

Newborn Screening Quality Assurance Program

2025 Set 1 Quality Control Report

In co-sponsorship with Association of Public Health Laboratories (APHL)
Provided by the Newborn Screening and Molecular Biology Branch
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Introduction

The NSQAP Quality Control (QC) dried blood spot (DBS) materials provide participants with external controls to assess method performance over time. The controls provide continuity and transcend changes in production lots of routinely used method- or kit-control materials. The external QC materials are intended to supplement the participants' method- or kit-control materials at periodic intervals to allow participants to monitor the long-term stability of their assays. NSQAP QC material is not a replacement for manufacturer kit controls or other daily QC and should not be used for routine analysis. This report contains a summary of the 2025 Set 1 QC data reported by state, contract, and private laboratories in the United States; international participants; and manufacturers of screening test products.

QC Material Production

NSQAP provided 6-month supplies of DBS QC materials. DBS QC lots were prepared from whole blood of 50% hematocrit. The materials were enriched with predetermined quantities of selected analytes and dispensed in 100 µL aliquots on Grade 903 filter paper (Cytiva (Cardiff, United Kingdom)).

NSQAP provides single-analyte QC materials for thyroxine (T4), thyroid-stimulating hormone (TSH), galactose-1-phosphate uridylyltransferase (GALT), and immunoreactive trypsinogen (IRT). 17 α-hydroxyprogesterone (17OHP) and total galactose (TGal) are combined in one QC panel, 17OHPQC and TGALQC.

The Tandem Mass Spectrometry 1st Tier QC (MSMS1QC) includes enrichments for twenty acylcarnitines, ten amino acids, four markers of X-linked adrenoleukodystrophy (ALD), two markers of adenosine deaminase deficiency severe combined immunodeficiency (ADA-SCID), and four other markers of metabolic disorders.

- *Acylcarnitines*: free carnitine (C0), acetylcarnitine (C2), propionylcarnitine (C3), malonylcarnitine (C3DC), butyrylcarnitine (C4), hydroxybutyrylcarnitine (C4OH), isovalerylcarnitine (C5), tiglylcarnitine (C5:1), glutaryl carnitine (C5DC), hydroxyisovalerylcarnitine (C5OH), hexanoylcarnitine (C6), octanoylcarnitine (C8), decanoylcarnitine (C10), dodecanoylcarnitine (C12), myristoylcarnitine (C14), tetradecenoylcarnitine (C14:1), palmitoylcarnitine (C16), hydroxypalmitoylcarnitine (C16OH), stearoylcarnitine (C18), and hydroxystearoylcarnitine (C18OH)
- *Amino acids*: alanine (Ala), arginine (Arg), citrulline (Cit), glycine (Gly), leucine (Leu), methionine (Met), ornithine (Orn), phenylalanine (Phe), tyrosine (Tyr), and valine (Val)
- *ALD*: 20:0- 22:0- 24:0- and 26:0-lysophosphatidylcholine (20, 22, 24, and 26-LPC)
- *ADA-SCID*: adenosine (Ado) and deoxyadenosine (dAdo)

- *Other MSMS1QC analytes:* creatine (CRE), guanidinoacetic acid (GUAC), creatinine (CRN), and succinylacetone (SUAC)

We provided QC materials for six enzymes used in the detection of lysosomal storage disorders (LSD): galactocerebrosidase (GALC), acid α -glucosidase (GAA), α -L-iduronidase (IDUA), α -galactosidase (GLA), β -glucocerebrosidase (ABG), and acid sphingomyelinase (ASM).

NSQAP also distributed certified QC materials for newborn screening analytes and disorders designed for second-tier testing by liquid chromatography with tandem mass spectrometry (LC-MS/MS).

- *Second-tier Congenital Adrenal Hyperplasia (CAHQC):* 17 α -hydroxyprogesterone (17OHP2), 4-androstenedione (4AD2), cortisol (CORT2), 11-deoxycortisol (11D2), and 21-deoxycortisol (21D2)
- *Second-tier Maple Syrup Urine Disease and Phenylketonuria (MSUD-PKUQC):* alloisoleucine (ALE2), isoleucine (Ile2), leucine (Leu2), phenylalanine (Phe2), tyrosine (Tyr2), and valine (Val2)
- *Second-tier Methylmalonic/Propionic Acidemia and Homocystinuria (MMA-tHCY):* malonic acid (MA2), methylmalonic acid (MMA2), ethylmalonic acid (EMA2), 2-methylcitric acid (MCA2), and total homocysteine (tHCY2)

QC Material Distribution

On January 14, 2025, NSQAP distributed DBS quality control (QC) materials to 507 participating laboratories.

QC Data Reporting Requirements

Participants used the NSQAP Participant Portal at <https://nbs.dynamics365portals.us/> to report results. Required input for QC data reporting included the following: 1) analyte kit or method, 2) results of duplicate sample analysis from five independent runs in the analytic units and decimal places requested, and 3) ten data points for each lot and analyte.

Participant Results

For the Set 1 QC materials, we compiled the participant results from five analytic runs from each QC lot and calculated mean values and standard deviations (SD). NSQAP removed data values considered to be “blunders.” For statistical analysis, we could not include qualitative data, data submitted in unidentified units, or data from less than five analytic runs per specimen lot per analyte.

Participants must report results in requested units of measure. For GALT analysis, where no conversion factor exists between units of U/g Hb and other reportable units, we included a separate table to provide participants with peer-group statistics.

Tables on pages 4 – 71 summarize reported QC data. Each analyte summary table provides the following:

- Analyte name, analyte abbreviation, and reportable units of measure
- Method – The reported method
- Number of labs – Total number of laboratories reporting results for a given lot level within a specified method group
 - Note: methods with less than five laboratories reporting data were not included
- Total N – Total number of data points reported by laboratories for a given lot within a specified method group, minus any outliers removed
- Total mean – Average results reported by laboratories for a given lot within the specified method
- Total SD – Standard deviation of results reported by laboratories for a given lot within the specified method
- Intralaboratory SD – Average within-laboratory standard deviation of data points reported by laboratories for a given lot within the specified method
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Cortisol (CORT2) (ng/mL serum)	65
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Thyroxine (T4) (µg/dL serum)

T4 - Lot A2300 - Enrichment 2

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
DELFI A Neonatal Revvity	5	50	1.7	0.4	0.3	0.3
GSP Neonatal Revvity	17	169	1.9	0.6	0.3	0.5

T4 - Lot B2300 - Enrichment 7

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
AutoDELFI A Neonatal Revvity	5	50	7.0	1.2	0.8	0.9
DELFI A Neonatal Revvity	6	60	6.7	1.0	0.6	0.8
GSP Neonatal Revvity	20	200	7.2	1.2	0.8	0.9

T4 - Lot C2300 - Enrichment 11

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
AutoDELFI A Neonatal Revvity	5	50	12.0	1.5	0.9	1.2
DELFI A Neonatal Revvity	6	60	11.3	1.6	0.9	1.3
GSP Neonatal Revvity	20	200	12.5	2.0	1.2	1.5

Thyroid-Stimulating Hormone (TSH) (μIU/mL serum)

TSH - Lot A2401 - Enrichment 25

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
ZenTech ELISA Neonatal	12	120	19.5	7.7	2.9	7.2
Neonatal Labsystems	16	156	18.0	8.2	2.6	7.7
DiaSorin Immunoassay	6	60	20.6	4.4	2.8	3.4
AutoDELFI A Neonatal Revvity	31	310	21.9	4.8	1.7	4.4
DELFI A Neonatal Revvity	45	450	20.0	6.6	2.2	6.2
GSP Neonatal Revvity	86	860	20.7	4.7	1.8	4.4

TSH - Lot B2401 - Enrichment 40

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
ZenTech ELISA Neonatal	12	120	31.0	11.2	4.1	10.4
Neonatal Labsystems	16	160	31.6	13.3	4.8	12.3
DiaSorin Immunoassay	6	60	36.6	6.1	4.0	4.6
AutoDELFI A Neonatal Revvity	31	310	37.3	9.5	4.1	8.5
DELFI A Neonatal Revvity	45	449	32.8	10.5	3.5	9.9
GSP Neonatal Revvity	86	860	35.3	8.2	3.1	7.6

TSH - Lot C2401 - Enrichment 80

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
ZenTech ELISA Neonatal	12	120	65.1	21.9	8.2	20.4
Neonatal Labsystems	16	160	58.6	21.1	7.7	19.6
DiaSorin Immunoassay	6	60	65.8	9.4	6.1	7.2
AutoDELFI A Neonatal Revvity	31	310	71.0	15.3	5.9	14.2
DELFI A Neonatal Revvity	45	450	63.8	20.7	6.0	19.8
GSP Neonatal Revvity	86	860	68.3	15.0	5.8	13.9

17 α -Hydroxyprogesterone (17OHP) (ng/mL serum)

17OHP - Lot A2405 - Enrichment 25

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
ZenTech ELISA Neonatal	9	90	20.4	8.0	3.7	7.1
Neonatal Labsystems	19	190	22.1	6.5	2.5	6.0
AutoDELFIA Neonatal Revvity	33	330	22.9	4.6	2.5	3.8
DELFIA Neonatal Revvity	27	268	22.0	5.2	2.6	4.5
GSP Neonatal Revvity	69	690	25.0	7.1	2.5	6.6

17OHP - Lot B2405 - Enrichment 50

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
ZenTech ELISA Neonatal	9	86	47.1	16.9	7.1	15.3
Neonatal Labsystems	19	190	43.5	13.4	5.4	12.2
AutoDELFIA Neonatal Revvity	33	330	48.0	9.3	4.7	8.0
DELFIA Neonatal Revvity	27	270	45.5	9.9	4.7	8.7
GSP Neonatal Revvity	69	690	50.7	14.1	4.5	13.3

17OHP - Lot C2405 - Enrichment 100

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
ZenTech ELISA Neonatal	9	88	96.2	23.7	10.7	21.2
Neonatal Labsystems	19	186	91.2	38.7	16.8	34.8
AutoDELFIA Neonatal Revvity	33	330	98.1	18.0	9.0	15.6
DELFIA Neonatal Revvity	27	270	92.0	20.7	10.0	18.1
GSP Neonatal Revvity	69	690	103.1	29.8	10.1	28.0

Total Galactose (TGal) (mg/dL blood)

TGal - Lot A2405 - Enrichment 5

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
ZenTech Enzymatic Colorimetric	13	130	6.2	1.4	0.7	1.2
Fluorometric manual non-kit	5	50	4.4	2.3	0.4	2.3
Fluorescence Neonatal Revvity	20	200	5.8	1.1	0.7	0.9
GSP Neonatal Revvity	41	410	5.3	1.1	0.6	0.8
Labsystems Neonatal	6	60	5.8	1.4	0.9	1.1

TGal - Lot B2405 - Enrichment 10

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
ZenTech Enzymatic Colorimetric	13	130	10.0	2.0	1.1	1.7
Fluorometric manual non-kit	5	50	8.6	2.4	0.6	2.3
Fluorescence Neonatal Revvity	20	200	10.3	1.9	1.2	1.5
GSP Neonatal Revvity	41	410	9.9	1.8	1.1	1.5
Labsystems Neonatal	6	60	12.2	2.2	1.5	1.6

TGal - Lot C2405 - Enrichment 30

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
ZenTech Enzymatic Colorimetric	13	130	23.6	4.6	2.0	4.2
Fluorometric manual non-kit	5	50	23.4	5.5	1.7	5.3
Fluorescence Neonatal Revvity	20	200	25.6	3.9	2.1	3.3
GSP Neonatal Revvity	41	410	29.9	5.2	3.3	4.0
Labsystems Neonatal	6	60	37.7	5.3	3.4	4.1

Galactose-1-phosphate Uridyltransferase (GALT)

GALT - Lot A2403 - Mean Activity 1.6 (U/g Hb)

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Microplate Reagent Kit Spotcheck (U/g Hb)	6	60	0.9	0.3	0.1	0.2
Fluorescence Neonatal Revvity (U/g Hb)	21	210	1.6	0.5	0.3	0.4
GSP Neonatal Revvity (U/dL blood)	13	122	0.5	0.6	0.2	0.5
Labsystems Neonatal (U/g Hb)	6	60	1.0	0.3	0.1	0.3

GALT - Lot B2403 - Mean Activity 4.7 (U/g Hb)

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Microplate Reagent Kit Spotcheck (U/g Hb)	6	60	3.2	0.4	0.2	0.3
Fluorescence Neonatal Revvity (U/g Hb)	24	240	4.0	0.7	0.4	0.6
GSP Neonatal Revvity (U/dL blood)	35	350	3.7	0.8	0.5	0.6
Labsystems Neonatal (U/g Hb)	6	60	2.8	1.0	0.3	1.0

GALT - Lot C2403 - Mean Activity 11.7 (U/g Hb)

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Microplate Reagent Kit Spotcheck (U/g Hb)	6	60	8.7	1.3	0.8	1.0
Fluorescence Neonatal Revvity (U/g Hb)	24	240	10.6	1.8	1.0	1.5
GSP Neonatal Revvity (U/dL blood)	34	340	18.7	3.3	1.4	3.0
Labsystems Neonatal (U/g Hb)	6	60	10.7	1.6	0.8	1.4

Immunoreactive Trypsinogen (IRT) (ng/mL blood)

IRT - Lot A2409 - Assayed Value 17.2

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
DELFI A Neonatal	22	220	18.5	3.4	2.1	2.7
ZenTech ELISA Neonatal	9	90	27.1	11.7	3.2	11.2
FEIA Labsystems	10	100	18.0	9.1	5.4	7.4
AutoDELFI A Neonatal Revvity	32	318	17.5	2.7	1.6	2.2
GSP Neonatal Revvity	68	680	17.5	3.2	1.6	2.8

IRT - Lot B2409 - Assayed Value 66.7

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
DELFI A Neonatal	22	219	64.5	9.2	5.4	7.4
ZenTech ELISA Neonatal	9	90	102.5	17.7	9.6	14.8
FEIA Labsystems	11	110	73.2	22.0	11.5	18.7
AutoDELFI A Neonatal Revvity	33	330	67.0	9.1	5.1	7.6
GSP Neonatal Revvity	69	690	68.0	8.3	5.2	6.5

IRT - Lot C2409 - Assayed Value 124.1

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
DELFI A Neonatal	22	219	120.5	18.3	11.0	14.6
ZenTech ELISA Neonatal	9	90	152.2	28.4	18.3	21.8
FEIA Labsystems	11	110	141.7	42.2	23.9	34.8
AutoDELFI A Neonatal Revvity	33	330	124.7	17.5	9.7	14.5
GSP Neonatal Revvity	69	690	126.8	14.9	9.2	11.7

IRT - Lot D2409 - Assayed Value 224.7

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
DELFI A Neonatal	22	219	225.8	31.0	19.3	24.3
ZenTech ELISA Neonatal	9	90	197.0	32.6	16.6	28.1
FEIA Labsystems	11	110	262.5	60.2	27.2	53.7
AutoDELFI A Neonatal Revvity	33	329	232.0	30.4	17.4	25.0
GSP Neonatal Revvity	69	690	238.5	28.7	17.2	22.9

Alanine (Ala) (μmol/L blood)

Ala - Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	160.6	21.5	12.0	17.8
Derivatized - MassChrom Chromsystems	7	70	134.8	33.4	9.5	32.0
Derivatized - non-kit	23	230	175.5	33.4	16.8	28.8
Non-derivatized - MassChrom Chromsystems	10	100	140.6	34.9	13.2	32.3
Non-derivatized - non-kit	12	120	178.3	45.2	16.4	42.1
Non-derivatized - NeoBase Revvity	18	180	214.8	54.3	16.8	51.6
Non-derivatized - NeoBase 2 Revvity	59	590	207.5	52.0	22.2	47.0

Ala - Lot G2415 - Enrichment 200

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	285.2	32.2	17.9	26.8
Derivatized - MassChrom Chromsystems	7	70	256.1	65.7	21.3	62.1
Derivatized - non-kit	23	229	326.4	68.4	31.5	60.8
Non-derivatized - MassChrom Chromsystems	10	99	246.3	44.4	17.8	40.7
Non-derivatized - non-kit	12	120	329.4	100.1	31.8	94.9
Non-derivatized - NeoBase Revvity	18	180	375.5	69.9	27.4	64.4
Non-derivatized - NeoBase 2 Revvity	61	609	357.0	76.2	35.5	67.4

Ala - Lot H2415 - Enrichment 400

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	428.7	48.5	28.9	38.9
Derivatized - MassChrom Chromsystems	7	70	368.2	92.8	25.8	89.2
Derivatized - non-kit	23	230	478.3	91.5	43.0	80.8
Non-derivatized - MassChrom Chromsystems	10	100	358.3	59.8	26.1	53.8
Non-derivatized - non-kit	12	120	490.6	149.8	47.9	141.9
Non-derivatized - NeoBase Revvity	18	180	563.5	102.4	39.6	94.5
Non-derivatized - NeoBase 2 Revvity	61	610	523.4	108.7	53.1	94.8

Ala - Lot I2415 - Enrichment 600

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	591.9	80.9	49.7	63.8
Derivatized - MassChrom Chromsystems	7	70	481.9	123.0	42.2	115.5
Derivatized - non-kit	23	230	630.7	114.2	51.0	102.2
Non-derivatized - MassChrom Chromsystems	10	100	470.8	75.0	29.4	68.9
Non-derivatized - non-kit	12	120	638.1	178.5	54.0	170.1
Non-derivatized - NeoBase Revvity	18	180	747.2	163.4	54.3	154.1
Non-derivatized - NeoBase 2 Revvity	61	609	693.1	149.1	69.5	131.9

Arginine (Arg) (μmol/L blood)

Arg - Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	3.6	1.9	0.4	1.9
Derivatized - MassChrom Chromsystems	10	100	4.9	1.4	0.6	1.2
Derivatized - non-kit	25	250	5.3	3.1	1.1	2.9
Non-derivatized - MassChrom Chromsystems	9	88	4.7	3.1	1.3	2.9
Non-derivatized - non-kit	12	120	4.4	1.8	0.7	1.7
Non-derivatized - NeoBase Revvity	19	190	4.5	1.9	0.8	1.8
Non-derivatized - NeoBase 2 Revvity	68	677	4.1	1.1	0.5	1.0

Arg - Lot G2415 - Enrichment 100

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	48.4	6.7	3.7	5.6
Derivatized - MassChrom Chromsystems	10	100	80.3	14.4	6.2	13.0
Derivatized - non-kit	25	250	61.9	21.6	7.5	20.3
Non-derivatized - MassChrom Chromsystems	10	100	78.7	13.5	5.6	12.3
Non-derivatized - non-kit	12	120	66.1	29.2	5.5	28.7
Non-derivatized - NeoBase Revvity	19	190	74.1	11.1	5.6	9.6
Non-derivatized - NeoBase 2 Revvity	70	699	77.2	11.2	5.8	9.6

Arg - Lot H2415 - Enrichment 200

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	95.4	12.8	6.3	11.1
Derivatized - MassChrom Chromsystems	10	98	144.3	21.4	9.0	19.4
Derivatized - non-kit	25	250	122.7	40.0	13.8	37.5
Non-derivatized - MassChrom Chromsystems	10	99	138.1	25.8	8.7	24.2
Non-derivatized - non-kit	12	120	133.1	59.3	12.2	58.0
Non-derivatized - NeoBase Revvity	19	190	148.9	23.6	11.6	20.5
Non-derivatized - NeoBase 2 Revvity	70	700	152.5	21.9	11.5	18.6

Arg - Lot I2415 - Enrichment 300

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	147.7	21.9	11.9	18.4
Derivatized - MassChrom Chromsystems	10	98	209.1	32.7	16.1	28.4
Derivatized - non-kit	25	250	180.4	56.6	19.2	53.2
Non-derivatized - MassChrom Chromsystems	10	100	191.2	41.4	11.0	39.9
Non-derivatized - non-kit	12	119	192.7	84.0	17.8	82.1
Non-derivatized - NeoBase Revvity	19	190	220.2	34.8	15.3	31.2
Non-derivatized - NeoBase 2 Revvity	70	698	225.2	30.5	16.9	25.4

Citrulline (Cit) (μmol/L blood)

Cit - Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	12.4	2.8	1.8	2.1
Derivatized - MassChrom Chromsystems	11	108	11.1	1.8	1.1	1.4
Derivatized - non-kit	26	259	11.5	2.9	1.4	2.5
Non-derivatized - MassChrom Chromsystems	10	99	11.7	4.1	1.8	3.7
Non-derivatized - MS-Neo Siemens	5	50	11.2	1.7	0.7	1.6
Non-derivatized - non-kit	14	138	12.3	2.7	1.5	2.2
Non-derivatized - NeoBase Revvity	19	190	12.3	2.0	1.2	1.6
Non-derivatized - NeoBase 2 Revvity	76	758	11.6	2.2	1.3	1.8

Cit- Lot G2415 - Enrichment 25

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	30.0	5.8	3.5	4.7
Derivatized - MassChrom Chromsystems	11	110	31.2	4.5	2.5	3.7
Derivatized - non-kit	26	259	31.7	7.1	3.7	6.1
Non-derivatized - MassChrom Chromsystems	10	100	32.1	7.4	3.0	6.7
Non-derivatized - MS-Neo Siemens	5	50	31.9	4.0	1.9	3.5
Non-derivatized - non-kit	14	140	34.3	6.5	3.1	5.7
Non-derivatized - NeoBase Revvity	19	190	33.4	4.6	2.8	3.7
Non-derivatized - NeoBase 2 Revvity	77	768	32.8	5.4	3.1	4.4

Cit- Lot H2415 - Enrichment 100

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	72.0	19.3	9.9	16.6
Derivatized - MassChrom Chromsystems	11	110	87.3	11.6	6.6	9.6
Derivatized - non-kit	26	260	88.9	18.5	9.8	15.7
Non-derivatized - MassChrom Chromsystems	10	100	90.7	16.8	8.0	14.7
Non-derivatized - MS-Neo Siemens	5	50	92.0	12.4	4.8	11.4
Non-derivatized - non-kit	14	140	96.4	17.2	6.8	15.8
Non-derivatized - NeoBase Revvity	19	190	96.0	12.8	7.0	10.8
Non-derivatized - NeoBase 2 Revvity	77	769	92.5	13.8	8.0	11.3

Cit- Lot I2415 - Enrichment 250

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	151.9	44.7	21.4	39.3
Derivatized - MassChrom Chromsystems	11	110	196.2	29.2	13.8	25.8
Derivatized - non-kit	26	260	206.6	41.0	19.9	35.8
Non-derivatized - MassChrom Chromsystems	10	100	209.0	39.1	17.5	34.9
Non-derivatized - MS-Neo Siemens	5	50	210.9	32.2	12.2	29.8

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Non-derivatized - non-kit	14	140	222.9	39.5	15.1	36.5
Non-derivatized - NeoBase Revvity	19	190	218.9	26.4	15.6	21.4
Non-derivatized - NeoBase 2 Revvity	77	770	211.5	31.3	18.3	25.4

Glycine (Gly) (μmol/L blood)

Gly - Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	169.0	36.1	16.6	32.1
Derivatized - MassChrom Chromsystems	8	80	154.3	23.1	14.0	18.4
Derivatized - non-kit	21	210	190.4	73.9	19.0	71.4
Non-derivatized - MassChrom Chromsystems	7	69	146.1	27.2	12.4	24.2
Non-derivatized - non-kit	8	80	201.3	61.4	30.0	53.6
Non-derivatized - NeoBase Revvity	16	160	213.9	37.5	19.6	32.0
Non-derivatized - NeoBase 2 Revvity	51	510	203.0	50.4	23.1	44.8

Gly - Lot G2415 - Enrichment 300

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	380.3	87.4	36.3	79.5
Derivatized - MassChrom Chromsystems	8	80	360.6	44.8	25.3	37.0
Derivatized - non-kit	21	209	447.4	175.4	52.6	167.3
Non-derivatized - MassChrom Chromsystems	7	70	323.1	62.5	32.2	53.5
Non-derivatized - non-kit	8	80	440.5	94.0	41.1	84.6
Non-derivatized - NeoBase Revvity	16	160	462.4	63.0	33.1	53.7
Non-derivatized - NeoBase 2 Revvity	53	530	459.6	84.5	45.3	71.3

Gly - Lot H2415 - Enrichment 600

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	600.7	112.8	56.9	97.4
Derivatized - MassChrom Chromsystems	8	80	557.1	79.1	46.3	64.1
Derivatized - non-kit	21	208	686.0	260.8	69.2	251.5
Non-derivatized - MassChrom Chromsystems	7	68	487.7	75.5	31.0	68.8
Non-derivatized - non-kit	8	80	674.7	141.6	49.0	132.9
Non-derivatized - NeoBase Revvity	16	160	740.1	126.8	55.7	113.9
Non-derivatized - NeoBase 2 Revvity	53	530	703.5	118.8	65.1	99.4

Gly - Lot I2415 - Enrichment 900

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	877.1	188.5	95.5	162.6
Derivatized - MassChrom Chromsystems	8	80	736.1	86.6	43.8	74.8
Derivatized - non-kit	21	210	964.4	401.6	111.0	386.0
Non-derivatized - MassChrom Chromsystems	7	68	673.2	100.3	47.3	88.4
Non-derivatized - non-kit	8	80	913.0	155.5	67.9	139.9
Non-derivatized - NeoBase Revvity	16	160	995.9	139.7	71.0	120.3
Non-derivatized - NeoBase 2 Revvity	53	526	950.7	162.6	89.4	135.8

Leucine (Leu) (μmol/L blood)

Leu - Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS - non-kit	5	50	47.8	13.7	6.4	12.1
Derivatized - MassChrom Chromsystems	10	100	39.8	7.4	4.7	5.8
Derivatized - non-kit	25	249	47.0	16.7	9.1	14.0
Non-derivatized - MassChrom Chromsystems	12	120	51.3	9.4	3.2	8.8
Non-derivatized - non-kit	18	180	56.6	15.0	4.7	14.3
Non-derivatized - NeoBase Revvity	17	170	54.6	7.0	4.2	5.6
Non-derivatized - NeoBase 2 Revvity	79	788	50.4	7.9	4.1	6.7

Leu - Lot G2415 - Enrichment 150

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS - non-kit	5	50	162.3	32.9	13.9	29.8
Derivatized - MassChrom Chromsystems	10	100	139.1	29.6	12.6	26.8
Derivatized - non-kit	25	250	164.7	34.3	16.0	30.4
Non-derivatized - MassChrom Chromsystems	12	120	160.2	29.1	9.5	27.6
Non-derivatized - non-kit	18	180	182.5	52.7	11.2	51.5
Non-derivatized - NeoBase Revvity	17	170	174.0	24.6	12.7	21.1
Non-derivatized - NeoBase 2 Revvity	81	809	160.7	23.0	12.6	19.2

Leu - Lot H2415 - Enrichment 300

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS - non-kit	5	50	269.1	51.8	19.0	48.1
Derivatized - MassChrom Chromsystems	10	100	235.5	49.7	15.6	47.2
Derivatized - non-kit	25	250	280.2	56.3	25.1	50.4
Non-derivatized - MassChrom Chromsystems	12	120	268.7	45.6	15.7	42.8
Non-derivatized - non-kit	18	180	308.4	85.2	25.0	81.4
Non-derivatized - NeoBase Revvity	17	170	303.2	46.5	20.5	41.7
Non-derivatized - NeoBase 2 Revvity	81	809	273.7	40.5	23.2	33.2

Leu - Lot I2415 - Enrichment 600

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS - non-kit	5	50	489.7	76.6	35.5	67.9
Derivatized - MassChrom Chromsystems	10	100	419.9	86.2	28.3	81.5
Derivatized - non-kit	25	250	504.9	98.4	41.5	89.2
Non-derivatized - MassChrom Chromsystems	12	120	484.2	90.4	31.4	84.8
Non-derivatized - non-kit	18	180	546.4	183.7	41.1	179.1
Non-derivatized - NeoBase Revvity	17	170	551.6	74.2	36.9	64.4
Non-derivatized - NeoBase 2 Revvity	81	809	496.3	70.9	39.5	58.9

Methionine (Met) (μmol/L blood)

MET- Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	6.9	1.4	0.8	1.2
Derivatized - MassChrom Chromsystems	11	110	6.4	2.4	0.8	2.3
Derivatized - non-kit	27	267	6.7	1.8	1.0	1.5
Non-derivatized - MassChrom Chromsystems	12	120	6.9	4.1	1.6	3.8
Non-derivatized - MS-Neo Siemens	5	50	6.9	1.6	0.6	1.5
Non-derivatized - non-kit	18	180	6.7	2.3	0.9	2.1
Non-derivatized - NeoBase Revvity	20	199	5.7	1.3	0.7	1.1
Non-derivatized - NeoBase 2 Revvity	76	758	5.0	1.1	0.6	1.0

MET- Lot G2415 - Enrichment 50

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	41.9	4.9	2.6	4.2
Derivatized - MassChrom Chromsystems	11	110	39.4	12.2	3.3	11.7
Derivatized - non-kit	27	270	44.3	10.1	5.4	8.5
Non-derivatized - MassChrom Chromsystems	13	130	41.1	15.1	3.5	14.7
Non-derivatized - MS-Neo Siemens	5	50	44.5	5.6	3.2	4.5
Non-derivatized - non-kit	18	180	43.8	9.5	3.1	9.0
Non-derivatized - NeoBase Revvity	20	200	40.0	6.1	3.3	5.1
Non-derivatized - NeoBase 2 Revvity	77	768	37.2	5.8	3.2	4.9

MET- Lot H2415 - Enrichment 150

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	109.0	12.3	6.3	10.6
Derivatized - MassChrom Chromsystems	11	110	101.6	29.0	8.1	27.8
Derivatized - non-kit	27	269	118.0	24.6	12.2	21.4
Non-derivatized - MassChrom Chromsystems	13	130	112.4	36.9	7.1	36.3
Non-derivatized - MS-Neo Siemens	5	50	121.3	14.1	7.3	12.1
Non-derivatized - non-kit	18	180	120.3	30.2	10.9	28.2
Non-derivatized - NeoBase Revvity	20	200	113.9	20.2	10.4	17.3
Non-derivatized - NeoBase 2 Revvity	77	767	104.4	16.2	8.9	13.6

MET- Lot I2415 - Enrichment 250

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	194.6	22.3	12.9	18.2
Derivatized - MassChrom Chromsystems	11	110	172.2	51.4	13.9	49.5
Derivatized - non-kit	27	270	195.3	36.8	16.9	32.7
Non-derivatized - MassChrom Chromsystems	13	128	182.0	41.9	12.6	40.0
Non-derivatized - MS-Neo Siemens	5	50	200.4	29.5	13.7	26.2

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Non-derivatized - non-kit	18	180	206.4	49.0	14.9	46.6
Non-derivatized - NeoBase Revvity	20	198	191.7	24.3	13.5	20.2
Non-derivatized - NeoBase 2 Revvity	77	768	175.9	27.4	14.8	23.0

Ornithine (Orn) (μmol/L blood)

Orn - Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	9	90	60.0	11.6	5.7	10.1
Derivatized - non-kit	24	240	45.7	22.0	5.7	21.3
Non-derivatized - MassChrom Chromsystems	6	54	67.4	14.0	4.5	13.3
Non-derivatized - non-kit	11	110	89.9	102.7	9.9	102.2
Non-derivatized - NeoBase Revvity	16	160	60.6	9.2	5.0	7.7
Non-derivatized - NeoBase 2 Revvity	53	530	58.6	15.9	5.7	14.9

Orn - Lot G2415 - Enrichment 100

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	9	90	132.3	24.4	12.1	21.2
Derivatized - non-kit	24	239	97.4	46.9	11.8	45.4
Non-derivatized - MassChrom Chromsystems	6	60	141.3	24.1	11.3	21.3
Non-derivatized - non-kit	11	110	202.3	262.3	23.7	261.2
Non-derivatized - NeoBase Revvity	16	160	125.6	16.8	8.9	14.2
Non-derivatized - NeoBase 2 Revvity	54	538	121.2	19.7	8.3	17.8

Orn - Lot H2415 - Enrichment 200

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	9	90	204.9	39.6	18.1	35.3
Derivatized - non-kit	24	240	159.6	82.8	21.4	80.0
Non-derivatized - MassChrom Chromsystems	6	60	217.4	39.3	17.6	35.1
Non-derivatized - non-kit	11	110	318.5	398.9	35.7	397.3
Non-derivatized - NeoBase Revvity	16	160	203.6	35.3	16.2	31.3
Non-derivatized - NeoBase 2 Revvity	54	538	189.5	28.6	14.0	24.9

Orn - Lot I2415 - Enrichment 300

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	9	89	271.5	45.7	18.9	41.6
Derivatized - non-kit	24	240	221.7	109.0	25.8	105.9
Non-derivatized - MassChrom Chromsystems	6	60	291.2	50.8	20.2	46.6
Non-derivatized - non-kit	11	110	431.1	550.6	44.4	548.8
Non-derivatized - NeoBase Revvity	16	160	274.7	35.9	18.7	30.6
Non-derivatized - NeoBase 2 Revvity	54	539	256.7	38.4	18.9	33.5

Phenylalanine (Phe) (μmol/L blood)

Phe - Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	6	60	21.4	4.0	2.2	3.4
Derivatized - MassChrom Chromsystems	12	120	19.6	4.3	2.2	3.7
Derivatized - non-kit	27	270	21.0	3.7	2.2	3.0
Non-derivatized - MassChrom Chromsystems	13	130	24.2	3.7	1.8	3.3
Non-derivatized - MS-Neo Siemens	5	50	21.1	2.8	1.4	2.4
Non-derivatized - non-kit	18	180	23.9	8.8	2.8	8.3
Non-derivatized - NeoBase Revvity	21	208	21.7	3.1	1.8	2.5
Non-derivatized - NeoBase 2 Revvity	82	819	19.1	3.0	1.6	2.5
Neonatal Phe Labsystems (non-MS/MS)	6	59	31.6	25.2	7.7	24.0
Phe Neonatal Kit Revvity (non-MS/MS)	7	69	29.8	17.3	9.6	14.4
IBL International PKU Kit (non-MS/MS)	5	49	0.6	0.0	0.0	0.0

Phe - Lot G2415 - Enrichment 150

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	6	60	142.9	15.3	9.2	12.2
Derivatized - MassChrom Chromsystems	12	120	141.3	19.1	9.3	16.6
Derivatized - non-kit	27	267	152.5	25.3	13.9	21.2
Non-derivatized - MassChrom Chromsystems	13	130	172.9	22.4	10.0	20.0
Non-derivatized - MS-Neo Siemens	5	50	153.7	17.9	10.2	14.7
Non-derivatized - non-kit	18	180	170.0	75.1	10.8	74.3
Non-derivatized - NeoBase Revvity	21	210	149.8	17.9	9.9	14.9
Non-derivatized - NeoBase 2 Revvity	83	830	137.8	18.4	10.3	15.3
Neonatal Phe Labsystems (non-MS/MS)	6	60	162.7	30.1	17.1	24.9
Phe Neonatal Kit Revvity (non-MS/MS)	7	70	148.3	27.6	19.4	19.5
IBL International PKU Kit (non-MS/MS)	5	50	187.7	28.8	17.3	23.0
ZenTech Neonatal PKU Kit (non-MS/MS)	5	50	114.1	67.3	20.3	64.2

Phe - Lot H2415 - Enrichment 300

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	6	60	277.9	37.2	16.4	33.4
Derivatized - MassChrom Chromsystems	12	120	261.6	33.1	13.5	30.3
Derivatized - non-kit	27	266	281.1	45.8	22.3	40.1
Non-derivatized - MassChrom Chromsystems	13	130	320.2	38.7	18.4	34.1
Non-derivatized - MS-Neo Siemens	5	50	288.9	32.3	18.1	26.7
Non-derivatized - non-kit	18	180	313.0	132.1	23.0	130.1
Non-derivatized - NeoBase Revvity	21	210	289.0	39.4	20.5	33.6
Non-derivatized - NeoBase 2 Revvity	83	827	259.3	39.3	22.7	32.1
Neonatal Phe Labsystems (non-MS/MS)	6	60	321.4	54.8	29.5	46.1
Phe Neonatal Kit Revvity (non-MS/MS)	7	70	281.9	47.8	31.1	36.3

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
IBL International PKU Kit (non-MS/MS)	5	50	417.7	47.2	27.7	38.2
ZenTech Neonatal PKU Kit (non-MS/MS)	5	50	196.8	102.2	19.7	100.3

Phe - Lot I2415 - Enrichment 450

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	6	60	419.4	48.4	26.9	40.3
Derivatized - MassChrom Chromsystems	12	120	372.1	53.1	26.8	45.9
Derivatized - non-kit	27	268	406.4	68.0	32.9	59.5
Non-derivatized - MassChrom Chromsystems	13	130	464.5	63.1	28.7	56.2
Non-derivatized - MS-Neo Siemens	5	50	404.9	55.1	30.5	45.9
Non-derivatized - non-kit	18	180	451.4	192.0	30.1	189.6
Non-derivatized - NeoBase Revvity	21	210	420.5	52.4	29.0	43.6
Non-derivatized - NeoBase 2 Revvity	83	826	375.2	57.5	30.2	48.9
Neonatal Phe Labsystems (non-MS/MS)	6	60	508.6	97.5	46.6	85.6
Phe Neonatal Kit Revvity (non-MS/MS)	7	70	386.1	74.2	37.9	63.9
IBL International PKU Kit (non-MS/MS)	5	50	608.4	67.2	38.5	55.1
ZenTech Neonatal PKU Kit (non-MS/MS)	5	50	274.0	139.8	22.4	138.0

Creatine (CRE) (μmol/L blood)

CRE - Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - non-kit	10	100	189.7	44.4	23.1	37.9

CRE - Lot G2415 - Enrichment 50

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - non-kit	10	100	233.9	58.8	30.9	50.0

CRE - Lot H2415 - Enrichment 200

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - non-kit	10	100	360.3	87.9	49.1	72.8

CRE - Lot I2415 - Enrichment 400

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - non-kit	10	100	558.0	129.1	71.0	107.8

Guanidinoacetic Acid (GUAC) (μmol/L blood)

GUAC - Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - non-kit	12	120	1.2	0.6	0.2	0.5

GUAC - Lot G2415 - Enrichment 5

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - non-kit	13	130	4.9	1.2	0.4	1.1

GUAC - Lot H2415 - Enrichment 10

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - non-kit	13	130	8.8	2.5	0.8	2.4

GUAC - Lot I2415 - Enrichment 20

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - non-kit	13	130	16.8	5.3	1.4	5.1

Succinylacetone (SUAC) (μmol/L blood)

SUAC - Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	8	80	0.71	0.78	0.20	0.75
Derivatized - non-kit	14	139	0.76	0.77	0.20	0.74
Non-derivatized - MassChrom Chromsystems	6	60	0.75	0.39	0.14	0.36
Non-derivatized - non-kit	6	60	0.80	0.98	0.17	0.96
Non-derivatized - NeoBase Revvity	17	170	0.51	0.23	0.10	0.21
Non-derivatized - NeoBase 2 Revvity	56	558	0.21	0.11	0.05	0.09

SUAC - Lot G2415 - Enrichment 2.5

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	8	80	1.95	0.96	0.32	0.91
Derivatized - non-kit	14	140	2.15	1.43	0.38	1.38
Non-derivatized - MassChrom Chromsystems	7	70	1.57	0.46	0.22	0.40
Non-derivatized - non-kit	6	60	2.24	2.64	0.47	2.60
Non-derivatized - NeoBase Revvity	17	170	1.15	0.35	0.15	0.32
Non-derivatized - NeoBase 2 Revvity	61	608	0.69	0.21	0.11	0.18

SUAC - Lot H2415 - Enrichment 10

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	8	80	4.60	1.42	0.43	1.36
Derivatized - non-kit	14	140	5.23	2.93	0.75	2.83
Non-derivatized - MassChrom Chromsystems	7	70	3.80	0.90	0.45	0.78
Non-derivatized - non-kit	6	60	5.57	5.83	1.13	5.72
Non-derivatized - NeoBase Revvity	17	170	2.76	0.77	0.34	0.68
Non-derivatized - NeoBase 2 Revvity	61	610	1.93	0.50	0.25	0.43

SUAC - Lot I2415 - Enrichment 20

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	8	80	9.47	2.59	0.84	2.45
Derivatized - non-kit	14	140	10.80	6.18	1.59	5.97
Non-derivatized - MassChrom Chromsystems	7	70	7.75	1.72	1.01	1.40
Non-derivatized - non-kit	6	60	11.77	12.10	2.61	11.82
Non-derivatized - NeoBase Revvity	17	170	5.60	1.38	0.64	1.22
Non-derivatized - NeoBase 2 Revvity	61	608	4.21	1.06	0.48	0.95

Tyrosine (Tyr) (μmol/L blood)

Tyr - Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	22.2	3.9	2.2	3.2
Derivatized - MassChrom Chromsystems	11	110	22.7	3.8	2.0	3.3
Derivatized - non-kit	27	270	24.7	6.6	2.5	6.1
Non-derivatized - MassChrom Chromsystems	13	130	75.3	139.2	7.1	139.0
Non-derivatized - MS-Neo Siemens	5	50	23.1	2.4	1.6	1.9
Non-derivatized - non-kit	17	170	24.6	5.9	3.3	4.9
Non-derivatized - NeoBase Revvity	21	210	28.9	8.1	2.9	7.6
Non-derivatized - NeoBase 2 Revvity	79	789	23.8	3.4	1.9	2.8

Tyr - Lot G2415 - Enrichment 300

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	193.3	18.1	10.2	14.9
Derivatized - MassChrom Chromsystems	11	110	208.7	30.5	14.4	26.9
Derivatized - non-kit	27	270	226.2	70.1	26.0	65.1
Non-derivatized - MassChrom Chromsystems	13	130	283.7	159.9	15.4	159.1
Non-derivatized - MS-Neo Siemens	5	50	210.3	18.4	12.1	13.9
Non-derivatized - non-kit	17	170	208.0	33.3	13.4	30.4
Non-derivatized - NeoBase Revvity	21	210	226.6	29.5	15.6	25.0
Non-derivatized - NeoBase 2 Revvity	79	790	205.1	26.7	14.8	22.2

Tyr - Lot H2415 - Enrichment 600

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	461.3	59.2	29.1	51.5
Derivatized - MassChrom Chromsystems	11	110	479.7	70.9	32.5	63.0
Derivatized - non-kit	27	269	525.1	153.0	60.4	140.6
Non-derivatized - MassChrom Chromsystems	13	130	595.0	164.9	36.9	160.7
Non-derivatized - MS-Neo Siemens	5	50	493.9	47.2	25.6	39.7
Non-derivatized - non-kit	17	170	484.9	83.6	34.9	76.0
Non-derivatized - NeoBase Revvity	21	210	541.7	87.9	36.6	79.9
Non-derivatized - NeoBase 2 Revvity	79	788	485.7	65.7	37.6	53.9

Tyr - Lot I2415 - Enrichment 900

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	716.1	91.9	49.9	77.2
Derivatized - MassChrom Chromsystems	11	110	713.7	116.6	47.5	106.5
Derivatized - non-kit	27	270	780.1	220.2	69.0	209.1
Non-derivatized - MassChrom Chromsystems	13	130	866.6	204.1	57.0	196.0
Non-derivatized - MS-Neo Siemens	5	50	717.0	90.1	46.1	77.4

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Non-derivatized - non-kit	17	170	719.4	118.3	49.5	107.5
Non-derivatized - NeoBase Revvity	21	210	788.1	123.3	51.5	112.0
Non-derivatized - NeoBase 2 Revvity	79	789	715.7	99.4	55.0	82.8

Valine (Val) (μmol/L blood)

Val - Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	42.6	10.2	5.3	8.7
Derivatized - MassChrom Chromsystems	9	90	42.7	9.5	4.0	8.6
Derivatized - non-kit	25	250	51.9	11.0	4.8	9.9
Non-derivatized - MassChrom Chromsystems	9	90	46.2	6.5	2.9	5.9
Non-derivatized - MS-Neo Siemens	5	50	55.9	8.7	4.3	7.5
Non-derivatized - non-kit	14	140	54.1	22.5	6.4	21.6
Non-derivatized - NeoBase Revvity	21	210	53.1	10.5	4.7	9.4
Non-derivatized - NeoBase 2 Revvity	72	719	51.3	8.0	4.3	6.8

Val - Lot G2415 - Enrichment 200

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	166.8	31.2	15.7	27.0
Derivatized - MassChrom Chromsystems	9	90	167.9	30.9	10.6	29.0
Derivatized - non-kit	25	250	189.7	45.3	19.6	40.8
Non-derivatized - MassChrom Chromsystems	9	90	185.9	24.6	11.6	21.7
Non-derivatized - MS-Neo Siemens	5	50	234.3	27.2	16.6	21.6
Non-derivatized - non-kit	14	140	213.0	101.1	16.9	99.7
Non-derivatized - NeoBase Revvity	21	210	212.5	32.7	15.5	28.8
Non-derivatized - NeoBase 2 Revvity	73	730	206.6	28.0	15.7	23.2

Val - Lot H2415 - Enrichment 350

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	251.5	51.0	20.9	46.5
Derivatized - MassChrom Chromsystems	9	90	254.7	47.3	17.7	43.9
Derivatized - non-kit	25	249	290.0	65.8	25.1	60.8
Non-derivatized - MassChrom Chromsystems	9	90	287.8	36.2	17.6	31.6
Non-derivatized - MS-Neo Siemens	5	50	368.5	47.9	28.0	38.9
Non-derivatized - non-kit	14	140	329.4	147.8	28.0	145.1
Non-derivatized - NeoBase Revvity	21	210	344.6	68.9	24.7	64.3
Non-derivatized - NeoBase 2 Revvity	73	728	321.8	44.8	25.7	36.7

Val - Lot I2415 - Enrichment 500

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	358.6	68.4	34.3	59.2
Derivatized - MassChrom Chromsystems	9	90	344.5	67.3	28.1	61.1
Derivatized - non-kit	25	250	393.2	86.8	30.9	81.1
Non-derivatized - MassChrom Chromsystems	9	90	393.1	50.4	26.3	42.9
Non-derivatized - MS-Neo Siemens	5	50	491.9	77.4	44.2	63.6

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Non-derivatized - non-kit	14	140	447.4	219.7	37.4	216.5
Non-derivatized - NeoBase Revvity	21	210	471.2	98.4	37.4	91.0
Non-derivatized - NeoBase 2 Revvity	73	729	436.0	59.1	35.2	47.4

Free carnitine (C0) (μmol/L blood)

C0 - Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	15.48	3.27	1.35	2.97
Derivatized - MassChrom Chromsystems	12	120	14.08	2.88	1.16	2.64
Derivatized - non-kit	33	330	17.07	4.46	1.79	4.08
Non-derivatized - MassChrom Chromsystems	12	120	18.04	3.49	1.13	3.30
Non-derivatized - MS-Neo Siemens	5	50	20.48	2.96	1.68	2.44
Non-derivatized - non-kit	15	150	17.59	3.73	1.69	3.32
Non-derivatized - NeoBase Revvity	20	200	18.32	2.50	1.45	2.03
Non-derivatized - NeoBase 2 Revvity	78	780	18.65	2.93	1.66	2.41

C0 - Lot G2415 - Enrichment 10

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	26.45	6.33	2.54	5.80
Derivatized - MassChrom Chromsystems	12	120	24.21	5.57	1.94	5.22
Derivatized - non-kit	33	330	29.33	8.03	3.10	7.40
Non-derivatized - MassChrom Chromsystems	12	120	27.23	5.20	1.60	4.95
Non-derivatized - MS-Neo Siemens	5	50	32.07	3.67	2.20	2.94
Non-derivatized - non-kit	15	150	26.94	5.39	2.87	4.56
Non-derivatized - NeoBase Revvity	20	200	27.61	4.11	2.36	3.36
Non-derivatized - NeoBase 2 Revvity	78	779	28.30	4.58	2.59	3.78

C0 - Lot H2415 - Enrichment 20

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	38.98	10.29	3.31	9.74
Derivatized - MassChrom Chromsystems	12	120	33.27	7.26	2.26	6.90
Derivatized - non-kit	32	320	41.23	11.25	3.72	10.62
Non-derivatized - MassChrom Chromsystems	12	120	36.36	6.78	2.03	6.47
Non-derivatized - MS-Neo Siemens	5	50	42.56	5.75	2.78	5.03
Non-derivatized - non-kit	15	150	36.30	7.05	3.03	6.36
Non-derivatized - NeoBase Revvity	20	200	38.10	5.70	3.16	4.74
Non-derivatized - NeoBase 2 Revvity	78	777	38.06	6.07	3.54	4.92

C0 - Lot I2415 - Enrichment 30

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	52.12	14.06	5.26	13.04
Derivatized - MassChrom Chromsystems	12	120	43.20	10.35	3.26	9.82
Derivatized - non-kit	33	330	54.70	15.50	5.32	14.56
Non-derivatized - MassChrom Chromsystems	12	119	46.62	9.55	3.36	8.94
Non-derivatized - MS-Neo Siemens	5	50	53.42	8.30	3.97	7.29

Non-derivatized - non-kit	15	150	46.20	8.22	3.73	7.32
Non-derivatized - NeoBase Revvity	20	200	48.03	6.86	3.93	5.62
Non-derivatized - NeoBase 2 Revvity	78	777	48.00	7.50	4.19	6.22

Acetylcarnitine (C2) (μmol/L blood)

C2 - Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	0.88	0.36	0.21	0.29
Derivatized - MassChrom Chromsystems	11	110	1.96	1.38	0.39	1.32
Derivatized - non-kit	32	320	2.10	1.84	0.71	1.69
Non-derivatized - MassChrom Chromsystems	9	90	0.37	0.62	0.15	0.60
Non-derivatized - MS-Neo Siemens	5	50	0.19	0.08	0.05	0.06
Non-derivatized - non-kit	14	138	0.23	0.13	0.05	0.12
Non-derivatized - NeoBase Revvity	19	189	0.25	0.13	0.06	0.12
Non-derivatized - NeoBase 2 Revvity	70	698	0.19	0.09	0.05	0.07

C2 - Lot G2415 - Enrichment 10

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	10.01	1.13	0.76	0.85
Derivatized - MassChrom Chromsystems	11	110	9.54	2.30	0.70	2.19
Derivatized - non-kit	32	320	10.49	3.79	1.78	3.35
Non-derivatized - MassChrom Chromsystems	9	90	7.51	1.25	0.48	1.16
Non-derivatized - MS-Neo Siemens	5	50	9.89	1.11	0.64	0.91
Non-derivatized - non-kit	14	140	10.45	2.03	0.73	1.90
Non-derivatized - NeoBase Revvity	19	189	8.42	1.35	0.62	1.20
Non-derivatized - NeoBase 2 Revvity	73	730	7.69	1.08	0.61	0.89

C2 - Lot H2415 - Enrichment 20

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	19.02	1.77	1.14	1.36
Derivatized - MassChrom Chromsystems	11	110	16.80	3.31	1.05	3.14
Derivatized - non-kit	31	310	18.42	3.81	1.61	3.46
Non-derivatized - MassChrom Chromsystems	9	90	14.96	2.23	0.93	2.03
Non-derivatized - MS-Neo Siemens	5	50	19.15	2.29	1.40	1.81
Non-derivatized - non-kit	14	140	21.14	4.15	1.67	3.80
Non-derivatized - NeoBase Revvity	19	190	17.08	2.93	1.48	2.52
Non-derivatized - NeoBase 2 Revvity	73	728	15.25	2.14	1.23	1.75

C2 - Lot I2415 - Enrichment 30

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	49	28.96	2.68	1.88	1.92
Derivatized - MassChrom Chromsystems	11	110	24.37	4.74	1.80	4.38
Derivatized - non-kit	32	320	27.20	6.87	2.84	6.25
Non-derivatized - MassChrom Chromsystems	9	90	22.60	3.96	1.50	3.66
Non-derivatized - MS-Neo Siemens	5	50	28.50	3.82	1.86	3.33

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Non-derivatized - non-kit	14	140	30.71	6.38	2.34	5.93
Non-derivatized - NeoBase Revvity	19	190	25.42	4.17	1.87	3.73
Non-derivatized - NeoBase 2 Revvity	73	728	22.69	3.31	1.84	2.75

Propionylcarnitine (C3) (μmol/L blood)

C3 - Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	0.44	0.12	0.07	0.09
Derivatized - MassChrom Chromsystems	11	110	0.37	0.10	0.06	0.09
Derivatized - non-kit	33	330	0.47	0.21	0.06	0.20
Non-derivatized - MassChrom Chromsystems	12	120	0.36	0.06	0.03	0.05
Non-derivatized - MS-Neo Siemens	5	50	0.42	0.04	0.03	0.03
Non-derivatized - non-kit	14	140	0.49	0.11	0.06	0.10
Non-derivatized - NeoBase Revvity	20	200	0.42	0.07	0.04	0.06
Non-derivatized - NeoBase 2 Revvity	74	737	0.46	0.12	0.04	0.11

C3 - Lot G2415 - Enrichment 4

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	4.01	0.58	0.34	0.47
Derivatized - MassChrom Chromsystems	11	110	3.28	0.42	0.23	0.35
Derivatized - non-kit	33	330	3.89	0.94	0.48	0.80
Non-derivatized - MassChrom Chromsystems	12	120	3.18	0.45	0.19	0.41
Non-derivatized - MS-Neo Siemens	5	50	3.87	0.43	0.28	0.32
Non-derivatized - non-kit	14	140	4.36	0.76	0.32	0.69
Non-derivatized - NeoBase Revvity	20	200	3.65	0.56	0.28	0.48
Non-derivatized - NeoBase 2 Revvity	77	768	4.10	0.67	0.33	0.58

C3 - Lot H2415 - Enrichment 8

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	7.76	0.99	0.46	0.88
Derivatized - MassChrom Chromsystems	11	110	6.25	0.79	0.41	0.67
Derivatized - non-kit	32	320	7.47	1.51	0.72	1.33
Non-derivatized - MassChrom Chromsystems	12	120	6.15	0.78	0.36	0.69
Non-derivatized - MS-Neo Siemens	5	50	7.55	0.79	0.53	0.58
Non-derivatized - non-kit	14	140	8.49	1.60	0.70	1.44
Non-derivatized - NeoBase Revvity	20	200	7.24	1.24	0.61	1.08
Non-derivatized - NeoBase 2 Revvity	77	763	8.05	1.31	0.70	1.10

C3 - Lot I2415 - Enrichment 12

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	11.44	1.77	0.73	1.61
Derivatized - MassChrom Chromsystems	11	110	9.08	1.23	0.60	1.08
Derivatized - non-kit	33	330	11.10	2.13	0.99	1.89
Non-derivatized - MassChrom Chromsystems	12	120	9.12	1.35	0.60	1.21
Non-derivatized - MS-Neo Siemens	5	50	11.04	1.43	0.76	1.21

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Non-derivatized - non-kit	14	140	12.43	1.97	0.86	1.78
Non-derivatized - NeoBase Revvity	20	200	10.65	1.64	0.80	1.43
Non-derivatized - NeoBase 2 Revvity	77	765	11.81	1.85	0.90	1.61

Malonylcarnitine (C3DC) (μmol/L blood)

C3DC - Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	8	80	0.07	0.12	0.07	0.10
Derivatized - non-kit	32	319	0.02	0.03	0.01	0.02

C3DC - Lot G2415 - Enrichment 0.5

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	8	80	0.45	0.17	0.05	0.16
Derivatized - non-kit	33	330	0.33	0.17	0.06	0.16

C3DC - Lot H2415 - Enrichment 1.5

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	8	80	1.24	0.45	0.16	0.42
Derivatized - non-kit	32	320	0.90	0.39	0.12	0.37

C3DC - Lot I2415 - Enrichment 3

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	8	80	2.42	0.91	0.23	0.88
Derivatized - non-kit	33	330	1.90	0.91	0.24	0.88

Malonylcarnitine (C3DC) + Hydroxybutyrylcarnitine (C4OH) (μmol/L blood)

C3DC + C4OH - Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Non-derivatized - non-kit	11	110	0.05	0.03	0.01	0.03
Non-derivatized - NeoBase Revvity	17	170	0.04	0.01	0.01	0.01
Non-derivatized - NeoBase 2 Revvity	65	650	0.04	0.02	0.01	0.01

C3DC + C4OH - Lot G2415 - Enrichment 1

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Non-derivatized - non-kit	11	110	0.40	0.27	0.06	0.26
Non-derivatized - NeoBase Revvity	17	170	0.33	0.06	0.03	0.05
Non-derivatized - NeoBase 2 Revvity	67	670	0.40	0.10	0.04	0.09

C3DC + C4OH - Lot H2415 - Enrichment 2.5

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Non-derivatized - non-kit	11	110	0.82	0.54	0.12	0.53
Non-derivatized - NeoBase Revvity	17	170	0.70	0.16	0.08	0.14
Non-derivatized - NeoBase 2 Revvity	66	660	0.87	0.22	0.08	0.20

C3DC + C4OH - Lot I2415 - Enrichment 5.5

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Non-derivatized - non-kit	11	110	1.86	1.24	0.23	1.22
Non-derivatized - NeoBase Revvity	17	170	1.57	0.28	0.12	0.26
Non-derivatized - NeoBase 2 Revvity	67	670	1.92	0.46	0.16	0.43

Butyrylcarnitine (C4) (μmol/L blood)

C4 - Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	10	99	0.07	0.02	0.01	0.02
Derivatized - non-kit	32	320	0.09	0.05	0.03	0.04
Non-derivatized - MassChrom Chromsystems	9	90	0.08	0.03	0.01	0.03
Non-derivatized - non-kit	14	140	0.08	0.02	0.01	0.02
Non-derivatized - NeoBase Revvity	20	200	0.10	0.03	0.01	0.02
Non-derivatized - NeoBase 2 Revvity	69	690	0.07	0.02	0.01	0.01

C4 - Lot G2415 - Enrichment 1

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	10	100	0.81	0.15	0.07	0.14
Derivatized - non-kit	32	320	0.91	0.20	0.11	0.16
Non-derivatized - MassChrom Chromsystems	9	89	0.80	0.11	0.06	0.10
Non-derivatized - non-kit	15	150	0.89	0.18	0.07	0.17
Non-derivatized - NeoBase Revvity	20	200	0.88	0.13	0.07	0.11
Non-derivatized - NeoBase 2 Revvity	71	708	0.80	0.12	0.07	0.10

C4 - Lot H2415 - Enrichment 2

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	10	100	1.54	0.25	0.10	0.23
Derivatized - non-kit	31	310	1.74	0.38	0.22	0.32
Non-derivatized - MassChrom Chromsystems	9	89	1.57	0.23	0.12	0.20
Non-derivatized - non-kit	15	150	1.77	0.34	0.15	0.31
Non-derivatized - NeoBase Revvity	20	200	1.72	0.29	0.14	0.25
Non-derivatized - NeoBase 2 Revvity	71	707	1.56	0.24	0.13	0.20

C4 - Lot I2415 - Enrichment 4

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	10	100	3.00	0.55	0.22	0.51
Derivatized - non-kit	32	320	3.46	0.68	0.36	0.57
Non-derivatized - MassChrom Chromsystems	9	90	3.15	0.57	0.23	0.52
Non-derivatized - non-kit	15	150	3.55	0.63	0.21	0.59
Non-derivatized - NeoBase Revvity	20	200	3.40	0.49	0.23	0.43
Non-derivatized - NeoBase 2 Revvity	71	707	3.11	0.45	0.24	0.38

Hydroxybutyrylcarnitine (C4OH) (μmol/L blood)

C4OH - Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	9	89	0.05	0.03	0.01	0.02
Derivatized - non-kit	29	289	0.05	0.03	0.02	0.03

C4OH - Lot G2415 - Enrichment 0.5

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	9	90	0.32	0.09	0.04	0.08
Derivatized - non-kit	29	290	0.32	0.15	0.07	0.14

C4OH - Lot H2415 - Enrichment 1

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	9	90	0.59	0.14	0.06	0.13
Derivatized - non-kit	28	280	0.61	0.23	0.10	0.21

C4OH - Lot I2415 - Enrichment 2.5

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	9	90	1.37	0.29	0.11	0.27
Derivatized - non-kit	29	290	1.48	0.51	0.23	0.46

Isovalerylcarnitine (C5) (μmol/L blood)

C5 - Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	49	0.04	0.01	0.01	0.01
Derivatized - MassChrom Chromsystems	12	120	0.06	0.02	0.01	0.02
Derivatized - non-kit	32	320	0.06	0.11	0.03	0.11
Non-derivatized - MassChrom Chromsystems	10	100	0.08	0.11	0.01	0.11
Non-derivatized - MS-Neo Siemens	5	50	0.04	0.01	0.01	0.01
Non-derivatized - non-kit	17	170	0.05	0.02	0.01	0.02
Non-derivatized - NeoBase Revvity	21	208	0.04	0.02	0.01	0.02
Non-derivatized - NeoBase 2 Revvity	74	739	0.04	0.01	0.01	0.01

C5 - Lot G2415 - Enrichment 0.58

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	0.39	0.10	0.04	0.09
Derivatized - MassChrom Chromsystems	12	120	0.45	0.07	0.04	0.06
Derivatized - non-kit	33	330	0.47	0.16	0.07	0.14
Non-derivatized - MassChrom Chromsystems	12	120	0.48	0.10	0.04	0.09
Non-derivatized - MS-Neo Siemens	5	50	0.48	0.05	0.04	0.04
Non-derivatized - non-kit	18	180	0.51	0.18	0.04	0.17
Non-derivatized - NeoBase Revvity	21	210	0.43	0.06	0.04	0.05
Non-derivatized - NeoBase 2 Revvity	77	768	0.41	0.07	0.04	0.05

C5 - Lot H2415 - Enrichment 1.75

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	1.07	0.27	0.09	0.25
Derivatized - MassChrom Chromsystems	12	120	1.23	0.18	0.09	0.16
Derivatized - non-kit	32	319	1.27	0.27	0.15	0.22
Non-derivatized - MassChrom Chromsystems	12	120	1.26	0.18	0.08	0.17
Non-derivatized - MS-Neo Siemens	5	50	1.36	0.13	0.09	0.10
Non-derivatized - non-kit	18	180	1.43	0.48	0.11	0.47
Non-derivatized - NeoBase Revvity	21	210	1.22	0.19	0.10	0.16
Non-derivatized - NeoBase 2 Revvity	77	768	1.16	0.19	0.11	0.16

C5 - Lot I2415 - Enrichment 3.51

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	2.30	0.56	0.17	0.53
Derivatized - MassChrom Chromsystems	12	120	2.46	0.37	0.19	0.32
Derivatized - non-kit	33	330	2.58	0.52	0.28	0.44
Non-derivatized - MassChrom Chromsystems	12	120	2.58	0.47	0.20	0.42
Non-derivatized - MS-Neo Siemens	5	50	2.77	0.33	0.20	0.27

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Non-derivatized - non-kit	18	180	2.93	1.11	0.24	1.08
Non-derivatized - NeoBase Revvity	21	210	2.51	0.35	0.18	0.29
Non-derivatized - NeoBase 2 Revvity	77	768	2.37	0.37	0.22	0.31

Tiglylcarnitine (C5:1) (μmol/L blood)

C5:1 - Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	10	100	0.02	0.02	0.01	0.02
Derivatized - non-kit	31	310	0.03	0.06	0.03	0.05
Non-derivatized - MassChrom Chromsystems	5	50	0.01	0.01	0.01	0.01
Non-derivatized - non-kit	13	127	0.02	0.03	0.01	0.02
Non-derivatized - NeoBase Revvity	19	190	0.01	0.01	0.00	0.01
Non-derivatized - NeoBase 2 Revvity	65	646	0.01	0.01	0.00	0.01

C5:1 - Lot G2415 - Enrichment 0.66

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	10	100	0.45	0.09	0.04	0.08
Derivatized - non-kit	31	310	0.44	0.12	0.07	0.10
Non-derivatized - MassChrom Chromsystems	6	60	0.30	0.11	0.02	0.11
Non-derivatized - non-kit	13	130	0.60	0.35	0.09	0.34
Non-derivatized - NeoBase Revvity	19	189	0.34	0.07	0.03	0.06
Non-derivatized - NeoBase 2 Revvity	69	688	0.34	0.09	0.03	0.08

C5:1 - Lot H2415 - Enrichment 1.97

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	10	100	1.27	0.21	0.10	0.19
Derivatized - non-kit	30	300	1.27	0.36	0.21	0.29
Non-derivatized - MassChrom Chromsystems	6	60	0.86	0.31	0.08	0.30
Non-derivatized - non-kit	13	130	1.79	1.05	0.23	1.02
Non-derivatized - NeoBase Revvity	19	190	0.99	0.20	0.09	0.18
Non-derivatized - NeoBase 2 Revvity	69	690	1.00	0.25	0.11	0.23

C5:1 - Lot I2415 - Enrichment 3.93

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	10	100	2.52	0.46	0.21	0.41
Derivatized - non-kit	31	310	2.52	0.57	0.31	0.48
Non-derivatized - MassChrom Chromsystems	6	60	1.73	0.63	0.17	0.60
Non-derivatized - non-kit	13	130	3.53	1.84	0.47	1.78
Non-derivatized - NeoBase Revvity	19	190	2.01	0.42	0.17	0.38
Non-derivatized - NeoBase 2 Revvity	69	689	2.01	0.49	0.22	0.44

Glutaryl carnitine (C5DC) ($\mu\text{mol/L}$ blood)

C5DC - Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	49	0.03	0.03	0.01	0.02
Derivatized - MassChrom Chromsystems	12	120	0.02	0.03	0.01	0.02
Derivatized - non-kit	33	328	0.02	0.02	0.01	0.01
Non-derivatized - MassChrom Chromsystems	11	110	0.08	0.07	0.03	0.06
Non-derivatized - non-kit	16	160	0.06	0.04	0.01	0.03
Non-derivatized - NeoBase Revvity	17	170	0.04	0.01	0.01	0.01
Non-derivatized - NeoBase 2 Revvity	61	599	0.03	0.02	0.01	0.01

C5DC - Lot G2415 - Enrichment 0.5

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	0.67	0.15	0.07	0.13
Derivatized - MassChrom Chromsystems	12	120	0.59	0.22	0.09	0.20
Derivatized - non-kit	33	330	0.35	0.14	0.05	0.13
Non-derivatized - MassChrom Chromsystems	13	130	0.69	0.15	0.06	0.13
Non-derivatized - non-kit	16	160	0.61	0.23	0.06	0.23
Non-derivatized - NeoBase Revvity	17	170	0.53	0.08	0.04	0.07
Non-derivatized - NeoBase 2 Revvity	65	647	0.45	0.08	0.04	0.07

C5DC - Lot H2415 - Enrichment 1

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	1.28	0.30	0.08	0.29
Derivatized - MassChrom Chromsystems	12	120	1.13	0.38	0.10	0.37
Derivatized - non-kit	32	320	0.68	0.26	0.09	0.25
Non-derivatized - MassChrom Chromsystems	13	130	1.30	0.24	0.12	0.21
Non-derivatized - non-kit	16	160	1.19	0.52	0.11	0.50
Non-derivatized - NeoBase Revvity	17	170	1.07	0.18	0.10	0.15
Non-derivatized - NeoBase 2 Revvity	65	649	0.87	0.16	0.09	0.13

C5DC - Lot I2415 - Enrichment 2.5

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	3.27	0.81	0.29	0.76
Derivatized - MassChrom Chromsystems	12	120	2.81	0.97	0.24	0.93
Derivatized - non-kit	33	330	1.79	0.70	0.24	0.65
Non-derivatized - MassChrom Chromsystems	13	130	3.22	0.60	0.29	0.53
Non-derivatized - non-kit	16	160	2.93	1.33	0.29	1.30
Non-derivatized - NeoBase Revvity	17	170	2.59	0.37	0.21	0.31
Non-derivatized - NeoBase 2 Revvity	65	650	2.18	0.43	0.25	0.35

Hydroxyisovalerylcarnitine (C5OH) (μmol/L blood)

C5OH - Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	11	110	0.30	0.07	0.03	0.06
Derivatized - non-kit	34	340	0.28	0.14	0.05	0.13
Non-derivatized - MassChrom Chromsystems	5	50	0.30	0.08	0.02	0.08
Non-derivatized - MS-Neo Siemens	5	50	0.51	0.05	0.03	0.04
Non-derivatized - non-kit	12	120	0.42	0.14	0.04	0.13
Non-derivatized - NeoBase Revvity	17	168	0.36	0.08	0.03	0.07
Non-derivatized - NeoBase 2 Revvity	58	580	0.47	0.11	0.05	0.10

C5OH - Lot G2415 - Enrichment 1

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	11	110	1.07	0.25	0.10	0.23
Derivatized - non-kit	34	339	0.99	0.26	0.12	0.23
Non-derivatized - MassChrom Chromsystems	5	50	0.74	0.18	0.04	0.18
Non-derivatized - MS-Neo Siemens	5	50	1.46	0.16	0.11	0.11
Non-derivatized - non-kit	12	120	1.11	0.41	0.12	0.39
Non-derivatized - NeoBase Revvity	17	170	0.89	0.17	0.07	0.15
Non-derivatized - NeoBase 2 Revvity	59	588	1.09	0.23	0.11	0.20

C5OH - Lot H2415 - Enrichment 2

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	11	110	1.85	0.40	0.13	0.38
Derivatized - non-kit	33	329	1.75	0.42	0.22	0.36
Non-derivatized - MassChrom Chromsystems	5	50	1.20	0.25	0.06	0.24
Non-derivatized - MS-Neo Siemens	5	50	2.46	0.29	0.16	0.23
Non-derivatized - non-kit	12	120	1.85	0.66	0.17	0.64
Non-derivatized - NeoBase Revvity	17	170	1.48	0.27	0.11	0.25
Non-derivatized - NeoBase 2 Revvity	59	586	1.74	0.35	0.15	0.31

C5OH - Lot I2415 - Enrichment 3

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	11	110	2.61	0.57	0.20	0.53
Derivatized - non-kit	34	340	2.52	0.57	0.27	0.50
Non-derivatized - MassChrom Chromsystems	5	50	1.65	0.35	0.09	0.34
Non-derivatized - MS-Neo Siemens	5	50	3.41	0.41	0.23	0.34
Non-derivatized - non-kit	12	120	2.58	0.92	0.22	0.90
Non-derivatized - NeoBase Revvity	17	170	2.03	0.40	0.15	0.37
Non-derivatized - NeoBase 2 Revvity	59	588	2.34	0.47	0.21	0.42

Hexanoylcarnitine (C6) (μmol/L blood)

C6 - Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	10	100	0.05	0.08	0.01	0.08
Derivatized - non-kit	31	310	0.02	0.02	0.01	0.01
Non-derivatized - MassChrom Chromsystems	8	80	0.02	0.02	0.00	0.02
Non-derivatized - MS-Neo Siemens	5	50	0.01	0.00	0.00	0.00
Non-derivatized - non-kit	14	139	0.01	0.01	0.01	0.01
Non-derivatized - NeoBase Revvity	18	180	0.01	0.02	0.01	0.02
Non-derivatized - NeoBase 2 Revvity	70	699	0.01	0.01	0.00	0.01

C6 - Lot G2415 - Enrichment 0.5

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	10	100	0.38	0.08	0.03	0.07
Derivatized - non-kit	32	320	0.38	0.09	0.05	0.07
Non-derivatized - MassChrom Chromsystems	9	90	0.37	0.05	0.03	0.05
Non-derivatized - MS-Neo Siemens	5	50	0.46	0.09	0.04	0.08
Non-derivatized - non-kit	15	150	0.41	0.11	0.04	0.10
Non-derivatized - NeoBase Revvity	19	190	0.41	0.06	0.03	0.05
Non-derivatized - NeoBase 2 Revvity	73	728	0.37	0.05	0.03	0.04

C6 - Lot H2415 - Enrichment 1

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	10	100	0.64	0.10	0.05	0.09
Derivatized - non-kit	31	309	0.74	0.15	0.08	0.13
Non-derivatized - MassChrom Chromsystems	9	90	0.72	0.10	0.04	0.09
Non-derivatized - MS-Neo Siemens	5	50	0.89	0.16	0.05	0.15
Non-derivatized - non-kit	15	150	0.82	0.21	0.08	0.20
Non-derivatized - NeoBase Revvity	19	190	0.79	0.13	0.07	0.12
Non-derivatized - NeoBase 2 Revvity	73	726	0.71	0.10	0.06	0.08

C6 - Lot I2415 - Enrichment 2.5

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	10	100	1.47	0.21	0.12	0.18
Derivatized - non-kit	32	320	1.90	0.37	0.20	0.31
Non-derivatized - MassChrom Chromsystems	9	90	1.78	0.31	0.13	0.28
Non-derivatized - MS-Neo Siemens	5	50	2.21	0.36	0.15	0.33
Non-derivatized - non-kit	15	150	2.05	0.55	0.18	0.52
Non-derivatized - NeoBase Revvity	19	190	1.99	0.27	0.12	0.24
Non-derivatized - NeoBase 2 Revvity	73	728	1.72	0.23	0.13	0.19

Octanoylcarnitine (C8) (μmol/L blood)

C8 - Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	0.02	0.01	0.01	0.01
Derivatized - MassChrom Chromsystems	12	117	0.02	0.02	0.01	0.02
Derivatized - non-kit	32	318	0.03	0.03	0.01	0.03
Non-derivatized - MassChrom Chromsystems	11	110	0.03	0.02	0.01	0.01
Non-derivatized - MS-Neo Siemens	5	50	0.01	0.01	0.00	0.01
Non-derivatized - non-kit	17	169	0.03	0.02	0.01	0.01
Non-derivatized - NeoBase Revvity	21	210	0.02	0.01	0.01	0.01
Non-derivatized - NeoBase 2 Revvity	72	719	0.01	0.01	0.00	0.01

C8 - Lot G2415 - Enrichment 0.5

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	0.64	0.08	0.04	0.06
Derivatized - MassChrom Chromsystems	12	120	0.51	0.09	0.05	0.08
Derivatized - non-kit	33	330	0.71	0.16	0.09	0.13
Non-derivatized - MassChrom Chromsystems	12	120	0.57	0.10	0.05	0.08
Non-derivatized - MS-Neo Siemens	5	50	0.68	0.10	0.06	0.08
Non-derivatized - non-kit	18	179	0.72	0.21	0.06	0.20
Non-derivatized - NeoBase Revvity	21	210	0.64	0.10	0.05	0.08
Non-derivatized - NeoBase 2 Revvity	77	770	0.59	0.09	0.05	0.08

C8 - Lot H2415 - Enrichment 1

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	1.26	0.13	0.08	0.10
Derivatized - MassChrom Chromsystems	12	118	0.97	0.13	0.08	0.10
Derivatized - non-kit	32	320	1.36	0.29	0.16	0.24
Non-derivatized - MassChrom Chromsystems	12	120	1.09	0.17	0.08	0.15
Non-derivatized - MS-Neo Siemens	5	50	1.32	0.19	0.10	0.16
Non-derivatized - non-kit	18	180	1.39	0.43	0.13	0.41
Non-derivatized - NeoBase Revvity	21	210	1.29	0.24	0.13	0.20
Non-derivatized - NeoBase 2 Revvity	77	766	1.15	0.18	0.10	0.15

C8 - Lot I2415 - Enrichment 2.5

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	48	3.36	0.44	0.22	0.38
Derivatized - MassChrom Chromsystems	12	119	2.45	0.37	0.20	0.31
Derivatized - non-kit	33	330	3.47	0.66	0.34	0.57
Non-derivatized - MassChrom Chromsystems	12	120	2.79	0.47	0.20	0.42
Non-derivatized - MS-Neo Siemens	5	50	3.37	0.57	0.25	0.51

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Non-derivatized - non-kit	18	180	3.50	1.01	0.31	0.96
Non-derivatized - NeoBase Revvity	21	210	3.28	0.52	0.27	0.44
Non-derivatized - NeoBase 2 Revvity	77	768	2.93	0.46	0.25	0.38

Decanoylcarnitine (C10) (μmol/L blood)

C10 - Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	11	110	0.01	0.01	0.01	0.01
Derivatized - non-kit	32	320	0.03	0.04	0.02	0.04
Non-derivatized - MassChrom Chromsystems	10	100	0.03	0.01	0.00	0.01
Non-derivatized - MS-Neo Siemens	5	50	0.01	0.01	0.01	0.01
Non-derivatized - non-kit	17	170	0.04	0.04	0.01	0.04
Non-derivatized - NeoBase Revvity	20	200	0.03	0.02	0.01	0.02
Non-derivatized - NeoBase 2 Revvity	75	750	0.02	0.01	0.00	0.01

C10 - Lot G2415 - Enrichment 0.5

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	11	110	0.30	0.06	0.03	0.05
Derivatized - non-kit	33	330	0.48	0.13	0.07	0.11
Non-derivatized - MassChrom Chromsystems	12	120	0.43	0.07	0.03	0.06
Non-derivatized - MS-Neo Siemens	5	50	0.45	0.07	0.04	0.06
Non-derivatized - non-kit	18	180	0.48	0.09	0.04	0.08
Non-derivatized - NeoBase Revvity	20	200	0.44	0.08	0.04	0.07
Non-derivatized - NeoBase 2 Revvity	78	780	0.41	0.07	0.04	0.06

C10 - Lot H2415 - Enrichment 1

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	11	110	0.56	0.10	0.05	0.08
Derivatized - non-kit	32	320	0.92	0.25	0.13	0.21
Non-derivatized - MassChrom Chromsystems	12	120	0.81	0.12	0.05	0.11
Non-derivatized - MS-Neo Siemens	5	50	0.87	0.15	0.07	0.13
Non-derivatized - non-kit	18	180	0.93	0.19	0.10	0.16
Non-derivatized - NeoBase Revvity	20	200	0.86	0.17	0.08	0.15
Non-derivatized - NeoBase 2 Revvity	78	777	0.81	0.14	0.08	0.12

C10 - Lot I2415 - Enrichment 2.5

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	11	110	1.41	0.26	0.10	0.24
Derivatized - non-kit	33	329	2.30	0.58	0.27	0.51
Non-derivatized - MassChrom Chromsystems	12	120	2.05	0.36	0.15	0.32
Non-derivatized - MS-Neo Siemens	5	50	2.19	0.39	0.16	0.35
Non-derivatized - non-kit	18	180	2.28	0.49	0.24	0.43
Non-derivatized - NeoBase Revvity	20	200	2.16	0.37	0.18	0.32
Non-derivatized - NeoBase 2 Revvity	78	778	2.00	0.35	0.18	0.30

Dodecanoylcarnitine (C12) (μmol/L blood)

C12 - Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	9	90	0.02	0.02	0.01	0.01
Derivatized - non-kit	29	289	0.04	0.04	0.02	0.04
Non-derivatized - MassChrom Chromsystems	8	80	0.02	0.01	0.00	0.01
Non-derivatized - MS-Neo Siemens	5	50	0.01	0.01	0.00	0.01
Non-derivatized - non-kit	13	130	0.02	0.01	0.01	0.01
Non-derivatized - NeoBase Revvity	19	190	0.02	0.01	0.01	0.01
Non-derivatized - NeoBase 2 Revvity	68	680	0.01	0.01	0.00	0.01

C12 - Lot G2415 - Enrichment 1

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	9	90	0.77	0.12	0.07	0.09
Derivatized - non-kit	29	290	0.87	0.26	0.16	0.20
Non-derivatized - MassChrom Chromsystems	9	90	0.74	0.13	0.05	0.12
Non-derivatized - MS-Neo Siemens	5	50	0.92	0.14	0.08	0.11
Non-derivatized - non-kit	13	130	0.97	0.44	0.08	0.43
Non-derivatized - NeoBase Revvity	19	189	0.80	0.11	0.06	0.09
Non-derivatized - NeoBase 2 Revvity	70	698	0.74	0.11	0.06	0.09

C12 - Lot H2415 - Enrichment 2

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	9	90	1.56	0.21	0.12	0.18
Derivatized - non-kit	28	280	1.73	0.42	0.23	0.35
Non-derivatized - MassChrom Chromsystems	9	90	1.53	0.25	0.11	0.23
Non-derivatized - MS-Neo Siemens	5	50	1.87	0.29	0.15	0.24
Non-derivatized - non-kit	13	130	2.00	0.79	0.19	0.77
Non-derivatized - NeoBase Revvity	19	190	1.70	0.27	0.15	0.22
Non-derivatized - NeoBase 2 Revvity	70	698	1.52	0.24	0.14	0.19

C12 - Lot I2415 - Enrichment 3

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	9	90	2.29	0.33	0.17	0.29
Derivatized - non-kit	29	290	2.65	0.73	0.39	0.62
Non-derivatized - MassChrom Chromsystems	9	90	2.33	0.45	0.16	0.42
Non-derivatized - MS-Neo Siemens	5	50	2.79	0.47	0.23	0.41
Non-derivatized - non-kit	13	130	2.96	1.22	0.27	1.19
Non-derivatized - NeoBase Revvity	19	188	2.55	0.37	0.20	0.31
Non-derivatized - NeoBase 2 Revvity	70	698	2.27	0.34	0.21	0.28

Myristoylcarnitine (C14) (μmol/L blood)

C14 - Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	0.05	0.01	0.01	0.01
Derivatized - MassChrom Chromsystems	12	120	0.06	0.02	0.01	0.02
Derivatized - non-kit	33	329	0.07	0.05	0.02	0.04
Non-derivatized - MassChrom Chromsystems	9	90	0.05	0.01	0.01	0.01
Non-derivatized - MS-Neo Siemens	5	50	0.06	0.01	0.01	0.01
Non-derivatized - non-kit	14	140	0.06	0.02	0.01	0.01
Non-derivatized - NeoBase Revvity	20	200	0.06	0.01	0.01	0.01
Non-derivatized - NeoBase 2 Revvity	74	740	0.05	0.01	0.01	0.01

C14 - Lot G2415 - Enrichment 0.5

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	0.39	0.05	0.03	0.04
Derivatized - MassChrom Chromsystems	12	120	0.47	0.10	0.06	0.09
Derivatized - non-kit	33	329	0.56	0.17	0.08	0.15
Non-derivatized - MassChrom Chromsystems	9	90	0.42	0.07	0.04	0.06
Non-derivatized - MS-Neo Siemens	5	50	0.54	0.07	0.05	0.06
Non-derivatized - non-kit	15	150	0.50	0.10	0.04	0.10
Non-derivatized - NeoBase Revvity	20	200	0.49	0.07	0.04	0.06
Non-derivatized - NeoBase 2 Revvity	75	747	0.47	0.07	0.04	0.06

C14 - Lot H2415 - Enrichment 1.5

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	1.09	0.15	0.07	0.13
Derivatized - MassChrom Chromsystems	12	120	1.24	0.23	0.10	0.21
Derivatized - non-kit	32	317	1.48	0.39	0.17	0.35
Non-derivatized - MassChrom Chromsystems	9	90	1.16	0.19	0.09	0.16
Non-derivatized - MS-Neo Siemens	5	50	1.42	0.19	0.11	0.15
Non-derivatized - non-kit	15	150	1.39	0.32	0.14	0.28
Non-derivatized - NeoBase Revvity	20	200	1.37	0.21	0.12	0.17
Non-derivatized - NeoBase 2 Revvity	75	747	1.29	0.20	0.13	0.16

C14 - Lot I2415 - Enrichment 3

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	2.20	0.34	0.14	0.31
Derivatized - MassChrom Chromsystems	12	120	2.39	0.42	0.19	0.37
Derivatized - non-kit	33	330	2.84	0.72	0.32	0.65
Non-derivatized - MassChrom Chromsystems	9	90	2.26	0.42	0.19	0.37
Non-derivatized - MS-Neo Siemens	5	50	2.74	0.38	0.20	0.32

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Non-derivatized - non-kit	15	150	2.65	0.56	0.24	0.50
Non-derivatized - NeoBase Revvity	20	200	2.64	0.36	0.21	0.30
Non-derivatized - NeoBase 2 Revvity	75	748	2.45	0.37	0.22	0.29

Tetradecenoylcarnitine (C14:1) (μmol/L blood)

C14:1 - Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	11	110	0.03	0.02	0.01	0.01
Derivatized - non-kit	31	310	0.03	0.04	0.02	0.03
Non-derivatized - MassChrom Chromsystems	5	50	0.03	0.02	0.01	0.02
Non-derivatized - non-kit	12	120	0.03	0.03	0.01	0.03
Non-derivatized - NeoBase Revvity	20	198	0.03	0.02	0.01	0.02
Non-derivatized - NeoBase 2 Revvity	73	730	0.02	0.01	0.00	0.01

C14:1 - Lot G2415 - Enrichment 0.5

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	11	110	0.40	0.10	0.04	0.09
Derivatized - non-kit	31	310	0.44	0.15	0.07	0.13
Non-derivatized - MassChrom Chromsystems	6	60	0.26	0.07	0.05	0.06
Non-derivatized - non-kit	13	130	0.40	0.15	0.04	0.15
Non-derivatized - NeoBase Revvity	20	200	0.32	0.05	0.03	0.04
Non-derivatized - NeoBase 2 Revvity	74	736	0.31	0.05	0.03	0.04

C14:1 - Lot H2415 - Enrichment 1.5

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	11	110	1.04	0.22	0.09	0.20
Derivatized - non-kit	30	300	1.17	0.35	0.15	0.31
Non-derivatized - MassChrom Chromsystems	6	60	0.74	0.21	0.13	0.17
Non-derivatized - non-kit	13	130	1.10	0.38	0.11	0.36
Non-derivatized - NeoBase Revvity	20	200	0.90	0.14	0.08	0.11
Non-derivatized - NeoBase 2 Revvity	74	735	0.86	0.15	0.08	0.12

C14:1 - Lot I2415 - Enrichment 3

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	11	110	2.11	0.51	0.19	0.47
Derivatized - non-kit	31	310	2.38	0.70	0.27	0.65
Non-derivatized - MassChrom Chromsystems	6	60	1.47	0.41	0.21	0.35
Non-derivatized - non-kit	13	130	2.19	0.74	0.24	0.70
Non-derivatized - NeoBase Revvity	20	199	1.78	0.26	0.14	0.22
Non-derivatized - NeoBase 2 Revvity	74	736	1.73	0.29	0.16	0.24

Palmitoylcarnitine (C16) (μmol/L blood)

C16 - Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	0.90	0.28	0.13	0.25
Derivatized - MassChrom Chromsystems	12	120	0.67	0.10	0.06	0.08
Derivatized - non-kit	33	330	0.73	0.15	0.09	0.13
Non-derivatized - MassChrom Chromsystems	9	90	0.65	0.12	0.05	0.11
Non-derivatized - MS-Neo Siemens	5	50	0.78	0.10	0.07	0.08
Non-derivatized - non-kit	15	150	0.78	0.14	0.07	0.12
Non-derivatized - NeoBase Revvity	20	199	0.76	0.12	0.07	0.09
Non-derivatized - NeoBase 2 Revvity	73	729	0.86	0.16	0.08	0.14

C16 - Lot G2415 - Enrichment 4

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	4.56	0.55	0.27	0.48
Derivatized - MassChrom Chromsystems	12	120	3.69	0.65	0.32	0.57
Derivatized - non-kit	33	330	3.98	0.82	0.46	0.67
Non-derivatized - MassChrom Chromsystems	9	90	3.53	0.69	0.26	0.64
Non-derivatized - MS-Neo Siemens	5	50	4.34	0.57	0.36	0.44
Non-derivatized - non-kit	15	149	4.12	0.72	0.29	0.66
Non-derivatized - NeoBase Revvity	20	200	4.02	0.60	0.32	0.51
Non-derivatized - NeoBase 2 Revvity	75	748	4.61	0.73	0.39	0.62

C16 - Lot H2415 - Enrichment 8

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	8.22	1.00	0.52	0.85
Derivatized - MassChrom Chromsystems	12	120	6.59	1.01	0.45	0.91
Derivatized - non-kit	32	319	7.09	1.39	0.73	1.18
Non-derivatized - MassChrom Chromsystems	9	90	6.37	1.18	0.46	1.09
Non-derivatized - MS-Neo Siemens	5	50	7.82	1.06	0.61	0.87
Non-derivatized - non-kit	15	150	7.64	1.49	0.70	1.31
Non-derivatized - NeoBase Revvity	20	200	7.56	1.25	0.65	1.07
Non-derivatized - NeoBase 2 Revvity	75	748	8.36	1.37	0.76	1.14

C16 - Lot I2415 - Enrichment 12

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	12.27	1.43	0.86	1.15
Derivatized - MassChrom Chromsystems	12	120	9.43	1.70	0.84	1.48
Derivatized - non-kit	33	330	10.22	1.94	1.01	1.65
Non-derivatized - MassChrom Chromsystems	9	90	9.35	1.90	0.71	1.76
Non-derivatized - MS-Neo Siemens	5	50	11.18	1.71	0.92	1.45

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Non-derivatized - non-kit	15	150	10.87	1.88	0.93	1.64
Non-derivatized - NeoBase Revvity	20	200	10.75	1.56	0.86	1.30
Non-derivatized - NeoBase 2 Revvity	75	747	11.89	1.87	1.04	1.55

Hydroxypalmitoylcarnitine (C16OH) (μmol/L blood)

C16OH - Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	11	110	0.01	0.02	0.01	0.02
Derivatized - non-kit	32	319	0.02	0.03	0.01	0.03
Non-derivatized - MassChrom Chromsystems	7	70	0.01	0.01	0.00	0.01
Non-derivatized - MS-Neo Siemens	5	50	0.00	0.01	0.00	0.00
Non-derivatized - non-kit	14	139	0.01	0.01	0.00	0.01
Non-derivatized - NeoBase Revvity	19	190	0.01	0.01	0.00	0.01
Non-derivatized - NeoBase 2 Revvity	71	705	0.01	0.01	0.00	0.00

C16OH - Lot G2415 - Enrichment 0.25

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	11	110	0.20	0.07	0.03	0.07
Derivatized - non-kit	32	319	0.21	0.06	0.03	0.05
Non-derivatized - MassChrom Chromsystems	9	89	0.19	0.06	0.02	0.06
Non-derivatized - MS-Neo Siemens	5	50	0.18	0.03	0.02	0.03
Non-derivatized - non-kit	14	140	0.22	0.06	0.02	0.06
Non-derivatized - NeoBase Revvity	20	200	0.18	0.04	0.01	0.04
Non-derivatized - NeoBase 2 Revvity	75	748	0.18	0.04	0.02	0.03

C16OH - Lot H2415 - Enrichment 1

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	11	110	0.74	0.24	0.07	0.23
Derivatized - non-kit	31	310	0.77	0.18	0.09	0.16
Non-derivatized - MassChrom Chromsystems	9	90	0.71	0.23	0.08	0.21
Non-derivatized - MS-Neo Siemens	5	50	0.68	0.14	0.06	0.13
Non-derivatized - non-kit	14	140	0.86	0.26	0.09	0.25
Non-derivatized - NeoBase Revvity	20	200	0.68	0.18	0.05	0.17
Non-derivatized - NeoBase 2 Revvity	75	748	0.69	0.15	0.07	0.13

C16OH - Lot I2415 - Enrichment 1.5

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	11	110	1.14	0.38	0.11	0.36
Derivatized - non-kit	32	320	1.18	0.28	0.14	0.24
Non-derivatized - MassChrom Chromsystems	9	90	1.07	0.37	0.16	0.34
Non-derivatized - MS-Neo Siemens	5	50	1.02	0.22	0.10	0.20
Non-derivatized - non-kit	14	140	1.26	0.34	0.12	0.32
Non-derivatized - NeoBase Revvity	20	200	0.99	0.20	0.07	0.18
Non-derivatized - NeoBase 2 Revvity	75	748	1.01	0.22	0.11	0.19

Stearoylcarnitine (C18) (μmol/L blood)

C18 - Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	0.50	0.12	0.05	0.11
Derivatized - MassChrom Chromsystems	11	110	0.46	0.08	0.05	0.07
Derivatized - non-kit	30	300	0.45	0.11	0.06	0.10
Non-derivatized - MassChrom Chromsystems	9	90	0.52	0.13	0.05	0.12
Non-derivatized - MS-Neo Siemens	5	50	0.44	0.07	0.04	0.06
Non-derivatized - non-kit	13	130	0.55	0.28	0.04	0.28
Non-derivatized - NeoBase Revvity	19	190	0.47	0.07	0.05	0.05
Non-derivatized - NeoBase 2 Revvity	69	688	0.48	0.07	0.04	0.06

C18 - Lot G2415 - Enrichment 1

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	49	1.38	0.22	0.09	0.20
Derivatized - MassChrom Chromsystems	11	110	1.30	0.26	0.12	0.24
Derivatized - non-kit	30	300	1.29	0.27	0.17	0.21
Non-derivatized - MassChrom Chromsystems	9	90	1.49	0.38	0.12	0.36
Non-derivatized - MS-Neo Siemens	5	50	1.28	0.19	0.12	0.15
Non-derivatized - non-kit	13	130	1.58	0.92	0.11	0.92
Non-derivatized - NeoBase Revvity	19	190	1.32	0.17	0.10	0.13
Non-derivatized - NeoBase 2 Revvity	70	700	1.37	0.20	0.12	0.16

C18 - Lot H2415 - Enrichment 3

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	3.21	0.56	0.25	0.50
Derivatized - MassChrom Chromsystems	11	110	2.96	0.61	0.26	0.56
Derivatized - non-kit	29	290	2.89	0.60	0.34	0.50
Non-derivatized - MassChrom Chromsystems	9	90	3.44	0.86	0.30	0.81
Non-derivatized - MS-Neo Siemens	5	50	2.94	0.49	0.25	0.42
Non-derivatized - non-kit	13	130	3.67	1.98	0.33	1.95
Non-derivatized - NeoBase Revvity	19	190	3.18	0.48	0.27	0.40
Non-derivatized - NeoBase 2 Revvity	70	697	3.17	0.47	0.29	0.37

C18 - Lot I2415 - Enrichment 5

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - ClinSpot Complete Kit RECIPE	5	50	5.27	1.00	0.38	0.93
Derivatized - MassChrom Chromsystems	11	110	4.43	0.92	0.45	0.80
Derivatized - non-kit	30	300	4.44	0.89	0.50	0.74
Non-derivatized - MassChrom Chromsystems	9	90	5.29	1.40	0.45	1.33
Non-derivatized - MS-Neo Siemens	5	50	4.47	0.81	0.37	0.72

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Non-derivatized - non-kit	13	130	5.44	2.90	0.40	2.88
Non-derivatized - NeoBase Revvity	19	190	4.82	0.65	0.39	0.52
Non-derivatized - NeoBase 2 Revvity	70	697	4.78	0.67	0.41	0.53

Hydroxystearoylcarnitine (C18OH) (μmol/L blood)

C18OH - Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	11	110	0.02	0.02	0.01	0.02
Derivatized - non-kit	19	190	0.01	0.03	0.01	0.02
Non-derivatized - MassChrom Chromsystems	5	49	0.01	0.01	0.01	0.01
Non-derivatized - non-kit	12	117	0.01	0.02	0.01	0.02
Non-derivatized - NeoBase Revvity	17	170	0.01	0.01	0.01	0.01
Non-derivatized - NeoBase 2 Revvity	61	599	0.00	0.01	0.00	0.01

C18OH - Lot G2415 - Enrichment 0.25

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	11	110	0.20	0.06	0.03	0.05
Derivatized - non-kit	19	190	0.20	0.08	0.04	0.07
Non-derivatized - MassChrom Chromsystems	6	60	0.20	0.07	0.02	0.06
Non-derivatized - non-kit	12	120	0.43	0.71	0.08	0.71
Non-derivatized - NeoBase Revvity	19	190	0.17	0.03	0.02	0.02
Non-derivatized - NeoBase 2 Revvity	66	660	0.18	0.04	0.02	0.04

C18OH - Lot H2415 - Enrichment 1

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	11	110	0.74	0.18	0.08	0.16
Derivatized - non-kit	19	190	0.78	0.28	0.11	0.26
Non-derivatized - MassChrom Chromsystems	6	60	0.74	0.27	0.09	0.25
Non-derivatized - non-kit	12	120	1.59	2.53	0.19	2.52
Non-derivatized - NeoBase Revvity	19	189	0.68	0.12	0.06	0.11
Non-derivatized - NeoBase 2 Revvity	66	660	0.69	0.15	0.07	0.14

C18OH - Lot I2415 - Enrichment 1.5

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Derivatized - MassChrom Chromsystems	11	110	1.07	0.28	0.12	0.26
Derivatized - non-kit	19	190	1.16	0.43	0.18	0.39
Non-derivatized - MassChrom Chromsystems	6	60	1.11	0.41	0.13	0.38
Non-derivatized - non-kit	12	120	2.30	3.69	0.33	3.68
Non-derivatized - NeoBase Revvity	19	190	1.00	0.15	0.08	0.12
Non-derivatized - NeoBase 2 Revvity	66	660	1.01	0.22	0.10	0.20

C20:0-lysophosphatidylcholine (C20-LPC) (μmol/L blood)

C20-LPC - Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Non-derivatized - NeoBase 2 Revvity	26	258	0.2	0.14	0.07	0.12

C20-LPC - Lot G2415 - Enrichment 0.25

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Non-derivatized - NeoBase 2 Revvity	26	258	0.48	0.27	0.1	0.25

C20-LPC - Lot H2415 - Enrichment 0.5

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Non-derivatized - NeoBase 2 Revvity	26	258	0.74	0.41	0.15	0.38

C20-LPC - Lot I2415 - Enrichment 2

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Non-derivatized - NeoBase 2 Revvity	26	258	2.25	1.24	0.44	1.16

C22:0-lysophosphatidylcholine (C22-LPC) (μmol/L blood)

C22-LPC - Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Non-derivatized - NeoBase 2 Revvity	27	268	0.1	0.07	0.04	0.06

C22-LPC - Lot G2415 - Enrichment 0.25

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Non-derivatized - NeoBase 2 Revvity	27	268	0.35	0.19	0.09	0.16

C22-LPC - Lot H2415 - Enrichment 0.5

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Non-derivatized - NeoBase 2 Revvity	27	268	0.64	0.3	0.13	0.27

C22-LPC - Lot I2415 - Enrichment 2

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Non-derivatized - NeoBase 2 Revvity	27	268	2.18	1.03	0.44	0.94

C24:0-lysophosphatidylcholine (C24-LPC) (μmol/L blood)

C24-LPC - Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Non-derivatized - NeoBase 2 Revvity	35	347	0.2	0.11	0.05	0.1

C24-LPC - Lot G2415 - Enrichment 0.25

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Non-derivatized - NeoBase 2 Revvity	35	347	0.41	0.17	0.08	0.15

C24-LPC - Lot H2415 - Enrichment 0.5

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Non-derivatized - NeoBase 2 Revvity	35	348	0.67	0.26	0.12	0.23

C24-LPC - Lot I2415 - Enrichment 2

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Non-derivatized - NeoBase 2 Revvity	35	348	2.11	0.73	0.3	0.66

C26:0-lysophosphatidylcholine (C26-LPC) (μmol/L blood)

C26-LPC - Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Non-derivatized - NeoBase 2 Revvity	42	417	0.15	0.09	0.05	0.08
LC-negative ion mode	9	90	0.01	0.01	0.01	0.01

C26-LPC - Lot G2415 - Enrichment 0.25

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Non-derivatized - NeoBase 2 Revvity	44	437	0.38	0.14	0.08	0.11
LC-negative ion mode	10	100	0.21	0.04	0.03	0.03

C26-LPC - Lot H2415 - Enrichment 0.5

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Non-derivatized - NeoBase 2 Revvity	44	438	0.58	0.16	0.10	0.13
LC-negative ion mode	10	100	0.40	0.07	0.04	0.06

C26-LPC - Lot I2415 - Enrichment 2

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Non-derivatized - NeoBase 2 Revvity	44	438	1.93	0.5	0.29	0.40
LC-negative ion mode	10	100	1.63	0.3	0.16	0.25

Adenosine (Ado) (μmol/L blood)

Ado - Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Non-derivatized - NeoBase 2 Revvity	36	360	0.19	0.09	0.04	0.08

Ado - Lot G2415 - Enrichment 1

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Non-derivatized - NeoBase 2 Revvity	36	359	1.02	0.18	0.11	0.15

Ado - Lot H2415 - Enrichment 5

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Non-derivatized - NeoBase 2 Revvity	36	359	4.81	0.64	0.33	0.55

Ado - Lot I2415 - Enrichment 10

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Non-derivatized - NeoBase 2 Revvity	36	360	8.66	1.18	0.62	1.00

Deoxyadenosine (dAdo) (μmol/L blood)

dAdo - Lot F2415 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Non-derivatized - NeoBase 2 Revvity	32	316	0.02	0.02	0.01	0.01

dAdo - Lot G2415 - Enrichment 0.5

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Non-derivatized - NeoBase 2 Revvity	33	329	0.44	0.09	0.04	0.09

dAdo - Lot H2415 - Enrichment 2.5

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Non-derivatized - NeoBase 2 Revvity	33	330	2.29	0.47	0.17	0.44

dAdo - Lot I2415 - Enrichment 5

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Non-derivatized - NeoBase 2 Revvity	33	330	4.31	0.88	0.32	0.82

Galactoceramidase (GALC) (μmol/hr/L blood)

GALC - Lot F2408 - Mean Activity 0.1

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
NeoLSD MSMS Kit Revvity	17	170	0.13	0.1	0.05	0.08

GALC - Lot G2408 - Mean Activity 0.34

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
NeoLSD MSMS Kit Revvity	21	210	0.55	0.14	0.08	0.11

GALC - Lot H2408 - Mean Activity 2.48

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
NeoLSD MSMS Kit Revvity	22	220	3.22	0.5	0.22	0.45

GALC - Lot I2408 - Mean Activity 4.86

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
NeoLSD MSMS Kit Revvity	22	220	6.18	0.91	0.47	0.78

Acid α-Glucosidase (GAA) (μmol/hr/L blood)

GAA - Lot F2408 - Mean Activity 0.16

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
NeoLSD MSMS Kit Revvity	28	279	0.11	0.08	0.04	0.07

GAA - Lot G2408 - Mean Activity 0.63

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Digital Microfluidic Fluorescence	6	60	2.67	0.65	0.42	0.49
NeoLSD MSMS Kit Revvity	32	319	0.64	0.12	0.07	0.10

GAA - Lot H2408 - Mean Activity 3.97

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Digital Microfluidic Fluorescence	7	70	14.82	2.83	1.81	2.18
Fluorometric manual LSD non-kit	6	60	12.68	23.96	3.11	23.76
NeoLSD MSMS Kit Revvity	33	329	4.44	0.80	0.42	0.68

GAA - Lot I2408 - Mean Activity 6.11

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Digital Microfluidic Fluorescence	7	70	23.72	4.49	2.61	3.66
Fluorometric manual LSD non-kit	6	60	22.31	41.64	6.98	41.05
NeoLSD MSMS Kit Revvity	33	329	7.07	1.14	0.69	0.91

α -L-Iduronidase (IDUA) ($\mu\text{mol/hr/L}$ blood)

IDUA - Lot F2408 - Mean Activity 0.06

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
NeoLSD MSMS Kit Revvity	26	259	0.09	0.06	0.02	0.05

IDUA - Lot G2408 - Mean Activity 0.39

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
NeoLSD MSMS Kit Revvity	34	339	0.49	0.11	0.05	0.09

IDUA - Lot H2408 - Mean Activity 3.17

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Digital Microfluidic Fluorescence	6	60	10.22	1.38	0.80	1.12
NeoLSD MSMS Kit Revvity	35	350	3.78	0.66	0.33	0.58

IDUA - Lot I2408 - Mean Activity 5.62

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Digital Microfluidic Fluorescence	6	60	21.80	3.57	1.88	3.04
NeoLSD MSMS Kit Revvity	35	350	6.88	1.34	0.60	1.19

α -Galactosidase (GLA) ($\mu\text{mol/hr/L}$ blood)

GLA - Lot F2408 - Mean Activity 1.9

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
NeoLSD MSMS Kit Revvity	19	190	0.65	0.62	0.19	0.59

GLA - Lot G2408 - Mean Activity 2.95

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
NeoLSD MSMS Kit Revvity	23	228	1.73	0.54	0.2	0.5

GLA - Lot H2408 - Mean Activity 7.83

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Fluorometric manual LSD non-kit	5	50	10.78	8.11	1.60	7.94
NeoLSD MSMS Kit Revvity	23	230	7.66	1.23	0.45	1.15

GLA - Lot I2408 - Mean Activity 12.55

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
Fluorometric manual LSD non-kit	5	50	18.82	14.62	2.57	14.39
NeoLSD MSMS Kit Revvity	23	230	13.65	2.43	0.95	2.24

β-Glucocerebrosidase (ABG) (μmol/hr/L blood)

ABG - Lot F2408 - Mean Activity 0.18

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
NeoLSD MSMS Kit Revvity	18	180	0.27	0.14	0.08	0.11

ABG - Lot G2408 - Mean Activity 0.6

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
NeoLSD MSMS Kit Revvity	22	219	0.9	0.25	0.16	0.2

ABG - Lot H2408 - Mean Activity 3.33

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
NeoLSD MSMS Kit Revvity	22	220	4.42	0.93	0.51	0.77

ABG - Lot I2408 - Mean Activity 6.16

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
NeoLSD MSMS Kit Revvity	22	219	8.35	1.69	0.98	1.37

Acid Sphingomyelinase (ASM) (μmol/hr/L blood)

ASM - Lot F2408 - Mean Activity 0.05

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
NeoLSD MSMS Kit Revvity	14	140	0.07	0.08	0.02	0.08

ASM - Lot G2408 - Mean Activity 0.11

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
NeoLSD MSMS Kit Revvity	15	150	0.19	0.1	0.04	0.09

ASM - Lot H2408 - Mean Activity 0.95

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
NeoLSD MSMS Kit Revvity	18	179	1.16	0.31	0.15	0.28

ASM - Lot I2408 - Mean Activity 1.54

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
NeoLSD MSMS Kit Revvity	18	180	2.13	0.57	0.27	0.50

17 α -Hydroxyprogesterone (17OHP2) (ng/mL serum)

17OHP2 - Lot A2411 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	12	118	0.3	0.5	0.3	0.4

17OHP2 - Lot B2411 - Enrichment 10

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	25	250	10.6	2.9	1.4	2.5

17OHP2 - Lot C2411 - Enrichment 50

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	25	250	52.4	12.5	6.1	10.9

17OHP2 - Lot D2411 - Enrichment 100

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	25	250	103.2	25.6	11.9	22.6

17OHP2 - Lot E2411 - Enrichment 500

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	24	240	529.3	126.7	57.5	112.9

4-Androstenedione (4AD2) (ng/mL serum)

4AD2 - Lot A2411 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	12	117	0.3	0.5	0.2	0.4

4AD2 - Lot B2411 - Enrichment 10

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	24	240	10.9	3.3	1.6	3.0

4AD2 - Lot C2411 - Enrichment 50

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	24	240	54.9	14.4	6.2	13.0

4AD2 - Lot D2411 - Enrichment 100

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	24	240	106.4	31.2	15.1	27.3

4AD2 - Lot E2411 - Enrichment 500

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	23	230	543.7	151.2	65.4	136.3

Cortisol (CORT2) (ng/mL serum)

CORT2 - Lot A2411 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	12	117	1.2	1.7	1.0	1.4

CORT2 - Lot B2411 - Enrichment 10

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	24	240	10.2	3.8	1.9	3.3

CORT2 - Lot C2411 - Enrichment 50

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	24	238	54.5	12.4	5.9	10.9

CORT2 - Lot D2411 - Enrichment 100

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	24	240	105.7	24.9	10.2	22.7

CORT2 - Lot E2411 - Enrichment 500

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	23	230	561.7	129.1	48.7	119.6

11-Deoxycortisol (11D2) (ng/mL serum)

11D2 - Lot A2411 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	11	107	0.4	1.4	0.6	1.2

11D2 - Lot B2411 - Enrichment 10

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	19	188	10.9	4.0	1.4	3.8

11D2 - Lot C2411 - Enrichment 50

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	19	189	57.8	16.8	7.2	15.2

11D2 - Lot D2411 - Enrichment 100

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	19	189	110.9	33.9	11.9	31.8

11D2 - Lot E2411 - Enrichment 500

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	18	178	562.4	183.0	53.8	174.9

21-Deoxycortisol (21D2) (ng/mL serum)

21D2 - Lot A2411 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	12	116	0.6	1.3	0.4	1.2

21D2 - Lot B2411 - Enrichment 10

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	21	208	11.3	4.1	2.0	3.6

21D2 - Lot C2411 - Enrichment 50

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	21	208	54.4	16.6	6.7	15.2

21D2 - Lot D2411 - Enrichment 100

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	21	207	96.2	23.2	9.8	21.1

21D2 - Lot E2411 - Enrichment 500

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	20	196	549.7	123.7	53.8	111.3

Methylmalonic Acid (MMA2) (μmol/L blood)

MMA2 - Lot A2414 - Enrichment 2

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	27	268	2.1	1.1	0.5	1.0

MMA2 - Lot B2414 - Enrichment 5

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	27	268	4.9	1.9	0.7	1.8

MMA2 - Lot C2414 - Enrichment 20

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	27	270	18.2	6.1	2.1	5.7

MMA2 - Lot D2414 - Enrichment 50

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	27	270	45.6	15.7	4.3	15.1

Ethylmalonic Acid (EMA2) (μmol/L blood)

EMA2 - Lot A2414 - Enrichment 2

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	8	80	2.2	1.1	0.5	1.0

EMA2 - Lot B2414 - Enrichment 5

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	8	80	4.9	2.0	0.7	1.9

EMA2 - Lot C2414 - Enrichment 20

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	8	80	17.7	6.5	2.8	5.9

EMA2 - Lot D2414 - Enrichment 50

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	8	80	44.5	15.2	6.1	13.9

2-Methylcitric Acid (MCA2) (μmol/L blood)

MCA2 - Lot A2414 - Enrichment 1

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	21	210	1.1	0.8	0.4	0.7

MCA2 - Lot B2414 - Enrichment 2.5

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	22	220	2.3	1.3	0.5	1.2

MCA2 - Lot C2414 - Enrichment 10

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	22	220	9.0	5.3	1.4	5.2

MCA2 - Lot D2414 - Enrichment 25

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	22	220	21.9	13.2	2.9	12.9

Total Homocysteine (tHCY2) (μmol/L blood)

tHCY2 - Lot A2414 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	26	260	9.5	5.7	1.3	5.5

tHCY2 - Lot B2414 - Enrichment 10

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	25	250	19.5	9.9	2.3	9.6

tHCY2 - Lot C2414 - Enrichment 50

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	25	250	61.9	31.6	6.7	30.9

tHCY2 - Lot D2414 - Enrichment 100

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	25	250	109.6	57.0	11.7	55.8

Alloisoleucine (ALE2) (μmol/L blood)

ALE2 - Lot A2413 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	14	140	1.4	2.3	0.3	2.3

ALE2 - Lot B2413 - Enrichment 100

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	15	150	82.8	18.9	6.6	17.7

ALE2 - Lot C2413 - Enrichment 200

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	15	150	164.4	42.6	19.2	38.1

ALE2 - Lot D2413 - Enrichment 400

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	15	150	323.7	78.1	34.1	70.3

ALE2 - Lot E2413 - Enrichment 800

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	15	150	633.6	142.9	50.8	133.5

Isoleucine (Ile2) (μmol/L blood)

Ile2 - Lot A2413 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	13	129	21.2	9.3	4.5	8.1

Ile2 - Lot B2413 - Enrichment 100

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	13	130	115.7	19.3	10.0	16.5

Ile2 - Lot C2413 - Enrichment 200

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	13	130	214.4	35.6	18.0	30.7

Ile2 - Lot D2413 - Enrichment 400

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	13	130	400.8	68.1	33.9	59.0

Ile2 - Lot E2413 - Enrichment 800

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	13	130	779.4	117.7	61.9	100.1

Leucine (Leu2) (μmol/L blood)

Leu2 - Lot A2413 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	14	140	43.1	9.6	4.6	8.4

Leu2 - Lot B2413 - Enrichment 100

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	14	140	146.2	48.5	9.9	47.5

Leu2 - Lot C2413 - Enrichment 200

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	14	140	252.3	93.0	20.6	90.7

Leu2 - Lot D2413 - Enrichment 400

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	14	140	456.7	173.7	34.6	170.2

Leu2 - Lot E2413 - Enrichment 800

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	14	140	843.6	329.8	62.0	323.9

Phenylalanine (Phe2) (μmol/L blood)

Phe2 - Lot A2413 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	12	120	20.1	4.8	2.6	4.0

Phe2 - Lot B2413 - Enrichment 100

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	12	120	107.9	16.0	8.5	13.5

Phe2 - Lot C2413 - Enrichment 200

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	12	120	201.0	28.2	15.1	23.9

Phe2 - Lot D2413 - Enrichment 400

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	12	120	367.2	59.4	34.5	48.4

Phe2 - Lot E2413 - Enrichment 800

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	12	120	719.4	100.5	40.5	92.0

Tyrosine (Tyr2) (μmol/L blood)

Tyr2 - Lot A2413 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	11	108	25.9	5.5	2.3	5.0

Tyr2 - Lot B2413 - Enrichment 100

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	11	110	111.5	19.9	8.1	18.2

Tyr2 - Lot C2413 - Enrichment 200

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	11	110	202.2	31.2	13.8	28.0

Tyr2 - Lot D2413 - Enrichment 400

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	11	110	371.9	61.6	29.1	54.3

Tyr2 - Lot E2413 - Enrichment 800

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	11	110	718.4	101.2	39.3	93.3

Valine (Val2) (μmol/L blood)

Val2 - Lot A2413 - Enrichment 0

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	16	160	58.0	14.8	6.3	13.4

Val2 - Lot B2413 - Enrichment 100

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	16	160	140.8	28.2	10.5	26.2

Val2 - Lot C2413 - Enrichment 200

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	16	160	224.3	45.4	18.5	41.5

Val2 - Lot D2413 - Enrichment 400

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	16	160	384.4	78.4	28.2	73.2

Val2 - Lot E2413 - Enrichment 800

Method	Number of Labs	Total N	Total Mean	Total SD	Intra Lab SD	Inter Lab SD
LC-MS/MS non-kit	16	160	696.9	123.1	46.6	113.9

This *NEWBORN SCREENING QUALITY ASSURANCE PROGRAM (NSQAP)* report is an internal publication distributed to program participants and selected program colleagues. The laboratory quality assurance program is a project cosponsored by the Centers for Disease Control and Prevention (CDC) and the Association of Public Health Laboratories.

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