	DL-Methionine (¹³ C ₅ , 97-99%; D ₈ , 97-99%; ¹⁵ N, 97-99%)
CLM-3267	L-Methionine (1- ¹³ C, 99%)
CLM-206	L-Methionine (methyl- ¹³ C, 99%)
CLM-893-H	L-Methionine (¹³ C ₅ , 99%)
DLM-431	L-Methionine (methyl-D ₃ , 98%)
DLM-6797	L-Methionine (2,3,3,4,4-D ₅ ; methyl-D ₃ , 98%)
NLM-752	L-Methionine (¹⁵ N, 96-98%)
CDLM-760	L-Methionine (1- ¹³ C, 99%; methyl-D ₃ , 98%)
CDLM-8885	L-Methionine (2,3,3,4,4-D ₅ , 98%; methyl- ¹³ CH ₃ , 99%)
CNLM-759-H	L-Methionine (¹³ C ₅ , 99%; ¹⁵ N, 99%)
DNLM-7179	L-Methionine (D ₈ , 98%; ¹⁵ N, 98%)
CDNLM-6798	L-Methionine (¹³ C ₅ , 97-99%; D ₈ , 97-99%; ¹⁵ N, 97-99%)
ULM-8204	L-Methionine (unlabeled)
CLM-8002	L-Methionine sulfone (1- ¹³ C, 99%)
CLM-1289	DL-Ornithine•2HCl (1- ¹³ C, 99%)
CLM-2176	DL-Ornithine•HCl (1,2- ¹³ C ₂ , 99%)
CLM-4219	DL-Ornithine•HCl (¹³ C ₅ , 97-98%)
DLM-200	DL-Ornithine•HCl (3,3,4,4,5,5-D ₆ , 97-98%)
DLM-6668	DL-Ornithine•HCl (D ₇ , 98%)
NLM-1047	DL-Ornithine•HCl (α- ¹⁵ N, 98%)
NLM-8064	DL-Ornithine•HCl (¹⁵ N ₂ , 98%)
CNLM-7577-H	DL-Ornithine•HCl (¹³ C ₅ , 99%; ¹⁵ N ₂ , 99%)
DNLM-8618	DL-Ornithine•HCl (D ₇ , 98%; 5- ¹⁵ N, 98%)
CLM-3588	L-Ornithine•HCl (1- ¹³ C, 99%)
CLM-1036	L-Ornithine•HCl (1,2- ¹³ C ₂ , 99%)
CLM-4724-H	L-Ornithine•HCl (¹³ C ₅ , 99%)
DLM-4261	L-Ornithine•HCl (5,5-D ₂ , 98%)
DLM-6046	L-Ornithine•HCl (4,4,5,5-D ₄ , 95%)
DLM-2969	L-Ornithine•HCl (3,3,4,4,5,5-D ₆ , 98%)
DLM-6669	L-Ornithine•HCl (D ₇ , 98%)
NLM-2212	L-Ornithine•HCl (α- ¹⁵ N, 98%)
NLM-2174	L-Ornithine•HCl (5- ¹⁵ N, 98%)
NLM-3610	L-Ornithine•HCl (¹⁵ N ₂ , 98%)
CDLM-3873	L-Ornithine•HCl (5- ¹³ C, 99%; 4,4,5,5-D ₄ , 95%)
CNLM-7578-H	L-Ornithine•HCl (¹³ C ₅ , 99%; ¹⁵ N ₂ , 99%)
DNLM-7369	L-Ornithine•HCl (D ₇ , 98%; ¹⁵ N ₂ , 98%)
ULM-8641	L-Ornithine•HCl (unlabeled)
CLM-3208	D-Phenylalanine (1- ¹³ C, 99%)
DLM-4526	D-Phenylalanine (ring-D ₅ , 97%)
CLM-761	DL-Phenylalanine (1- ¹³ C, 99%)
CLM-3268	DL-Phenylalanine (3- ¹³ C, 99%)
CLM-7486	DL-Phenylalanine (ring- ¹³ C ₆ , 99%)
DLM-2983	DL-Phenylalanine (2-D, 98%)
DLM-2986	DL-Phenylalanine (ring-D ₅ , 98%)
DLM-2987	DL-Phenylalanine (D ₈ , 98%)

Amino Acids

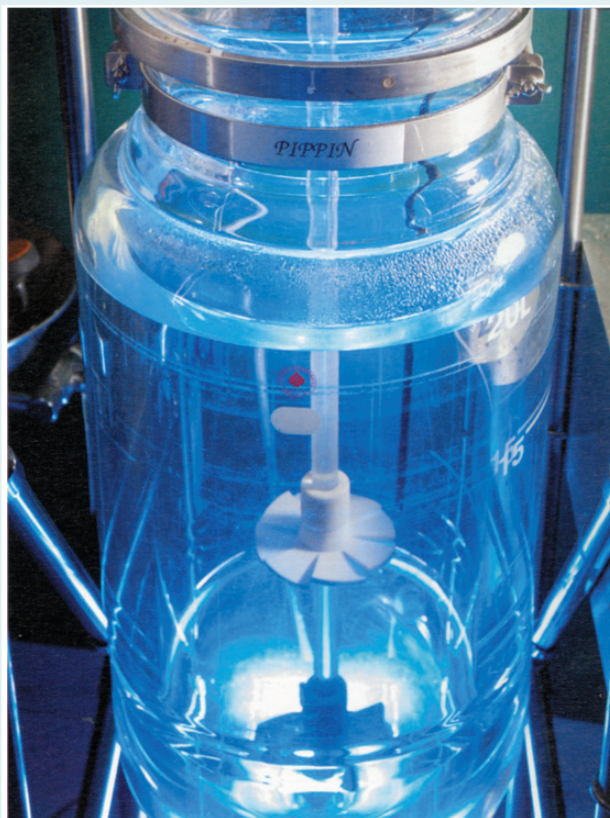
Catalog No.	Description
NLM-3434	DL-Phenylalanine (^{15}N , 98%)
CLM-762	L-Phenylalanine ($1\text{-}^{13}\text{C}$, 99%)
CLM-1631	L-Phenylalanine ($2\text{-}^{13}\text{C}$, 99%) CP 97%
CLM-1053	L-Phenylalanine ($3\text{-}^{13}\text{C}$, 99%)
CLM-1055	L-Phenylalanine (ring- $^{13}\text{C}_6$, 99%)
CLM-2250-H	L-Phenylalanine ($^{13}\text{C}_9$, 99%)
DLM-2984	L-Phenylalanine (2-D , 95%)
DLM-2985	L-Phenylalanine ($3,3\text{-D}_2$, 98%)
DLM-1258	L-Phenylalanine (ring- D_5 , 98%)
DLM-2652	L-Phenylalanine (ring- D_5 , $3,3\text{-D}_2$, 98%)
DLM-372	L-Phenylalanine (D_8 , 98%)
NLM-108	L-Phenylalanine (^{15}N , 98%)
CNLM-7611	L-Phenylalanine ($2,3\text{-}^{13}\text{C}_2$, 99%; ^{15}N , 98%)
CNLM-575-H	L-Phenylalanine ($^{13}\text{C}_9$, 99%; ^{15}N , 99%)
DNLM-7180	L-Phenylalanine (D_8 , 98%; ^{15}N , 98%)
CDNLM-6811	L-Phenylalanine ($^{13}\text{C}_9$, 97-99%; D_8 , 97-99%; ^{15}N , 97-99%)
CLM-2479	DL-Proline ($1\text{-}^{13}\text{C}$, 99%)
DLM-2657	DL-Proline ($2,3,3,4,4,5\text{-D}_7$, 97-98%)
NLM-1689	DL-Proline (^{15}N , 98%)
CLM-510	L-Proline ($1\text{-}^{13}\text{C}$, 99%)
CLM-2260-H	L-Proline ($^{13}\text{C}_5$, 99%)
DLM-487	L-Proline (D_7 , 97-98%)
NLM-835	L-Proline (^{15}N , 98%)
CNLM-436-H	L-Proline ($^{13}\text{C}_5$, 99%; ^{15}N , 99%)
DNLM-7562	L-Proline (D_7 , 98%; ^{15}N , 98%)
CDNLM-6812	L-Proline ($^{13}\text{C}_5$, 97-99%; D_7 , 97-99%; ^{15}N , 97-99%)
ULM-8333	L-Proline (unlabeled)
CLM-1075	DL-Serine ($1\text{-}^{13}\text{C}$, 99%)
CLM-496	DL-Serine ($2\text{-}^{13}\text{C}$, 99%)
CLM-497	DL-Serine ($3\text{-}^{13}\text{C}$, 99%)
DLM-1074	DL-Serine ($3,3\text{-D}_2$, 98%)
DLM-1073	DL-Serine ($2,3,3\text{-D}_3$, 98%)
NLM-1531	DL-Serine (^{15}N , 98%)
CNLM-4207	DL-Serine ($^{13}\text{C}_3$, 98%; ^{15}N , 98%)
ULM-8939	DL-Serine (unlabeled)
CLM-1573	L-Serine ($1\text{-}^{13}\text{C}$, 99%)
CLM-2013	L-Serine ($2\text{-}^{13}\text{C}$, 99%)
CLM-1572	L-Serine ($3\text{-}^{13}\text{C}$, 99%)
CLM-1574-H	L-Serine ($^{13}\text{C}_3$, 99%)
DLM-161	L-Serine ($3,3\text{-D}_2$, 98%)
DLM-582	L-Serine ($2,3,3\text{-D}_3$, 98%)
NLM-2036	L-Serine (^{15}N , 98%)
CNLM-3467	L-Serine ($2\text{-}^{13}\text{C}$, 99%; ^{15}N , 99%)
CNLM-474-H	L-Serine ($^{13}\text{C}_3$, 99%; ^{15}N , 99%)
DNLM-6863	L-Serine ($2,3,3\text{-D}_3$, 98%; ^{15}N , 98%)
CDNLM-6813	L-Serine ($^{13}\text{C}_3$, 97-99%; D_3 , 97-99%; ^{15}N , 97-99%)
ULM-8799	L-Serine (unlabeled)
CLM-3949	Sodium glutamate• $\frac{1}{2}\text{H}_2\text{O}$ ($^{13}\text{C}_5$, 97-98%)
DLM-8738	S-Sulfo-DL-cysteine ($2,3,3\text{-D}_3$, 99%)
CLM-447	L-Threonine ($1\text{-}^{13}\text{C}$, 99%)
CLM-2261-H	L-Threonine ($^{13}\text{C}_4$, 99%)
DLM-1693	L-Threonine (D_5 , 98%)
NLM-742	L-Threonine (^{15}N , 98%)

Catalog No.	Description
CNLM-587	L-Threonine ($^{13}\text{C}_4$, 97-99%; ^{15}N , 97-99%)
DNLM-7367	L-Threonine (D_5 , 97%; ^{15}N , 98%)
CDNLM-6814	L-Threonine ($^{13}\text{C}_4$, 97-99%; D_5 , 97-99%; ^{15}N , 97-99%)
ULM-8800	L-Threonine (unlabeled)
CLM-778	L-Tryptophan ($1\text{-}^{13}\text{C}$, 99%)
CLM-1543	L-Tryptophan (indole- $2\text{-}^{13}\text{C}$, 98%)
CLM-716	L-Tryptophan (indole- $3\text{-}^{13}\text{C}$, 95-99%)
CLM-717	L-Tryptophan (indole- $4\text{-}^{13}\text{C}$, 99%) CP 95%+
CLM-1301	L-Tryptophan (ring- $^{13}\text{C}_6$, 99%)
CLM-4290-H	L-Tryptophan ($^{13}\text{C}_{11}$, 99%)
DLM-1092	L-Tryptophan (indole- D_5 , 98%)
DLM-6903	L-Tryptophan (D_8 , 98%)
NLM-1695	L-Tryptophan ($\alpha\text{-}^{15}\text{N}$, 95-99%)
NLM-1208	L-Tryptophan (indole- ^{15}N , 98%+)
NLM-800	L-Tryptophan ($^{15}\text{N}_2$, 98%)
CNLM-2475-H	L-Tryptophan ($^{13}\text{C}_{11}$, 99%; $^{15}\text{N}_2$, 99%)
DNLM-6904	L-Tryptophan (D_8 , 98%; $^{15}\text{N}_2$, 98%)
CDNLM-6816	L-Tryptophan ($^{13}\text{C}_{11}$, 97-99%; D_8 , 97-99%; $^{15}\text{N}_2$, 97-99%)
CLM-448	DL-Tyrosine ($1\text{-}^{13}\text{C}$, 99%)
DLM-137	DL-Tyrosine ($3,3\text{-D}_2$, 98%)
DLM-2914	DL-Tyrosine (ring- $3,5\text{-D}_2$, 98%)
CLM-776	L-Tyrosine ($1\text{-}^{13}\text{C}$, 99%)
CLM-437	L-Tyrosine ($2\text{-}^{13}\text{C}$, 99%)
CLM-3378	L-Tyrosine ($3\text{-}^{13}\text{C}$, 99%)
CLM-622	L-Tyrosine (phenol- $4\text{-}^{13}\text{C}$, 95-99%)
CLM-623	L-Tyrosine (phenol- $3,5\text{-}^{13}\text{C}_2$, 95-99%)
CLM-1542	L-Tyrosine (ring- $^{13}\text{C}_6$, 99%)
CLM-7881	L-Tyrosine ($1\text{-}^{13}\text{C}$, ring- $^{13}\text{C}_6$, 99%)
CLM-2263-H	L-Tyrosine ($^{13}\text{C}_9$, 99%)
DLM-2317	L-Tyrosine ($3,3\text{-D}_2$, 98%)
DLM-2917	L-Tyrosine (ring- $2,6\text{-D}_2$, 2-D , 98%)
DLM-449	L-Tyrosine (ring- $3,5\text{-D}_2$, 98%)
DLM-451	L-Tyrosine (ring- D_4 , 98%)
DLM-589	L-Tyrosine (D_7 , 98%)
NLM-590	L-Tyrosine (^{15}N , 98%)
OLM-621	L-Tyrosine (phenol- ^{17}O , 35-40%)
OLM-8696	L-Tyrosine (phenol- ^{18}O , 85-90%)
CNLM-7610	L-Tyrosine ($2,3\text{-}^{13}\text{C}_2$, 99%; ^{15}N , 98%)
CNLM-439-H	L-Tyrosine ($^{13}\text{C}_9$, 99%; ^{15}N , 99%)
DNLM-7373	L-Tyrosine (D_7 , 98%; ^{15}N , 98%)
CDNLM-6815	L-Tyrosine ($^{13}\text{C}_9$, 97-99%; D_7 , 97-99%; ^{15}N , 97-99%)
ULM-8201	L-Tyrosine (unlabeled)
CLM-7103	3-Chloro-L-tyrosine (ring- $^{13}\text{C}_6$, 99%) CP 95%+
CLM-7104	3-Nitro-L-tyrosine (ring- $^{13}\text{C}_6$, 99%) CP 94%+
CLM-166	DL-Valine ($1\text{-}^{13}\text{C}$, 99%)
CLM-3277	DL-Valine ($2\text{-}^{13}\text{C}$, 99%)
DLM-3340	DL-Valine (2-D , 98%)
DLM-3341	DL-Valine (3-D , 98%)
DLM-3342	DL-Valine ($2,3\text{-D}_2$, 98%)
DLM-3675	DL-Valine (dimethyl- D_6 , 98%)
DLM-311	DL-Valine (D_8 , 98%)
NLM-236	DL-Valine (^{15}N , 98%)

(continued)

Amino Acids

Catalog No.	Description
CNLM-8677	DL-Valine (2- ¹³ C, 99%; ¹⁵ N, 98%)
CLM-470	L-Valine (1- ¹³ C, 99%)
CLM-3050	L-Valine (2- ¹³ C, 99%)
CLM-2249-H	L-Valine (¹³ C ₅ , 99%)
DLM-7732	L-Valine (3-D, 98%)
DLM-4364	L-Valine (2,3-D ₂ , 98%)
DLM-488	L-Valine (D ₈ , 98%)
NLM-316	L-Valine (¹⁵ N, 98%)
CNLM-3466	L-Valine (1- ¹³ C, 99%; ¹⁵ N, 98%)
CNLM-8678	L-Valine (2- ¹³ C, 99%; ¹⁵ N, 98%)
CNLM-442-H	L-Valine (¹³ C ₅ , 99%; ¹⁵ N, 99%)
DNLM-4643	L-Valine (D ₈ , 97%; ¹⁵ N, 97%)
CDNLM-6817	L-Valine (¹³ C ₅ , 97-99%; D ₈ , 97-99%; ¹⁵ N, 97-99%)
ULM-8202	L-Valine (unlabeled)



Large-scale bioreactor commonly used for synthesis of amino acids.

Amino Acid Mixes for Cell-Free Protein Expression

Catalog No.	Description
CLM-1548	Algal amino acid mixture (16AA) (U- ¹³ C, 97-99%)
DLM-2082	Algal amino acid mixture (16AA) (U-D, 98%)
NLM-2161	Algal amino acid mixture (16AA) (U- ¹⁵ N, 98%)
CNLM-452	Algal amino acid mixture (16AA) (U- ¹³ C, 97-99%; U- ¹⁵ N, 97-99%)
DNLM-819	Algal amino acid mixture (16AA) (U-D, 98%; U- ¹⁵ N, 98%)
CDNLM-2496	Algal amino acid mixture (16AA) (U- ¹³ C, 97-99%; U-D, 97-99%; U- ¹⁵ N, 97-99%)
ULM-2314	Algal amino acid mixture (16AA) (unlabeled)

Catalog No.	Description
DLM-6819	"Cell Free" amino acid mix (20AA) (U-D, 98%)
NLM-6695	"Cell Free" amino acid mix (20AA) (U- ¹⁵ N, 96-98%)
CNLM-6696	"Cell Free" amino acid mix (20AA) (U- ¹³ C, 97-99%+; U- ¹⁵ N, 97-99%)
DNLM-6818	"Cell Free" amino acid mix (20AA) (U-D, 98%; U- ¹⁵ N, 98%)
CDNLM-6784	"Cell Free" amino acid mix (20AA) (U- ¹³ C, 97-99%; U- ¹⁵ N, 97-99%; U-D, 97-99%)
ULM-7891	"Cell Free" amino acid mix (20AA) (unlabeled)

Protected Amino Acids

Catalog No.	Description
NLM-3289	D-Alanine- <i>N</i> -acetyl (¹⁵ N, 98%)
NLM-2168	D-Alanine- <i>N</i> - <i>t</i> -BOC (¹⁵ N, 98%)
CLM-6599	DL-Alanine- <i>N</i> -acetyl (1- ¹³ C, 99%)
CLM-7785	L-Alanine- <i>N</i> -FMOC (¹³ C ₃ , 97-99%)
CLM-818	L-Alanine- <i>N</i> -FMOC (1- ¹³ C, 99%)
CLM-3638	L-Alanine- <i>N</i> -FMOC (2- ¹³ C, 99%)
CLM-1142	L-Alanine- <i>N</i> -FMOC (3- ¹³ C, 99%)
CLM-2150	L-Alanine- <i>N</i> - <i>t</i> -BOC (1- ¹³ C, 99%)
CLM-2011	L-Alanine- <i>N</i> - <i>t</i> -BOC (2- ¹³ C, 98-99%)
CLM-2151	L-Alanine- <i>N</i> - <i>t</i> -BOC (3- ¹³ C, 99%)
CLM-3589	L-Alanine- <i>N</i> - <i>t</i> -BOC (¹³ C ₃ , 97-99%)
DLM-7316	L-Alanine- <i>N</i> -FMOC (3,3,3-D ₃ , 98%)
DLM-8168	L-Alanine- <i>N</i> -FMOC (2,3,3,3-D ₄ , 98%)
DLM-649	L-Alanine- <i>N</i> - <i>t</i> -BOC (2-D ₁ , 98%)
DLM-2793	L-Alanine- <i>N</i> - <i>t</i> -BOC (3,3,3-D ₃ , 99%)
NLM-614	L-Alanine- <i>N</i> -FMOC (¹⁵ N, 98%)
NLM-1903	L-Alanine- <i>N</i> - <i>t</i> -BOC (¹⁵ N, 98%)
CNLM-4355	L-Alanine- <i>N</i> -FMOC (¹³ C ₃ , 97-99%; ¹⁵ N, 97-99%)
CNLM-4355-H	L-Alanine- <i>N</i> -FMOC (¹³ C ₃ , 99%; ¹⁵ N, 99%)
CNLM-6014	L-Alanine- <i>N</i> - <i>t</i> -BOC (2- ¹³ C, 99%; ¹⁵ N, 96-99%)
CNLM-2394	L-Alanine- <i>N</i> - <i>t</i> -BOC (¹³ C ₃ , 97-99%; ¹⁵ N, 97-99%)
CDNLM-7852	L-Alanine- <i>N</i> -FMOC (¹³ C ₃ , 97-99%; D ₄ , 97-99%; ¹⁵ N, 97-99%)
CLM-8475-H	L-Arginine- <i>N</i> -FMOC, PBF (¹³ C ₆ , 99%) (contains solvent)
NLM-8841	L-Arginine- <i>N</i> -FMOC, PBF (¹⁵ N ₄ , 98%) (contains solvent)
CNLM-8474-H	L-Arginine- <i>N</i> -FMOC, PBF (¹³ C ₆ , 99%; ¹⁵ N ₄ , 99%) (contains solvent)
NLM-2164	L-Asparagine- <i>N</i> - <i>t</i> -BOC (α- ¹⁵ N, 98%)
NLM-4204	L-Asparagine- <i>N</i> -FMOC, β- <i>N</i> -trityl (¹⁵ N ₂ , 98%)
CNLM-6193	L-Asparagine- <i>N</i> -FMOC, β- <i>N</i> -trityl (¹³ C ₄ , 97-99%; ¹⁵ N ₂ , 97-99%)
CNLM-6193-H	L-Asparagine- <i>N</i> -FMOC, β- <i>N</i> -trityl (¹³ C ₄ , 99%; ¹⁵ N ₂ , 99%)
DLM-8599	DL-Aspartic acid- <i>N</i> -acetyl (aspartate-2,3,3-D ₃ , 97%)
CLM-4249	L-Aspartic acid- <i>N</i> -carboxylbenzyl (¹³ C ₄ , 97-99%)
NLM-647	L-Aspartic acid- <i>N</i> -FMOC, β- <i>O</i> - <i>t</i> -butyl ester (¹⁵ N, 98%)
NLM-3493	L-Aspartic acid- <i>N</i> - <i>t</i> -BOC (¹⁵ N, 98%)
NLM-1908	L-Aspartic acid- <i>N</i> - <i>t</i> -BOC, β-benzyl ester (¹⁵ N, 98%)
CNLM-2392	L-Aspartic acid- <i>N</i> - <i>t</i> -BOC, β-benzyl ester (¹³ C ₄ , 97-99%; ¹⁵ N, 97-99%)
CNLM-4789	L-Aspartic acid- <i>N</i> -FMOC, α- <i>O</i> - <i>t</i> -butyl ester (¹³ C ₄ , 97-99%; ¹⁵ N, 97-99%)
CNLM-4752	L-Aspartic acid- <i>N</i> -FMOC, β- <i>O</i> - <i>t</i> -butyl ester (¹³ C ₄ , 97-99%; ¹⁵ N, 97-99%)
CNLM-4752-H	L-Aspartic acid- <i>N</i> -FMOC, β- <i>O</i> - <i>t</i> -butyl ester (¹³ C ₄ , 99%; ¹⁵ N, 99%)
CNLM-4788	L-Aspartic acid- <i>N</i> -FMOC (¹³ C ₄ , 97-99%; ¹⁵ N, 97-99%)
CLM-2403	L-Cysteine- <i>N</i> -FMOC, <i>S</i> -benzyl (3- ¹³ C, 98%)
CLM-1901	L-Cysteine- <i>N</i> - <i>t</i> -BOC, <i>S</i> -benzyl (3- ¹³ C, 99%)
DLM-4721	L-Cysteine- <i>N</i> -FMOC, <i>S</i> -trityl (3,3-D ₂ , 98%)
DLM-2700	L-Cysteine- <i>N</i> - <i>t</i> -BOC, <i>S</i> - <i>p</i> -methyl benzoate (3,3-D ₂ , 98%)
DLM-4532	L-Cysteine- <i>S</i> -trityl (3,3-D ₂ , 98%)
DLM-2942	L-Cysteine- <i>S</i> -methyl (<i>S</i> -methyl-D ₃ , 98%)
NLM-3874	L-Cysteine- <i>N</i> - <i>t</i> -BOC, <i>S</i> - <i>p</i> -methyl benzoate (¹⁵ N, 98%)
CNLM-7579	L-Cysteine- <i>N</i> -acetyl (cysteine- ¹³ C ₃ , 97-99%; ¹⁵ N, 97-99%) CP 95%
CNLM-4722	L-Cysteine- <i>N</i> -FMOC, <i>S</i> -trityl (¹³ C ₃ , 97-99%; ¹⁵ N, 97-99%)
CNLM-4722-H	L-Cysteine- <i>N</i> -FMOC, <i>S</i> -trityl (¹³ C ₃ , 99%; ¹⁵ N, 99%)

Catalog No.	Description
CLM-6664	L-Glutamic acid- <i>N</i> -acetyl (glutamate- ¹³ C ₅ , 97-99%)
CLM-2008	L-Glutamic acid- <i>N</i> - <i>t</i> -BOC, γ-benzyl ester (1,2- ¹³ C ₂ , 99%)
NLM-1907	L-Glutamic acid- <i>N</i> - <i>t</i> -BOC, γ-benzyl ester (¹⁵ N, 98%)
NLM-8960	L-Glutamic acid- <i>N</i> -FMOC, γ- <i>t</i> -butyl ester (¹⁵ N, 98%)
CNLM-4753	L-Glutamic acid- <i>N</i> -FMOC, γ- <i>t</i> -butyl ester (¹³ C ₅ , 97-99%; ¹⁵ N, 97-99%) CP 96%
CNLM-4753-H	L-Glutamic acid- <i>N</i> -FMOC, γ- <i>t</i> -butyl ester (¹³ C ₅ , 99%; ¹⁵ N, 99%) CP 96%
NLM-3419	L-Glutamine- <i>N</i> - <i>t</i> -BOC (α- ¹⁵ N, 98%+)
CNLM-4356	L-Glutamine- <i>N</i> -FMOC (¹³ C ₅ , 97-99%; ¹⁵ N ₂ , 97-99%)
CNLM-4356-H	L-Glutamine- <i>N</i> -FMOC (¹³ C ₅ , 99%; ¹⁵ N ₂ , 99%)
CNLM-7252	L-Glutamine- <i>N</i> -FMOC, γ- <i>N</i> -trityl (¹³ C ₅ , 97-99%; ¹⁵ N ₂ , 97-99%)
CNLM-7252-H	L-Glutamine- <i>N</i> -FMOC, γ- <i>N</i> -trityl (¹³ C ₅ , 99%; ¹⁵ N ₂ , 99%)
CLM-2152	Glycine- <i>N</i> - <i>t</i> -BOC (1- ¹³ C, 99%)
CLM-1900	Glycine- <i>N</i> - <i>t</i> -BOC (2- ¹³ C, 99%)
CLM-3639	Glycine- <i>N</i> -FMOC (1- ¹³ C, 99%)
CLM-2387	Glycine- <i>N</i> -FMOC (2- ¹³ C, 99%)
CLM-3777	Glycine- <i>N</i> -acetyl (2- ¹³ C, 99%)
CLM-7547	Glycine- <i>N</i> -FMOC (¹³ C ₂ , 97-99%)
DLM-2153	Glycine- <i>N</i> - <i>t</i> -BOC (2,2-D ₂ , 98%)
DLM-7339	Glycine- <i>N</i> -FMOC (2,2-D ₂ , 98%)
DLM-2947	Glycine- <i>N</i> -methyl (<i>N</i> -methyl-D ₃ , 98%)
NLM-694	Glycine- <i>N</i> -FMOC (¹⁵ N, 98%)
NLM-2109	Glycine- <i>N</i> - <i>t</i> -BOC (¹⁵ N, 98%)
NLM-2377	Glycine- <i>N</i> -benzoyl (Hippuric acid) (¹⁵ N, 98%)
NLM-4464	Glycine- <i>N</i> -acetyl (¹⁵ N, 98%)
CNLM-2412	Glycine- <i>N</i> - <i>t</i> -BOC (¹³ C ₂ , 97-99%; ¹⁵ N, 97-99%)
CNLM-4357	Glycine- <i>N</i> -FMOC (¹³ C ₂ , 97-99%; ¹⁵ N, 97-99%)
CNLM-4357-H	Glycine- <i>N</i> -FMOC (¹³ C ₂ , 99%; ¹⁵ N, 99%)
CNLM-4524	Glycine- <i>N</i> -acetyl (¹³ C ₂ , 97-99%; ¹⁵ N, 97-99%)
CNLM-7697	Glycine- <i>N</i> -FMOC (1- ¹³ C, 99%; ¹⁵ N, 98%)
CNLM-7698	Glycine- <i>N</i> -FMOC (2- ¹³ C, 99%; ¹⁵ N, 98%)
CDNLM-7853	Glycine- <i>N</i> -FMOC (¹³ C ₂ , 97-99%; 2,2-D ₂ , 97-99%; ¹⁵ N, 97-99%)
CLM-8043	L-Isoleucine- <i>N</i> -FMOC (1- ¹³ C, 99%)
CLM-7794	L-Isoleucine- <i>N</i> -FMOC (¹³ C ₆ , 97-99%)
NLM-391	L-Isoleucine- <i>N</i> -FMOC (¹⁵ N, 98%)
NLM-2167	L-Isoleucine- <i>N</i> - <i>t</i> -BOC (¹⁵ N, 98%)
CNLM-4346	L-Isoleucine- <i>N</i> -FMOC (¹³ C ₆ , 97-99%; ¹⁵ N, 97-99%)
CNLM-4346-H	L-Isoleucine- <i>N</i> -FMOC (¹³ C ₆ , 99%; ¹⁵ N, 99%)
CLM-2155	L-Leucine- <i>N</i> - <i>t</i> -BOC•H ₂ O (1- ¹³ C, 99%)
CLM-2010	L-Leucine- <i>N</i> - <i>t</i> -BOC•H ₂ O (2- ¹³ C, 99%)
CLM-3691	L-Leucine- <i>N</i> -FMOC (1- ¹³ C, 99%)
CLM-7546	L-Leucine- <i>N</i> -FMOC (1,2- ¹³ C ₂ , 99%)
CLM-3683	L-Leucine- <i>N</i> -FMOC (¹³ C ₆ , 97-99%)
DLM-2736	L-Leucine- <i>N</i> - <i>t</i> -BOC•H ₂ O (5,5,5-D ₃ , 98%)
DLM-7202	L-Leucine- <i>N</i> -FMOC (5,5,5-D ₃ , 98%)
DLM-476	L-Leucine- <i>N</i> -acetyl (D ₁₀ , 98%)
DLM-7575	L-Leucine- <i>N</i> -FMOC (D ₁₀ , 98%)
DLM-3650	L-Leucine- <i>N</i> - <i>t</i> -BOC•H ₂ O (D ₁₀ , 98%)
NLM-1904	L-Leucine- <i>N</i> - <i>t</i> -BOC•H ₂ O (¹⁵ N, 98%)
NLM-2397	L-Leucine- <i>N</i> -FMOC (¹⁵ N, 98%)
CNLM-2396	L-Leucine- <i>N</i> - <i>t</i> -BOC•H ₂ O (¹³ C ₆ , 97-99%; ¹⁵ N, 97-99%)
CNLM-4345	L-Leucine- <i>N</i> -FMOC (¹³ C ₆ , 97-99%; ¹⁵ N, 97-99%)

(continued)

Protected Amino Acids

Catalog No.	Description
CNLM-4345-H	L-Leucine- <i>N</i> -FMOC ($^{13}\text{C}_6$, 99%; ^{15}N , 99%)
CDNLM-7854	L-Leucine- <i>N</i> -FMOC ($^{13}\text{C}_6$, 97-99%; D_{10} , 97-99%; ^{15}N , 97-99%)
CLM-343	L-Lysine- α - <i>N</i> - <i>t</i> -BOC (6- ^{13}C , 99%)
CLM-2302	L-Lysine- α - <i>N</i> - <i>t</i> -BOC, ϵ - <i>N</i> -2Cl-carboxylbenzyl (6- ^{13}C , 99%)
CLM-6194	L-Lysine- α - <i>N</i> -FMOC, ϵ - <i>N</i> - <i>t</i> -BOC (1- ^{13}C , 99%)
CLM-7865-H	L-Lysine- α - <i>N</i> -FMOC, ϵ - <i>N</i> - <i>t</i> -BOC ($^{13}\text{C}_6$, 99%)
DLM-4731	L-Lysine- ϵ - <i>N</i> -carboxymethyl (4,4,5,5- D_4 , 96-98%)
NLM-4631	L-Lysine- α - <i>N</i> -FMOC, ϵ - <i>N</i> - <i>t</i> -BOC ($^{15}\text{N}_2$, 96-98%)
CNLM-4754-H	L-Lysine- α - <i>N</i> -FMOC, ϵ - <i>N</i> - <i>t</i> -BOC ($^{13}\text{C}_6$, 99%; $^{15}\text{N}_2$, 99%)
CLM-2156	L-Methionine- <i>N</i> - <i>t</i> -BOC (methyl- ^{13}C , 98%)
CLM-8166	L-Methionine- <i>N</i> -FMOC (1- ^{13}C , 99%)
NLM-4632	L-Methionine- <i>N</i> -FMOC (^{15}N , 98%) CP 95%
CNLM-4358	L-Methionine- <i>N</i> -FMOC ($^{13}\text{C}_5$, 97-99%; ^{15}N , 97-99%)
CNLM-4358-H	L-Methionine- <i>N</i> -FMOC ($^{13}\text{C}_5$, 99%; ^{15}N , 99%)
CLM-4824	L-Phenylalanine- <i>N</i> -FMOC (1- ^{13}C , 99%)
CLM-3684	L-Phenylalanine- <i>N</i> -FMOC (ring- $^{13}\text{C}_6$, 99%)
CLM-2170	L-Phenylalanine- <i>N</i> - <i>t</i> -BOC (1- ^{13}C , 99%)
CLM-2009	L-Phenylalanine- <i>N</i> - <i>t</i> -BOC (2- ^{13}C , 99%)
CLM-2061	L-Phenylalanine- <i>N</i> - <i>t</i> -BOC (ring- $^{13}\text{C}_6$, 99%)
CLM-7859	L-Phenylalanine- <i>N</i> - <i>t</i> -BOC ($^{13}\text{C}_9$, 97-99%)
DLM-7786	L-Phenylalanine- <i>N</i> -FMOC (ring- D_5 , 98%)
DLM-8752	L-Phenylalanine- <i>N</i> -FMOC (D_8 , 98%)
DLM-2157	L-Phenylalanine- <i>N</i> - <i>t</i> -BOC (ring- D_5 , 98%)
NLM-1265	L-Phenylalanine- <i>N</i> -FMOC (^{15}N , 98%)
NLM-1905	L-Phenylalanine- <i>N</i> - <i>t</i> -BOC (^{15}N , 98%)
CNLM-4362	L-Phenylalanine- <i>N</i> -FMOC ($^{13}\text{C}_9$, 99%; ^{15}N , 99%)
CNLM-4362-H	L-Phenylalanine- <i>N</i> -FMOC ($^{13}\text{C}_9$, 99%; ^{15}N , 99%)
CNLM-2393	L-Phenylalanine- <i>N</i> - <i>t</i> -BOC ($^{13}\text{C}_9$, 97-99%; ^{15}N , 97-99%)
CLM-8044	L-Proline- <i>N</i> -FMOC (1- ^{13}C , 99%)
NLM-3906	L-Proline- <i>N</i> -FMOC (^{15}N , 98%)
NLM-2329	L-Proline- <i>N</i> - <i>t</i> -BOC (^{15}N , 96%)
CNLM-4347	L-Proline- <i>N</i> -FMOC ($^{13}\text{C}_5$, 97-99%; ^{15}N , 99%)
CNLM-4347-H	L-Proline- <i>N</i> -FMOC ($^{13}\text{C}_5$, 99%; ^{15}N , 97-99%)

Catalog No.	Description
CLM-8167	L-Serine- <i>N</i> -FMOC, <i>O</i> - <i>t</i> -butyl ether (1- ^{13}C , 99%)
CLM-2007	L-Serine- <i>N</i> - <i>t</i> -BOC, <i>O</i> -benzyl ether (2- ^{13}C , 99%)
CLM-756	L-Serine- <i>N</i> - <i>t</i> -BOC, <i>O</i> -benzyl ether (3- ^{13}C , 99%)
NLM-4630	L-Serine- <i>N</i> -FMOC, <i>O</i> - <i>t</i> -butyl ether (^{15}N , 98%)
NLM-2025	L-Serine- <i>N</i> - <i>t</i> -BOC, <i>O</i> -benzyl ether (^{15}N , 98%)
CNLM-4755	L-Serine- <i>N</i> -FMOC, <i>O</i> - <i>t</i> -butyl ether ($^{13}\text{C}_3$, 97-99%; ^{15}N , 97-99%)
CNLM-4755-H	L-Serine- <i>N</i> -FMOC, <i>O</i> - <i>t</i> -butyl ether ($^{13}\text{C}_3$, 99%; ^{15}N , 99%)
CNLM-8403	L-Serine- <i>N</i> -FMOC ($^{13}\text{C}_3$, 97-99%; ^{15}N , 97-99%)
CNLM-8403-H	L-Serine- <i>N</i> -FMOC ($^{13}\text{C}_3$, 99%; ^{15}N , 99%)
NLM-8170	L-Threonine- <i>N</i> -FMOC, <i>O</i> - <i>t</i> -butyl ether (^{15}N , 98%)
NLM-3681	L-Threonine- <i>N</i> - <i>t</i> -BOC, <i>O</i> -benzyl ether (^{15}N , 98%)
CNLM-7615	L-Threonine- <i>N</i> -FMOC, <i>O</i> - <i>t</i> -butyl ether ($^{13}\text{C}_4$, 97-99%; ^{15}N , 97-99%)
CNLM-7615-H	L-Threonine- <i>N</i> -FMOC, <i>O</i> - <i>t</i> -butyl ether ($^{13}\text{C}_4$, 99%; ^{15}N , 99%)
CLM-2194	L-Tryptophan- <i>N</i> - <i>t</i> -BOC (1- ^{13}C , 99%)
DLM-6113	L-Tryptophan- <i>N</i> -FMOC (indole- D_5 , 98%)
NLM-3423	L-Tryptophan- <i>N</i> -FMOC (α - ^{15}N , 98%+)
CNLM-6077	L-Tryptophan- <i>N</i> -FMOC ($^{13}\text{C}_{11}$, 97-99%; $^{15}\text{N}_2$, 97-99%)
DLM-2303	L-Tyrosine- <i>N</i> - <i>t</i> -BOC, <i>O</i> -benzyl ether (ring- D_4 , 98%)
NLM-1906	L-Tyrosine- <i>N</i> - <i>t</i> -BOC, <i>O</i> -benzyl ether (^{15}N , 98%)
NLM-8169	L-Tyrosine- <i>N</i> -FMOC, <i>O</i> - <i>t</i> -butyl ether (^{15}N , 98%)
CNLM-4349	L-Tyrosine- <i>N</i> -FMOC, <i>O</i> - <i>t</i> -butyl ether ($^{13}\text{C}_9$, 97-99%; ^{15}N , 97-99%)
CNLM-4349-H	L-Tyrosine- <i>N</i> -FMOC, <i>O</i> - <i>t</i> -butyl ether ($^{13}\text{C}_9$, 99%; ^{15}N , 99%)
CLM-2450	D-Valine- <i>N</i> -acetyl (2- ^{13}C , 99%)
CLM-3640	L-Valine- <i>N</i> -FMOC (1- ^{13}C , 99%)
CLM-7793	L-Valine- <i>N</i> -FMOC ($^{13}\text{C}_5$, 97-99%)
CLM-2158	L-Valine- <i>N</i> - <i>t</i> -BOC (1- ^{13}C , 99%)
DLM-7784	L-Valine- <i>N</i> -FMOC (D_8 , 98%)
DLM-3651	L-Valine- <i>N</i> - <i>t</i> -BOC (D_8 , 98%)
NLM-7888	L-Valine- <i>N</i> -acetyl (^{15}N , 98%)
NLM-4243	L-Valine- <i>N</i> -FMOC (^{15}N , 98%)
NLM-2060	L-Valine- <i>N</i> - <i>t</i> -BOC (^{15}N , 98%)
CNLM-4348	L-Valine- <i>N</i> -FMOC ($^{13}\text{C}_5$, 97-99%; ^{15}N , 97-99%)
CNLM-4348-H	L-Valine- <i>N</i> -FMOC ($^{13}\text{C}_5$, 99%; ^{15}N , 99%)
CNLM-2395	L-Valine- <i>N</i> - <i>t</i> -BOC ($^{13}\text{C}_5$, 97-99%; ^{15}N , 97-99%)

Preloaded Resins

Catalog No.	Description
SRPR-ARG-CN	L-Arginine- <i>N</i> -Pbf ($^{13}\text{C}_6$, 99%; $^{15}\text{N}_4$, 99%) – 2-ClTrit resin
SRPR-LYS-CN	L-Lysine- <i>N</i> - <i>t</i> -BOC ($^{13}\text{C}_6$, 99%; $^{15}\text{N}_2$, 99%) – 2-ClTrit resin

Carbohydrates

Catalog No.	Description
CLM-1220	<i>N</i> -Acetylglucosamine (<i>N</i> -acetyl-1- ¹³ C, 99%)
CLM-1827	<i>N</i> -Acetylglucosamine (¹³ C ₆ , 99%)
NLM-8810	<i>N</i> -Acetylglucosamine (¹⁵ N, 98%)
CLM-7642	D-Arabinitol (U- ¹³ C ₅ , 98%+)
CLM-715	D-Arabinose (1- ¹³ C, 99%)
CLM-1288	D-Arabinose (2- ¹³ C, 98%)
CLM-8477	D-Arabinose (U- ¹³ C ₅ , 99%)
DLM-1379	D-Arabinose (2-D, 98%)
CLM-1824	2-Deoxy-D-glucose (1- ¹³ C, 99%)
CLM-2122	2-Deoxy-D-glucose (6- ¹³ C, 99%)
DLM-6732	2-Deoxy-D-glucose (1-D, 98%)
DLM-6940	2-Deoxy-D-glucose (D ₈ , 98%) CP 88%
CLM-7266	2-Deoxy-D-ribose (1- ¹³ C, 99%)
DLM-4750	2-Deoxy-D-ribose (5,5-D ₂ , 98%)
CLM-3867	Epilactose (1- ¹³ C, 98%+)
CLM-1118	D-Erythrose (1- ¹³ C, 99%) 1.2% in H ₂ O
CLM-1387	D-Erythrose (2- ¹³ C, 99%) 1.2% in H ₂ O
CLM-8944	D-Erythrose (4- ¹³ C, 99%) 1.2% in H ₂ O
CLM-7863	D-Erythrose (U- ¹³ C ₄ , 98%) 1.2% in H ₂ O
CLM-1201	D-Fructose (1- ¹³ C, 99%)
CLM-1527	D-Fructose (2- ¹³ C, 99%)
CLM-7660	D-Fructose (3- ¹³ C, 99%)
CLM-7661	D-Fructose (4- ¹³ C, 99%)
CLM-7662	D-Fructose (5- ¹³ C, 99%)
CLM-1388	D-Fructose (6- ¹³ C, 99%)
CLM-528	D-Fructose (1,2- ¹³ C ₂ , 99%)
CLM-2462	D-Fructose (1,6- ¹³ C ₂ , 99%)
CLM-8415	D-Fructose (1,2,3- ¹³ C ₃ , 99%)
CLM-1553	D-Fructose (U- ¹³ C ₆ , 99%)
DLM-1389	D-Fructose (6,6-D ₂ , 98%)
DLM-6050	D-Fructose (1-D, 98%)
CLM-3705	L-Fructose (1'- ¹³ C, 99%)
CLM-219	L-Fructose (6- ¹³ C, 99%)
CLM-6678	D-Fructose-1,6-bisphosphate, sodium salt (hydrate) (1- ¹³ C, 99%)
CLM-8962	D-Fructose-1,6-bisphosphate, disodium salt (hydrate) (U- ¹³ C ₆ , 98%)
CLM-8616	D-Fructose-6-phosphate, disodium salt (hydrate) (U- ¹³ C ₆ , 99%)
CLM-744	D-Galactose (1- ¹³ C, 99%)
CLM-745	D-Galactose (2- ¹³ C, 99%)
CLM-4217	D-Galactose (1,2- ¹³ C ₂ , 99%)
CLM-1570	D-Galactose (U- ¹³ C ₆ , 99%)
DLM-1390	D-Galactose (1-D, 98%)
DLM-1391	D-Galactose (2-D, 98%)
CLM-8998	D-Galactose-1-phosphate, dipotassium salt (1- ¹³ C, 99%)
CLM-420	D-Glucose (1- ¹³ C, 98-99%)
CLM-746	D-Glucose (2- ¹³ C, 99%)
CLM-1393	D-Glucose (3- ¹³ C, 99%)
CLM-1394	D-Glucose (4- ¹³ C, 99%)
CLM-1395	D-Glucose (5- ¹³ C, 98%)
CLM-481	D-Glucose (6- ¹³ C, 99%)

Catalog No.	Description
CLM-504	D-Glucose (1,2- ¹³ C ₂ , 99%)
CLM-8942	D-Glucose (2,3- ¹³ C ₂ , 99%)
CLM-2717	D-Glucose (1- ¹³ C, 99%; 6- ¹³ C, 97%+)
CLM-6750	D-Glucose (3,4- ¹³ C ₂ , 99%)
CLM-8787	D-Glucose (4,5- ¹³ C ₂ , 99%)
CLM-4673	D-Glucose (1,2,3- ¹³ C ₃ , 99%)
CLM-8770	D-Glucose (4,5,6- ¹³ C ₃ , 98%)
CLM-8946	D-Glucose (2,3,4,5,6- ¹³ C ₅ , 99%)
CLM-1396	D-Glucose (U- ¹³ C ₆ , 99%)
CLM-4819	D-Glucose (U- ¹² C ₆ , 99.9%)
DLM-1150	D-Glucose (1-D, 98%)
DLM-1271	D-Glucose (2-D, 98%)
DLM-3557	D-Glucose (3-D ₁ , 98%)
DLM-6754	D-Glucose (5-D, 98%)
DLM-349	D-Glucose (6,6-D ₂ , 99%)
DLM-2062	D-Glucose (1,2,3,4,5,6,6-D ₇ , 97-98%)
DLM-9047	D-Glucose (U-D ₁₂ , 98%)
CDLM-6064	D-Glucose (1- ¹³ C, 99%; 1-D, 98%)
CDLM-999	D-Glucose (1- ¹³ C, 99%; 2-D, 98%)
CDLM-4895	D-Glucose (1- ¹³ C, 99%; 6- ¹³ C, 97%+; 6,6-D ₂ , 98%)
CDLM-3813	D-Glucose (U- ¹³ C ₆ , 99%; 1,2,3,4,5,6,6-D ₇ , 97-98%)
CLM-1966	L-Glucose (1- ¹³ C, 99%)
CLM-1399	L-Glucose (2- ¹³ C, 99%)
CLM-8813	D-Glucose-1-phosphate, dicyclohexylammonium salt monohydrate (U- ¹³ C ₆ , 99%+)
CLM-8367	D-Glucose-6-phosphate, disodium salt (hydrate) (U- ¹³ C ₆ , 99%+)
DLM-3856	Methyl-D-glucopyranoside (O-methyl-D ₃ , glucose-D ₇ , 98%)
DLM-7826	<i>myo</i> -Inositol (2-D ₁ , 91%)
CLM-4423	Lactose•H ₂ O (glucose- ¹³ C ₆ , 98%+)
CLM-4518	Lactose ureide•2H ₂ O (ureide- ¹³ C, 99%)
ULM-4519	Lactose ureide•2H ₂ O (unlabeled)
CLM-1127	D-Lyxose (1- ¹³ C, 99%)
CLM-1525	D-Lyxose (2- ¹³ C, 99%)
CLM-1128	D-Lyxose (5- ¹³ C, 99%)
DLM-1187	D-Lyxose (1-D, 98%)
DLM-1188	D-Lyxose (2-D, 98%)
CLM-2470	L-Lyxose (1,2- ¹³ C ₂ , 99%)
CLM-2642	D-Maltose•H ₂ O (U- ¹³ C ₁₂ , 99%)
CLM-1189	D-Mannitol (1- ¹³ C, 98%)
CLM-4416	D-Mannitol (2- ¹³ C, 99%)
CLM-6733	D-Mannitol (U- ¹³ C ₆ , 99%)
CLM-358	D-Mannose (1- ¹³ C, 99%)
CLM-1523	D-Mannose (2- ¹³ C, 99%)
CLM-1192	D-Mannose (6- ¹³ C, 99%)
CLM-6567	D-Mannose (U- ¹³ C ₆ , 99%)
DLM-1193	D-Mannose (1-D, 98%)
DLM-1194	D-Mannose (2-D, 98%)
DLM-1195	D-Mannose (6,6-D ₂ , 98%)
CLM-1218	L-Mannose (1- ¹³ C, 99%)
CLM-1196	D-Ribitol (1- ¹³ C, 99%)

(continued)

Carbohydrates

Catalog No.	Description
CLM-768	D-Ribose (1- ¹³ C, 99%)
CLM-1069	D-Ribose (2- ¹³ C, 99%)
CLM-1066	D-Ribose (5- ¹³ C, 99%)
CLM-4602	D-Ribose (1,2- ¹³ C ₂ , 99%)
CLM-4830	D-Ribose (2,3,4,5- ¹³ C ₄ , 99%)
CLM-3652	D-Ribose (U- ¹³ C ₅ , 98%)
DLM-1070	D-Ribose (1-D, 98%)
DLM-1197	D-Ribose (2-D, 98%)
DLM-6559	D-Ribose (3-D, 98%)
DLM-7778	D-Ribose (5,5-D ₂ , 98%)
DLM-346	D-Ribose (2,3,4,5,5'-D ₅ , 98%)
CLM-8780	Sodium D-gluconate (1- ¹³ C, 99%)
CLM-8781	Sodium D-gluconate (U- ¹³ C ₆ , 99%)
CLM-1565	D-Sorbitol (1- ¹³ C, 99%) (monohydrate or semihydrate)
CLM-8529	D-Sorbitol (U- ¹³ C ₆ , 98%+)
CLM-8091	D-Sucrose (glucose- ¹³ C ₆ , 98%)
CLM-7757	D-Sucrose (¹³ C ₁₂ , 98%)
CLM-1203	D-Talitol (1- ¹³ C, 99%)

Catalog No.	Description
CLM-773	D-Talose (1- ¹³ C, 99%)
CLM-1204	D-Talose (2- ¹³ C, 99%)
CLM-1139	D-Threose (1- ¹³ C, 99%) 1.8% in H ₂ O
CLM-1207	D-Threose (2- ¹³ C, 99%) 1.8% in H ₂ O
CLM-1295	D-Xylitol (1- ¹³ C, 99%)
CLM-1214	D-Xylitol (5- ¹³ C, 99%)
CLM-7608	D-Xylitol (U- ¹³ C ₅ , 99%)
CLM-1140	D-Xylose (1- ¹³ C, 99%)
CLM-1524	D-Xylose (2- ¹³ C, 99%)
CLM-8593	D-Xylose (3- ¹³ C, 99%)
CLM-9083	D-Xylose (4- ¹³ C, 99%)
CLM-1219	D-Xylose (5- ¹³ C, 99%)
CLM-2456	D-Xylose (1,2- ¹³ C ₂ , 99%)
CLM-6140	D-Xylose (U- ¹³ C ₅ , 99%)
DLM-1215	D-Xylose (1-D, 99%)
DLM-1216	D-Xylose (2-D, 98%)
DLM-7121	D-Xylose (D ₆ , 98%)

Cell Growth Media

Yeast Media and Reagents

Catalog No.	Description
NLM-467	Ammonium chloride (¹⁵ N, 99%)
NLM-713	Ammonium sulfate (¹⁵ N ₂ , 99%)
CLM-1396	D-Glucose (U- ¹³ C ₆ , 99%)
DLM-2062	D-Glucose (1,2,3,4,5,6,6-D ₇ , 97-98%)
CDLM-3813	D-Glucose (U- ¹³ C ₆ , 99%; 1,2,3,4,5,6,6-D ₇ , 97-98%)
CLM-1510	Glycerol (¹³ C ₃ , 99%)
DLM-558	Glycerol (D ₈ , 99%)
CDLM-7745	Glycerol (¹³ C ₃ , 99%; D ₈ , 98%) CP 95%
CLM-359	Methanol (¹³ C, 99%)
CDLM-1035	Methanol (¹³ C, 99%; D ₃ , 98%)

Insect Cell Media

Catalog No.	Description
CGM-2000-N	BioExpress® 2000 (U- ¹⁵ N, 98%)
CGM-2000-N-S	BioExpress® 2000 (U- ¹⁵ N, 98%) (200 mL media kit)
CGM-2000-CN	BioExpress® 2000 (U- ¹³ C, 98%; U- ¹⁵ N, 98%)
CGM-2000-U	BioExpress® 2000 (unlabeled)
CGM-2000-U-S	BioExpress® 2000 (unlabeled) (200mL media kit)
CGM-2000-CUSTOM	BioExpress® 2000 (Labeled amino acids to be specified by customer at time of request)

Mammalian Cell Media

Catalog No.	Description
CGM-6000-N	BioExpress® 6000 (U- ¹⁵ N, 98%)
CGM-6000-N-S	BioExpress® 6000 (U- ¹⁵ N, 98%) (200 mL media kit)
CGM-6000-CN	BioExpress® 6000 (U- ¹³ C, 98%; U- ¹⁵ N, 98%)
CGM-6000-U-S	BioExpress® 6000 (unlabeled) (200 mL media kit)
CGM-6000-CUSTOM	BioExpress® 6000 (Labeled amino acids to be specified by customer at time of request)

BioExpress® is a registered trademark of Cambridge Isotope Laboratories, Inc.

Cell Growth Media

Bacterial Media

BioExpress® 1000

Catalog No.	Description
CGM-1000-C	BioExpress® 1000 (U- ¹³ C, 98%) (10x concentrate)
CGM-1000-D	BioExpress® 1000 (U-D, 98%) (10x concentrate)
CGM-1000-N	BioExpress® 1000 (U- ¹⁵ N, 98%) (10x concentrate)
CGM-1000-CD	BioExpress® 1000 (U- ¹³ C, 98%; U-D, 98%) (10x concentrate)
CGM-1000-CN	BioExpress® 1000 (U- ¹³ C, 98%; U- ¹⁵ N, 98%) (10x concentrate)
CGM-1000-DN	BioExpress® 1000 (U-D, 98%; U- ¹⁵ N, 98%) (10x concentrate)
CGM-1000-CDN	BioExpress® 1000 (U- ¹³ C, 98%; U- ¹⁵ N, 98%; U-D, 98%) (10x concentrate)
CGM-1000-U	BioExpress® 1000 (unlabeled) (10x concentrate)

Celtone® Complete

Catalog No.	Description
CGM-1040-C	Celtone® Complete Medium (¹³ C, 98%+)
CGM-1040-D	Celtone® Complete Medium (D, 97%+)
CGM-1040-N	Celtone® Complete Medium (¹⁵ N, 98%+)
CGM-1040-CN	Celtone® Complete Medium (¹³ C, 98%+; ¹⁵ N, 98%+)
CGM-1040-DN	Celtone® Complete Medium (D, 97%+; ¹⁵ N, 98%+)
CGM-1040-CDN	Celtone® Complete Medium (¹³ C, 98%+; D, 97%+; ¹⁵ N, 98%+)
CGM-1040-U	Celtone® Complete Medium (unlabeled)

Celtone® Powder

Catalog No.	Description
CGM-1030P-C	Celtone® Base Powder (¹³ C, 98%+)
CGM-1030P-D	Celtone® Base Powder (D, 97%+)
CGM-1030P-N	Celtone® Base Powder (¹⁵ N, 98%+)
CGM-1030P-CN	Celtone® Base Powder (¹³ C, 98%+; ¹⁵ N, 98%+)
CGM-1030P-DN	Celtone® Base Powder (D, 97%+; ¹⁵ N, 98%+)
CGM-1030P-CDN	Celtone® Base Powder (¹³ C, 98%+; D, 97%+; ¹⁵ N, 98%+)
CGM-1030P-U	Celtone® Base Powder (unlabeled)

Spectra 9 Media

Catalog No.	Description
CGM-3030-C	Spectra 9 (¹³ C, 98%)
CGM-3030-D	Spectra 9 (D, 97%+)
CGM-3030-N	Spectra 9 (¹⁵ N, 98%)
CGM-3030-CN	Spectra 9 (¹³ C, 98%; ¹⁵ N, 98%)
CGM-3030-DN	Spectra 9 (D, 97%+; ¹⁵ N, 98%+)
CGM-3030-CDN	Spectra 9 (¹³ C, 98%; D, 97%+; ¹⁵ N, 98%)
CGM-3030-U	Spectra 9 (unlabeled)

Minimal Media Reagents

Catalog No.	Description
NLM-467	Ammonium chloride (¹⁵ N, 99%)
NLM-713	Ammonium sulfate (¹⁵ N ₂ , 99%)
DLM-4-99	Deuterium oxide (D, 99%)
DLM-4-99.8	Deuterium oxide (D, 99.8%)
DLM-4	Deuterium oxide (D, 99.9%)
CLM-1396	D-Glucose (U- ¹³ C ₆ , 99%)
DLM-2062	D-Glucose (1,2,3,4,5,6-D ₇ , 97-98%)
CDLM-3813	D-Glucose (U- ¹³ C ₆ , 99%; 1,2,3,4,5,6,6-D ₇ , 97-98%)
CLM-1510	Glycerol (¹³ C ₃ , 99%)
DLM-558	Glycerol (D ₈ , 99%)

See CIL Application Note 12 at www.isotope.com.



Cell-Free Protein Expression

Amino Acid Mixes for Cell-Free Protein Expression

Catalog No.	Description
CLM-1548	Algal amino acid mixture (16AA) (U- ¹³ C, 97-99%)
DLM-2082	Algal amino acid mixture (16AA) (U-D, 98%)
NLM-2161	Algal amino acid mixture (16AA) (U- ¹⁵ N, 98%)
CNLM-452	Algal amino acid mixture (16AA) (U- ¹³ C, 97-99%; U- ¹⁵ N, 97-99%)
DNLM-819	Algal amino acid mixture (16AA) (U-D, 98%; U- ¹⁵ N, 98%)
CDNLM-2496	Algal amino acid mixture (16AA) (U- ¹³ C, 97-99%; U-D, 97-99%; U- ¹⁵ N, 97-99%)
ULM-2314	Algal amino acid mixture (16AA) (unlabeled)

Catalog No.	Description
DLM-6819	"Cell Free" amino acid mix (20AA) (U-D, 98%)
NLM-6695	"Cell Free" amino acid mix (20AA) (U- ¹⁵ N, 96-98%)
CNLM-6696	"Cell Free" amino acid mix (20AA) (U- ¹³ C, 97-99%; U- ¹⁵ N, 97-99%)
DNLM-6818	"Cell Free" amino acid mix (20AA) (U-D, 98%; U- ¹⁵ N, 98%)
CDNLM-6784	"Cell Free" amino acid mix (20AA) (U- ¹³ C, 97-99%; U- ¹⁵ N, 97-99%; U-D, 97-99%)
ULM-7891	"Cell Free" amino acid mix (20AA) (unlabeled)

CFS Product Listing

Standard Reagents and Kits

Catalog No.	Short Description	Description
Transcription Reagents		
CFS-TSC-5TB	5x Transcription Buffer	Transcription buffer for WEPRO1240/2240 series
CFS-TSC-ENZ	SP6 RNA Polymerase + RNase Inhibitor	Enzymes for mRNA synthesis and RNase activity inhibition
CFS-TSC-NTP	NTP Mix	Mixture of high quality substrates for transcription
Translation Reagents		
CFS-WGE-1240	WEPRO1240	WGE (240 OD) for general purpose
CFS-WGE-1240G	WEPRO1240G	WGE (240 OD) to produce high purity GST-tagged proteins
CFS-WGE-1240H	WEPRO1240H	WGE (240 OD) to produce high purity His-tagged proteins
CFS-WGE-2240	WEPRO2240	WGE (240 OD) to produce labeled proteins; WEPRO1240 less amino acids
CFS-WGE-2240H	WEPRO2240H	WGE (240 OD) to produce His-tagged, labeled proteins; WEPRO1240H less amino acids
CFS-SUB-AMX	SUB-AMIX	Buffer containing ATP, GTP, and 20 amino acids; used with WEPRO1240 series
CFS-SUB-NAA	SUB-AMIX NA	Buffer containing no amino acids; used with WEPRO2240 series
CFS-SUB-AMX-N	SUB-AMIX (¹⁵ N, 97-99%)	Buffer containing ¹⁵ N-labeled amino acids; used with WEPRO2240 series
CFS-SUB-AMX-CN	SUB-AMIX (¹³ C, 97-99%; ¹⁵ N, 97-99%)	Buffer containing ¹³ C, ¹⁵ N-labeled amino acids; used with WEPRO2240 series
CFS-SUB-AMX-CDN	SUB-AMIX (¹³ C, 97-99%; D, 97-99%; ¹⁵ N, 97-99%)	Buffer containing ¹³ C, D, ¹⁵ N-labeled amino acids; used with WEPRO2240 series

Small Scale Expression Plus Kits

CFS-EDX-PLUS	Premium Expression Kit	Trial expression kit using plasmid or for template for eight (8) 226-μl reactions
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Large Scale Expression Kits

CFS-TRI-1240	WEPRO1240 Expression Kit	Kit containing 2 mL WEPRO1240
CFS-TRI-1240G	WEPRO1240G Expression Kit	Kit containing 2 mL WEPRO1240G
CFS-TRI-1240H	WEPRO1240H Expression Kit	Kit containing 2 mL WEPRO1240H
CFS-TRI-2240H	WEPRO2240H Expression Kit	Kit containing 2 mL WEPRO2240H and SUB-AMIX NA
CFS-TRI-2240-N	WEPRO2240 (¹⁵ N) Expression Kit	Kit containing 2 mL WEPRO2240 and ¹⁵ N-labeled amino acids
CFS-TRI-2240-CN	WEPRO2240 (¹³ C, ¹⁵ N) Expression Kit	Kit containing 2 mL WEPRO2240 and ¹³ C, ¹⁵ N-labeled amino acids
CFS-TRI-2240-CDN	WEPRO2240 (¹³ C, D, ¹⁵ N) Expression Kit	Kit containing 2 mL WEPRO2240 and ¹³ C, D, ¹⁵ N-labeled amino acids

ENDEXT® is a registered trademark of CellFree Sciences.

Protemist® is a registered trademark of Emerald BioSystems.

CIL is a distributor of the above-referenced CFS products in the US and Europe.

Cell-Free Protein Expression

Catalog No	Short Description	Description
CFS-TRI-2240H-N	WEPRO2240H (¹⁵ N) Expression Kit	Kit containing 2 mL WEPRO2240H and ¹⁵ N-labeled amino acids
CFS-TRI-2240H-CN	WEPRO2240H (¹³ C, ¹⁵ N) Expression Kit	Kit containing 2 mL WEPRO2240H and ¹³ C, ¹⁵ N-labeled amino acids
CFS-TRI-2240H-CDN	WEPRO2240H (¹³ C, D, ¹⁵ N) Expression Kit	Kit containing 2 mL WEPRO2240H and ¹³ C,D, ¹⁵ N-labeled amino acids

High Performance Reagents and Kits

Transcription Reagents

CFS-TSC-5TB-LM	5x Transcription Buffer LM	Transcription buffer for WEPRO7240/8240 series
CFS-TSC-ENZ	SP6 RNA Polymerase + RNase Inhibitor	Enzymes for mRNA synthesis and RNase activity inhibition
CFS-TSC-NTP	NTP Mix	Mixture of high quality substrates for transcription

Translation Reagents

CFS-WGE-7240	WEPRO7240	High yield WGE (240 OD) for general purpose
CFS-WGE-7240G	WEPRO7240G	High yield WGE (240 OD) to produce high purity GST-tagged proteins
CFS-WGE-7240H	WEPRO7240H	High yield WGE (240 OD) to produce high purity His-tagged proteins
CFS-WGE-8240	WEPRO8240	High yield WGE (240 OD) to produce labeled proteins; WEPRO7240 less amino acids
CFS-WGE-8240H	WEPRO8240H	High yield WGE (240 OD) to produce high purity His-tagged, labeled proteins; WEPRO7240H less amino acids
CFS-SUB-SGC	SUB-AMIX SGC	Buffer for BL for general purpose; used with WEPRO7240 series
CFS-SUB-SGC-NAA	SUB-AMIX SGC NA	Buffer for BL, containing no amino acids; used with WEPRO8240 series
CFS-SUB-SG	SUB-AMIX SG	Buffer for FF for general purpose; used with WEPRO7240 series
CFS-SUB-SG-NAA	SUB-AMIX SG NA	Buffer for FF, containing no amino acids ; used with WEPRO8240 series
CFS-SUB-SGC-N	SUB-AMIX SGC (¹⁵ N, 97-99%)	Buffer for BL, containing ¹⁵ N-labeled amino acids; used with WEPRO8240 series
CFS-SUB-SGC-CN	SUB-AMIX SGC (¹³ C, 97-99%; ¹⁵ N, 97-99%)	Buffer for BL, containing ¹³ C, ¹⁵ N-labeled amino acids; used with WEPRO8240 series
CFS-SUB-SGC-CDN	SUB-AMIX SGC (¹³ C, 97-99%; D, 97-99%; ¹⁵ N, 97-99%)	Buffer for BL, containing ¹³ C,D, ¹⁵ N-labeled amino acids; used with WEPRO8240 series
CFS-SUB-SG-N	SUB-AMIX SG (¹⁵ N, 97-99%)	Buffer for FF, containing ¹⁵ N-labeled amino acids; used with WEPRO8240 series
CFS-SUB-SG-CN	SUB-AMIX SG (¹³ C, 97-99%; ¹⁵ N, 97-99%)	Buffer for FF, containing ¹³ C, ¹⁵ N-labeled amino acids; used with WEPRO8240 series
CFS-SUB-SG-CDN	SUB-AMIX SG (¹³ C, 97-99%; D, 97-99%; ¹⁵ N, 97-99%)	Buffer for FF, containing ¹³ C,D, ¹⁵ N-labeled amino acids; used with WEPRO8240 series

Large Scale Expression Kits

CFS-TRI-7240	WEPRO7240 Expression Kit	Contains 2mL WEPRO7240
CFS-TRI-7240G	WEPRO7240G Expression Kit	Contains 2 mL WEPRO7240G
CFS-TRI-7240H	WEPRO7240H Expression Kit	Contains 2 mL WEPRO7240H
CFS-TRI-8240H-N	WEPRO8240H (¹⁵ N) Expression Kit	Contains 2 mL WEPRO8240H and ¹⁵ N-labeled amino acids
CFS-TRI-8240H-CN	WEPRO8240H (¹³ C, ¹⁵ N) Expression Kit	Contains 2 mL WEPRO8240H and ¹³ C, ¹⁵ N-labeled amino acids
CFS-TRI-8240H-CDN	WEPRO8240H (¹³ C,D, ¹⁵ N) Expression Kit	Contains 2 mL WEPRO8240H and ¹³ C,D, ¹⁵ N-labeled amino acids

WGE: Wheat germ extract BL: Bilayer method FF: Filter-and-Feed method

Chemical Tagging Reagents and Related Products

Catalog No.	Description
CLM-173	Acetaldehyde (1,2- ¹³ C ₂ , 99%)
DLM-112	Acetaldehyde (D ₄ , 99%)
CLM-1159	Acetic anhydride (1,1'- ¹³ C ₂ , 99%)
CLM-1160	Acetic anhydride (2,2'- ¹³ C ₂ , 99%)
CLM-1161	Acetic anhydride (1,1',2,2'- ¹³ C ₄ , 99%)
DLM-1162	Acetic anhydride (D ₆ , 98%)
CDLM-9271	Acetic anhydride (¹³ C ₄ , 99%; D ₆ , 98%)
DLM-9	Acetone (D ₆ , 99.9%)
CLM-1260	Acetonitrile (1- ¹³ C, 99%)
CLM-704	Acetyl chloride (1,2- ¹³ C ₂ , 99%)
DLM-247	Acetyl chloride (D ₃ , 98%)
CDLM-6208	Acetyl chloride (¹³ C ₂ , 99%; D ₃ , 98%)
CLM-9270	Acrylamide (1- ¹³ C, 99%)
CLM-813	Acrylamide (1,2,3- ¹³ C ₃ , 99%)
DLM-821	Acrylamide (2,3,3-D ₃ , 98%)
OLM-7858	Adenosine 5'-triphosphate, sodium salt (γ- ¹⁸ O ₄ , 94%+)
CLM-8906	S-Adenosyl-L-homocysteine (adenosine- ¹³ C ₁₀ , 98%)
CLM-8755	β-Alanine (3- ¹³ C, 99%)
CLM-8756	β-Alanine (1,2,3- ¹³ C ₃ , 99%)
CNLM-3440	β-Alanine (3- ¹³ C, 99%; ¹⁵ N, 98%)
CNLM-3946	β-Alanine (U- ¹³ C ₃ , 98%+; ¹⁵ N, 96-99%)
CLM-714	Aniline (¹³ C ₆ , 99%)
CLM-466	Barium carbonate (¹³ C, 98%+)
CLM-182	Benzene (¹³ C ₆ , 99%)
CLM-1813	Benzoic acid (ring- ¹³ C ₆ , 99%)
CLM-3010	Benzoyl chloride (carbonyl- ¹³ C, 99%)
DLM-595	Benzoyl chloride (D ₅ , 99%)
CLM-1339	Bromoacetic acid (1,2- ¹³ C ₂ , 99%)
CLM-871	Bromobenzene (¹³ C ₆ , 99%)
DLM-398	Bromobenzene (D ₅ , 99%)
DLM-103	2-Bromoethanol (1,1,2,2-D ₄ , 98%) CP ≥ 95%
CLM-1829	Chlorobenzene (¹³ C ₆ , 99%)
DLM-341	1,4-Dibromobenzene (D ₄ , 98%)
CDLM-301	1,2-Dibromoethane (1,2- ¹³ C ₂ , 99%; D ₄ , 98%)
CLM-495	Diethyl malonate (2- ¹³ C, 99%)
CLM-3603	Diethyl malonate (1,2,3- ¹³ C ₃ , 99%)
DLM-267	Dimethylamine (D ₆ , 99%) gas
CLM-266	Dimethyl sulfate (¹³ C ₂ , 99%)
DLM-196	Dimethyl sulfate (D ₆ , 98%)
DLM-2622	DL-1,4-Dithiothreitol (D ₁₀ , 98%)
DLM-6785	1,2-Ethanedithiol (1,1,2,2-D ₄ , 98%)
DLM-552	Ethanolamine (D ₄ , 98%)
CLM-3297	Ethyl acetoacetate (1,2,3,4- ¹³ C ₄ , 99%)
CLM-1009	Ethyl bromoacetate (1- ¹³ C, 99%)
CLM-1011	Ethyl bromoacetate (1,2- ¹³ C ₂ , 99%)
DLM-271	Ethylene oxide (D ₄ , 98%) (stabilized with 0.1% hydroquinone)

Catalog No.	Description
DLM-6711	N-Ethylmaleimide (ethyl-D ₅ , 98%)
CLM-806	Formaldehyde (¹³ C, 99%) (~20% w/w in H ₂ O)
DLM-805	Formaldehyde (D ₂ , 98%) (~20% w/w in D ₂ O)
CDLM-4599	Formaldehyde (¹³ C, 99%; D ₂ , 98%) (20% w/w in D ₂ O)
DLM-1229	Glycerol (1,1,2,3,3-D ₅ , 99%)
CNLM-7138	Guanidine•HCl (¹³ C, 99%; ¹⁵ N ₃ , 98%)
CNLM-7333	Guanidine•HBR (¹³ C, 99%; ¹⁵ N ₃ , 98%)
DLM-7249	Iodoacetamide (D ₄ , 98%)
CLM-3264	Iodoacetic acid (2- ¹³ C, 99%)
CLM-8824	Iodoacetic acid (¹³ C ₂ , 99%)
DLM-272	Iodoethane (D ₅ , 99%) + copper wire
DLM-1136	Isopropanol (dimethyl-D ₆ , 98%)
DLM-1981	Methanesulfonic acid (D ₄ , 97-98%)
DLM-598	Methanol (D ₃ , 99.5%)
CDLM-688	Methanol (¹³ C, 99%; D ₄ , 99%)
CDLM-8241	Methylamine•HCl (¹³ C, 99%; D ₃ , 98%)
CDNLM-8182	Methylamine•HCl (¹³ C, 99%; methyl-D ₃ , 98%; ¹⁵ N, 98%)
CNLM-6088	O-Methylisourea hydrogen chloride (isourea- ¹³ C, 99%; ¹⁵ N ₂ , 98%) CP ≥ 95%
DLM-2872	Nicotinic acid, ethyl ester (2,4,5,6-D ₄ , 98%)
CLM-675	Nitrobenzene (¹³ C ₆ , 99%)
CLM-6586	2-Nitrobenzenesulfonyl chloride (¹³ C ₆ , 99%)
CLM-3981	Octanoic acid (¹³ C ₈ , 99%)
CLM-216	Phenol (¹³ C ₆ , 99%)
DLM-7731	Phenyl isocyanate (phenyl-D ₅ , 98%)
OLM-1057	Phosphoric acid (¹⁸ O ₄ , 96%) (80-85% in ¹⁸ O water)
NLM-111	Potassium cyanide (¹⁵ N, 98%+)
OLM-7493	Potassium dihydrogen phosphate (¹⁸ O ₄ , 97%)
OLM-7523	Potassium phosphate (¹⁸ O, 97%)
DLM-599	Propionic acid (D ₆ , 98%)
DLM-3305	Propionic anhydride (D ₁₀ , 98%)
DLM-1067	1,2-Propylene oxide (D ₆ , 98%) (stabilized with hydroquinone)
DLM-3126	Sodium acetate (D ₃ , 99%)
CDLM-611	Sodium acetate (1- ¹³ C, 99%; D ₃ , 98%)
CDLM-1240	Sodium acetate (2- ¹³ C, 99%; D ₃ , 98%)
CDLM-3457	Sodium acetate (1,2- ¹³ C ₂ , 99%; D ₃ , 98%)
DLM-226	Sodium borodeuteride (D ₄ , 99%) CP 95%+
DLM-7364	Sodium cyanoborodeuteride (D ₃ , 98%) CP 95%+
CLM-1571	Succinic acid (¹³ C ₄ , 99%)
CDLM-7754	Succinic acid (¹³ C ₄ , 99%; 2,2,3,3-D ₄ , 98%)
CLM-2473	Succinic anhydride (1,2,3,4- ¹³ C ₄ , 99%)
DLM-833	Succinic anhydride (D ₄ , 98%)
DLM-6143	Suberic acid (2,2,7,7-D ₄ , 98%)
DLM-1176	Toluene (ring-D ₅ , 98%)
CLM-311	Urea (¹³ C, 99%)
NLM-233	Urea (¹⁵ N ₂ , 98%+)

Fatty Acids

Catalog No.	Description
DLM-2497	Algal fatty acid mixture (methyl esters) (U-D, 96-98%)
CLM-1239	Arachidic acid (1- ¹³ C, 99%) (eicosanoic acid)
DLM-1234	Arachidic acid (methyl-D ₃ , 98%)
DLM-1233	Arachidic acid (D ₃₉ , 98%)
DLM-2006	Decanoic acid (methyl-D ₃ , 98%)
DLM-270	Decanoic acid (D ₁₉ , 98%)
DLM-7974	Dimyristin (dimyristoyl-D ₅₄ , 98%)
DLM-8273	Dipalmitin (D ₆₇ , 98%)
CLM-8388	Docosahexaenoic acid (U- ¹³ C ₂₂ , 95%+) CP 95%+
CLM-8398	Docosahexaenoic acid, methyl ester (docosahexaenoate- ¹³ C ₂₂ , 95%+) CP 90%+
CLM-8398-HP	Docosahexaenoic acid, methyl ester (docosahexaenoate- ¹³ C ₂₂ , 95%+)
DLM-9180	Docosanoic acid (22,22,22-D ₃ , 98%)
CLM-8274	Ethyl hexanoate (hexanoate- ¹³ C ₆ , 99%)
DLM-1308	Heptadecanoic acid (methyl-D ₃ , 98%)
DLM-6905	Heptadecanoic acid (D ₃₃ , 98%)
DLM-1820	Heptanoic acid (2,2,3,3-D ₄ , 98%)
DLM-2731	Heptanoic acid (D ₁₃ , 98%)
DLM-8510	Hexacosanoic acid (12,12,13,13-D ₄ , 98%)
DLM-2922	DL-3-Hydroxytetradecanoic acid (2,2,3,4,4-D ₅ , 96%)
DLM-3062	Lauric acid (methyl-D ₃ , 99%)
CLM-6855	Linoleic acid (U- ¹³ C ₁₈ , 98%) 94%+ (<10% <i>cis/trans</i> isomer)
CLM-2119	Linoleic acid, ethyl ester (1- ¹³ C, 99%)
CLM-3960	Linoleic acid, ethyl ester (linoleate-U- ¹³ C ₁₈ , 98%) CP 95%+
DLM-1909	Linoleic acid, ethyl ester (9,10,12,13-D ₄ , 95%)
DLM-227	Linoleic acid, ethyl ester (17,17,18,18,18-D ₅ , 98%)
DLM-766	Linoleic acid, ethyl ester (D ₃₁ , 98%) CP 95%+
CLM-8395	Linoleic acid, methyl ester (linoleate- ¹³ C ₁₈ , 98%+) CP 95%
CLM-6229	Linoleic acid, potassium salt (1- ¹³ C, 99%)
CLM-8835	Linoleic acid, potassium salt (U- ¹³ C ₁₈ , 98%) CP 97%
DLM-2160	Linolenic acid (D ₂₉ , 98%)
DLM-2351	Linolenic acid, ethyl ester (17,17,18,18,18-D ₅ , 98%) CP 90%
CLM-8455	Mixed fatty acids (U- ¹³ C, 98%+)
DLM-8572	Mixed fatty acids (U-D, 98%)
CDLM-8376	Mixed fatty acids (U- ¹³ C, 98%+; U-D, 97%+)
CLM-8381	Mixed fatty acids methyl esters (U- ¹³ C, 98%+) (terminal ester unlabeled) CP 95%
DLM-2497	Mixed fatty acid methyl esters (U-D, 96-98%)
CLM-8373	Mixed triglycerides (U- ¹³ C, 98%+)
DLM-8375	Mixed triglycerides (U-D, 97%+)
CLM-1844	Myristic acid (1- ¹³ C, 99%)
CLM-3665	Myristic acid (1,2,3- ¹³ C ₃ , 99%)
DLM-1039	Myristic acid (methyl-D ₃ , 98%)
DLM-208	Myristic acid (D ₂₇ , 98%)
CLM-6228	Myristic acid, potassium salt (1- ¹³ C, 99%)
CLM-8724	Nonanoic acid (U- ¹³ C ₉ , 98%)
DLM-4533	DL-α-Phosphatidylcholine, dimyristoyl (DMPC) (D ₇₂ , 98%)
DLM-605	L-α-Phosphatidylcholine, dimyristoyl (DMPC) (dimyristoyl-D ₅₄ , 98%) CP 95%
DLM-606	L-α-Phosphatidylcholine, dipalmitoyl (DPPC) (dipalmitoyl-D ₆₂ , 98%) CP 95%

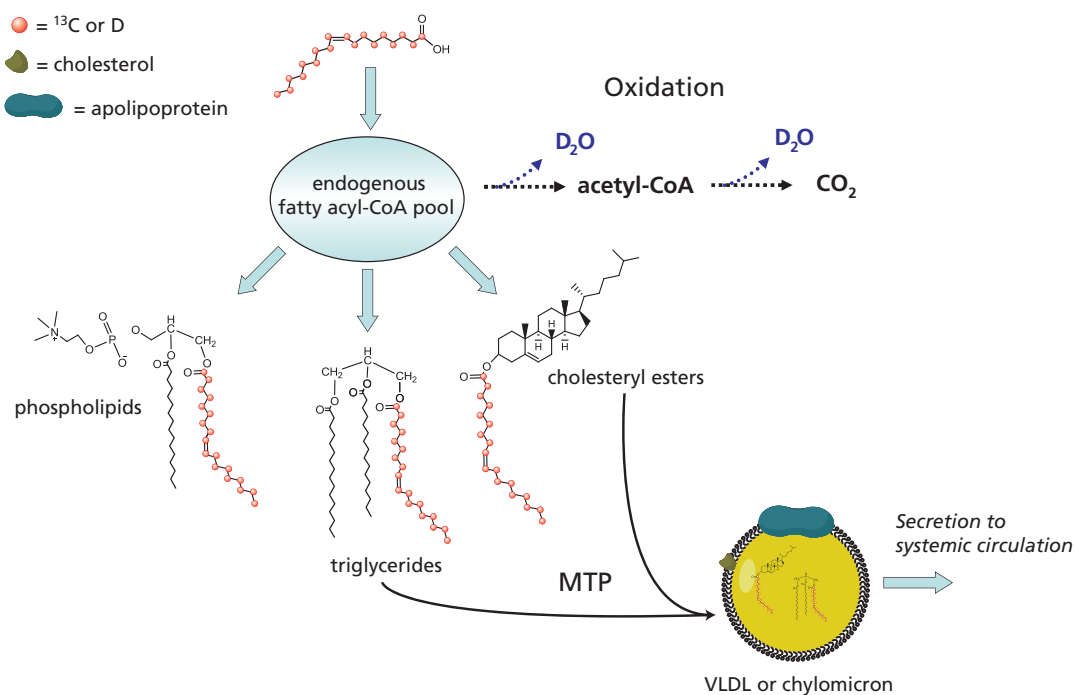
Catalog No.	Description
DLM-7558	L-Phosphatidylglycerol, dimyristoyl (DMPG) (dimyristoyl-D ₅₄ , 98%)
DLM-7557	L-Phosphatidylglycerol, dipalmitoyl (DPPG) (dipalmitoyl-D ₆₂ , 98%)
CLM-293	Octanoic acid (1- ¹³ C, 99%)
CLM-3827	Octanoic acid (1,2- ¹³ C ₂ , 99%)
CLM-2721	Octanoic acid (1,2,3,4- ¹³ C ₄ , 99%)
CLM-3981	Octanoic acid (¹³ C ₈ , 99%)
DLM-619	Octanoic acid (D ₁₅ , 98%)
CLM-4259	Octanoyl-1,3-diolein (octanoyl-1,2- ¹³ C ₂ , 99%)
CLM-3707	2-Octanoyl-1,3-distearin (octanoic-1- ¹³ C, 99%)
CLM-4258	2-Octanoyl-1,3-distearin (octanoyl-1,2- ¹³ C ₂ , 99%)
CLM-149	Oleic acid (1- ¹³ C, 99%)
CLM-2492	Oleic acid (methyl- ¹³ C, 99%)
CLM-460	Oleic acid (U- ¹³ C ₁₈ , 98%) CP 95%
DLM-689	Oleic acid (9,10-D ₂ , 97%)
DLM-2968	Oleic acid (11,11-D ₂ , 98%)
DLM-1891	Oleic acid (D ₃₃ , 98%)
CLM-3959	Oleic acid, ethyl ester (oleate-U- ¹³ C ₁₈ , 98%+)
DLM-8747	Oleic acid, ethyl ester (D ₃₃ , 98%) CP 95%+
CLM-4337	Oleic acid, methyl ester (oleate- ¹³ C ₁₈ , 98%+)
CLM-4477	Oleic acid, potassium salt (1- ¹³ C, 99%)
CLM-8856	Oleic acid, potassium salt (U- ¹³ C ₁₈ , 98%) CP 95%
DLM-8837	Oleic acid, potassium salt (15,15,16,16,17,17,18,18-D ₉ , 98%)
CLM-6230	Oleic acid, sodium salt (1- ¹³ C, 99%)
CLM-8763	Oleic acid, sodium salt (U- ¹³ C ₁₈ , 98%)
CLM-150	Palmitic acid (1- ¹³ C, 99%)
CLM-2120	Palmitic acid (2- ¹³ C, 99%)
CLM-2253	Palmitic acid (methyl- ¹³ C, 99%)
CLM-214	Palmitic acid (1,2- ¹³ C ₂ , 99%)
CLM-7896	Palmitic acid (1,2,3,4- ¹³ C ₄ , 99%)
CLM-409	Palmitic acid (U- ¹³ C ₁₆ , 98%)
DLM-8673	Palmitic acid (12-D ₁ , 98%)
DLM-1153	Palmitic acid (2,2-D ₂ , 98%)
DLM-2889	Palmitic acid (3,3-D ₂ , 98%)
DLM-2890	Palmitic acid (9,9-D ₂ , 98%)
DLM-2891	Palmitic acid (13,13-D ₂ , 98%)
DLM-611	Palmitic acid (methyl-D ₃ , 98%)
DLM-2892	Palmitic acid (5,5,6,6-D ₄ , 98%)
DLM-2893	Palmitic acid (7,7,8,8-D ₄ , 98%)
DLM-2894	Palmitic acid (11,11,12,12-D ₄ , 98%)
DLM-2895	Palmitic acid (9,9,...16,16,16-D ₁₇ , 98%) CP 97%
DLM-215	Palmitic acid (D ₃₁ , 98%)
CLM-3957	Palmitic acid, ethyl ester (palmitate-U- ¹³ C ₁₆ , 98%+) CP 95%
DLM-8793	Palmitic acid, ethyl ester (D ₃₁ , 98%)
CLM-8390	Palmitic acid, methyl ester (palmitate- ¹³ C ₁₆ , 98%+)
CLM-2241	Palmitoleic acid (¹³ C ₁₆ , 99%) CP 95-99%
CLM-3958	Palmitoleic acid, ethyl ester (palmitoleate-U- ¹³ C ₁₆ , 98%+) CP 95%+
CLM-8391	Palmitoleic acid, methyl ester (palmitoleate- ¹³ C ₁₆ , 98%+)
CLM-8384	Palmitolenic acid (U- ¹³ C ₁₆ , 98%+) CP >90%
CLM-8392	Palmitolenic acid, methyl ester (palmitolenate- ¹³ C ₁₆ , 98%+)
DLM-1307	Pentadecanoic acid (methyl-D ₃ , 98%)

(continued)

Fatty Acids

Catalog No.	Description
DLM-572	Pentanoic acid (D ₉ , 98%)
CLM-1889	Potassium palmitate (1- ¹³ C, 99%)
CLM-6865	Potassium palmitate (1,2,3,4- ¹³ C ₄ , 99%)
CLM-3943	Potassium palmitate (U- ¹³ C ₁₆ , 98%+)
DLM-3773	Potassium palmitate (2,2-D ₂ , 97%)
DLM-6199	Potassium palmitate (methyl-D ₃ , 98%)
DLM-6033	Potassium palmitate (7,7,8,8-D ₄ , 98%)
CLM-1948	Sodium octanoate (1- ¹³ C, 99%)
CLM-3876	Sodium octanoate (1,2,3,4- ¹³ C ₄ , 99%)
CLM-3980	Sodium octanoate (2,4,6,8- ¹³ C ₄ , 99%)
CLM-174	Sodium palmitate (1- ¹³ C, 99%)
CLM-6059	Sodium palmitate (¹³ C ₁₆ , 98%+)
CLM-490	Stearic acid (methyl- ¹³ C, 99%)
CLM-676	Stearic acid (1- ¹³ C, 99%)
CLM-6990	Stearic acid (U- ¹³ C ₁₈ , 98%) CP 97%

Catalog No.	Description
DLM-1154	Stearic acid (methyl-D ₃ , 98%)
DLM-379	Stearic acid (D ₃₅ , 98%)
CLM-8731	Stearic acid, ethyl ester (stearate- ¹³ C ₁₈ , 98%+)
DLM-8748	Stearic acid, ethyl ester (D ₃₅ , 98%)
CLM-8394	Stearic acid, methyl ester (stearate- ¹³ C ₁₈ , 98%+)
CLM-6227	Stearic acid, potassium salt (1- ¹³ C, 99%)
DLM-7302	Tetracosanoic acid (D ₄₇ , 98%)
DLM-9179	Tetracosanoic acid (9,9,10,10-D ₄ , 98%)
DLM-7487	Tetradecanoic acid (13,13,14,14,14-D ₅ , 98%)
DLM-1392	Tridecanoic acid (D ₂₅ , 98%)
CLM-162	Trioctanoin (1,1,1- ¹³ C ₃ , 99%)
CLM-163	Triolein (1,1,1- ¹³ C ₃ , 99%)
CLM-164	Tripalmitin (1,1,1- ¹³ C ₃ , 99%)
CLM-8445	Tripalmitin (glyceryl- ¹³ C ₃ , 99%)
DLM-9044	Tripalmitin (D ₉₈ , 98%)
DLM-7875	Tristearin (tristearoyl-D ₁₀₅ , 98%)



Schematic illustration showing the incorporation of [¹³C] or [D] oleic acid into larger lipids.

For further information on fatty acid and lipid metabolism, please see the application note beginning on page 74.

Gases

Catalog No.	Description
DLM-389	Ammonia (D ₃ , 99%)
NLM-107	Ammonia (¹⁵ N, 98%)
NLM-107-10	Ammonia (¹⁵ N, 10%)
NLM-859	Ammonia (¹⁴ N, 99.99%)
NDLM-860	Ammonia (¹⁵ N, 98%+; D ₃ , 98%)
ARLM-6672	Argon (³⁶ Ar, 99.5%)
CLM-1217	Bromomethane (¹³ C, 99%)
DLM-401	Bromomethane (D ₃ , 99%)
CLM-7114	1,3-Butadiene (¹³ C ₄ , 99%) + hydroquinone
DLM-877	1,3-Butadiene (1,1,4,4-D ₄ , 98%) + hydroquinone
DLM-876	1,3-Butadiene (D ₆ , 98%) + hydroquinone
CLM-8994	<i>n</i> -Butane (1- ¹³ C, 99%)
DLM-1610	<i>n</i> -Butane (D ₁₀ , 98%)
CLM-3505	1-Butene (1- ¹³ C, 99%)
CLM-4309	1-Butene (1,2- ¹³ C ₂ , 99%)
DLM-4623	1-Butene (4,4,4-D ₃ , 98%)
DLM-2033	1-Butene (D ₈ , 98%)
CLM-185-10	Carbon dioxide (¹³ C, 10%)
CLM-185	Carbon dioxide (¹³ C, 99%) (<1% ¹⁸ O)
CLM-3781	5% CO ₂ in air baseline calibrant gas with delta value = -22.71 vs. PDB
CLM-3782	5% CO ₂ in air mid-level calibrant gas at 7.21 delta units above baseline calibrant gas
CLM-3783	5% CO ₂ in air high-level calibrant gas at 13.02 delta units above baseline calibrant gas
CLM-3785	5% CO ₂ in air low-level calibrant gas at 13.32 delta units above baseline calibrant gas
CLM-9026	5% CO ₂ in air mid-level calibrant gas at 9.11 delta units above baseline calibrant gas
CLM-880	Carbon dioxide (¹² C, 99.95%)
CLM-477	Carbon dioxide (¹² C, 99.99%)
CLM-709	Carbon dioxide (¹² C, 99.999%)
OLM-186	Carbon dioxide (¹⁸ O ₂ , 95%)
COLM-801	Carbon dioxide (¹³ C, 99%; ¹⁷ O ₂ , 10%)
COLM-802	Carbon dioxide (¹³ C, 99%; ¹⁸ O ₂ , 90%)
COLM-881	Carbon dioxide (¹² C, 99.95%; ¹⁷ O ₂ , 10%)
COLM-882	Carbon dioxide (¹² C, 99.95%; ¹⁸ O ₂ , 95%)
COLM-1313	Carbon dioxide (¹² C, 99.95%; ¹⁸ O ₂ , 50%)
CLM-189	Carbon monoxide (¹³ C, 99%) (<2% ¹⁸ O)
CLM-837	Carbon monoxide (¹² C, 99.95%)
CLM-424	Carbon monoxide (¹² C, 99.99%)
CLM-425	Carbon monoxide (¹² C, 99.999%)
OLM-190	Carbon monoxide (¹⁸ O, 95%)
COLM-885	Carbon monoxide (¹³ C, 99%; ¹⁸ O, 95%)
CLM-4619	Carbonyl sulfide (¹³ C, 99%)
CLM-6582	Chloroethane (random- ¹³ C, 99%)
CLM-3259	Chloroethane (2- ¹³ C, 99%)
DLM-2809	Chloroethane (2-D, 98%)
DLM-1612	Chloroethane (2,2,2-D ₃ , 98%)
DLM-1171	Chloroethane (D ₅ , 98%)
CGM-P39	Cyclotron target gas mixture (code I-460) 39 (¹⁵ N ₂ , 99%):1 O ₂ CP 99.99%

Catalog No.	Description
DLM-408	Deuterium (D, 99.8%) (D ₂ , 99.6% +HD, 0.4%)
DLM-1329	Deuterium (D, 99.9%) (D ₂ , 99.8% +HD, 0.2%)
DLM-1003	Deuterium (D, 99.96%) <400 ppm HD
DLM-342	Deuterium bromide (D, 99%)
DLM-458	Deuterium chloride (D, 99%)
DLM-194	Deuterium hydride (D, 97%)
DLM-596	Deuterium iodide (D, 98%)
DLM-791	Deuterium sulfide (D ₂ , 98%)
DLM-1558	Dichlorofluoromethane (D, 98%) CP 96%
CLM-1604	Difluoromethane (¹³ C, 99%)
DLM-1614	Difluoromethane (D ₂ , 98%)
CDLM-6057	Difluoromethane (¹³ C, 99%; D ₂ , 98%)
DLM-267	Dimethylamine (D ₆ , 99%)
DLM-506	Dimethylamine (D ₇ , 99%)
NLM-2304	Dimethylamine (¹⁵ N, 98%+)
CDLM-7280	Dimethylamine•HCl (¹³ C ₂ , 99%; D ₆ , 98%)
CLM-1517	Dimethyl ether (¹³ C ₂ , 99%)
DLM-340	Dimethyl ether (D ₆ , 99%)
CLM-2187	Ethane (1- ¹³ C, 99%)
DLM-276	Ethane (D ₆ , 98%)
DLM-3857	Ethylamine (D ₅ , 98%)
CLM-415	Ethylene (1,2- ¹³ C ₂ , 99%)
DLM-6610	Ethylene (D ₁ , 98%)
DLM-2446	Ethylene (1,1-D ₂ , 98%)
DLM-416	Ethylene (1,2-D ₂ , 98%) <i>cis/trans</i> mix
DLM-1530	Ethylene (<i>cis</i> -1,2-D ₂ , 98%)
DLM-740	Ethylene (<i>trans</i> -1,2-D ₂ , 98%)
DLM-347	Ethylene (D ₄ , 98%)
CDLM-6684	Ethylene (¹³ C ₁ , 99%; D ₄ , 98%)
CDLM-8024	Ethylene (¹³ C ₂ , 99%; D ₄ , 98%)
CLM-1014	Fluoromethane (¹³ C, 99%)
DLM-1015	Fluoromethane (D ₃ , 99%)
DLM-1809	Isobutane (D ₁₀ , 98%)
KRLM-4656	Krypton-78 (⁷⁸ Kr, 99%)
KRLM-6794	Krypton-82 (⁸² Kr, 99%)
KRLM-7397	Krypton-86 (⁸⁶ Kr)
CLM-1033	Methane (¹² C, 99.95%)
CLM-427	Methane (¹² C, 99.99%)
CLM-392	Methane (¹² C, 99.999%)
CLM-429	Methane (¹³ C, 99%)
CLM-3590	Methane (¹³ C, 99.9%)
DLM-1257	Methane (D ₁ , 98%)
DLM-1343	Methane (D ₂ , 98%)
DLM-1344	Methane (D ₃ , 98%)
DLM-144	Methane (D ₄ , 99%)
CDLM-469	Methane (¹³ C, 99%; D ₄ , 99%)
CDLM-1616	Methane (¹² C, 99.95%; D ₄ , 98%)
CLM-3961	Methanethiol (¹³ C, 99%)
DLM-2643	Methanethiol (D ₃ , 99%)

(continued)

Gases

Catalog No.	Description
CLM-1617	Methylamine (^{13}C , 99%)
DLM-1500	Methylamine (D_3 , 98%)
DLM-1618	Methylamine (D_2 , 98%)
DLM-1501	Methylamine (D_5 , 98%)
NLM-1621	Methylamine (^{15}N , 98%+)
CNLM-302	Methylamine (^{13}C , 99%; ^{15}N , 99%)
CLM-7250	2-Methylpropene ($2\text{-}^{13}\text{C}$, 99%)
DLM-1623	Methyl vinyl ether (methyl- D_3 , 98%)
DLM-1624	Methyl vinyl ether (vinyl- D_3 , 98%)
NE-2099	Neon (^{20}Ne , 99.95%)
NE-2299	Neon (^{22}Ne , 99.9%)
NLM-823	Nitric oxide (^{15}N , 98%+)
NLM-363	Nitrogen ($^{15}\text{N}_2$, 98%+)
NLM-1619	Nitrogen dioxide (^{15}N , 99%)
NLM-1045	Nitrous oxide ($1\text{-}^{15}\text{N}$, 98%+)
NLM-1044	Nitrous oxide ($2\text{-}^{15}\text{N}$, 98%+)
NLM-1046	Nitrous oxide ($^{15}\text{N}_2$, 98%+)
OLM-212	Oxygen ($^{18}\text{O}_2$, 97%) CP >99.8%
OLM-213-70	Oxygen ($^{17}\text{O}_2$, 70%)
DLM-2703	Phosphine (D_3 , 98%)
DLM-4732	Propadiene (D_4 , 98%)
CLM-403	Propane ($1\text{-}^{13}\text{C}$, 99%)
CLM-2726	Propane ($2\text{-}^{13}\text{C}$, 99%)
DLM-3676	Propane ($2,2\text{-D}_2$, 98%)
DLM-3476	Propane ($1,1,1,3,3,3\text{-D}_6$, 98%)
DLM-153	Propane (D_8 , 98%)

Catalog No.	Description
CLM-4254	Propene ($1\text{-}^{13}\text{C}$, 99%)
CLM-7210	Propene ($2\text{-}^{13}\text{C}$, 99%)
CLM-1514	Propene ($3\text{-}^{13}\text{C}$, 99%)
DLM-4624	Propene ($1,1\text{-D}_2$, 98%)
DLM-1626	Propene ($3,3,3\text{-D}_3$, 98%)
DLM-304	Propene (D_6 , 98%)
CLM-6188	Propyne ($1,2\text{-}^{13}\text{C}_2$, 99%)
CLM-6189	Propyne ($1,2,3\text{-}^{13}\text{C}_3$, 99%)
DLM-4303	Propyne (1-D , 98%)
DLM-4302	Propyne (methyl- D_3 , 98%)
DLM-4775	Propyne (D_4 , 98%)
DLM-3823	Trimethylamine (dimethyl- D_6 , 98%)
DLM-4638	Trimethylamine (D_8 , 98%)
DLM-603	Trimethylamine (D_9 , 98%)
DLM-3344	Vinyl bromide (D_3 , 98%) + hydroquinone
CLM-472	Vinyl chloride ($^{13}\text{C}_2$, 99%) + hydroquinone
DLM-2390	Vinyl chloride (1-D_1 , 98%)
XELM-428	Xenon (^{124}Xe , 99.9%)
XELM-430	Xenon (^{129}Xe , 99%)
XELM-8114	Xenon (^{131}Xe , 99%+)
XELM-7261	Xenon (^{132}Xe , 99.5%+)
XELM-8986	Xenon (^{134}Xe , 99%)

Gas Packaging

Catalog No.	Description
CODE U-0.3	0.3 L Aluminum cylinder with brass CGA 350 valve
CODE U-1	1 L Aluminum cylinder with brass CGA 350 valve
CODE U-2.9	2.9 L Aluminum cylinder with brass CGA 350 valve
CODE U-10.5	10.5 L Aluminum cylinder with brass CGA 350 valve

Breath Test

BT-3L-KIT	Breath test adaptor set for use with CGA-580 cylinder
BTB-1300-20	Breath collection bag (aluminum lined) 1300 mL for baseline breath test
BTB-300-25	Breath test bags (aluminum lined) 300 mL for time course breath test sample
BT-LB-KIT	Breath test adaptor set for use with CGA-110/170 lecture bottle

Cylinder Valve

CODE G-3	3 L carbon steel cylinder CGA 580 packless brass angle
CODE G-8	8 L carbon steel cylinder CGA 580 packless brass angle
CODE H-3	3 L carbon steel cylinder CGA 350 packless brass angle
CODE H-8	8 L carbon steel cylinder CGA 350 packless brass angle
CODE H-45	45 L carbon steel cylinder CGA 350 packless brass angle
CODE L	44 L carbon steel cylinder CGA 350 packless brass angle
CODE T-3	3 L carbon steel cylinder CGA 320 brass angle
CODE T-8	8 L carbon steel cylinder CGA 320 packless brass angle
CODE O	CGA 110 to 1/4" NPT brass adaptor
CODE P	CGA 110 to 1/4" NPT stainless steel adaptor
CODE R	CGA 170 control valve for code C lecture bottles
CODE S	CGA 180 to 1/8" NPT (m) adaptor stainless steel
CODE X	CGA-580 HPT 500 two-stage brass regulator for non-corrosive gases
CODE Y	CGA 170 regulator for code C lecture bottles for non-corrosive gases
CODE A	440 mL lecture bottle 1/4" NPT brass Nupro straight/male
CODE B	440 mL lecture bottle 1/4" NPT stainless steel Nupro straight/male

Catalog No.	Description
CODE C	440 mL lecture bottle CGA 110/170 brass angle
CODE D	440 mL lecture bottle CGA 110 stainless steel straight/female
CODE E	440 mL lecture bottle CGA 110 monel straight/female
CODE F	440 mL lecture bottle CGA 350 packless brass angle
CODE M	440 mL lecture bottle CGA 110/180 AL-SI-bronze valve angle
CODE N	440 mL lecture bottle CGA 580 packless brass angle
CODE Q	440 mL lecture bottle 1/4" NPT stainless steel Whitey straight/male
CODE I-75	75 mL stainless steel 1/4" NPT brass nupro straight/male
CODE I-150	150 mL stainless steel 1/4" NPT brass Nupro straight/male
CODE I-300	300 mL stainless steel 1/4" NPT brass Nupro straight/male
CODE I-460	460 mL stainless steel 1/4" NPT brass Nupro straight/male
CODE J-75	75 mL stainless steel 1/4" NPT stainless steel Nupro straight/male
CODE J-150	150 mL stainless steel 1/4" NPT stainless steel Nupro straight/male
CODE J-300	300 mL stainless steel 1/4" NPT stainless steel Nupro straight/male
CODE J-460	460 mL stainless steel 1/4" NPT stainless steel Nupro straight/male
CODE J-HP-460	460 mL stainless steel Swagelok-Nupro SS-DSM4F4A
CODE K-75	75 mL stainless steel 1/4" NPT stainless steel Whitey straight/male
CODE K-150	150 mL stainless steel 1/4" NPT stainless steel Whitey straight/male
CODE K-300	300 mL stainless steel 1/4" NPT stainless steel Whitey straight/male
CODE K-460	460 mL stainless steel 1/4" NPT stainless steel Whitey straight/male
CODE K-500	500 mL stainless steel 1/4" NPT DOT 3E1800
METAL BOX	Metal box required for select gas shipments via air



MouseExpress® Mouse Feed

MouseExpress® L-Lysine ($^{13}\text{C}_6$, 99%) Mouse Feed

Catalog No.	Description
MF-LYS-C	MouseExpress® L-Lysine ($^{13}\text{C}_6$, 99%) Mouse Feed
MF-LYS-C-IR	MouseExpress® L-Lysine ($^{13}\text{C}_6$, 99%) Irradiated Mouse Feed
MLK-LYS-C	MouseExpress® L-Lysine ($^{13}\text{C}_6$, 99%) Mouse Feed Kit Kit contains: 1 kg of L-Lysine $^{13}\text{C}_6$ feed and 1 kg of (unlabeled) feed
MLK-LYS-C-IR	MouseExpress® L-Lysine ($^{13}\text{C}_6$, 99%) Mouse Feed Kit, Irradiated Kit contains: 1 kg of L-Lysine $^{13}\text{C}_6$ feed and 1 kg of (unlabeled) feed



MouseExpress® Unlabeled Mouse Feed

Catalog No.	Description
MF-UNLABELED	MouseExpress® Unlabeled Mouse Feed
MF-UNLABELED-IR	MouseExpress® Unlabeled Irradiated Mouse Feed



Custom-formulated amino acid-defined diets are available in additional labeling patterns and amino acid substitutions. Please inquire.

MouseExpress® is a registered trademark of Cambridge Isotope Laboratories, Inc.

MouseExpress® (^{15}N , 98%) Mouse Feed

Catalog No.	Description
MF-SPIRULINA-N	MouseExpress® (^{15}N , 98%) Mouse Feed prepared with Spirulina ($\text{U-}^{15}\text{N}$, 98%+)
MF-SPIRULINA-N-IR	MouseExpress® (^{15}N , 98%) Mouse Feed, Irradiated prepared with Spirulina ($\text{U-}^{15}\text{N}$, 98%+)
MF-SPIRULINA-U	MouseExpress® Unlabeled Mouse Feed prepared with unlabeled Spirulina
MF-SPIRULINA-U-IR	MouseExpress® Unlabeled Mouse Feed, Irradiated prepared with unlabeled Spirulina
MLK-SPIRULINA-N	MouseExpress® (^{15}N , 98%) Mouse Feed Kit prepared with Spirulina Kit contains: 1 kg Spirulina (^{15}N , 98%) feed and 1 kg Spirulina (unlabeled) feed
MLK-SPIRULINA-N-IR	MouseExpress® (^{15}N , 98%) Mouse Feed Kit, Irradiated prepared with Spirulina Kit contains: 1 kg Spirulina (^{15}N , 98%) feed and 1 kg Spirulina (unlabeled) feed



MouseExpress® L-Leucine (5,5,5- D_3 , 98%) Mouse Feed

Catalog No.	Description
MF-LEU-D3	MouseExpress® L-Leucine (5,5,5- D_3 , 98%) Mouse Feed
MF-LEU-D3-IR	MouseExpress® L-Leucine (5,5,5- D_3 , 98%) Irradiated Mouse Feed
MLK-LEU-D3	MouseExpress® L-Leucine (5,5,5- D_3 , 98%) Mouse Feed Kit Kit contains: 1 kg of L-Leucine D_3 feed and 1 kg of (unlabeled) feed
MLK-LEU-D3-IR	MouseExpress® L-Leucine (5,5,5- D_3 , 98%) Mouse Feed Kit, Irradiated Kit contains: 1 kg of L-Leucine D_3 feed and 1 kg of (unlabeled) feed



We have used the MouseExpress® L-Lysine ($^{13}\text{C}_6$, 99%) Mouse Feed Labeling Kit from Cambridge Isotope Labs (CIL) to label a colony of C57BL6 mice. We achieved full labeling efficiency by F2 generation in the muscle tissue, our tissue of interest and in all other tissues tested. In addition, CIL's MouseExpress® (^{15}N , 98%) Mouse Feed was used in non-generational labeling of a colony of C57BL6 mice. We achieved full labeling efficiency after 12 weeks of feeding the MouseExpress® (^{15}N , 98%) Mouse Feed. These labeled tissues are fueling a variety of studies for multiple principle investigators at our research institute to study Duchenne muscular dystrophy, myositis, urea cycle disorders and vanishing white matter disease.

*Kristy J. Brown, PhD, and Yetrib Hathout, PhD
Children's National Medical Center
Center for Genetic Medicine*

MouseExpress® Mouse Tissue

MouseExpress® L-Lysine (¹³C₆, 97%) Mouse Tissue

Catalog No.	Description
MT-LYSC6-MAW	MouseExpress® Abdominal Adipose Tissue (white) (M) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-FAW	MouseExpress® Abdominal Adipose Tissue (white) (F) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-MAB	MouseExpress® Interscapular Adipose Tissue (brown) (M) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-FAB	MouseExpress® Interscapular Adipose Tissue (brown) (F) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-MBL	MouseExpress® Bladder Tissue (M) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-FBL	MouseExpress® Bladder Tissue (F) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-MBR	MouseExpress® Breast Tissue (M) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-FBR	MouseExpress® Breast Tissue (F) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-MB	MouseExpress® Brain Tissue (M) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-FB	MouseExpress® Brain Tissue (F) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-MC	MouseExpress® Cecum Tissue (M) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-FC	MouseExpress® Cecum Tissue (F) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-MCO	MouseExpress® Colon Tissue (M) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-FCO	MouseExpress® Colon Tissue (F) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-MD	MouseExpress® Duodenum Tissue (M) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-FD	MouseExpress® Duodenum Tissue (F) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-MEY	MouseExpress® Eye Tissue (M) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-FEY	MouseExpress® Eye Tissue (F) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-MFB	MouseExpress® Femur Bone (M) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-FFB	MouseExpress® Femur Bone (F) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-MH	MouseExpress® Heart Tissue (M) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-FH	MouseExpress® Heart Tissue (F) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-MIL	MouseExpress® Ileum Tissue (M) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-FIL	MouseExpress® Ileum Tissue (F) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-ME	MouseExpress® Inner Ear Tissue (M) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-FE	MouseExpress® Inner Ear Tissue (F) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-MI	MouseExpress® Intestine (M) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-FI	MouseExpress® Intestine (F) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-MJ	MouseExpress® Jejunum Tissue (M) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-FJ	MouseExpress® Jejunum Tissue (F) L-Lysine (¹³ C ₆ , 97%)

MouseExpress® (¹⁵N, 94%) Mouse Tissue

Catalog No.	Description
MT-15N-MB	MouseExpress® Brain Tissue (M) (¹⁵ N, 94%)
MT-15N-ML	MouseExpress® Liver Tissue (M) (¹⁵ N, 94%)
MT-15N-MM	MouseExpress® Muscle Tissue (M) (¹⁵ N, 94%)
MT-15N-MSE	MouseExpress® Serum (M) (¹⁵ N, 94%)
MT-15N-MSP	MouseExpress® Spleen Tissue (M) (¹⁵ N, 94%)
MT-15N-MTA	MouseExpress® Tail (M) (¹⁵ N, 94%)
MT-15N-MT	MouseExpress® Testis Tissue (M) (¹⁵ N, 94%)

Catalog No.	Description
MT-LYSC6-MK	MouseExpress® Kidney Tissue (M) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-FK	MouseExpress® Kidney Tissue (F) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-ML	MouseExpress® Liver Tissue (M) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-FL	MouseExpress® Liver Tissue (F) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-MLU	MouseExpress® Lung Tissue (M) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-FLU	MouseExpress® Lung Tissue (F) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-MMAM	MouseExpress® Mammary Tissue (M) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-FMAM	MouseExpress® Mammary Tissue (F) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-MM	MouseExpress® Muscle Tissue (M) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-FM	MouseExpress® Muscle Tissue (F) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-FO	MouseExpress® Ovaries; Bilateral (F) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-MP	MouseExpress® Pancreas Tissue (M) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-FP	MouseExpress® Pancreas Tissue (F) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-MPL	MouseExpress® Plasma (M) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-FPL	MouseExpress® Plasma (F) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-MSE	MouseExpress® Serum (M) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-FSE	MouseExpress® Serum (F) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-MSK	MouseExpress® Skin Tissue (M) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-FSK	MouseExpress® Skin Tissue (F) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-MSP	MouseExpress® Spleen Tissue (M) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-FSP	MouseExpress® Spleen Tissue (F) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-MSK	MouseExpress® Spinal Cord (M) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-FSC	MouseExpress® Spinal Cord (F) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-MST	MouseExpress® Stomach (M) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-FST	MouseExpress® Stomach (F) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-MT	MouseExpress® Testis Tissue (M) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-MTB	MouseExpress® Tibia Bone (M) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-FTB	MouseExpress® Tibia Bone (F) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-MTH	MouseExpress® Thymus (M) L-Lysine (¹³ C ₆ , 97%)
MT-LYSC6-FTH	MouseExpress® Thymus (F) L-Lysine (¹³ C ₆ , 97%)

M – Male F – Female

MS/MS Standards

Catalog No.	Description
NSK-A	Labeled Amino Acid Standards Set A
NSK-B	Labeled Carnitine Standards Set B
NSK-B-G	Labeled Carnitine Standards (supplement to NSK-B)
NSK-AB	Labeled Standards Sets A & B (2 x 10 vials)
NSK-T	Labeled Succinylacetone Standard – 1 Set T

Please see pages 110-111 for further information on the MS/MS standards.

Other Metabolites and Substrates

Catalog No.	Description
CLM-2436	Acetaminophen (carbonyl- ¹³ C, 99%)
CLM-317	Acetic acid (1- ¹³ C, 99%)
CLM-318	Acetic acid (2- ¹³ C, 99%)
CLM-113	Acetic acid (1,2- ¹³ C ₂ , 99%)
DLM-7476	ADMA•HCl•H ₂ O (Asymmetric dimethylarginine) (2,3,3,4,4,5,5-D ₇ , 98%)
CLM-630	Aminopyrine (N,N-dimethyl- ¹³ C ₂ , 99%)
DLM-2762	Amitriptyline•HCl (N-methyl-D ₃ , 98%)
CLM-6585	Aspirin (acetyl-1- ¹³ C, 99%)
CLM-3655	AZT (methyl- ¹³ C, 99%) CP 96%
DLM-2790	Buspirone•HCl (butyl-D ₈ , 98%)
CLM-728	Caffeine (3-methyl- ¹³ C, 99%)
NLM-332	Caffeine (1,3- ¹⁵ N ₂ , 99%)
CNLM-333	Caffeine (2- ¹³ C, 99%; 1,3- ¹⁵ N ₂ , 98%+)
DLM-3555	L-Carnitine (trimethyl-D ₉ , 98%)
ULM-7801	L-Carnitine (unlabeled)
ULM-8247	L-Carnitine (mono), O-glutaryl, dibenzyl (unlabeled)
DLM-8275	L-Carnitine•ClO ₄ , benzyl ester (N-methyl-D ₃ , 98%)
DLM-1871	L-Carnitine•HCl (methyl-D ₃ , 98%)
DLM-3820	L-Carnitine•HCl (dimethyl-D ₆ , 98%)
DLM-754	L-Carnitine•HCl, O-acetyl (N-methyl-D ₃ , 98%)
DLM-3821	L-Carnitine•HCl, O-acetyl (N,N-dimethyl-D ₆ , 98%) CP 97%
DLM-3822	L-Carnitine•HCl, O-acetyl (N,N,N-trimethyl-D ₉ , 98%) CP 95%+
ULM-7802	L-Carnitine•HCl, O-acetyl (unlabeled)
DLM-3861	L-Carnitine•HCl, O-buteryl (N-methyl-D ₃ , 98%)
ULM-7704	L-Carnitine•HCl, O-buteryl (unlabeled)
ULM-7195	L-Carnitine•HCl, O-decanoyl (unlabeled)
DLM-8162	L-Carnitine•HCl, O-dodecanoyl (N-methyl-D ₃ , 98%)
DLM-6718	L-Carnitine•HCl, O-hexacosanoyl (N-methyl-D ₃ , 98%) CP 80%
ULM-6719	L-Carnitine•HCl, O-hexacosanoyl (unlabeled) CP 80%
ULM-7198	L-Carnitine•HCl, O-hexanoyl (unlabeled)
DLM-3974	L-Carnitine•HCl, O-isovaleryl (N,N,N-trimethyl-D ₉ , 98%)
ULM-4697	L-Carnitine•HCl, O-isovaleryl (unlabeled)
DLM-4425	L-Carnitine•HCl, O-myristoyl (N,N,N-trimethyl-D ₉ , 98%)
ULM-7737	L-Carnitine•HCl, O-myristoyl (unlabeled)
DLM-755	L-Carnitine•HCl, O-octanoyl (N-methyl-D ₃ , 98%)
ULM-7770	L-Carnitine•HCl, O-octanoyl (unlabeled)
DLM-1263	L-Carnitine•HCl, O-palmitoyl (N-methyl-D ₃ , 98%)
ULM-7738	L-Carnitine•HCl, O-palmitoyl (unlabeled)
DLM-3973	L-Carnitine•HCl, O-propionyl (N-methyl-D ₃ , 98%)
ULM-7705	L-Carnitine•HCl, O-propionyl (unlabeled)
CLM-6126	β-Carotene (10,10',11,11'- ¹³ C ₄ , 99%)
DLM-3829	β-Carotene (19,19,19',19',19'-D ₆ , 98%)
DLM-2439	β-Carotene (10,10',19,19,19',19',19'-D ₈ , 97%)
CLM-548	Choline chloride (1,2- ¹³ C ₂ , 99%)
CLM-1608	Chloral hydrate (trichloromethyl- ¹³ C, 97%)
CLM-4415	Citric acid (3- ¹³ C, 99%)
CLM-7337	Citric acid (1,5- ¹³ C ₂ , 99%)
CLM-148	Citric acid (2,4- ¹³ C ₂ , 99%)
CLM-9021	Citric acid (¹³ C ₆ , 99%) CP 97%
DLM-3487	Citric acid (2,2,4,4-D ₄ , 98%)
DLM-1287	Clonidine•HCl (4,4,5,5-imidazoline-D ₄ , 98%)
DLM-2816	Clozapine (4-methylpiperazinyl-D ₄ , 97%)

Catalog No.	Description
DLM-1819	DL-Cotinine (methyl-D ₃ , 98%)
CLM-7933	Creatine (guanidino- ¹³ C, 99%)
DLM-7504	Dexamethasone (4,6-α,21,21-D ₄ , 96%) (18% D at C ₂ position)
DLM-1886	Diazepam (phenyl-D ₅ , 98%)
CLM-7401	L-Dopa (1- ¹³ C, 99%)
CLM-3723	L-Dopa (alkyl-2,3- ¹³ C ₂ , 98%)
CLM-2231	L-Dopa (ring-3,5- ¹³ C ₂ , 99%)
CLM-1007	L-Dopa (ring- ¹³ C ₆ , 99%)
CLM-3724	L-Dopa (ring- ¹³ C ₆ , alkyl-2,3- ¹³ C ₂ , 99%)
DLM-2084	L-Dopa (ring-D ₃ , 98%)
COLM-2232	L-Dopa (2,3- ¹³ C ₂ , 97%; 4-hydroxy- ¹⁸ O, 95%)
COLM-2233	L-Dopa (ring- ¹³ C ₆ , 99%; 4-hydroxy- ¹⁸ O, 95%)
CLM-3368	Dopamine•HCl (1- ¹³ C, 99%)
CLM-3369	Dopamine•HCl (ring- ¹³ C ₆ , 99%)
DLM-2833	Dopamine•HCl (1,1-D ₂ , 93%) CP 96-98%
DLM-2834	Dopamine•HCl (2,2-D ₂ , 97-98%)
DLM-2181	Dopamine•HCl (ring-D ₃ , 98%)
DLM-2498	Dopamine•HCl (1,1,2,2-D ₄ , 97-98%)
CNLM-3445	Dopamine•HCl (1- ¹³ C, 99%; ¹⁵ N, 99%)
DLM-2290	Dopamine•HCl (ring-D ₃ , 97%; 2,2-D ₂ , 97%)
DLM-2744	Enalaprilat•H ₂ O (phenyl-D ₅ , 98%)
DLM-2745	Enalapril maleate (phenyl-D ₅ , 98%)
CLM-123	Erythromycin (N-methyl- ¹³ C, 99%)
CLM-165	Erythromycin lactobionate salt (N-methyl- ¹³ C, 99%)
CLM-3758	Erythromycin lactobionate salt (N,N-dimethyl- ¹³ C ₂ , ~90%)
CLM-344	Ethanol (1- ¹³ C, 99%) (<6% H ₂ O)
CLM-130	Ethanol (2- ¹³ C, 99%) (<6% H ₂ O)
CLM-551	Ethanol (1,2- ¹³ C ₂ , 99%) (<6% H ₂ O)
CLM-2291	Ethanolamine (¹³ C ₂ , 99%)
CLM-3911	Ethanolamine•HCl (1- ¹³ C, 99%)
CLM-274	Ethanolamine•HCl (1,2- ¹³ C ₂ , 99%)
CLM-522	Ethyl acetoacetate (1,3- ¹³ C ₂ , 99%)
CLM-523	Ethyl acetoacetate (2,4- ¹³ C ₂ , 99%)
CLM-1529	Fumaric acid (¹³ C ₄ , 99%)
DLM-1539	Fumaric acid (2,3-D ₂ , 98%)
DLM-7654	Fumaric acid (D ₄ , 98%)
CDLM-8473	Fumaric acid (1,4- ¹³ C ₂ , 99%; 2,3-D ₂ , 98%)
CDLM-6062	Fumaric acid (1- ¹³ C, 99%; 2,3-D ₂ , 98%)
DLM-3996	Glybenclamide (cyclohexylamine-D ₁₁ , 98%)
CLM-1397	Glycerol (2- ¹³ C, 99%)
CLM-1857	Glycerol (1,3- ¹³ C ₂ , 99%)
CLM-1510	Glycerol (¹³ C ₃ , 99%)
DLM-1229	Glycerol (1,1,2,3,3-D ₅ , 99%)
DLM-558	Glycerol (D ₈ , 99%)
CDLM-7745	Glycerol (¹³ C ₃ , 99%; D ₈ , 98%) CP 95%
DLM-2911	Histamine•2HCl (α,α,β,β-D ₄ , 98%)
CLM-8042	Hypoxanthine (¹³ C ₅ , 99%)
DLM-8658	Hypoxanthine (2,8-D ₂ , 98%)
DLM-2923	Hypoxanthine (2,3,7,8-D ₄ , 98%)
NLM-8500	Hypoxanthine (¹⁵ N ₄ , 98%)
CNLM-7894	Hypoxanthine (¹³ C ₅ , 99%; ¹⁵ N ₄ , 98%)
DLM-3035	Imipramine•HCl (2,4,6,8-D ₄ , 98%) CP 97%
CLM-7118	Ketoconazole (carbonyl- ¹³ C, 99%)

Other Metabolites and Substrates

Catalog No.	Description
CLM-2411	α -Ketoglutaric acid ($U\text{-}^{13}\text{C}_5$, 99%)
CLM-4442	α -Ketoglutaric acid, disodium salt ($1,2,3,4\text{-}^{13}\text{C}_4$, 99%) CP 97%
CLM-8468	α -Ketoisocaproic acid ($1\text{-}^{13}\text{C}$, 99%)
CLM-2093	α -Ketoisocaproic acid, sodium salt ($1\text{-}^{13}\text{C}$, 99%)
CLM-7742	α -Ketoisocaproic acid, sodium salt ($2\text{-}^{13}\text{C}$, 99%)
DLM-1944	α -Ketoisocaproic acid, sodium salt (methyl- D_3 , 98%)
DLM-4214	α -Ketoisocaproic acid, sodium salt (isopropyl- D_7 , 98%)
CLM-7613	<i>trans</i> -Lycopene (8,8',9,9',10,10',11,11',19,19'- $^{13}\text{C}_{10}$, 99%)
DLM-1129	Maleic acid ($2,3\text{-D}_2$, 98%)
CLM-310	Maleic anhydride ($1,4\text{-}^{13}\text{C}_2$, 99%)
CLM-312	Maleic anhydride ($2,3\text{-}^{13}\text{C}_2$, 99%)
CLM-6019	Maleic anhydride ($^{13}\text{C}_4$, 99%)
DLM-7101	Melatonin (acetyl- D_3 , 98%)
CLM-1280	Methacetin (methoxy- ^{13}C , 99%)
DLM-2646	5-Methoxytryptamine•HCl ($\alpha,\alpha,\beta,\beta\text{-D}_4$, 98%)
DLM-651	Methyl formate (formyl- D , 99%)
CLM-7522	Naproxen, sodium salt (<i>O</i> -methyl- ^{13}C , 98%)
DLM-6883	Nicotinamide (D_4 , 98%)
CLM-3914	DL-Nicotine (3',4',5'- $^{13}\text{C}_3$, 99%)
DLM-1818	DL-Nicotine (methyl- D_3 , 98%)
CLM-4892	DL-Nornicotine (3',4',5'- $^{13}\text{C}_3$, 99%)
DLM-9017	DL-Nornicotine (pyridine- D_4 , 98%)
NLM-1048	Orotic acid• H_2O ($1,3\text{-}^{15}\text{N}_2$, 98%+)
DLM-1888	Oxazepam (phenyl- D_5 , 98%)
CLM-1296	Phenacetin (ethoxy- $1\text{-}^{13}\text{C}$, 99%)
CLM-432	Phenobarbital ($2,4,5\text{-}^{13}\text{C}_3$, 90%)
DLM-433	Phenobarbital (ethyl- D_5 , 98%)
DLM-1688	Phenobarbital (ring- D_5 , 99%)
CNLM-110	Phenobarbital ($2\text{-}^{13}\text{C}$, 99%; $1,3\text{-}^{15}\text{N}_2$, 99%)
CLM-3551	Potassium phosphoenol pyruvate ($2\text{-}^{13}\text{C}$, 99%)
CLM-2723	Potassium phosphoenol pyruvate ($3\text{-}^{13}\text{C}$, 99%)
CLM-3398	Potassium phosphoenol pyruvate ($2,3\text{-}^{13}\text{C}_2$, 99%)
DLM-3041	Primidone (ethyl- D_5 , 98%)
CLM-646	Propionic acid ($1\text{-}^{13}\text{C}$, 99%)
CLM-647	Propionic acid ($^{13}\text{C}_3$, 99%)
CLM-8077	Pyruvic acid ($1\text{-}^{13}\text{C}$, 99%)
CLM-8849	Pyruvic acid ($2\text{-}^{13}\text{C}$, 99%) CP 95%
DLM-2659	DL-Secobarbital (1-methyl- D_3 , butyl- $2,2\text{-D}_2$, 98%)
DLM-3579	Serotonin creatinine sulfate complex ($\alpha,\alpha,\beta,\beta\text{-D}_4$, 98%)
CLM-156	Sodium acetate ($1\text{-}^{13}\text{C}$, 99%)
CLM-381	Sodium acetate ($2\text{-}^{13}\text{C}$, 99%)
CLM-440	Sodium acetate ($1,2\text{-}^{13}\text{C}_2$, 99%)
DLM-3165	Sodium acetate (D_3 , 90%)
DLM-3126	Sodium acetate (D_3 , 99%)
OLM-1077	Sodium acetate ($^{18}\text{O}_2$, 95%)
CDLM-611	Sodium acetate ($1\text{-}^{13}\text{C}$, 99%; D_3 , 98%)
CDLM-1240	Sodium acetate ($2\text{-}^{13}\text{C}$, 99%; D_3 , 98%)
CDLM-3457	Sodium acetate ($1,2\text{-}^{13}\text{C}_2$, 99%; D_3 , 98%)
COLM-1230	Sodium acetate ($1\text{-}^{13}\text{C}$, 99%; $^{18}\text{O}_2$, 96%)
CLM-441	Sodium bicarbonate (^{13}C , 99%) CP 97%+
CLM-1256	Sodium butyrate ($1\text{-}^{13}\text{C}$, 99%)

Catalog No.	Description
CLM-3706	Sodium D-3-hydroxybutyrate ($2,4\text{-}^{13}\text{C}_2$, 99%)
DLM-7644	Sodium D-3-hydroxybutyrate ($4,4,4\text{-D}_3$, 99%)
CLM-3634	Sodium DL-3-hydroxybutyrate ($2,4\text{-}^{13}\text{C}_2$, 99%)
CLM-3780	Sodium dichloroacetate ($^{13}\text{C}_2$, 99%)
CLM-583	Sodium formate (^{13}C , 99%)
CLM-1577	Sodium L-lactate ($1\text{-}^{13}\text{C}$, 99%) (20% w/w in H_2O)
CLM-1578	Sodium L-lactate ($3\text{-}^{13}\text{C}$, 98%) (20% w/w in H_2O)
CLM-1579	Sodium L-lactate ($^{13}\text{C}_3$, 98%) (20% w/w in H_2O)
DLM-3317	Sodium L-lactate ($3,3,3\text{-D}_3$, 98%) (20% w/w in H_2O)
CLM-771	Sodium propionate ($1\text{-}^{13}\text{C}$, 99%)
CLM-1506	Sodium propionate ($2\text{-}^{13}\text{C}$, 99%)
CLM-4573	Sodium propionate ($3\text{-}^{13}\text{C}$, 99%)
CLM-3042	Sodium propionate ($2,3\text{-}^{13}\text{C}_2$, 99%)
CLM-1865	Sodium propionate ($^{13}\text{C}_3$, 99%)
CLM-1082	Sodium pyruvate ($1\text{-}^{13}\text{C}$, 99%)
CLM-1580	Sodium pyruvate ($2\text{-}^{13}\text{C}$, 99%)
CLM-1575	Sodium pyruvate ($3\text{-}^{13}\text{C}$, 99%)
CLM-3507	Sodium pyruvate ($2,3\text{-}^{13}\text{C}_2$, 99%)
CLM-2440	Sodium pyruvate ($^{13}\text{C}_3$, 99%)
DLM-6068	Sodium pyruvate (D_3 , 97-98%)
CDLM-6063	Sodium pyruvate ($2\text{-}^{13}\text{C}$, 99%; D_3 , 98%)
DLM-7311	Stearoyl coenzyme A (stearoyl-methyl- D_3 , 98%) CP 90%
CLM-1084	Succinic acid ($1,4\text{-}^{13}\text{C}_2$, 99%)
CLM-1199	Succinic acid ($2,3\text{-}^{13}\text{C}_2$, 99%)
CLM-1571	Succinic acid ($^{13}\text{C}_4$, 99%)
DLM-584	Succinic acid (D_4 , 98%)
DLM-831	Succinic acid (D_6 , 98%)
CDLM-7754	Succinic acid ($^{13}\text{C}_4$, 99%; $2,2,3,3\text{-D}_4$, 98%)
DLM-2307	Succinic acid, disodium salt (D_4 , 75%)
CLM-6622	Taurine ($1,2\text{-}^{13}\text{C}_2$, 98%)
NLM-4472	Taurine (^{15}N , 98%+)
CLM-7119	Temozolomide (methyl- ^{13}C , 99%)
CLM-7491	<i>cis</i> -(+/-)-Tramadol•HCl (methoxy- ^{13}C , 99%)
DLM-6989	Tryptamine ($\alpha,\alpha,\beta,\beta\text{-D}_4$, 97%)
DLM-2919	Tyramine ($1,1,2,2\text{-D}_4$, 98%)
DLM-8075	Tyramine•HCl ($1,1,2,2\text{-D}_4$, 98%)
NLM-637	Uracil ($1,3\text{-}^{15}\text{N}_2$, 98%)
CLM-311	Urea (^{13}C , 99%)
DLM-1269	Urea (D_4 , 98%)
NLM-232	Urea ($^{15}\text{N}_1$, 98%+)
NLM-233	Urea ($^{15}\text{N}_2$, 98%+)
OLM-655	Urea (^{18}O , 95%)
CNLM-234	Urea (^{13}C , 99%; $^{15}\text{N}_2$, 98%+)
COLM-4861	Urea (^{13}C , 99%; ^{18}O , 98%)
NOLM-654	Urea ($^{15}\text{N}_2$, 99%; ^{18}O , 96-99%)
CNOLM-8871	Urea (^{13}C , 99%; $^{15}\text{N}_2$, 99%; ^{18}O , 99%)
CLM-3399	Valproic acid ($1,2,3,3'\text{-}^{13}\text{C}_4$, 99%)
DLM-4291	Valproic acid ($4,4,4',4'\text{-D}_4$, 98%)
DLM-7876	Valproic acid (propyl- $1,1\text{-D}_2$, pentanoic- $3,3\text{-D}_2$, 98%)
DLM-8875	Valproic acid (D_{15} , 98%)
NLM-1698	Xanthine ($1,3\text{-}^{15}\text{N}_2$, 98%+) CP 90%

Pharmaceutical and Personal Care Products (PPCPs)

Catalog No.	Description
CNLM-3726-1.2	Acetaminophen (acetyl- $^{13}\text{C}_2$, 99%; ^{15}N , 98%+) 100 µg/mL in acetonitrile
ULM-7629-1.2	Acetaminophen (unlabeled) 100 µg/mL in acetonitrile
DLM-3008-1.2	Amitriptyline•HCl (<i>N,N</i> -dimethyl- D_6 , 98%) 100 µg/mL in methanol
ULM-8350-1.2	Amitriptyline•HCl (unlabeled) 100 µg/mL in methanol
CLM-7407-1MG	Amoxicillin•3H ₂ O (phenyl- $^{13}\text{C}_6$, 99%)
DLM-183-1.2	Benzophenone (D_{10} , 98%) 100 µg/mL in nonane
ULM-8303-1.2	Benzophenone (unlabeled) 100 µg/mL in nonane
CLM-4325-1.2	Bisphenol A (ring- $^{13}\text{C}_{12}$, 99%) 100 µg/mL in acetonitrile
ULM-7106-1.2	Bisphenol A (unlabeled) 100 µg/mL in acetonitrile
CLM-8285-1.2	<i>n</i> -Butyl paraben (ring- $^{13}\text{C}_6$, 99%) 1mg/mL in methanol
ULM-8287-1.2	<i>n</i> -Butyl paraben (unlabeled) 1 mg/mL in methanol
CLM-514-1.2	Caffeine (trimethyl- $^{13}\text{C}_3$, 99%) 100 µg/mL in methanol
ULM-7653-1.2	Caffeine (unlabeled) 100 µg/mL in methanol
DLM-2806-1.2	Carbamazepine (D_{10} , 98%) 100 µg/mL in acetonitrile- D_3
ULM-6581-1.2	Carbamazepine (unlabeled) 100 µg/mL in acetonitrile
DLM-119-1.2	(+/-)-Chloramphenicol (ring- D_4 , benzyl- D_1 , 98%) 100 µg/mL in acetonitrile
ULM-6687-1.2	(+/-)-Chloramphenicol (unlabeled) 100 µg/mL in acetonitrile
CNLM-7539-1.2	Ciprofloxacin•HCl (2,3,carboxyl- $^{13}\text{C}_3$, 99%; quinoline- ^{15}N , 98%) 100 µg/mL in methanol
ULM-7710-1.2	Ciprofloxacin•HCl monohydrate (unlabeled) 100 µg/mL in methanol
DLM-2218-0.1MG	Cortisol (9,11,12,12- D_4 , 98%)
ULM-7823-0.1MG	Cortisol (unlabeled)
CLM-8569-1.2	Dechlorane Plus <i>syn</i> (<i>bis</i> -cyclopentene- $^{13}\text{C}_{10}$, 99%) 100 µg/mL in nonane
CLM-8569-T-1.2	Dechlorane Plus <i>syn</i> (<i>bis</i> -cyclopentene- $^{13}\text{C}_{10}$, 99%) 100 µg/mL in toluene
ULM-7886-1.2	Dechlorane Plus <i>syn</i> (unlabeled) 100 µg/mL in nonane
ULM-7886-T-1.2	Dechlorane Plus <i>syn</i> (unlabeled) 100 µg/mL in toluene
CLM-8588-1.2	Dechlorane Plus <i>anti</i> (<i>bis</i> -cyclopentene- $^{13}\text{C}_{10}$, 99%) 100 µg/mL in nonane
CLM-8588-T-1.2	Dechlorane Plus <i>anti</i> (<i>bis</i> -cyclopentene- $^{13}\text{C}_{10}$, 99%) 100 µg/mL in toluene
ULM-7887-1.2	Dechlorane Plus <i>anti</i> (unlabeled) 100 µg/mL in nonane
ULM-7887-T-1.2	Dechlorane Plus <i>anti</i> (unlabeled) 100 µg/mL in toluene
ULM-7777-1.2	Dechlorane Plus Technical Product (unlabeled) 100 µg/mL in nonane
DLM-8567-1.2	Diclofenac (phenyl- D_4 , 98%) 100 µg/mL in methylene chloride CP 96%
ULM-9023-1.2	Diclofenac (unlabeled) 100 µg/mL in methylene chloride
DLM-1632-1.2	Diethylene glycol (D_8 , 98%) 1 mg/mL in methanol
ULM-8235-1.2	Diethylene glycol (unlabeled) 1 mg/mL in methanol
DLM-170-1.2	Diethylstilbestrol (<i>cis/trans</i> mix) 100 µg/mL in CD_2Cl_2 (ring-3,3',5,5'-diethyl-1,1',1'- D_8 , 98%)
DLM-170-D-1.2	Diethylstilbestrol (<i>cis/trans</i> mix) 100 µg/mL in <i>p</i> -dioxane (ring-3,3',5,5'-diethyl-1,1',1'- D_8 , 98%)
ULM-7921-1.2	Diethylstilbestrol (<i>cis/trans</i> mix) (unlabeled) 100 µg/mL in methylene chloride
ULM-7921-D-1.2	Diethylstilbestrol (<i>cis/trans</i> mix) (unlabeled) 100 µg/mL in <i>p</i> -dioxane

Catalog No.	Description
CNLM-411-1.2	5,5-Diphenylhydantoin (2- ^{13}C , 99%; 1,3- $^{15}\text{N}_2$, 98%) 100 µg/mL in methanol
ULM-8533-1.2	5,5-Diphenylhydantoin (unlabeled) 100 µg/mL in methanol
CLM-3672-1.2	Erythromycin (90-95% Erythromycin A) (<i>N,N</i> -dimethyl- $^{13}\text{C}_2$, ~90%) 100 µg/mL in acetonitrile
ULM-4322-1.2	Erythromycin (unlabeled) 100 µg/mL in acetonitrile
CLM-803-1.2	Estradiol (3,4- $^{13}\text{C}_2$, 99%) 100 µg/mL in acetonitrile
CLM-7936-1.2	DL-Estradiol (13,14,15,16,17,18- $^{13}\text{C}_6$, 99%) 100 µg/mL in methanol
ULM-7449-1.2	Estradiol (unlabeled) 100 µg/mL in acetonitrile
DLM-7468-1.2	Estriol (2,4- D_2 , 98%) 100 µg/mL in <i>p</i> -dioxane
ULM-8218-1.2	Estriol (unlabeled) 100 µg/mL in <i>p</i> -dioxane
CLM-7935-1.2	DL-Estrone (13,14,15,16,17,18- $^{13}\text{C}_6$, 99%) 100 µg/mL in methanol
ULM-7212-1.2	Estrone (unlabeled) 100 µg/mL in acetonitrile
CLM-3375-1.2	Ethinylestradiol (20,21- $^{13}\text{C}_2$, 99%) 100 µg/mL in acetonitrile
ULM-7211-1.2	Ethinylestradiol (unlabeled) 100 µg/mL in acetonitrile
DLM-8221-1.2	Gemfibrozil (2,2-dimethyl- D_6 , 98%) 100 µg/mL in <i>p</i> -dioxane
ULM-8225-1.2	Gemfibrozil (unlabeled) 100 µg/mL in <i>p</i> -dioxane
CLM-4748-1.2	1,6-Anhydro-β-D-glucose (Levogluconan) ($\text{U}-^{13}\text{C}_6$, 98%) 100 µg/mL in dimethyl sulfoxide
ULM-8000-1.2	1,6-Anhydro-β-D-glucose (Levogluconan) (unlabeled) 100 µg/mL in dimethyl sulfoxide
CLM-8008-1.2	Hexachlorophene ($^{13}\text{C}_{13}$, 99%) 50 µg/mL in methanol
ULM-8009-1.2	Hexachlorophene (unlabeled) 50 µg/mL in methanol
CLM-4745-1.2	4-Hydroxybenzoic acid (ring- $^{13}\text{C}_6$, 99%) 1 mg/mL in methanol
ULM-8251-1.2	4-Hydroxybenzoic acid (unlabeled) 1 mg/mL in methanol
CLM-6779-1.2	2',4,4'-Trichloro-2-hydroxydiphenyl ether ($^{13}\text{C}_{12}$, 99%) (Triclosan) 100 µg/mL in nonane
ULM-6935-1.2	2',4,4'-Trichloro-2-hydroxydiphenyl ether (unlabeled) (Triclosan) 100 µg/mL in nonane
CLM-8012-0.1MG	DL-2-Hydroxyestradiol (13,14,15,16,17,18- $^{13}\text{C}_6$, 99%)
ULM-8135-0.1MG	2-Hydroxyestradiol (unlabeled)
CLM-8013-0.1MG	DL-4-Hydroxyestrone (13,14,15,16,17,18- $^{13}\text{C}_6$, 99%)
ULM-8261-0.1MG	4-Hydroxyestrone (unlabeled) CP 96%
ULM-8134-0.1MG	2-Hydroxyestrone (unlabeled)
CLM-8016-0.1MG	DL-2-Hydroxyestrone-3-methyl ether (13,14,15,16,17,18- $^{13}\text{C}_6$, 99%)
ULM-8133-0.1MG	2-Hydroxyestrone-3-methyl ether (unlabeled)
CLM-6943-1.2	Ibuprofen (propionic- $^{13}\text{C}_3$, 99%) 100 µg/mL in acetonitrile
ULM-7275-1.2	Ibuprofen (unlabeled) 100 µg/mL in acetonitrile
CLM-8015-0.1MG	DL-2-Methoxyestradiol (13,14,15,16,17,18- $^{13}\text{C}_6$, 99%)
ULM-8137-0.1MG	2-Methoxyestradiol (unlabeled)
CLM-8014-0.1MG	DL-2-Methoxyestrone (13,14,15,16,17,18- $^{13}\text{C}_6$, 99%)
ULM-8263-0.1MG	2-Methoxyestrone (unlabeled)
CLM-8017-0.1MG	DL-4-Methoxyestrone (13,14,15,16,17,18- $^{13}\text{C}_6$, 99%)
ULM-8262-0.1MG	4-Methoxyestrone (unlabeled)
DLM-4766-1.2	2-Methylisoborneol (2-methyl- D_3 , 98%) (unlabeled) 100 µg/mL in nonane

Pharmaceutical and Personal Care Products (PPCPs)

Catalog No.	Description
CLM-8249-1.2	Methyl paraben (methyl 4-hydroxybenzoate) (ring- $^{13}\text{C}_6$, 99%) 1 mg/mL in methanol
ULM-8250-1.2	Methyl paraben (methyl 4-hydroxybenzoate) (unlabeled) 1 mg/mL in methanol
CLM-7885-1.2	Methyl Triclosan (2,4,4'-Trichloro-2'-methoxydiphenyl ether) (ring- $^{13}\text{C}_{12}$, 99%) 100 µg/mL in nonane
ULM-7884-1.2	Methyl Triclosan (2,4,4'-Trichloro-2'-methoxydiphenyl ether) (unlabeled) 100 µg/mL in nonane
CDLM-7665-1.2	Naproxen 100 µg/mL in acetonitrile (<i>O</i> -methyl- ^{13}C , 99%; <i>O</i> -methyl- D_3 , 98%)
ULM-7709-1.2	Naproxen (unlabeled) 100 µg/mL in acetonitrile
CLM-4306-1.2	<i>p</i> - <i>n</i> -Nonylphenol (ring- $^{13}\text{C}_6$, 99%) 100 µg/mL in nonane
ULM-4559-1.2	<i>p</i> - <i>n</i> -Nonylphenol (unlabeled) 100 µg/mL in nonane
ULM-6560-1.2	<i>p</i> -Nonylphenol – technical grade (unlabeled) 100 µg/mL in nonane
CLM-4307-1.2	<i>p</i> - <i>n</i> -Nonylphenol diethoxylate (ring- $^{13}\text{C}_6$, 99%) 100 µg/mL in nonane
ULM-4521-1.2	<i>p</i> - <i>n</i> -Nonylphenol diethoxylate (unlabeled) 100 µg/mL in nonane
ULM-4521-SA-5X-1.2	<i>p</i> - <i>n</i> -Nonylphenol diethoxylate (unlabeled) 500 µg/mL in acetonitrile
ULM-7147-1.2	Nonylphenol diethoxylate – branched isomers (unlabeled) 100 µg/mL in nonane
CLM-4512-1.2	<i>p</i> - <i>n</i> -Nonylphenol monoethoxylate (ring- $^{13}\text{C}_6$, 99%) 100 µg/mL in nonane
ULM-4520-1.2	<i>p</i> - <i>n</i> -Nonylphenol monoethoxylate (unlabeled) 100 µg/mL in nonane
ULM-4520-SA-5X-1.2	<i>p</i> - <i>n</i> -Nonylphenol monoethoxylate (unlabeled) 500 µg/mL in acetonitrile
ULM-7146-1.2	Nonylphenol monoethoxylate – branched isomers (unlabeled) 100 µg/mL in nonane
CLM-4516-1.2	<i>p</i> - <i>n</i> -Nonylphenol triethoxylate (ring- $^{13}\text{C}_6$, 99%) 100 µg/mL in nonane
CLM-8525-1.2	Oxybenzone (phenyl- $^{13}\text{C}_6$, 99%) 100 µg/mL in acetonitrile
ULM-8531-1.2	Oxybenzone (unlabeled) 100 µg/mL in acetonitrile
OLM-7310-1.2	Perchloric acid, sodium salt ($^{18}\text{O}_4$, 90%+) 100 µg/mL in water
ULM-7312-1.2	Perchloric acid, sodium salt (unlabeled) 100 µg/mL in water

Branched Nonylphenols

CLM-8356	4-(1,3-Dimethyl-1-ethylpentyl) phenol (ring- $^{13}\text{C}_6$, 99%)
ULM-8360	4-(1,3-Dimethyl-1-ethylpentyl) phenol (unlabeled)
CLM-8357-1.2	4-(1,4-Dimethyl-1-ethylpentyl) phenol (ring- $^{13}\text{C}_6$, 99%)
ULM-8361-1.2	4-(1,4-Dimethyl-1-ethylpentyl) phenol (unlabeled)
CLM-8358	4-(1,1,5-Trimethylhexyl) phenol (ring- $^{13}\text{C}_6$, 99%)
ULM-8362	4-(1,1,5-Trimethylhexyl) phenol (unlabeled)
CLM-8359-1.2	4-(1-Ethyl-1-methylhexyl) phenol (ring- $^{13}\text{C}_6$, 99%)
ULM-8363-1.2	4-(1-Ethyl-1-methylhexyl) phenol (unlabeled)

Catalog No.	Description
DLM-3039-1MG	Phenylbutazone (diphenyl- D_{10} , 98%)
ULM-7378-1MG	Phenylbutazone (unlabeled)
CLM-3733-1.2	<i>o</i> -Phenylphenol (phenyl- $^{13}\text{C}_6$, 99%) 100 µg/mL in nonane
ULM-7396-1.2	<i>o</i> -Phenylphenol (unlabeled) 100 µg/mL in nonane
OLM-8283-180-1.2	Potassium bromate ($^{18}\text{O}_3$, 98%) 100 µg/mL in H_2^{18}O
ULM-8451-1.2	Potassium bromate (unlabeled) 100 µg/mL in water
DLM-7953-1.2	Progesterone (2,2,4,6,6 $^{17}\text{D}_5$, 21,21,21- D_3 , 98%) 100 µg/mL in <i>p</i> -dioxane
ULM-8219-1.2	Progesterone (unlabeled) 100 µg/mL in <i>p</i> -dioxane
ULM-8654-1.2	2-(2-Hydroxyphenyl)-2-(4-hydroxyphenyl) propane (unlabeled) (2,4'-bisphenol A) 100 µg/mL in acetonitrile
DLM-4633-1.2	3-Chloro-1,2-propanediol (propane- D_5 , 98%) CP 95% 1 mg/mL in methanol
ULM-7998-1.2	3-Chloro-1,2-propanediol (unlabeled) 1 mg/mL in methanol
CLM-7892	Resorcinol ($^{13}\text{C}_6$, 99%)
CLM-3045-1.2	Sulfamethazine (phenyl- $^{13}\text{C}_6$, 90%) 100 µg/mL in acetonitrile
ULM-7220-1.2	Sulfamethazine (unlabeled) 100 µg/mL in acetonitrile
CLM-6944-1.2	Sulfamethoxazole (ring- $^{13}\text{C}_6$, 99%) 100 µg/mL in acetonitrile
ULM-7527-1.2	Sulfamethoxazole (unlabeled) 100 µg/mL in acetonitrile
DLM-683-1.2	Testosterone (1,2- D_2 , 98%) 100 µg/mL in methylene chloride
DLM-8085-1.2	Testosterone (2,2,4,6,6- D_5 , 98%) 100 µg/mL in methylene chloride
DLM-8085-D-1.2	Testosterone (D_5 , 98%) 100 µg/mL in <i>p</i> -dioxane
ULM-8081-1.2	Testosterone (unlabeled) 100 µg/mL in methylene chloride
ULM-8081-D-1.2	Testosterone (unlabeled) 100 µg/mL in <i>p</i> -dioxane
CLM-8370-1.2	Thiabendazole (ring- $^{13}\text{C}_6$, 99%) 100 µg/mL in acetonitrile
ULM-8371-1.2	Thiabendazole (unlabeled) 100 µg/mL in acetonitrile
DLM-6083-1.2	2,4,6-Trichloroanisole (D_5 , 98%) 1 mg/mL in methanol- D_3
ULM-7999-1.2	2,4,6-Trichloroanisole (unlabeled) 1 mg/mL in methanol
CLM-7286-1.2	3,4,4'-Trichlorocarbaniide (Triclocarban) (4'-chlorophenyl- $^{13}\text{C}_6$, 99%) 100 µg/mL in acetonitrile
ULM-7968-1.2	3,4,4'-Trichlorocarbaniide (Triclocarban) (unlabeled) 100 µg/mL in acetonitrile
CLM-7988-A-1.2	Trimethoprim ($^{13}\text{C}_3$, 99%) 50 µg/mL in methanol
ULM-7989-A-1.2	Trimethoprim (unlabeled) 50 µg/mL in methanol
DLM-6861-1.2	Warfarin (phenyl- D_5 , 98%) 100 µg/mL in acetonitrile- D_3
ULM-7242-1.2	Warfarin (unlabeled) 100 µg/mL in acetonitrile

As new analytes are frequently added to this list, please consult the CIL website, www.isotope.com, to see if desired target analytes have been added since this catalog, or contact envsales@isotope.com for a quotation.

Phthalate and Phthalate Metabolite Standards

Catalog No.	Description
DLM-1369-1.2	Benzyl butyl phthalate (ring-D ₄ , 98%) 100 µg/mL in nonane
ULM-7551-1.2	Benzyl butyl phthalate (unlabeled) 100 µg/mL in nonane
CLM-4675-1.2	Bis(2-ethylhexyl) adipate (adipate- ¹³ C ₆ , 99%) 100 µg/mL in nonane
ULM-6566-1.2	Bis(2-ethylhexyl) adipate (unlabeled) 100 µg/mL in nonane
DLM-1368-1.2	Bis(2-ethylhexyl) phthalate (ring-D ₄ , 98%) 100 µg/mL in nonane
ULM-6241-1.2	Bis(2-ethylhexyl) phthalate (unlabeled) 100 µg/mL in nonane
DLM-1367-1.2	Di- <i>n</i> -butyl phthalate (ring-D ₄ , 98%) 100 µg/mL in nonane
ULM-7466-1.5	Di- <i>n</i> -butyl phthalate (unlabeled) 100 µg/mL in nonane
CLM-4670-1.2	Dicyclohexyl phthalate (ring-1,2- ¹³ C ₂ , dicarboxyl- ¹³ C ₂ , 99%) 100 µg/mL in nonane
ULM-8785-1.2	Dicyclohexyl phthalate (unlabeled) 100 µg/mL in nonane
DLM-1629-1.2	Diethyl phthalate (ring-D ₄ , 98%) 100 µg/mL in nonane
ULM-6174-1.2	Diethyl phthalate (unlabeled) 100 µg/mL in nonane
CLM-4669-1.2	Di- <i>n</i> -hexyl phthalate (ring-1,2- ¹³ C ₂ , dicarboxyl- ¹³ C ₂ , 99%) 100 µg/mL in nonane
ULM-7434-1.2	Di- <i>n</i> -hexyl phthalate (unlabeled) 100 µg/mL in nonane
DLM-1366-1.2	Dimethyl phthalate (ring-D ₄ , 98%) 100 µg/mL in nonane
ULM-6783-1.2	Dimethyl phthalate (unlabeled) 100 µg/mL in nonane
DLM-1630-1.2	Di- <i>n</i> -octyl phthalate (ring-D ₄ , 98%) 100 µg/mL in nonane
ULM-6129-1.2	Di- <i>n</i> -octyl phthalate (unlabeled) 100 µg/mL in nonane
CLM-4668-1.2	Di- <i>n</i> -pentyl phthalate (ring-1,2- ¹³ C ₂ , dicarboxyl- ¹³ C ₂ , 99%) 100 µg/mL in nonane
ULM-7433-1.2	Di- <i>n</i> -pentyl phthalate (unlabeled) 100 µg/mL in nonane
CLM-4591-MT-1.2	Monobenzyl phthalate (ring-1,2- ¹³ C ₂ , dicarboxyl- ¹³ C ₂ , 99%) 100 µg/mL in MTBE
ULM-6149-MT-1.2	Monobenzyl phthalate (unlabeled) 100 µg/mL in MTBE
CLM-6148-MT-1.2	Mono- <i>n</i> -butyl phthalate (ring-1,2- ¹³ C ₂ , dicarboxyl- ¹³ C ₂ , 99%) 100 µg/mL in MTBE
ULM-6148-MT-1.2	Mono- <i>n</i> -butyl phthalate (unlabeled) 100 µg/mL in MTBE
CLM-8148-MT-1.2	Mono-(2-ethyl-5-carboxy-pentyl) phthalate (DEHP Metabolite V) (¹³ C ₄ , 99%) 100 µg/mL in MTBE
ULM-8149-MT-1.2	Mono-(2-ethyl-5-carboxy-pentyl) phthalate (DEHP Metabolite V) (unlabeled) 100 µg/mL in MTBE
CLM-8232-MT-1.2	Mono-[(2-carboxymethyl) hexyl] phthalate (DEHP Metabolite IV) (¹³ C ₄ , 99%) 100 µg/mL in MTBE
ULM-8233-MT-1.2	Mono-[(2-carboxymethyl) hexyl] phthalate (DEHP Metabolite IV) (unlabeled) 100 µg/mL in MTBE

Catalog No.	Description
CLM-6847-MT-1.2	Mono-(3-carboxypropyl) phthalate (ring-1,2- ¹³ C ₂ , dicarboxyl- ¹³ C ₂ , 99%) 100 µg/mL in MTBE
ULM-6848-MT-1.2	Mono-(3-carboxypropyl) phthalate (unlabeled) 100 µg/mL in MTBE
CLM-4592-MT-1.2	Monocyclohexyl phthalate (ring-1,2- ¹³ C ₂ , dicarboxyl- ¹³ C ₂ , 99%) 100 µg/mL in MTBE
ULM-7394-MT-1.2	Monocyclohexyl phthalate (unlabeled) 100 µg/mL in MTBE
CLM-4584-MT-1.2	Mono-2-ethylhexyl phthalate (ring-1,2- ¹³ C ₂ , dicarboxyl- ¹³ C ₂ , 99%) 100 µg/mL in MTBE
ULM-4583-MT-1.2	Mono-2-ethylhexyl phthalate (unlabeled) 100 µg/mL in MTBE
CLM-6641-MT-1.2	Mono-(2-ethyl-5-hydroxyhexyl) phthalate (DEHP Metabolite IX) (ring-1,2- ¹³ C ₂ , dicarboxyl- ¹³ C ₂ , 99%) 100 µg/mL in MTBE
ULM-4662-MT-1.2	Mono-(2-ethyl-5-hydroxyhexyl) phthalate (DEHP Metabolite IX) (unlabeled) 100 µg/mL in MTBE
CLM-6640-MT-1.2	Mono-(2-ethyl-5-oxohexyl) phthalate (DEHP Metabolite VI) (¹³ C ₄ , 99%) 100 µg/mL in MTBE
ULM-4663-MT-1.2	Mono-(2-ethyl-5-oxohexyl) phthalate (DEHP Metabolite VI) (unlabeled) 100 µg/mL in MTBE
CLM-4586-MT-1.2	Monoethyl phthalate (ring-1,2- ¹³ C ₂ , dicarboxyl- ¹³ C ₂ , 99%) 100 µg/mL in MTBE
ULM-4585-MT-1.2	Monoethyl phthalate (unlabeled) 100 µg/mL in MTBE
ULM-7919-MT-1.2	Monoisobutyl phthalate (unlabeled) 100 µg/mL in MTBE
ULM-4652-1.2	Monoisodecyl phthalate (Mono-3,7-dimethyloctyl phthalate) (unlabeled) 100 µg/mL in acetonitrile
CLM-4587-MT-1.2	Monoisononyl phthalate (Mono-3,5,5-trimethylhexyl phthalate) (ring-1,2- ¹³ C ₂ , dicarboxyl- ¹³ C ₂ , 99%) 100 µg/mL in MTBE
ULM-4651-MT-1.2	Monoisononyl phthalate (Mono-3,5,5-trimethylhexyl phthalate) (unlabeled) 100 µg/mL in MTBE
ULM-7395-1.2	Monoisopropyl phthalate (unlabeled) 100 µg/mL in acetonitrile
CLM-6071-1.2	Monomethyl phthalate (ring-1,2- ¹³ C ₂ , dicarboxyl- ¹³ C ₂ , 99%) 100 µg/mL in acetonitrile
ULM-6697-MT-1.2	Monomethyl phthalate (unlabeled) 100 µg/mL in MTBE
CLM-4589-MT-1.2	Mono- <i>n</i> -octyl phthalate (ring-1,2- ¹³ C ₂ , dicarboxyl- ¹³ C ₂ , 99%) 100 µg/mL in MTBE
ULM-4593-MT-1.2	Mono- <i>n</i> -octyl phthalate (unlabeled) 100 µg/mL in MTBE
ULM-7393-1.2	Mono- <i>n</i> -pentyl phthalate (unlabeled) 100 µg/mL in acetonitrile

Prescription and Non-Prescription Drug Standards

Catalog No.	Description
CNLM-3726-1.2	Acetaminophen (acetyl- $^{13}\text{C}_2$, 99%; ^{15}N , 98%) 100 µg/mL in acetonitrile
ULM-7629-1.2	Acetaminophen (unlabeled) 100 µg/mL in acetonitrile
DLM-3008-1.2	Amitriptyline•HCl (<i>N,N</i> -dimethyl- D_6 , 98%) 100 µg/mL in methanol
ULM-8350-1.2	Amitriptyline•HCl (unlabeled) 100 µg/mL in methanol
CLM-514-1.2	Caffeine (trimethyl- $^{13}\text{C}_3$, 99%) 100 µg/mL in methanol
ULM-7653-1.2	Caffeine (unlabeled) 100 µg/mL in methanol
DLM-2806-1.2	Carbamazepine (D_{10} , 98%) 100 µg/mL in acetonitrile- D_3
ULM-6581-1.2	Carbamazepine (unlabeled) CP 97% 100 µg/mL in acetonitrile
DLM-1287-1.2	Clonidine (4,4,5,5-imidazoline- D_4 , 98%) 100 µg/mL in methanol
ULM-8349-1.2	Clonidine (unlabeled) 100 µg/mL in methanol
C-041	Codeine (D_6 , 98%) 1.0 mg/mL in methanol
C-006	Codeine (unlabeled) 1.0 mg/mL in methanol
C-035	(+/-)-Cotinine (D_3 , 98%) 1.0 mg/mL in methanol
C-016	(-)-Cotinine (unlabeled) 1.0 mg/mL in methanol
D-902	Diazepam (D_5 , 98%) 100 µg/mL in methanol
D-907	Diazepam (unlabeled) 1.0 mg/mL in methanol
DLM-8567-1.2	Diclofenac (phenyl- D_4 , 98%) 100 µg/mL in methylene chloride CP 96%
ULM-9023-1.2	Diclofenac (unlabeled) 100 µg/mL in methylene chloride
CNLM-411-1.2	5,5-Diphenylhydantoin (2- ^{13}C , 99%; 1,3- $^{15}\text{N}_2$, 98%) 100 µg/mL in methanol
ULM-8533-1.2	5,5-Diphenylhydantoin (unlabeled) 100 µg/mL in methanol

Catalog No.	Description
F-919	Fluoxetine oxalate (D_6 , 98%) 100 µg/mL in methanol
F-918	Fluoxetine•HCl (unlabeled) 1.0 mg/mL in methanol
DLM-8221-1.2	Gemfibrozil (2,2-dimethyl- D_6 , 98%) 100 µg/mL in <i>p</i> -dioxane
ULM-8225-1.2	Gemfibrozil (unlabeled) 100 µg/mL in <i>p</i> -dioxane
CLM-6943-1.2	Ibuprofen (propionic- $^{13}\text{C}_3$, 99%) 100 µg/mL in acetonitrile
ULM-7275-1.2	Ibuprofen (unlabeled) 100 µg/mL in acetonitrile
I-902	Imipramine (unlabeled) 1.0 mg/mL in methanol
L-902	Lorazepam (D_4 , 98%) 100 µg/mL in acetonitrile
L-901	Lorazepam (unlabeled) 1.0 mg/mL in acetonitrile
CDLM-7665-1.2	Naproxen (methyl- ^{13}C , 99% methyl- D_3 , 98%) 100 µg/mL in acetonitrile
ULM-7709-1.2	Naproxen (unlabeled) 100 µg/mL in acetonitrile
N-922	Norfluoxetine oxalate (D_6 , 98%) 100 µg/mL in methanol
N-923	Norfluoxetine oxalate (unlabeled) 1.0 mg/mL in methanol
DLM-3039-1MG	Phenylbutazone (diphenyl- D_{10} , 98%) neat
ULM-7378-1MG	Phenylbutazone (unlabeled) neat
CLM-7892	Resorcinol ($^{13}\text{C}_6$, 99%)
CLM-8370-1.2	Thiabendazole (ring- $^{13}\text{C}_6$, 99%) 100 µg/mL in acetonitrile
ULM-8371-1.2	Thiabendazole (unlabeled) 100 µg/mL in acetonitrile
DLM-6861-1.2	Warfarin (phenyl- D_5 , 98%) 100 µg/mL in acetonitrile- D_3
ULM-7242-1.2	Warfarin (unlabeled) 100 µg/mL in acetonitrile



RNA/DNA

Catalog No.	Description
CLM-1654	Adenine (8- ¹³ C, 95%)
NLM-6924	Adenine•HCl (¹⁵ N ₅ , 98%)
CLM-3678	Adenosine (ribose- ¹³ C ₅ , 98%+) CP 97%
NLM-3796	Adenosine•H ₂ O (¹⁵ N ₅ , 96-98%)
CNLM-3806-CA	Adenosine (¹³ C ₁₀ , 98%; ¹⁵ N ₅ , 96-98%)
CNLM-4265-CA	Adenosine 5'-triphosphate, ammonium salt (¹³ C; ¹⁵ N, 98-99%) CP >90% (in solution)
NLM-3987-CA	Adenosine 5'-triphosphate, ammonium salt (¹⁵ N ₅ , 98-99%) CP >90% (in solution)
NLM-3797	Cytidine (¹⁵ N ₃ , 96-98%)
CNLM-3807	Cytidine (¹³ C ₉ , 98%; ¹⁵ N ₃ , 96-98%)
NLM-4266-CA	Cytidine 5'-triphosphate, ammonium salt (¹⁵ N ₃ , 96%) CP >90% (in solution)
CNLM-4267-CA	Cytidine 5'-triphosphate, ammonium salt (¹³ C; ¹⁵ N, 96-98%) CP >90% (in solution)
NLM-3895	2'-Deoxyadenosine (¹⁵ N ₅ , 96-98%)
CNLM-3896	2'-Deoxyadenosine (¹³ C ₁₀ , 98%; ¹⁵ N ₅ , 96-98%)
NLM-7659	2'-Deoxyadenosine phosphoramidite (¹⁵ N ₅ , 98%) (dibenzoate)
CNLM-6828	2'-Deoxyadenosine phosphoramidite (¹³ C ₁₀ , 98%; ¹⁵ N ₅ , 98%) CP 95%
CNLM-6219-CA	2'-Deoxyadenosine 5'-triphosphate (¹³ C ₁₀ , 98%; ¹⁵ N ₅ , 97-98%) CP >90%
NLM-3897	2'-Deoxycytidine (¹⁵ N ₃ , 96-98%)
NLM-3921	2'-Deoxycytidine 5'-monophosphate (¹⁵ N ₃ , 96%)
NLM-6827	2'-Deoxycytidine phosphoramidite (¹⁵ N ₃ , 98%) CP 95%
CNLM-6830	2'-Deoxycytidine phosphoramidite (¹³ C ₉ , 98%; ¹⁵ N ₃ , 98%) CP 95%
NLM-3899-CA	2'-Deoxyguanosine•H ₂ O (¹⁵ N ₅ , 98%) CP 95%+
NLM-6826	2'-Deoxyguanosine phosphoramidite (U- ¹⁵ N ₅ , 98%) CP 95%
CNLM-6825	2'-Deoxyguanosine phosphoramidite (U- ¹³ C ₁₀ , 98%; U- ¹⁵ N ₅ , 98%) CP 95%
NLM-6217-CA	2'-Deoxyguanosine 5'-triphosphate, ammonium salt (U- ¹⁵ N ₅ , 98-99%) CP >90% (in solution)
CNLM-6221-CA	2'-Deoxyguanosine 5'-triphosphate, ammonium salt (U- ¹³ C, 98%; U- ¹⁵ N, 96-98%) CP >90%
CNLM-8771-CA	2'-Deoxyuridine•H ₂ O (¹³ C ₉ , 98-99%; ¹⁵ N ₂ , 98-99%) CP 90% (in solution)

Catalog No.	Description
CNLM-4510	5,6-Dihydrouracil (¹³ C ₄ , 99%; ¹⁵ N ₂ , 98%+)
DLM-4391	5,6-Dihydrothymine (5,6,6-D ₃ , methyl-D ₃ , 95%+)
CNLM-3916	5-Fluorouracil (¹³ C ₄ , 99%; ¹⁵ N ₂ , 98%)
NLM-6925	Guanine (¹⁵ N ₅ , 98%)
NLM-3798	Guanosine (U- ¹⁵ N ₅ , 96-98%)
NLM-4268-CA	Guanosine 5'-triphosphate, ammonium salt (U- ¹⁵ N ₅ , 98-99%) CP >90% (in solution)
CNLM-4269-CA	Guanosine 5'-triphosphate, ammonium salt (U- ¹³ C; U- ¹⁵ N, 98-99%); CP >90% (in solution)
CNLM-3808-CA	Guanosine•H ₂ O (U- ¹³ C ₁₀ , 98%; U- ¹⁵ N ₅ , 96-98%)
CNLM-3859	8-Hydroxyguanine•1/2 H ₂ O (8- ¹³ C, 98%; 7,9- ¹⁵ N ₂ , 98%)
NLM-4264	Inosine (U- ¹⁵ N ₄ , 95%+)
NLM-8712-CA	Inosine 5'-monophosphate, ammonium salt (U- ¹⁵ N ₄ , 98-99%) CP >90% (in solution)
DLM-7471	3-Methyladenine (methyl-D ₃ , 98%)
DLM-7472	7-Methylguanine (methyl-D ₃ , 98%)
CLM-3647	Thymidine (methyl- ¹³ C, 98%)
NLM-3901	Thymidine (U- ¹⁵ N ₂ , 96-98%) CP 97%
CNLM-3902	Thymidine (U- ¹³ C ₁₀ , 98%; U- ¹⁵ N ₂ , 96-98%)
NLM-3925	Thymidine 5'-monophosphate (U- ¹⁵ N ₂ , 98%)
NLM-6823	Thymidine phosphoramidite (U- ¹⁵ N ₂ , 96-98%) CP 95%
CNLM-6824	Thymidine phosphoramidite (U- ¹³ C ₁₀ , 98%; U- ¹⁵ N ₂ , 98%) CP 95%
CNLM-6945	Thymine (U- ¹³ C ₅ , 98%; U- ¹⁵ N ₂ , 98%)
NLM-3795	Uridine 5'-monophosphate (U- ¹⁵ N ₂ , 96-98%)
CNLM-3805	Uridine 5'-monophosphate (U- ¹³ C ₉ , 98%; U- ¹⁵ N ₂ , 96-98%)
DLM-7517-CA	Uridine 5'-triphosphate, ammonium salt (D ₈ , 97%+) CP 90%+
DLM-8925-CA	Uridine 5'-triphosphate (UTP), ammonium salt (5-D ₁ , ribose-3',4',5',5''-D ₄ , 98%) CP >90% (in solution)
NLM-4270-CA	Uridine 5'-triphosphate, ammonium salt (U- ¹⁵ N ₂ , 98-99%) CP >90% (in solution)
CNLM-4271-CA	Uridine 5'-triphosphate, ammonium salt (U- ¹³ C; U- ¹⁵ N, 98-99%) CP >90% (in solution)
CLM-8700-CA	Xanthosine-5'-monophosphate, ammonium salt (U- ¹³ C ₁₀ , 98%) CP >90% (in solution)

¹⁵N Salts

Catalog No.	Description
NLM-467	Ammonium chloride (¹⁵ N, 99%)
NLM-711	Ammonium nitrate (ammonium- ¹⁵ N, 98%+)
NLM-712	Ammonium nitrate (nitrate- ¹⁵ N, 98%+)
NLM-390	Ammonium nitrate (¹⁵ N ₂ , 98%+)
NLM-713	Ammonium sulfate (¹⁵ N ₂ , 99%)
NLM-499	Calcium nitrate (¹⁵ N ₂ , 98%+)
NLM-765	Potassium nitrate (¹⁵ N, 99%)
NLM-157	Sodium nitrate (¹⁵ N, 98%+)

SILAC Kits and Reagents

SILAC Protein Quantitation Kits

Catalog No.	Description
DMEM-LYS-C	SILAC Protein Quantitation Kit DMEM (Dulbecco's Modified Eagle Media)
RPMI-LYS-C	SILAC Protein Quantitation Kit RPMI 1640
DMEM-500	DMEM Media for SILAC (DMEM minus L-Lysine and L-Arginine)
RPMI-500	RPMI 1640 Media for SILAC (RPMI 1640 minus L-Lysine and L-Arginine)
FBS-50	Dialyzed Fetal Bovine Serum

Arginine

Catalog No.	Description
CLM-1268	L-Arginine•HCl (1- ¹³ C, 99%)
CLM-2070	L-Arginine•HCl (guanido- ¹³ C, 99%)
CLM-2051	L-Arginine•HCl (1,2- ¹³ C ₂ , 99%)
CLM-2265-H	L-Arginine•HCl (¹³ C ₆ , 99%)
DLM-6038	L-Arginine•HCl (<5% D) (4,4,5,5-D ₄ , 94%)
DLM-541	L-Arginine•HCl (D ₇ , 98%)
NLM-1267	L-Arginine•HCl (α- ¹⁵ N, 98%+)
NLM-395	L-Arginine•HCl (guanido- ¹⁵ N ₂ , 98%+)
NLM-396	L-Arginine•HCl (¹⁵ N ₄ , 98%)
CNLM-7819	L-Arginine•HCl (1- ¹³ C, 99%; α- ¹⁵ N, 98%)
CNLM-539-H	L-Arginine•HCl (¹³ C ₆ , 99%; ¹⁵ N ₄ , 99%)
CDLM-3789	L-Arginine•HCl (5- ¹³ C, 99%; 4,4,5,5-D ₄ , 95%)
DNLM-7543	L-Arginine•HCl (D ₇ , 98%; ¹⁵ N ₄ , 98%)
CDNLM-6801	L-Arginine•HCl (¹³ C ₆ , 97-99%; D ₇ , 97-99%; ¹⁵ N ₄ , 97-99%)
ULM-8347	L-Arginine•HCl (unlabeled)

Leucine

Catalog No.	Description
CLM-2262-H	L-Leucine (¹³ C ₆ , 99%)
DLM-4212	L-Leucine (isopropyl-D ₇ , 98%)
CNLM-281-H	L-Leucine (¹³ C ₆ , 99%; ¹⁵ N, 99%)
CDNLM-4280	L-Leucine (¹³ C ₆ , 95-97%; ¹⁵ N, 96-99%; 2,3,3-D ₃ , 97%+)

Lysine

Catalog No.	Description
CLM-653	L-Lysine•2HCl (1- ¹³ C, 99%)
CLM-633	L-Lysine•HCl (5- ¹³ C, 99%)
CLM-632	L-Lysine•2HCl (6- ¹³ C, 99%)
CLM-2247-H	L-Lysine•2HCl (¹³ C ₆ , 99%)
DLM-2640	L-Lysine•2HCl (4,4,5,5-D ₄ , 96-98%)
DLM-2641	L-Lysine•2HCl (3,3,4,4,5,5,6,6-D ₈ , 98%)
DLM-570	L-Lysine•2HCl (D ₉ , 98%)
NLM-143	L-Lysine•2HCl (α- ¹⁵ N, 95-99%)
NLM-631	L-Lysine•2HCl (ε- ¹⁵ N, 98%+)
NLM-1554	L-Lysine•2HCl (¹⁵ N ₂ , 98%+)
CNLM-7821	L-Lysine•2HCl (1- ¹³ C, 99%; α- ¹⁵ N, 98%)
CNLM-3454	L-Lysine•2HCl•H ₂ O (6- ¹³ C, 99%; ε- ¹⁵ N, 98%)
CNLM-291-H	L-Lysine•2HCl (¹³ C ₆ , 99%; ¹⁵ N ₂ , 99%)
DNLM-7545	L-Lysine•2HCl (D ₉ , 98%; ¹⁵ N ₂ , 98%)
CDNLM-6810	L-Lysine•2HCl (¹³ C ₆ , 97-99%; D ₉ , 97-99%; ¹⁵ N ₂ , 97-99%)
ULM-8766	L-Lysine•2HCl (unlabeled)

Please see pages 130-136 for a complete listing of amino acids.

Spirulina

Spirulina Whole Cells

Catalog No.	Description
CLM-8400	Spirulina whole cells (lyophilized powder) (U- ¹³ C, 97%+)
NLM-8401	Spirulina whole cells (lyophilized powder) (U- ¹⁵ N, 98%+)
ULM-8453	Spirulina whole cells (lyophilized powder) unlabeled

Please see page 148 for MouseExpress® (¹⁵N, 98%) Mouse Feed.

Steroids

Catalog No.	Description
DLM-8438	Aldosterone (2,2,4,6,6,17,21,21-D ₈)
ULM-9134	Aldosterone (unlabeled) CP 95%
DLM-8750	5β-Androstan-3α-ol-17-one (16,16-D ₂ , 98%)
CLM-9135	4-Androstene-3,17-dione (2,3,4- ¹³ C ₃ , 99%)
CLM-9135-C	4-Androstene-3,17-dione (2,3,4- ¹³ C ₃ , 99%) 100 µg/mL in 1,2-dimethoxyethane
CLM-9135-D	4-Androstene-3,17-dione (2,3,4- ¹³ C ₃ , 99%) 1000 µg/mL in 1,2-dimethoxyethane
DLM-7976	4-Androstene-3,17-dione (2,2,4,6,6,16,16-D ₇ , 97%)
ULM-8472	4-Androstene-3,17-dione (unlabeled)
ULM-8472-C	4-Androstene-3,17-dione (unlabeled) 100 µg/mL in 1,2-dimethoxyethane
ULM-8472-D	4-Androstene-3,17-dione (unlabeled) 1000 µg/mL in 1,2-dimethoxyethane
DLM-7937	Androsterone (16,16-D ₂ , 98%)
DLM-9137	Androsterone glucuronide (2,2,4,4-D ₄ , 98%)
ULM-9138	Androsterone glucuronide (unlabeled)
DLM-6780	Chenodeoxycholic acid (2,2,4,4-D ₄ , 98%)
DLM-4700	Cholestane (3,3-D ₂ , 98%)
DLM-8276	Cholestenone (2,2,4,6,6-D ₅ , 98%)
CLM-9139	Cholesterol (2,3,4- ¹³ C ₃ , 99%)
CLM-9139-B	Cholesterol (2,3,4- ¹³ C ₃ , 99%) 50 µg/mL in chloroform
CLM-9139-C	Cholesterol (2,3,4- ¹³ C ₃ , 99%) 100 µg/mL in chloroform
CLM-804	Cholesterol (3,4- ¹³ C ₂ , 99%)
DLM-1831	Cholesterol (3-D ₁ , 98%)
DLM-7260	Cholesterol (25,26,26,26-D ₄ , 98%)
DLM-2607	Cholesterol (2,2,3,4,4,6-D ₆ , 97-98%)
DLM-3057	Cholesterol (25,26,26,26,27,27,27-D ₇ , 98%)
OLM-7695	Cholesterol (¹⁸ O, 80%)
ULM-9140	Cholesterol (unlabeled)
ULM-9140-C	Cholesterol (unlabeled) 100 µg/mL in chloroform
ULM-9140-D	Cholesterol (unlabeled) 1000 µg/mL in chloroform
CLM-3361	Cholesterol-3-octanoate (octanoate-1- ¹³ C, 99%)
CLM-2710	Cholic acid (24- ¹³ C, 99%)
DLM-2611	Cholic acid (2,2,4,4-D ₄ , 98%)
DLM-7347	Corticosterone (2,2,4,6,6,17a,21,21-D ₈ , 97-98%)
DLM-2615	Cortisol (1,2-D ₂ , 98%)
DLM-2057	Cortisol (9,12,12-D ₃ , 98%)
DLM-2218	Cortisol (9,11,12,12-D ₄ , 98%)
ULM-9141	Cortisol (unlabeled)
ULM-9141-C	Cortisol (unlabeled) 100 µg/mL in methanol
ULM-9141-D	Cortisol (unlabeled) 1000 µg/mL in methanol
ULM-7823	Cortisol (unlabeled)
DLM-8863	Cortisone (1,2-D ₂ , 98%)
DLM-9142	Cortisone (2,2,4,6,6,12,12-D ₇ , 98%)
ULM-9202	Cortisone (unlabeled)
DLM-4216	7-Dehydrocholesterol (25,26,26,26,27,27-D ₇ , 98%)
DLM-7714	Dehydroepiandrosterone (DHEA) (16,16-D ₂ , 97%)
ULM-9143	Dehydroepiandrosterone (DHEA) (unlabeled)
ULM-9143-C	Dehydroepiandrosterone (DHEA) (unlabeled) 100 µg/mL in methanol
ULM-9143-D	Dehydroepiandrosterone (DHEA) (unlabeled) 1000 µg/mL in methanol

Catalog No.	Description
DLM-8701	Dehydroepiandrosterone sulfate•sodium salt (DHEAS) (16,16-D ₂ , 97%)
DLM-8337	Dehydroepiandrosterone sulfate•sodium salt (DHEAS) (2,2,3,4,4,6-D ₆ , 98%)
ULM-9144	Dehydroepiandrosterone sulfate•sodium salt (DHEAS) (unlabeled)
ULM-9144-C	Dehydroepiandrosterone sulfate•sodium salt (DHEAS) (unlabeled) 100 µg/mL in methanol
ULM-9144-D	Dehydroepiandrosterone sulfate•sodium salt (DHEAS) (unlabeled) 1000 µg/mL in methanol
CLM-3364	Deoxycholic acid (24- ¹³ C, 99%)
DLM-2824	Deoxycholic acid (2,2,4,4-D ₄ , 98%)
DLM-7209	11-Deoxycortisol (21,21-D ₂ , 96%)
ULM-9145	11-Deoxycortisol (unlabeled)
ULM-9145-C	11-Deoxycortisol (unlabeled) 100 µg/mL in methanol
ULM-9145-D	11-Deoxycortisol (unlabeled) 1000 µg/mL in methanol
DLM-8305	21-Deoxycortisol (D ₈ , 96%)
DLM-170	Diethylstilbestrol (<i>cis/trans</i> mix) (ring-3,3',5,5'-diethyl-1,1,1',1'-D ₈ , 98%)
ULM-7921	Diethylstilbestrol (<i>cis/trans</i> mix) (unlabeled)
DLM-3023	Dihydrotestosterone (16,16,17-D ₃ , 98%)
CLM-9146	5α-Dihydrotestosterone (2,3,4- ¹³ C ₃ , 99%) CP 97%
CLM-9146-C	5α-Dihydrotestosterone (2,3,4- ¹³ C ₃ , 99%) 100 µg/mL in 1,2-dimethoxyethane
CLM-9146-D	5α-Dihydrotestosterone (2,3,4- ¹³ C ₃ , 99%) 1000 µg/mL in 1,2-dimethoxyethane
DLM-9041	5α-Dihydrotestosterone (2,2,4,4-D ₄ , 98%)
CNLM-7889	DL-Epinephrine (1,2- ¹³ C ₂ , 99%; ¹⁵ N, 98%)
DLM-2866	DL-Epinephrine (α,α,β-D ₃ , 97%)
CLM-7936	Estradiol (13,14,15,16,17,18- ¹³ C ₆ , 99%) 100 µg/mL in methanol
DLM-3694	Estradiol (16,16,17-D ₃ , 98%)
DLM-2487	Estradiol (2,4,16,16-D ₄ , 95-97%)
ULM-7449	Estradiol (unlabeled) 100 µg/mL in nonane
CLM-9147	Estriol (16α-hydroxyestradiol) (2,3,4- ¹³ C ₃ , 99%)
CLM-9147-A	Estriol (16α-hydroxyestradiol) (2,3,4- ¹³ C ₃ , 99%) 5 µg/mL in methanol
CLM-9147-B	Estriol (16α-hydroxyestradiol) (2,3,4- ¹³ C ₃ , 99%) 50 µg/mL in methanol
CLM-9147-C	Estriol (16α-hydroxyestradiol) (2,3,4- ¹³ C ₃ , 99%) 100 µg/mL in methanol
DLM-7468	Estriol (2,4-D ₂ , 98%)
DLM-8343	Estriol (2,4,17-D ₃ , 98%) CP 96%
DLM-8583	Estriol (2,4,16,17-D ₄ , 98%) CP 95%
DLM-8586	Estriol (2,4,16-D ₃ , 98%)
ULM-8218	Estriol (unlabeled)
CLM-9148	Estrone (2,3,4- ¹³ C ₃ , 99%)
CLM-9148-B	Estrone (2,3,4- ¹³ C ₃ , 99%) 50 µg/mL in methanol
CLM-9148-C	Estrone (2,3,4- ¹³ C ₃ , 99%) 100 µg/mL in methanol
CLM-673	Estrone (3,4- ¹³ C ₂ , 99%) 100 µg/mL in acetonitrile
DLM-3976	Estrone (2,4,16,16-D ₄ , 97%)
CLM-8033	DL-Estrone 3-methyl ether (13,14,15,16,17,18- ¹³ C ₆ , 99%)
CLM-3375	Ethynylestradiol (20,21- ¹³ C ₂ , 99%) 100 µg/mL in acetonitrile
DLM-4691	17-α-Ethynylestradiol (2,4,16,16-D ₄ , 97-98%)
ULM-7211	Ethynylestradiol (unlabeled) 100 µg/mL in acetonitrile

Steroids

Catalog No.	Description
DLM-8646	7-β-Hydroxycholesterol (25,26,26,26,27,27,27-D ₇ , 98%) CP 97%
DLM-9150	18-Hydroxycorticosterone (9,11,12,12-D ₄ , 98%) CP 95%
ULM-9151	18-Hydroxycorticosterone (unlabeled) CP 95%
DLM-9149	6β-Hydroxycortisol (9,11,12,12-D ₄) CP 97%
CLM-8012	DL-2-Hydroxyestradiol (13,14,15,16,17,18- ¹³ C ₆ , 99%)
ULM-8135	2-Hydroxyestradiol (unlabeled)
ULM-8134	2-Hydroxyestrone (unlabeled)
CLM-8013	DL-4-Hydroxyestrone (13,14,15,16,17,18- ¹³ C ₆ , 99%)
ULM-8261	4-Hydroxyestrone (unlabeled) CP 96%
CLM-9153	16α-Hydroxyestrone (2,3,4- ¹³ C ₃ , 99%)
ULM-9152	16α-Hydroxyestrone (unlabeled)
CLM-8016	DL-2-Hydroxyestrone-3-methyl ether (13,14,15,16,17,18- ¹³ C ₆ , 99%)
ULM-8133	2-Hydroxyestrone-3-methyl ether (unlabeled)
DLM-7206	17-Hydroxypregnenolone (21,21,21-D ₃ , 97%)
CDLM-9154	17α-Hydroxypregnenolone (20,21- ¹³ C ₂ , 99%; 16,16-D ₂ , 99%)
CDLM-9154-C	17α-Hydroxypregnenolone (20,21- ¹³ C ₂ , 99%; 16,16-D ₂ , 99%) 100 µg/mL in methanol
CDLM-9154-D	17α-Hydroxypregnenolone (20,21- ¹³ C ₂ , 99%; 16,16-D ₂ , 99%) 1000 µg/mL in methanol
ULM-9155	17α-Hydroxypregnenolone (unlabeled)
ULM-9155-C	17α-Hydroxypregnenolone (unlabeled) 100 µg/mL in methanol
ULM-9155-D	17α-Hydroxypregnenolone (unlabeled) 1000 µg/mL in methanol
CLM-9157	17α-Hydroxyprogesterone (2,3,4- ¹³ C ₃ , 98%)
CLM-9157-C	17α-Hydroxyprogesterone (2,3,4- ¹³ C ₃ , 98%) 100 µg/mL in methanol
CLM-9157-D	17α-Hydroxyprogesterone (2,3,4- ¹³ C ₃ , 98%) 1000 µg/mL in methanol
DLM-6598	17-Hydroxyprogesterone (2,2,4,6,6,21,21,21-D ₈ , 98%)
ULM-9156	17α-Hydroxyprogesterone (unlabeled)
ULM-9156-C	17α-Hydroxyprogesterone (unlabeled) 100 µg/mL in methanol CP 95%
ULM-9156-D	17α-Hydroxyprogesterone (unlabeled) 1000 µg/mL in methanol CP 95%
DLM-8647	7-Ketocholesterol (25,26,26,26,27,27,27-D ₇ , 99%)
DLM-3560	DL-Metanephine•HCl (α,β,β-D ₃ , 98%)
CLM-8015	DL-2-Methoxyestradiol (13,14,15,16,17,18- ¹³ C ₆ , 99%)
ULM-8137	2-Methoxyestradiol (unlabeled)
CLM-8014	DL-2-Methoxyestrone (13,14,15,16,17,18- ¹³ C ₆ , 99%)
ULM-8263	2-Methoxyestrone (unlabeled)
CLM-8017	DL-4-Methoxyestrone (13,14,15,16,17,18- ¹³ C ₆ , 99%)
ULM-8262	4-Methoxyestrone (unlabeled)
CLM-2468	Norethindrone (ethynyl- ¹³ C ₂ , 99%)
DLM-3670	DL-Norepinephrine•HCl (1,2,2-D ₃ , 95%)
DLM-8820	DL-Norepinephrine•HCl (ring-D ₃ ,1,2,2-D ₃ , 99%)
DLM-3979	19-Nortestosterone (16,16,17-D ₃ , 98%)
ULM-4841	19-Nortestosterone (unlabeled)
ULM-222	Pregna-1,4,6-triene-3,20-dione (unlabeled)
DLM-3754	5-α-Pregnan-3-α-ol-20-one (17,21,21,21-D ₄ , 96-98%) CP 95%+
ULM-3779	5-α-Pregnan-3-α-ol-20-one (unlabeled) CP 97%
DLM-7492	5-α-Pregnan-3-β-ol-20-one (17α,21,21,21-D ₄ , 97%+) CP 96%
ULM-8242	5-α-Pregnan-3-β-ol-20-one (unlabeled)
DLM-2294	5-β-Pregnan-3-α-ol-20-one (17,21,21,21-D ₄ , 96-98%)

Catalog No.	Description
DLM-8751	5-β-Pregnan-3-α,11-β,17-α,21-tetrol-20-one (9,11α,12-D ₃ , 95%)
DLM-8753	5-β-Pregnan-3-α,17-α,20-triol (20,21,21,21-D ₄ , 98%) mix of 20α & 20β
DLM-3910	5-α-Pregnan-3-α,21-diol-20-one (17,21,21-D ₃ , 95%)
DLM-3816	5-α-Pregnan-3,20-dione (1,2,4,5,6,7-D ₆ , 95%)
DLM-3817	5-β-Pregnan-3,20-dione (1,2,4,5,6,7-D ₆ , 95%)
DLM-7228	4-Pregnen-21-ol-3,20-dione (2,2,4,6,6,17,21,21-D ₈ , 96%) CP 95%
DLM-6896	Pregnenolone (17,21,21,21-D ₄ , 98%)
CDLM-9158	Pregnenolone (20,21- ¹³ C ₂ , 99%; 16,16-D ₂ , 98%)
ULM-9159	Pregnenolone (unlabeled)
CDLM-9160	Pregnenolone sulfate•sodium salt (20,21- ¹³ C ₂ , 99%; 16,16-D ₂ , 98%)
ULM-9161	Pregnenolone sulfate•sodium salt (unlabeled)
CLM-457	Progesterone (3,4- ¹³ C ₂ , 90%)
CLM-9162	Progesterone (2,3,4- ¹³ C ₃ , 99%)
CLM-9162-B	Progesterone (2,3,4- ¹³ C ₃ , 99%) 50 µg/mL in acetonitrile
CLM-9162-C	Progesterone (2,3,4- ¹³ C ₃ , 99%) 100 µg/mL in acetonitrile
DLM-6909	Progesterone (2,2,6,6,17,21,21,21-D ₈ , 96%)
DLM-7953	Progesterone (2,2,4,6,6,17α,21,21,21-D ₉ , 98%)
ULM-8219	Progesterone (unlabeled)
DLM-3312	Prostaglandin A2 (3,3,4,4-D ₄ , 98%)
DLM-3627	Prostaglandin A2 (3,3,4,4-D ₄ , 98%) (in solution)
DLM-3728	Prostaglandin E1 (3,3,4,4-D ₄ , 98%) (in solution)
DLM-3592	Prostaglandin E2 (3,3,4,4-D ₄ , 98%) 500 µg/mL in methyl acetate
DLM-3628	Prostaglandin E2 (3,3,4,4-D ₄ , 98%) (in solution)
DLM-3558	Prostaglandin F2α (3,3,4,4-D ₄ , 98%) (in solution)
DLM-4200	9-α,11-α-Prostaglandin F2 (3,3',4,4'-D ₄ , 98%) (in solution)
DLM-7457	Sodium 17β-estradiol 3-sulfate (2,4,16,16-D ₄ , 98%) (stabilized with 50% w/w tris)
DLM-7456	Sodium estrone 3-sulfate (2,4,16,16-D ₄ , 98%) (stabilized with 50% w/w tris)
CLM-159	Testosterone (3,4- ¹³ C ₂ , 99%)
CLM-9164	Testosterone (2,3,4- ¹³ C ₃ , 99%)
CLM-9164-C	Testosterone (2,3,4- ¹³ C ₃ , 99%) 100 µg/mL in 1,2-dimethoxyethane
CLM-9164-D	Testosterone (2,3,4- ¹³ C ₃ , 99%) 1000 µg/mL in 1,2-dimethoxyethane
DLM-683	Testosterone (1,2-D ₂ , 98%)
DLM-6224	Testosterone (16,16,17-D ₃ , 98%)
DLM-8085	Testosterone (2,2,4,6,6-D ₅ , 98%)
ULM-8081	Testosterone (unlabeled)
ULM-8933	Testosterone benzoate (unlabeled)
DLM-8265	Testosterone diacetate (testosterone-D ₄ , acetate methyl-D ₆ , 98%)
ULM-9163	3α,5β-Tetrahydroaldosterone (unlabeled)
DLM-7477	3-α,5-β-Tetrahydrodeoxycorticosterone (17,21,21-D ₃ , 97%) CP 96%
CLM-7185	3,3',5-Triiodo-L-thyronine (ring- ¹³ C ₆ , 99%) CP >90%
CLM-6725	L-Thyroxine (tyrosine-ring- ¹³ C ₆ , 99%) CP 90%
CLM-8931	L-Thyroxine (ring- ¹³ C ₁₂ , 99%) CP 97%
ULM-8184	L-Thyroxine (unlabeled)

Veterinary and Human Antibiotic Standards

Catalog No.	Description
DLM-7170-1.2	1-Aminohydantoin hydrochloride (AHD) (5,5-D ₂ , 98%) 100 µg/mL in acetonitrile-D ₃
ULM-7188-1.2	1-Aminohydantoin hydrochloride (AHD) (unlabeled) 100 µg/mL in methanol
DLM-7171-1.2	3-Amino-2-oxazolidone (AOZ) (ring-D ₄ , 98%) 100 µg/mL in acetonitrile-D ₃
ULM-7189-1.2	3-Amino-2-oxazolidone (AOZ) (unlabeled) 100 µg/mL in methanol
CLM-7407-1MG	Amoxicillin•3H ₂ O (phenyl- ¹³ C ₆ , 99%) neat
DLM-119-1.2	(+/-)-Chloramphenicol (ring-D ₄ , benzyl-D ₁ , 98%) 100 µg/mL in acetonitrile
ULM-6687-1.2	(+/-)-Chloramphenicol (unlabeled) 100 µg/mL in acetonitrile
CNLM-7539-1.2	Ciprofloxacin•HCl (2,3,carboxyl- ¹³ C ₃ , 99%; quinoline- ¹⁵ N, 98%) 100 µg/mL in methanol
ULM-7710-1.2	Ciprofloxacin•HCl (unlabeled) 100 µg/mL in methanol

Catalog No.	Description
CLM-3672-1.2	Erythromycin (90-95% Erythromycin A) (N,N-dimethyl- ¹³ C ₂ , ~90%) 100 µg/mL in acetonitrile
ULM-4322-1.2	Erythromycin (unlabeled) 100 µg/mL in acetonitrile
DLM-7172-1.2	5-(4-Morpholinylmethyl)-3-amino-2-oxazolidinone (AMOZ) (4,4,5,5',5'-D ₅ , 98%) 100 µg/mL in acetonitrile-D ₃
ULM-7190-1.2	5-(4-Morpholinylmethyl)-3-amino-2-oxazolidinone (AMOZ) (unlabeled) 100 µg/mL in methanol
CLM-3045-1.2	Sulfamethazine (phenyl- ¹³ C ₆ , 90%) 100 µg/mL in acetonitrile
ULM-7220-1.2	Sulfamethazine (unlabeled) 100 µg/mL in acetonitrile
CLM-6944-1.2	Sulfamethoxazole (ring- ¹³ C ₆ , 99%) 100 µg/mL in acetonitrile
ULM-7527-1.2	Sulfamethoxazole (unlabeled) 100 µg/mL in acetonitrile
CLM-7988-A-1.2	Trimethoprim (pyrimidine-4,5,6- ¹³ C ₃ , 99%) 50 µg/mL in methanol
ULM-7989-A-1.2	Trimethoprim (unlabeled) 50 µg/mL in methanol

Vitamins

Catalog No.	Description
CLM-3085	L-Ascorbic acid (1- ¹³ C, 99%)
CLM-7283	L-Ascorbic acid (U- ¹³ C ₆ , 98%)
DLM-8806	Biotin (ring-6,6-D ₂ , 98%) CP 97%
DLM-9105	1,25-Dihydroxyvitamin D ₂ (6,19,19-D ₃ , 99%) CP 95%
DLM-9105-A	1,25-Dihydroxyvitamin D ₂ (6,19,19-D ₃ , 99%) 5 µg/mL in ethanol CP 95%
DLM-9105-B	1,25-Dihydroxyvitamin D ₂ (6,19,19-D ₃ , 99%) 50 µg/mL in ethanol CP 95%
DLM-9105-C	1,25-Dihydroxyvitamin D ₂ (6,19,19-D ₃ , 99%) 100 µg/mL in ethanol CP 95%
ULM-9106	1,25-Dihydroxyvitamin D ₂ (unlabeled) CP 95%
ULM-9106-A	1,25-Dihydroxyvitamin D ₂ (unlabeled) 5 µg/mL in ethanol CP 95%
ULM-9106-B	1,25-Dihydroxyvitamin D ₂ (unlabeled) 50 µg/mL in ethanol CP 95%
ULM-9106-C	1,25-Dihydroxyvitamin D ₂ (unlabeled) 100 µg/mL in ethanol CP 95%
ULM-9109	24R,25-Dihydroxyvitamin D ₂ (unlabeled)
ULM-9109-B	24R,25-Dihydroxyvitamin D ₂ (unlabeled) 50 µg/mL in ethanol
ULM-9109-C	24R,25-Dihydroxyvitamin D ₂ (unlabeled) 100 µg/mL in ethanol
DLM-9107	1,25-Dihydroxyvitamin D ₃ (6,19,19-D ₃ , 97%) CP 95%
DLM-9107-A	1,25-Dihydroxyvitamin D ₃ (6,19,19-D ₃ , 97%) 5 µg/mL in ethanol CP 95%
DLM-9107-B	1,25-Dihydroxyvitamin D ₃ (6,19,19-D ₃ , 97%) 50 µg/mL in ethanol CP 95%
DLM-9107-C	1,25-Dihydroxyvitamin D ₃ (6,19,19-D ₃ , 97%) 100 µg/mL in ethanol CP 95%
ULM-9108	1,25-Dihydroxyvitamin D ₃ (unlabeled) CP 95%
ULM-9108-A	1,25-Dihydroxyvitamin D ₃ (unlabeled) 5 µg/mL in ethanol CP 95%
ULM-9108-B	1,25-Dihydroxyvitamin D ₃ (unlabeled) 50 µg/mL in ethanol CP 95%
ULM-9108-C	1,25-Dihydroxyvitamin D ₃ (unlabeled) 100 µg/mL in ethanol CP 95%
ULM-9110	3- <i>epi</i> -25-Hydroxyvitamin D ₂ (unlabeled)
ULM-9110-B	3- <i>epi</i> -25-Hydroxyvitamin D ₂ (unlabeled) 50 µg/mL in ethanol
ULM-9110-C	3- <i>epi</i> -25-Hydroxyvitamin D ₂ (unlabeled) 100 µg/mL in ethanol
DLM-9111	3- <i>epi</i> -25-Hydroxyvitamin D ₃ (6,19,19-D ₃ , 98%)
DLM-9111-B	3- <i>epi</i> -25-Hydroxyvitamin D ₃ (6,19,19-D ₃ , 98%) 50 µg/mL in ethanol
DLM-9111-C	3- <i>epi</i> -25-Hydroxyvitamin D ₃ (6,19,19-D ₃ , 98%) 100 µg/mL in ethanol
ULM-9112	3- <i>epi</i> -25-Hydroxyvitamin D ₃ (unlabeled)
ULM-9112-B	3- <i>epi</i> -25-Hydroxyvitamin D ₃ (unlabeled) 50 µg/mL in ethanol
ULM-9112-C	3- <i>epi</i> -25-Hydroxyvitamin D ₃ (unlabeled) 100 µg/mL in ethanol
CLM-9113	25-Hydroxyvitamin D ₂ (25,26,27- ¹³ C ₃ , 99%)
CLM-9113-B	25-Hydroxyvitamin D ₂ (25,26,27- ¹³ C ₃ , 99%) 50 µg/mL in ethanol
CLM-9113-C	25-Hydroxyvitamin D ₂ (25,26,27- ¹³ C ₃ , 99%) 100 µg/mL in ethanol
DLM-9114	25-Hydroxyvitamin D ₂ (6,19,19-D ₃ , 97%)
DLM-9114-A	25-Hydroxyvitamin D ₂ (6,19,19-D ₃ , 97%) 5 µg/mL in ethanol
DLM-9114-B	25-Hydroxyvitamin D ₂ (6,19,19-D ₃ , 97%) 50 µg/mL in ethanol
DLM-9114-C	25-Hydroxyvitamin D ₂ (6,19,19-D ₃ , 97%) 100 µg/mL in ethanol
ULM-9115	25-Hydroxyvitamin D ₂ (unlabeled)
ULM-9115-A	25-Hydroxyvitamin D ₂ (unlabeled) 5 µg/mL in ethanol

Catalog No.	Description
ULM-9115-B	25-Hydroxyvitamin D ₂ (unlabeled) 50 µg/mL in ethanol
ULM-9115-C	25-Hydroxyvitamin D ₂ (unlabeled) 100 µg/mL in ethanol
DLM-9116	25-Hydroxyvitamin D ₃ (6,19,19-D ₃ , 97%)
DLM-9116-A	25-Hydroxyvitamin D ₃ (6,19,19-D ₃ , 97%) 5 µg/mL in ethanol
DLM-9116-B	25-Hydroxyvitamin D ₃ (6,19,19-D ₃ , 97%) 50 µg/mL in ethanol
DLM-9116-C	25-Hydroxyvitamin D ₃ (6,19,19-D ₃ , 97%) 100 µg/mL in ethanol
DLM-7708	25-Hydroxyvitamin D ₃ (26,26,26,27,27-D ₆ , 98%)
ULM-9117	25-Hydroxyvitamin D ₃ (unlabeled)
ULM-9117-A	25-Hydroxyvitamin D ₃ (unlabeled) 5 µg/mL in ethanol
ULM-9117-B	25-Hydroxyvitamin D ₃ (unlabeled) 50 µg/mL in ethanol
ULM-9117-C	25-Hydroxyvitamin D ₃ (unlabeled) 100 µg/mL in ethanol
DLM-9069	Pyridoxal•HCl (methyl-D ₃ , 98%)
CLM-320	Retinal (10- ¹³ C, 99%)
CLM-325	Retinal (11- ¹³ C, 99%)
CLM-326	Retinal (14- ¹³ C, 99%)
CLM-327	Retinal (15- ¹³ C, 99%)
DLM-7719	Retinal (D ₆ , 96%+)
CLM-331	Retinoic acid (10- ¹³ C, 99%)
CLM-328	Retinoic acid (11- ¹³ C, 98%)
CLM-329	Retinoic acid (14- ¹³ C, 99%)
CLM-330	Retinoic acid (15- ¹³ C, 99%)
CLM-4343	Retinoic acid (10,11,14,15- ¹³ C ₄ , 99%)
DLM-7720	Retinoic acid (D ₆ , 96%+)
DLM-8113	Retinol (19,19,19,20,20,20-D ₆ , 97%+)
DLM-4902	Retinyl palmitate (+0.5 mg/mL BHT) (10,19,19,19-D ₄ , 96%)
CLM-8870	Vitamin A acetate (12,13,14,20- ¹³ C ₄ , 99%)
CLM-4831	Vitamin A acetate (8,9,10,12,13,14,19,20- ¹³ C ₈ , 99%)
CLM-7277	Vitamin A acetate (8,9,10,11,12,13,14,15,19,20- ¹³ C ₁₀ , 99%)
DLM-2244	Vitamin A acetate 3-4% <i>cis</i> (10,19,19,19-D ₄ , 96%)
DLM-3828	Vitamin A acetate 3-4% <i>cis</i> (19,19,19,20,20,20-D ₆ , 96%)
DLM-4203	Vitamin A acetate 3-4% <i>cis</i> (10,14,19,19,19,20,20,20-D ₈ , 90%)
CLM-7667	Vitamin B ₁ (Thiamine chloride) (4,5,4-methyl- ¹³ C ₃ , 99%)
CNLM-8851	Vitamin B ₂ (Riboflavin) (¹³ C ₄ , 99%; ¹⁵ N ₂ , 98%) CP >97%
ULM-9123	Vitamin B ₂ (Riboflavin) (unlabeled) CP 97%
CNLM-7694	Vitamin B ₅ (Pantothenic acid, calcium salt monohydrate) (β-alanyl- ¹³ C ₃ , 99%; ¹⁵ N, 98%)
ULM-9118	Vitamin B ₆ (Pyridoxal•HCl) (unlabeled)
DLM-9119	Vitamin B ₆ (Pyridoxamine•2HCl) (methyl-D ₃ , 98%)
ULM-9120	Vitamin B ₆ (Pyridoxamine•2HCl) (unlabeled)
CLM-7563	Vitamin B ₆ (Pyridoxine•HCl) (4,5- <i>bis</i> (hydroxymethyl)- ¹³ C ₄ , 99%)
DLM-9121	Vitamin B ₆ (Pyridoxine•HCl) (methyl-D ₃ , 98%) CP 96%
ULM-1992	Vitamin B ₆ (Pyridoxine•HCl) (unlabeled)
ULM-9122	Vitamin B ₆ (Pyridoxine•HCl) (unlabeled) CP 96%
CLM-7861	Vitamin B ₉ (Folic acid) (¹³ C ₅ , 95%+) (contains ~10% H ₂ O)
DLM-8985	Vitamin D ₂ (Ergocalciferol) (6,19,19-D ₃ , 97%)
ULM-9124	Vitamin D ₂ (Ergocalciferol) (unlabeled)
ULM-9124-C	Vitamin D ₂ (Ergocalciferol) (unlabeled) 100 µg/mL in ethanol
ULM-9124-D	Vitamin D ₂ (Ergocalciferol) (unlabeled) 1000 µg/mL in ethanol
CLM-7850	Vitamin D ₃ (Cholecalciferol) (¹³ C ₂ , 99%) CP 90%
DLM-8853-C	Vitamin D ₃ (Cholecalciferol) (D ₃ , 97%) 100 µg/mL in ethanol CP 97%
DLM-8853-D	Vitamin D ₃ (Cholecalciferol) (D ₃ , 97%) 1000 µg/mL in ethanol CP 97%

(continued)

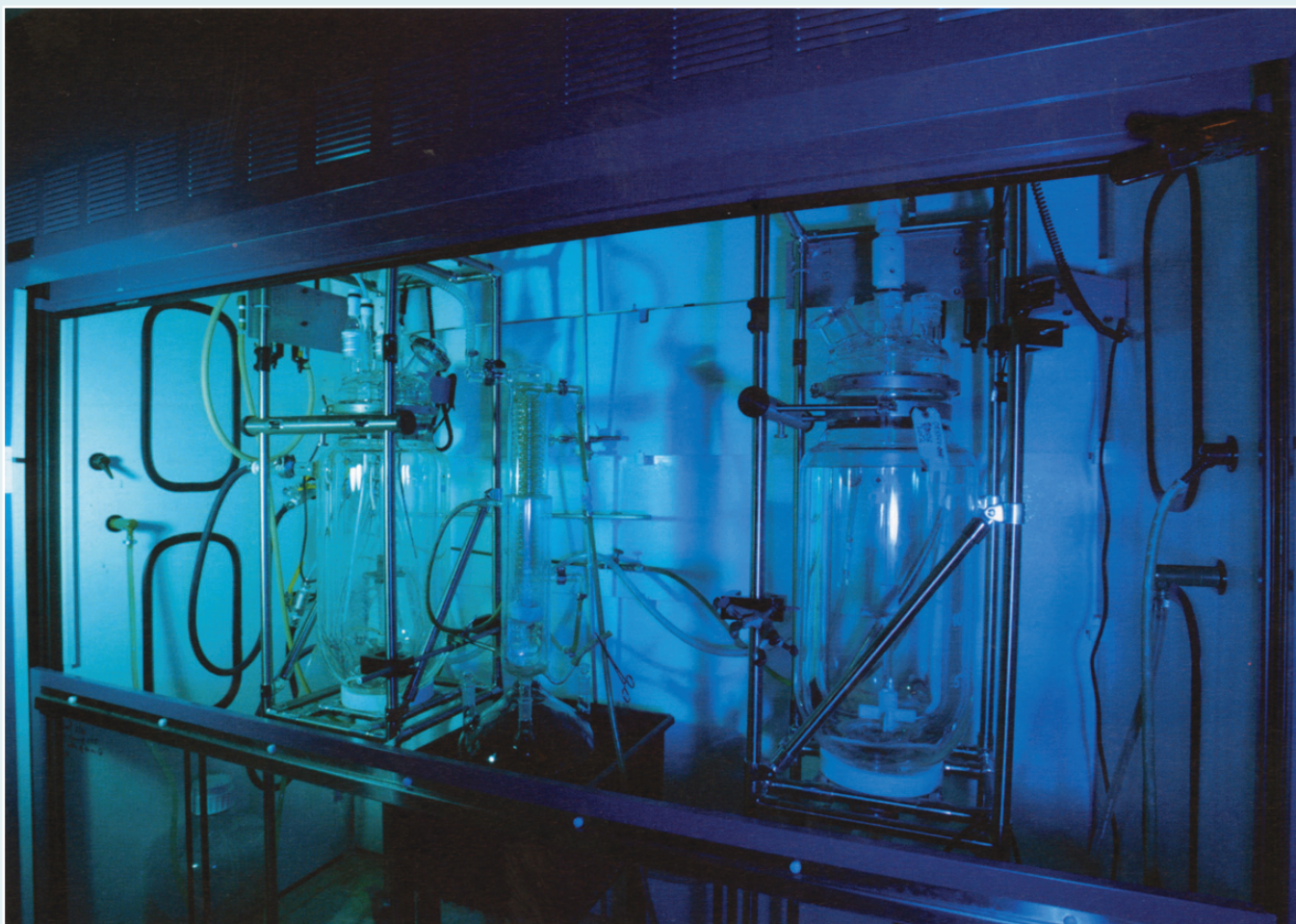
Vitamins

Catalog No.	Description
ULM-9125	Vitamin D ₃ (Cholecalciferol) (unlabeled)
ULM-9125-C	Vitamin D ₃ (Cholecalciferol) (unlabeled) 100 µg/mL in ethanol
ULM-9125-D	Vitamin D ₃ (Cholecalciferol) (unlabeled) 1000 µg/mL in ethanol
DLM-9126	Vitamin E (α-Tocopherol) (5-methyl-D ₃ , 7-methyl-D ₃ , 98%)
ULM-9127	Vitamin E (α-Tocopherol) (unlabeled)
DLM-8847	Vitamin E acetate (Tocopherol acetate) (acetyl-D ₃ , 98%)
DLM-9128	Vitamin H (Biotin) (2',2',3',3',4',4',5',5'-D ₈ , 99%)
ULM-9129	Vitamin H (Biotin) (unlabeled)
DLM-7702	Vitamin K ₁ (Phylloquinone) (ring-D ₄ , 98%)
DLM-9130	Vitamin K ₁ (Phylloquinone) (D ₇ , 99%) CP 97%
ULM-9131	Vitamin K ₁ (Phylloquinone) (unlabeled) CP 97%
DLM-9132	Vitamin K ₃ (Menadione) (D ₈ , 98%) CP 97%
ULM-9133	Vitamin K ₃ (Menadione) (unlabeled) CP 97%

Water

Catalog No.	Description
DLM-4-70	Deuterium oxide (D, 70%)
DLM-4-99	Deuterium oxide (D, 99%)
DLM-4-99.8	Deuterium oxide (D, 99.8%)
DLM-4	Deuterium oxide (D, 99.9%)
DLM-6	Deuterium oxide "100%" (D, 99.96%)
DLM-11	Deuterium oxide (D, 99.9%) low paramagnetic
DOLM-242	Water (D ₂ , 98%; ¹⁸ O, 97%)
OLM-240-10	Water (¹⁸ O, 10%)
OLM-240-50	Water (¹⁸ O, 50-60%)
OLM-240-97	Water (¹⁸ O, 97%)
OLM-240-99	Water (¹⁸ O, 99%)
OLM-782-10	Water (¹⁷ O, 10%)
OLM-782-20	Water (¹⁷ O, 20%)
OLM-782-40	Water (¹⁷ O, 35-40%)
OLM-782-70	Water (¹⁷ O, 70%)
OLM-782-85	Water (¹⁷ O, 85%)
OLM-782-90	Water (¹⁷ O, 90%)

Custom double-labeled water (¹⁸O; D) also available.



Microbiological and Pyrogen Tested Products

CIL offers microbiological and pyrogen testing for many of our research-grade products. For these products, denoted as -MPT, the bulk material is tested at release for *S. aureus*, *P. aeruginosa*, *E. coli*, *Salmonella sp.*, aerobic bacteria, yeast, mold and bacterial endotoxins. Subsequent aliquots are not retested. Microbiological testing does not imply suitability for any intended use.

For most -MPT products, CIL also offers an Enhanced Technical Data Package (EDP). It includes all data that normally accompanies the -MPT product, plus additional information pertaining to the synthesis, purity and stability of the product. This is available for an additional charge. **Please see page 94 for further details.**

Amino Acids

Catalog No.	Description
CLM-116-MPT	L-Alanine (1- ¹³ C, 99%)
CLM-117-MPT	L-Alanine (3- ¹³ C, 99%)
NLM-454-MPT	L-Alanine (¹⁵ N, 98%)
DLM-248-MPT	L-Alanine (3,3-D ₃ , 99%)
CLM-2051-MPT	L-Arginine•HCl (1,2- ¹³ C ₂ , 99%)
NLM-395-MPT	L-Arginine•HCl (guanido- ¹⁵ N ₂ , 98%+)
CLM-1801-H-MPT	L-Aspartic acid (¹³ C ₄ , 99%)
DLM-546-MPT	L-Aspartic acid (2,3,3-D ₃ , 98%)
CLM-4899-MPT	L-Citrulline (ureido- ¹³ C, 99%)
DLM-3860-MPT	L-Citrulline (5,5-D ₂ , 98%)
CDLM-7879-MPT	L-Citrulline (ureido- ¹³ C, 99%; 5,5-D ₂ , 98%)
CDLM-7139-MPT	L-Citrulline (5- ¹³ C, 99%; 4,4,5,5-D ₄ , 95%)
CLM-3852-MPT	L-Cysteine (1- ¹³ C, 99%)
DLM-769-MPT	L-Cysteine (3,3-D ₂ , 98%)
CLM-674-MPT	L-Glutamic acid (1- ¹³ C, 99%)
CLM-1800-H-MPT	L-Glutamic acid (¹³ C ₅ , 99%)
NLM-135-MPT	L-Glutamic acid (¹⁵ N, 98%)
DLM-3725-MPT	L-Glutamic acid (2,4,4-D ₃ , 97-98%)
CLM-3612-MPT	L-Glutamine (1- ¹³ C, 99%)
CLM-2001-MPT	L-Glutamine (1,2- ¹³ C ₂ , 99%)
CLM-1822-H-MPT	L-Glutamine (¹³ C ₅ , 99%)
NLM-557-MPT	L-Glutamine (amide- ¹⁵ N, 98%+)
NLM-1016-MPT	L-Glutamine (α- ¹⁵ N, 98%)
NLM-1328-MPT	L-Glutamine (¹⁵ N ₂ , 98%)
CLM-422-MPT	Glycine (1- ¹³ C, 99%)
CLM-136-MPT	Glycine (2- ¹³ C, 99%)
CLM-1017-MPT	Glycine (1,2- ¹³ C ₂ , 97-99%)
NLM-202-MPT	Glycine (¹⁵ N, 98%)
DLM-1674-MPT	Glycine (2,2-D ₂ , 98%)
CNLM-1673-H-MPT	Glycine (¹³ C ₂ , 99%; ¹⁵ N, 99%)
CLM-1026-MPT	L-Isoleucine (1- ¹³ C, 99%)
CLM-468-MPT	L-Leucine (1- ¹³ C, 99%)
CLM-3524-MPT	L-Leucine (1,2- ¹³ C ₂ , 99%)
CLM-2262-H-MPT	L-Leucine (¹³ C ₆ , 99%)
NLM-142-MPT	L-Leucine (¹⁵ N, 98%)
DLM-1259-MPT	L-Leucine (5,5,5-D ₃ , 99%)
DLM-4212-MPT	L-Leucine (isopropyl-D ₇ , 98%)
DLM-567-MPT	L-Leucine (D ₁₀ , 98%)
CNLM-615-MPT	L-Leucine (1- ¹³ C, 99%; ¹⁵ N, 98%+)
CNLM-281-H-MPT	L-Leucine (¹³ C ₆ , 99%; ¹⁵ N, 99%)
ULM-8203-MPT	L-Leucine (unlabeled)

Catalog No.	Description
CLM-653-MPT	L-Lysine•2HCl (1- ¹³ C, 99%)
NLM-143-MPT	L-Lysine•2HCl (α- ¹⁵ N, 95-99%)
DLM-2640-MPT	L-Lysine•2HCl (4,4,5,5-D ₄ , 96-98%)
CLM-206-MPT	L-Methionine (methyl- ¹³ C, 99%)
CLM-3267-MPT	L-Methionine (1- ¹³ C, 99%)
CLM-893-H-MPT	L-Methionine (¹³ C ₅ , 99%)
DLM-431-MPT	L-Methionine (methyl-D ₃ , 98%)
CDLM-760-MPT	L-Methionine (1- ¹³ C, 99%; methyl-D ₃ , 98%)
CLM-1036-MPT	L-Ornithine•HCl (1,2- ¹³ C ₂ , 99%)
CLM-762-MPT	L-Phenylalanine (1- ¹³ C, 99%)
CLM-1055-MPT	L-Phenylalanine (ring- ¹³ C ₆ , 99%)
CLM-2250-H-MPT	L-Phenylalanine (¹³ C ₉ , 99%)
NLM-108-MPT	L-Phenylalanine (¹⁵ N, 98%)
DLM-1258-MPT	L-Phenylalanine (ring-D ₅ , 98%)
DLM-372-MPT	L-Phenylalanine (D ₈ , 98%)
ULM-8205-MPT	L-Phenylalanine (unlabeled)
CLM-510-MPT	L-Proline (1- ¹³ C, 99%)
NLM-835-MPT	L-Proline (¹⁵ N, 98%)
CNLM-436-H-MPT	L-Proline (¹³ C ₅ , 99%; ¹⁵ N, 99%)
ULM-8333-MPT	L-Proline (unlabeled)
CLM-1573-MPT	L-Serine (1- ¹³ C, 99%)
CLM-1572-MPT	L-Serine (3- ¹³ C, 99%)
CLM-2261-MPT	L-Threonine (¹³ C ₄ , 97-99%)
NLM-742-MPT	L-Threonine (¹⁵ N, 98%)
CNLM-587-MPT	L-Threonine (¹³ C ₄ , 97-99%; ¹⁵ N, 97-99%)
CLM-778-MPT	L-Tryptophan (1- ¹³ C, 99%)
DLM-1092-MPT	L-Tryptophan (indole-D ₅ , 98%)
CLM-776-MPT	L-Tyrosine (1- ¹³ C, 99%)
CLM-1542-MPT	L-Tyrosine (ring- ¹³ C ₆ , 99%)
NLM-590-MPT	L-Tyrosine (¹⁵ N, 98%)
DLM-2317-MPT	L-Tyrosine (3,3-D ₂ , 98%)
DLM-449-MPT	L-Tyrosine (ring-3,5-D ₂ , 98%)
DLM-451-MPT	L-Tyrosine (ring-D ₄ , 98%)
CLM-470-MPT	L-Valine (1- ¹³ C, 99%)
CLM-2249-H-MPT	L-Valine (¹³ C ₅ , 99%)
NLM-316-MPT	L-Valine (¹⁵ N, 98%)
DLM-488-MPT	L-Valine (D ₈ , 98%)

MPT = microbiological/pyrogen tested

Carbohydrates

Catalog No.	Description
CLM-1201-MPT	D-Fructose (1- ¹³ C, 99%)
CLM-1553-MPT	D-Fructose (U- ¹³ C ₆ , 99%)
CLM-744-MPT	D-Galactose (1- ¹³ C, 99%)
DLM-1390-MPT	D-Galactose (1-D, 98%)
CLM-420-MPT	D-Glucose (1- ¹³ C, 98-99%)
CLM-746-MPT	D-Glucose (2- ¹³ C, 99%)
CLM-1393-MPT	D-Glucose (3- ¹³ C, 99%)
CLM-504-MPT	D-Glucose (1,2- ¹³ C ₂ , 99%)
CLM-2717-MPT	D-Glucose (1- ¹³ C, 99%; 6- ¹³ C, 97%+)
CLM-6750-MPT	D-Glucose (3,4- ¹³ C ₂ , 99%)
CLM-1396-MPT	D-Glucose (U- ¹³ C ₆ , 99%)
DLM-1150-MPT	D-Glucose (1-D, 98%)
DLM-1271-MPT	D-Glucose (2-D, 98%)
DLM-349-MPT	D-Glucose (6,6-D ₂ , 99%)
DLM-2062-MPT	D-Glucose (1,2,3,4,5,6-D ₇ , 98%)
CDLM-3813-MPT	D-Glucose (U- ¹³ C ₆ , 99%; 1,2,3,4,5,6-D ₇ , 97-98%)
CLM-1189-MPT	D-Mannitol (1- ¹³ C, 98%)
CLM-8091-MPT	D-Sucrose (glucose- ¹³ C ₆ , 98%)
CLM-2456-MPT	D-Xylose (1,2- ¹³ C ₂ , 99%)

Fatty Acids and Lipids

Catalog No.	Description
CLM-3960-MPT	Linoleic acid, ethyl ester (linoleate-U- ¹³ C ₁₈ , 98%+) CP 95%
CLM-6229-MPT	Linoleic acid, potassium salt (1- ¹³ C, 99%)
DLM-2351-MPT	Linolenic acid, ethyl ester (17,17,18,18,18-D ₅ , 98%) microbiological tested only , CP 90%
DLM-2351-P-MPT	Linolenic acid, potassium salt (17,17,18,18,18-D ₅ , 98%) CP 95%
CLM-8455-MPT	Mixed fatty acids (¹³ C, 98%+)
CLM-293-MPT	Octanoic acid (1- ¹³ C, 99%)
DLM-619-MPT	Octanoic acid (D ₁₅ , 98%)
CLM-149-MPT	Oleic acid (1- ¹³ C, 99%)
DLM-689-MPT	Oleic acid (9,10-D ₂ , 97%)
CLM-4477-MPT	Oleic acid, potassium salt (1- ¹³ C, 99%)
CLM-6230-MPT	Oleic acid, sodium salt (1- ¹³ C, 99%)
CLM-150-MPT	Palmitic acid (1- ¹³ C, 99%)
CLM-409-MPT	Palmitic acid (U- ¹³ C ₁₆ , 98%)
DLM-2893-MPT	Palmitic acid (7,7,8,8-D ₄ , 98%)
DLM-215-MPT	Palmitic acid (D ₃₁ , 98%)
CLM-1889-MPT	Potassium palmitate (1- ¹³ C, 99%)
CLM-3943-MPT	Potassium palmitate (U- ¹³ C ₁₆ , 98%+)
DLM-3773-MPT	Potassium palmitate (2,2-D ₂ , 97%)
DLM-6033-MPT	Potassium palmitate (7,7,8,8-D ₄ , 98%)
CLM-1948-MPT	Sodium octanoate (1- ¹³ C, 99%)
CLM-174-MPT	Sodium palmitate (1- ¹³ C, 99%)
CLM-6059-MPT	Sodium palmitate (¹³ C ₁₆ , 98%+)
CLM-163-MPT	Triolein (1,1,1- ¹³ C ₃ , 99%)
CLM-164-MPT	Tripalmitin (1,1,1- ¹³ C ₃ , 99%) microbiological tested only
CLM-8445-MPT	Tripalmitin (glyceryl- ¹³ C ₃ , 99%) microbiological tested only

Other Tracers

Catalog No.	Description
CLM-630-MPT	Aminopyrine (N,N-dimethyl- ¹³ C ₂ , 99%)
CLM-1813-MPT	Benzoic acid (ring- ¹³ C ₆ , 99%)
CLM-728-MPT	Caffeine (3-methyl- ¹³ C, 99%)
CLM-1608-MPT	Chloral hydrate (trichloromethyl- ¹³ C, 97%)
CLM-804-MPT	Cholesterol (3,4- ¹³ C ₂ , 99%)
DLM-3057-MPT	Cholesterol (25,26,26,26,27,27,27-D ₇ , 98%)
DLM-549-MPT	Choline chloride (trimethyl-D ₉ , 97-98%)
CLM-7933-MPT	Creatine (guanidino- ¹³ C, 99%)
DLM-1302-MPT	Creatine (methyl-D ₃ , 98%)
CLM-7401-MPT	L-Dopa (1- ¹³ C, 99%)
CLM-7824-MPT	L-Dopa (1- ¹³ C, ring- ¹³ C ₆ , 99%)
DLM-2259	Deuterium oxide (D, 99.8%) sterility tested
DLM-2259-70	Deuterium oxide (D, 70%) sterility tested
CLM-3758-MPT	Erythromycin, lactobioante salt (N,N-dimethyl- ¹³ C ₂ , ~90%)
CLM-344-MPT	Ethanol (1- ¹³ C, 99%) (<6% H ₂ O)
CLM-3297-MPT	Ethyl acetoacetate (1,2,3,4- ¹³ C ₄ , 99%)
CLM-1397-MPT	Glycerol (2- ¹³ C, 99%)
CLM-1510-MPT	Glycerol (¹³ C ₃ , 99%)
DLM-1229-MPT	Glycerol (1,1,2,3,3-D ₅ , 99%)
CLM-191-MPT	Glycocholic acid (glycine-1- ¹³ C, 99%)
CLM-8730-MPT	2-Hydroxybenzoic acid (salicylic acid) (ring- ¹³ C ₆ , 99%)
CLM-2093-MPT	α-Ketoisocaproic acid, sodium salt (1- ¹³ C, 99%)
DLM-1944-MPT	α-Ketoisocaproic acid, sodium salt (methyl-D ₃ , 98%)
CNLM-7633-MPT	Lamotrigine (5,6- ¹³ C ₂ , 99%; 5-amino- ¹⁵ N, 98%)
CLM-7522-MPT	Naproxen, sodium salt (O-methyl- ¹³ C, 98%)
NLM-1048-MPT	Orotic acid•H ₂ O (1,3- ¹⁵ N ₂ , 98%+)
CLM-4449-MPT	Oxalic acid, disodium salt (1,2- ¹³ C ₂ , 99%)
CLM-156-MPT	Sodium acetate (1- ¹³ C, 99%)
CLM-381-MPT	Sodium acetate (2- ¹³ C, 99%)
CLM-440-MPT	Sodium acetate (1,2- ¹³ C ₂ , 99%)
DLM-3126-MPT	Sodium acetate (D ₃ , 99%)
CLM-441-MPT	Sodium bicarbonate (¹³ C, 99%), CP 97%
CLM-1256-MPT	Sodium butyrate (1- ¹³ C, 99%)
DLM-7616-MPT	Sodium butyrate (D ₃ , 98%)
CLM-3780-MPT	Sodium dichloroacetate (¹³ C ₂ , 99%)
CLM-3706-MPT	Sodium D-3-hydroxybutyrate (2,4- ¹³ C ₂ , 99%)
CLM-1577-MPT	Sodium L-lactate (1- ¹³ C, 99%) (20% w/w in H ₂ O)
CLM-1578-MPT	Sodium L-lactate (3- ¹³ C, 98%) (20% w/w in H ₂ O)
CLM-1579-MPT	Sodium L-lactate (¹³ C ₃ , 98%) (20% w/w in H ₂ O)
DLM-4353-MPT	Sodium L-lactate (2-D, 98%) (20% w/w in H ₂ O)
CLM-771-MPT	Sodium propionate (1- ¹³ C, 99%)
CLM-1865-MPT	Sodium propionate (¹³ C ₃ , 99%)
DLM-1601-MPT	Sodium propionate (D ₃ , 98%)
CLM-1082-MPT	Sodium pyruvate (1- ¹³ C, 99%)
CLM-1575-MPT	Sodium pyruvate (3- ¹³ C, 99%)
DLM-2949-MPT	Tau-methyl-L-histidine (methyl-D ₃ , 98%)
NLM-3901-MPT	Thymidine (¹⁵ N ₂ , 96-98%), CP 97%
CLM-7491-MPT	cis-(+/-)-Tramadol•HCl (methoxy- ¹³ C, 99%)
CLM-3276-MPT	Uracil (2- ¹³ C, 99%)
CLM-311-MPT	Urea (¹³ C, 99%)
NLM-233-MPT	Urea (¹⁵ N ₂ , 98%+)
COLM-4861-MPT	Urea (¹³ C, 99%; ¹⁸ O, 98%)
NLM-1697-MPT	Uric acid (1,3- ¹⁵ N ₂ , 98%+)

MPT = microbiological/pyrogen tested

SILAC法に最適なアミノ酸スターター・セット

Catalog No.	Description	Description2	AMOUNT	Price
SLC-SET-1	L-LYSINE:2HCL	(U- ¹³ C ₆ , 97-99%)	0.05g	
	L-ARGININE:HCL	(U- ¹³ C ₆ , 97-99%)	0.05g	¥86,000
CLM-2247-H-0.05	L-LYSINE:2HCL	(U- ¹³ C ₆ , 97-99%)	0.05g	¥122,000
CLM-2265-H-0.05	L-ARGININE:HCL	(U- ¹³ C ₆ , 97-99%)	0.05g	¥107,400

Catalog No.	Description	Description2	AMOUNT	Price
SLC-SET-2	L-LYSINE:2HCL	(U- ¹³ C ₆ , 97-99%)	0.05g	
	L-ARGININE:HCL	(U- ¹³ C ₆ , 97-99%; U- ¹⁵ N ₄ , 97-99%)	0.05g	¥75,000
CLM-2247-H-0.05	L-LYSINE:2HCL	(U- ¹³ C ₆ , 97-99%)	0.05g	¥122,000
CNLM-539-H-0.05	L-ARGININE:HCL	(U- ¹³ C ₆ , 97-99%; U- ¹⁵ N ₄ , 97-99%)	0.05g	¥141,000

Catalog No.	Description	Description2	AMOUNT	Price
SLC-SET-3	L-LYSINE:2HCL	(U- ¹³ C ₆ , 97-99%; U- ¹⁵ N ₂ , 97-99%)	0.05g	
	L-ARGININE:HCL	(U- ¹³ C ₆ , 97-99%; U- ¹⁵ N ₄ , 97-99%)	0.05g	¥55,000
CNLM-291-H-0.05	L-LYSINE:2HCL	(U- ¹³ C ₆ , 97-99%; U- ¹⁵ N ₂ , 97-99%)	0.05g	¥62,000
CNLM-539-H-0.05	L-ARGININE:HCL	(U- ¹³ C ₆ , 97-99%; U- ¹⁵ N ₄ , 97-99%)	0.05g	¥141,000

Catalog No.	Description	Description2	AMOUNT	Price
DMEM-500	DMEM Media for SILAC	DMEM minus L-Lysine and L-Arginine	500mL	¥8,000
RPMI-500	RPMI 1640 Media for SILAC	RPMI 1640 minus L-Lysine and L-Arginine	500mL	¥8,000



LABELED AMINO ACID/CARNITINE STANDARDS SET

Amino Acid
Reference Standards

NSK-A1-OP	Concentration (nmol/mL)
² H ₄ -Alanine	500
² H ₈ -Valine	500
² H ₃ -Leucine	500
² H ₃ -Methionine	500
¹³ C ₆ -Phenylalanine	500
¹³ C ₆ -Tyrosine	500
² H ₃ -Glutamate	500
² H ₆ -Ornithine•HCl	500
² H ₂ -Citrulline	500
² H ₄ ;5- ¹³ C-Arginine•HCl	500
¹³ C ₄ -L-Threonine	1000
² H ₃ -DL-Serine	1000

Free Carnitine and Acylcarnitine
Reference Standards

NSK-B-OP	Concentration (nmol/mL)
² H ₉ -Carnitine(free carnitine,CN)	152.0
² H ₃ -Acetylcarnitine(C2)	38.0
² H ₃ -Propionylcarnitine(C3)	7.6
² H ₃ -Butyrylcarnitine(C4)	7.6
² H ₉ -Isovalerylcarnitine(C5)	7.6
² H ₃ -Octanoylcarnitine(C8)	7.6
² H ₉ -Myristoylcarnitine(C14)	7.6
² H ₃ -Palmitoylcarnitine(C16)	15.2
² H ₃ -Glutaryl carnitine(C5DC)	15.2
² H ₃ - β Hydroxyisovalerylcarnitine(C5OH)	7.6
² H ₃ -Dodecanoylcarnitine(C12)	7.6
² H ₃ -Octadecanoylcarnitine(C18)	15.2

Catalog No.	Description	AMOUNT	Price (¥)
NSK-A1-OP	LABELED AMINO ACID STANDARDS SET A	10 VIALS	¥850,000
NSK-A1-OP-1	LABELED AMINO ACID STANDARDS SET A	1VIAL	¥130,000
NSK-B-OP	LABELED CARNITINE STANDARDS SET B	10 VIALS	¥850,000
NSK-B-OP-1	LABELED CARNITINE STANDARDS SET B	1VIAL	¥130,000

Trac-NSK カルニチン混合溶液

Trac-NSK-B1	Concentration (nmol/mL)
Free carnitine (C0)	1.52
Acetylcarnitine (C2)	0.38
Butyrylcarnitine (C4)	0.076
Isovalerylcarnitine (C5)	0.076
Octanoylcarnitine (C8)	0.076
Lauroylcarnitine (C12)	0.076
Myristoylcarnitine (C14)	0.076
Palmitoylcarnitine (C16)	0.151
Octadecanoylcarnitine (C18)	0.151

Catalog No.	Description	AMOUNT	Price (¥)
Trac-NSK-B1	Trac-NSK カルニチン混合溶液	3.2ml	¥32,000

LABELED AMINO ACID/CARNITINE TUNING STANDARDS SET

Amino Acid Tuning Standards		Free Carnitine and Acylcarnitine Tuning Standards	
NSK-A-TS	Concentration (nmol/mL)*	NSK-B-TS	Concentration (nmol/mL)*
L-Alanine (2,3,3,3-D ₄)	25	L-Carnitine-D ₉ (free carnitine CN)	7.6
L-Phenylalanine (ring- ¹³ C ₆)	25	O-Propionyl-L-carnitine-D ₃ (C3)	0.38
L-Citrulline (5,5-D ₂)	25	O-Octanoyl-L-carnitine-D ₃ (C8)	0.38
DL-Glutamic acid (2,4,4-D ₃)	25	O-Palmitoyl-L-carnitine-D ₃ (C16)	0.76
L-Methionine (methyl-D ₃)	25		
*溶媒1mLでメスアップしたときの濃度			

Catalog No.	Description	AMOUNT	Price (¥)
NSK-A-TS	LABELED AMINO ACID TUNING STANDARDS SET A	1VIAL	¥72,000
NSK-B-TS	LABELED CARNITINE TUNING STANDARDS SET B	1VIAL	¥72,000

LABELED CARNITINE SUPPLEMENTS

NSK-B-2-OP-1	Concentration (nmol/mL)*
L-Carnitine:HCL, O-Hexanoyl (N-Methyl-D ₃)	7.6
L-Carnitine:HCL, O-Decanoyl (N-Methyl-D ₃)	7.6
*溶媒1mLでメスアップしたときの濃度	

Catalog No.	Description	AMOUNT	Price (¥)
NSK-B-2-OP-1	NSK-B-2-OP-1LABELED CARNITINE SUPPLEMENTS B-2	1VIAL	¥30,000

LABELED STEROID CAH SET

NSK-S-CAH-1			Concentration (μmol/L)*
17-OHP	17-Hydroxyprogesterone	2,2,4,6,6,21,21-D ₈	0.02
4-AD	4-Androstene-3,17-Dione	2,2,4,6,6,16,16-D ₇	0.02
11-DOF	11-Deoxycortisol	2,2,4,6,6-D ₅	0.02
21-DOF	21-Deoxycortisol	2,2,4,6,6,21,21-D ₈	0.02
F	Cortisol	9,11,12,12-D ₄	0.10
*溶媒1mLでメスアップしたときの濃度			

(保管条件: 冷蔵)

Catalog No.	Description	AMOUNT	Price (¥)
NSK-S-CAH-1	LABELED STEROID CAH SET	1VIAL	¥96,000



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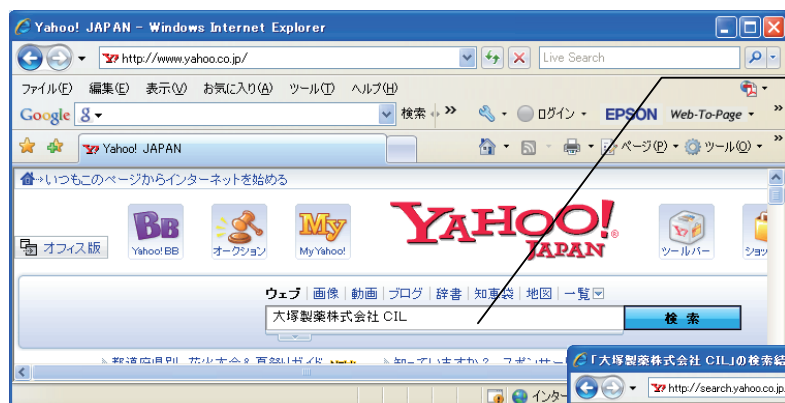
Research Products	Environmental Products	Clinical Research
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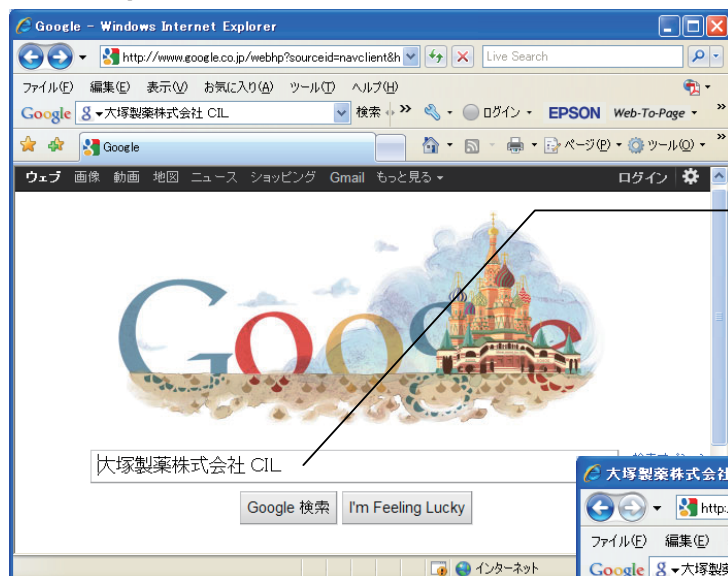


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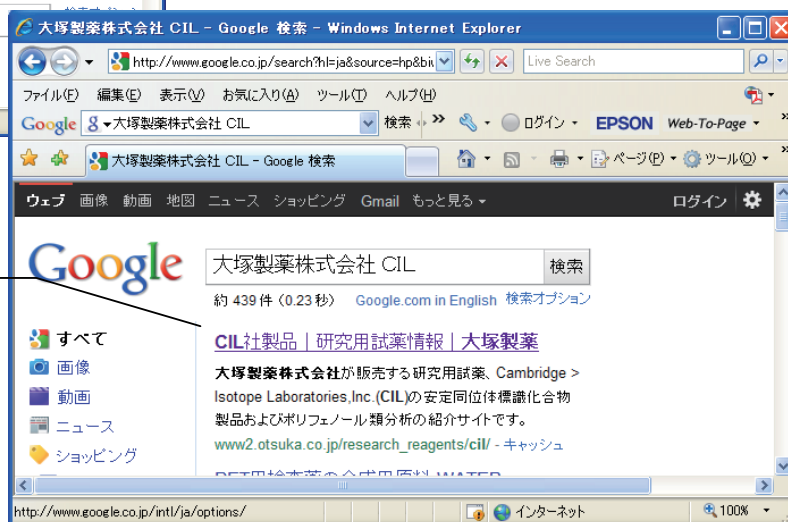


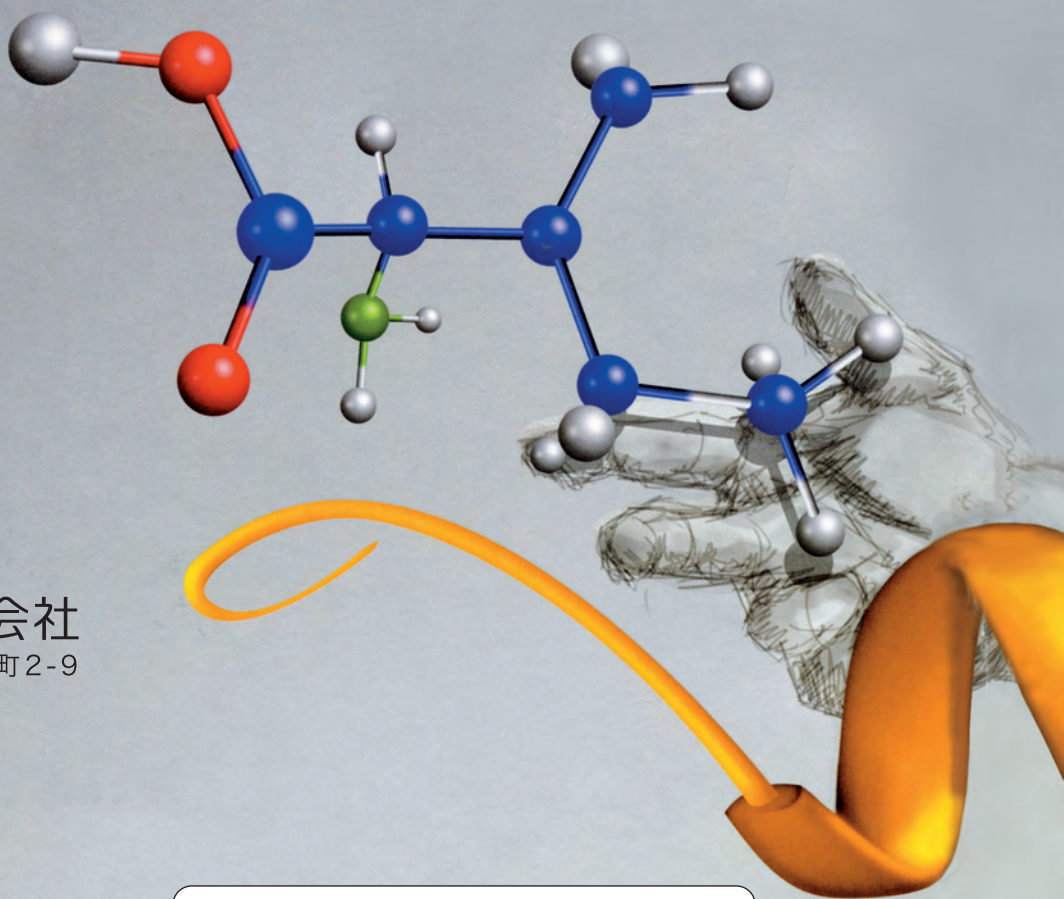
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[発売元]



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Cambridge Isotope Laboratories, Inc.

価格は予告なく変更になる場合がございます。

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