

Newborn Screening Quality Assurance Program Biochemical Proficiency Testing Program Report 2023 Quarter 4 Report

Provided by the Newborn Screening and Molecular Biology Branch
Centers for Disease Control and Prevention
4770 Buford Highway NE, S110-3
Atlanta, GA, 30341-3724
Email: NSQAPDMT@cdc.gov

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REPORT AUTHORIZATION

This report has been reviewed and authorized by Dr. Joanne Mei, Laboratory Chief, Newborn Screening Quality Assurance Program.

CONFIDENTIALITY STATEMENT

NSQAP participant information and evaluations are strictly confidential and shared only with individual participants, unless written authorization for release is received.

Event Summary

This report summarizes Proficiency Testing (PT) data received during the 2023 Quarter 4 Newborn Screening Quality Assurance Program's (NSQAP) PT event. Data were collected in the NSQAP participant portal. <https://nbs.dynamics365portals.us/>

On September 26, 2023, NSQAP distributed panels of five unknown dried blood spot (DBS) specimens to all active participants.

The hormone panel contained predetermined concentrations of thyroxine (T4), thyroid-stimulating hormone (TSH), 17 α -hydroxyprogesterone (17OHP), and total galactose (TGal). The amino acid panel contained arginine (Arg), citrulline (Cit), creatine (Cre), guanidinoacetic acid (GUAC), guanidinoacetate methyltransferase deficiency ratio (GAMTr), leucine (Leu), methionine (Met), phenylalanine (Phe), succinylacetone (SUAC), tyrosine (Tyr), and valine (Val). The acylcarnitine panel contained low free carnitine (C0(L)), low acylcarnitine (C2(L)), propionylcarnitine (C3), malonylcarnitine [derivatized] (C3DC), butyrylcarnitine (C4), hydroxybutyrylcarnitine [derivatized] (C4OH), malonylcarnitine + hydroxybutyrylcarnitine [non-derivatized] (C3DC+C4OH), isovalerylcarnitine (C5), tiglylcarnitine (C5:1), glutarylcarnitine (C5DC), hydroxyisovalerylcarnitine, (C5OH), hexanoylcarnitine, (C6), octanoylcarnitine(C8), decanoylcarnitine (C10), decenoylcarnitine (C10:1), decadienoylcarnitine (C10:2), myristoylcarnitine (C14), tetradecenoylcarnitine (C14:1), palmitoylcarnitine (C16), hydroxypalmitoylcarnitine (C16OH), stearoylcarnitine (C18), oleoylcarnitine (C18:1) and hydroxystearoylcarnitine (C18OH). Separate panels for biotinidase deficiency (BIOT), galactose-1-phosphate uridylyltransferase (GALT) deficiency, glucose-6-phosphate dehydrogenase (G6PD) deficiency, and immunoreactive trypsinogen (IRT) were sent to participating laboratories. We processed data from 416 laboratories.

Specimen Consensus

A consensus of 80% of US laboratories, as long as 10 or more US laboratories report results, must be reached for a specimen to be evaluated. If there were less than 10 US laboratories reporting results for any one specimen, all submitted results were evaluated. NSQAP occasionally challenges cutoff levels by enriching samples near cutoff levels. The NSQAP PT Committee closely reviews all specimen data. Specimens that were not evaluated are considered educational.

All specimens met the 80% criteria for the 2023 Q4 Biochemistry PT event.

Evaluations

NSQAP evaluated each specimen as “Acceptable” or “Unacceptable.” For each analyte and specimen, the participating laboratory’s assessment must match the CDC certified assessment to achieve an “Acceptable” evaluation. When assessments differ, the evaluation will be “Unacceptable.” NSQAP does not identify “Unacceptable” results as “false negative” or “false positive.” It is the responsibility of the laboratory to categorize “Unacceptable” results according to their protocols and policies.

Proficiency Testing Materials Preparation

NSQAP produces PT specimens from adult donor blood products and purchased umbilical cord blood, adjusted to 50% hematocrit before applying to filter paper. NSQAP tests PT specimens for homogeneity, accuracy, stability, and suitability for newborn screening assays.

- **Amino acid and acylcarnitine specimens** were enriched with commercially available standards. Small variances in enrichments and recoveries might result from impurities in the purchased materials.
 - **C0(L) and C2(L) PT deficient specimens** were produced by washing fresh RBCs at least six times then combining with charcoal-stripped plasma.
- **Congenital hypothyroid PT specimens** were enriched with measured amounts of T4 and TSH after reconstituting washed RBCs with purchased T4-depleted charcoal-stripped plasma.
- **TGal specimens** were enriched with galactose and galactose-1-phosphate, allowing measurement of free galactose (galactose alone) and total galactose (free galactose plus galactose-1- phosphate).
- **BIOT deficient PT specimens** were made using heat-treated charcoal-stripped plasma combined with compatible donor RBCs.
- **GALT and G6PD deficient PT specimens** were made using a 50/50 saline/serum solution combined with compatible washed RBCs and followed by heat-treatment.
- **IRT specimens** were made from washed, hematocrit-adjusted blood treated with a protease inhibitor then enriched with commercially purchased IRT.

Proficiency Testing Data Handling

Tables in this report include Specimen Certification, Frequency Distribution of Participants’ Clinical Assessments, Overall Statistics, and Mean Reported Concentration by Method. Individual laboratory data certification and evaluations are found in a separate report.

**Newborn Screening Quality Assurance Program
Specimen Certification
Year: 2023 Quarter: 4**

**Program: Amino Acids
Expected Values**

	Specimen				
	20234005001	20234005002	20234005003	20234005004	20234005005
Analyte	Expected Value				
Arg (µmol/L blood)	6.1	4.9	5.4	4.1	7.1
CRE (µmol/L blood)	71.3	405.7	329.2	369.9	312.8
Cit (µmol/L blood)	4.7	10.0	7.0	10.7	3.5
GAMTr	298.7	2.5	3.0	2.8	2.6
GUAC (µmol/L blood)	21.3	1.0	1.0	1.1	0.8
Leu (µmol/L blood)	18.9	14.5	19.0	14.1	621.2
Met (µmol/L blood)	1.2	2.0	203.3	2.1	1.7
Phe (µmol/L blood)	6.3	356.4	8.6	6.1	6.6
SUAC (µmol/L blood)	0.2	0.2	0.2	70.2	0.2
Tyr (µmol/L blood)	10.5	17.8	17.6	817.1	17.6
Val (µmol/L blood)	25.3	20.9	23.7	20.4	629.0

**Program: Amino Acids
Expected Clinical Assessments**

	Specimen				
	20234005001	20234005002	20234005003	20234005004	20234005005
Analyte	Expected Assessment				
Arg (µmol/L blood)	1	1	1	1	1
CRE	2	1	1	1	1
Cit (µmol/L blood)	1	1	1	1	1
GAMTr	2	1	1	1	1
GUAC	2	1	1	1	1
Leu (µmol/L blood)	1	1	1	1	2
Met (µmol/L blood)	1	1	2	1	1
Phe (µmol/L blood)	1	2	1	1	1
SUAC (µmol/L blood)	1	1	1	2	1
Tyr (µmol/L blood)	1	1	1	2	1
Val (µmol/L blood)	1	1	1	1	2

Note: Expected Value = sum of endogenous and enrichment values

Note: 1 = Within Normal Limits, 2 = Outside Normal Limits, NE = Not Evaluated

**Newborn Screening Quality Assurance Program
Specimen Certification
Year: 2023 Quarter: 4**

**Program: Acylcarnitines
Expected Values**

	Specimen				
	20234006001	20234006002	20234006003	20234006004	20234006005
Analyte	Expected Value				
C0(L) (µmol/L blood)	41.45	41.92	43.29	47.98	48.98
C2(L) (µmol/L blood)	29.01	29.39	30.15	31.45	37.28
C3 (µmol/L blood)	0.88	0.91	0.76	0.65	0.66
C3DC (µmol/L blood)	0.02	0.02	0.02	0.16	0.03
C3DC+C4OH (µmol/L blood)	0.03	0.03	0.04	0.04	0.06
C4 (µmol/L blood)	0.03	0.03	0.09	0.03	0.04
C4OH (µmol/L blood)	0.04	0.04	0.06	0.04	0.09
C5 (µmol/L blood)	0.02	0.02	0.06	0.03	3.05
C5:1 (µmol/L blood)	0.01	0.01	1.51	0.01	0.01
C5DC (µmol/L blood)	0.01	0.01	0.01	0.02	0.02
C5OH (µmol/L blood)	0.16	0.18	2.78	0.22	0.14
C6 (µmol/L blood)	0.01	0.01	0.01	0.01	0.01
C8 (µmol/L blood)	0.01	0.01	0.01	0.01	0.01
C10 (µmol/L blood)	0.01	0.01	0.01	0.01	0.01
C10:1 (µmol/L blood)	0.01	0.01	0.01	0.01	0.01
C10:2 (µmol/L blood)	0.00	0.00	0.00	0.00	0.00
C14 (µmol/L blood)	3.02	0.02	0.03	0.02	0.06
C14:1 (µmol/L blood)	6.01	0.01	0.01	0.01	0.02
C16 (µmol/L blood)	0.48	20.51	0.62	0.42	0.76
C16OH (µmol/L blood)	0.01	0.01	0.01	2.01	0.01
C18 (µmol/L blood)	0.39	6.41	0.42	0.30	0.41
C18:1 (µmol/L blood)	0.47	20.51	0.73	0.59	0.85
C18OH (µmol/L blood)	0.01	0.00	0.01	2.01	0.01

Note: Expected Value = sum of endogenous and enrichment values

**Newborn Screening Quality Assurance Program
Specimen Certification
Year: 2023 Quarter: 4**

**Program: Acylcarnitines
Expected Clinical Assessments**

Analyte	Specimen				
	20234006001	20234006002	20234006003	20234006004	20234006005
Expected Assessment	Expected Assessment	Expected Assessment	Expected Assessment	Expected Assessment	Expected Assessment
C0(L) (µmol/L blood)	1	1	1	1	1
C2(L) (µmol/L blood)	1	1	1	1	1
C3 (µmol/L blood)	1	1	1	1	1
C3DC (µmol/L blood)	1	1	1	1	1
C3DC+C4OH (µmol/L blood)	1	1	1	1	1
C4 (µmol/L blood)	1	1	1	1	1
C4OH (µmol/L blood)	1	1	1	1	1
C5 (µmol/L blood)	1	1	1	1	2
C5:1 (µmol/L blood)	1	1	2	1	1
C5DC (µmol/L blood)	1	1	1	1	1
C5OH (µmol/L blood)	1	1	2	1	1
C6 (µmol/L blood)	1	1	1	1	1
C8 (µmol/L blood)	1	1	1	1	1
C10 (µmol/L blood)	1	1	1	1	1
C10:1 (µmol/L blood)	1	1	1	1	1
C10:2 (µmol/L blood)	1	1	1	1	1
C14 (µmol/L blood)	2	1	1	1	1
C14:1 (µmol/L blood)	2	1	1	1	1
C16 (µmol/L blood)	1	2	1	1	1
C16OH (µmol/L blood)	1	1	1	2	1
C18 (µmol/L blood)	1	2	1	1	1
C18:1 (µmol/L blood)	1	2	1	1	1
C18OH (µmol/L blood)	1	1	1	2	1

Note: 1 = Within Normal Limits, 2 = Outside Normal Limits, NE = Not Evaluated

**Newborn Screening Quality Assurance Program
Specimen Certification
Year: 2023 Quarter: 4**

**Program: HORMPT
Expected Values**

	Specimen				
	20234001001	20234001002	20234001003	20234001004	20234001005
Analyte	Expected Value				
T4 (µg/dL serum)	15.4	15.5	8.2	15.4	16.0
TSH (µIU/mL serum)	1.4	1.5	91.6	1.4	1.2
17OHP (ng/mL serum)	0.3	0.8	0.9	86.3	0.9
TGal (mg/dL blood)	0.0	0.0	0.9	0.0	25.0

**Program: Hormones and Total Galactose
Expected Clinical Assessments**

	Specimen				
	20234001001	20234001002	20234001003	20234001004	20234001005
Analyte	Expected Assessment				
T4 (µg/dL serum)	1	1	1	1	1
TSH (µIU/mL serum)	1	1	2	1	1
17OHP (ng/mL serum)	1	1	1	2	1
TGal (mg/dL blood)	1	1	1	1	2

Note: Expected Value = sum of endogenous and enrichment values
Note: 1 = Within Normal Limits, 2 = Outside Normal Limits, NE = Not Evaluated

**Newborn Screening Quality Assurance Program
Specimen Certification
Year: 2023 Quarter: 4**

**Program: Immunoreactive Trypsinogen
Expected Clinical Assessments**

	Specimen				
	20234008001	20234008002	20234008003	20234008004	20234008005
Analyte	Expected Value				
IRT (ng/mL blood)	249.6	10.5	5.5	14.0	133.8

**Program: Immunoreactive Trypsinogen
Specimen Certification**

	Specimen				
	20234008001	20234008002	20234008003	20234008004	20234008005
Analyte	Expected Assessment				
IRT (ng/mL blood)	2	1	1	1	2

**Note: Expected Value = sum of endogenous and enrichment values
Note: 1 = Within Normal Limits, 2 = Outside Normal Limits, NE = Not Evaluated**

**Newborn Screening Quality Assurance Program
Specimen Certification
Year: 2023 Quarter: 4**

**Program: Biotinidase
Expected Clinical Assessments**

	Specimen				
	20234007001	20234007002	20234007003	20234007004	20234007005
Analyte	Expected Assessment				
BIOT	1	1	1	2	1

**Program: Galactose-1-phosphate Uridyltransferase
Expected Clinical Assessments**

	Specimen				
	20234009001	20234009002	20234009003	20234009004	20234009005
Analyte	Expected Assessment				
GALT	1	1	1	1	2

**Program: Glucose-6-phosphate Dehydrogenase Deficiency
Expected Clinical Assessments**

	Specimen				
	20234003001	20234003002	20234003003	20234003004	20234003005
Analyte	Expected Assessment				
G6PD	1	2	1	1	2

**Newborn Screening Quality Assurance Program
Frequency Distribution of Participants' Clinical Assessments
Year: 2023, Quarter 4**

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**Program: Acylcarnitines (ACPT)
Domestic**

Analyte	Specimen Number									
	20234006001		20234006002		20234006003		20234006004		20234006005	
	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL
C0(L)	0	44	0	44	0	44	0	44	0	44
C2(L)	0	19	0	19	0	19	0	19	0	19
C3	0	44	0	44	0	44	0	44	0	44
C3DC	0	8	0	8	0	8	0	8	0	8
C3DC+C4OH	0	28	0	28	0	28	0	28	0	28
C4	0	40	0	40	0	40	0	40	0	40
C4OH	0	7	0	7	0	7	0	7	0	7
C5	0	44	0	44	0	44	0	44	44	0
C5:1	0	43	0	43	43	0	0	43	0	43
C5DC	1	41	0	42	0	42	0	42	0	42
C5OH	0	42	0	42	42	0	0	42	0	42
C6	0	38	0	38	0	38	0	38	0	38
C8	0	44	0	44	0	44	0	44	0	44
C10	0	38	2	36	0	38	0	38	0	38
C10:1	0	36	0	36	0	36	0	36	0	36
C10:2	1	23	0	24	0	24	0	24	0	24
C14	38	0	0	38	0	38	0	38	0	38
C14:1	44	0	2	42	0	44	0	44	0	44
C16	0	43	43	0	0	43	0	43	0	43
C16OH	0	44	0	44	0	44	44	0	0	44
C18	0	35	35	0	0	35	0	35	0	35
C18:1	0	38	38	0	0	38	0	38	0	38
C18OH	0	34	1	33	0	34	34	0	0	34

**Newborn Screening Quality Assurance Program
Frequency Distribution of Participants' Clinical Assessments
Year: 2023, Quarter 4**

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**Program: Acylcarnitines (ACPT)
International**

Analyte	Specimen Number									
	20234006001		20234006002		20234006003		20234006004		20234006005	
	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL
C0(L)	5	242	4	243	4	243	6	241	4	243
C2(L)	4	193	3	194	3	194	4	193	4	193
C3	3	238	1	240	1	240	0	241	1	241
C3DC	2	65	2	65	1	66	1	66	1	66
C3DC+C4OH	0	103	0	103	0	103	0	103	0	103
C4	1	221	1	221	1	221	0	222	1	221
C4OH	0	64	0	64	1	63	0	64	2	62
C5	0	249	0	249	0	249	0	249	246	3
C5:1	2	211	2	211	205	8	1	212	3	210
C5DC	0	237	1	236	1	236	0	237	0	237
C5OH	0	207	0	207	202	5	0	207	2	205
C6	2	225	2	225	1	226	1	226	1	226
C8	1	252	1	252	1	252	1	252	2	251
C10	3	237	41	199	0	240	0	240	0	240
C10:1	8	201	0	209	0	209	0	209	0	209
C10:2	11	142	0	153	0	153	0	153	0	153
C14	222	8	2	228	0	230	0	230	2	228
C14:1	225	2	9	218	0	227	0	227	1	228
C16	2	228	222	8	0	230	2	228	2	228
C16OH	1	236	2	235	0	237	229	8	1	236
C18	0	221	212	9	0	221	0	221	0	221
C18:1	0	212	208	4	0	212	0	212	3	209
C18OH	0	192	1	191	0	192	183	9	3	189

**Newborn Screening Quality Assurance Program
Frequency Distribution of Participants' Clinical Assessments**

**Program: Amino Acids (AAPT)
Domestic**

Analyte	Specimen Number									
	20234005001		20234005002		20234005003		20234005004		20234005005	
	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL
ARG	0	37	0	37	0	37	0	37	0	37
CIT	0	42	0	42	0	42	0	42	0	42
CRE	2	2	0	4	0	4	0	4	0	4
GAMTr	4	0	0	4	0	4	0	4	0	4
GUAC	6	0	0	6	0	6	0	6	0	6
LEU	0	43	0	43	0	43	0	43	43	0
MET	0	42	0	42	42	0	0	42	0	42
PHE	2	48	48	2	2	48	2	48	2	48
SUAC	0	41	0	41	0	41	41	0	0	41
TYR	2	47	2	47	2	47	43	6	2	47
VAL	1	29	0	30	1	29	0	30	30	0

**Program: Amino Acids (AAPT)
International**

Analyte	Specimen Number									
	20234005001		20234005002		20234005003		20234005004		20234005005	
	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL
ARG	1	197	0	198	1	197	0	198	2	196
CIT	2	216	0	218	1	217	0	218	1	217
CRE	3	4	0	7	0	7	0	7	0	7
GAMTr	3	0	0	3	0	3	0	3	0	3
GUAC	10	0	0	10	0	10	0	10	0	10
LEU	2	249	3	248	3	248	3	248	239	12
MET	4	238	4	238	238	4	4	238	3	239
PHE	2	302	299	6	3	302	1	304	2	303
SUAC	1	126	1	126	1	126	125	2	2	125
TYR	2	239	1	240	2	239	238	3	2	239
VAL	3	224	4	223	4	223	4	223	221	6

**Newborn Screening Quality Assurance Program
 Frequency Distribution of Participants' Clinical Assessments
 Year: 2023, Quarter 4**

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**Program: Biotinidase (BIOTPT)
 Domestic**

	Specimen Number									
	20234007001		20234007002		20234007003		20234007004		20234007005	
Analyte	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL
BIOT	0	41	0	41	0	41	41	0	0	41

**Program: Biotinidase (BIOTPT)
 International**

	Specimen Number									
	20234007001		20234007002		20234007003		20234007004		20234007005	
Analyte	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL
BIOT	1	169	1	169	1	169	170	0	1	160

**Newborn Screening Quality Assurance Program
 Frequency Distribution of Participants' Clinical Assessments
 Year: 2023, Quarter 4**

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**Program: Galactose-1-phosphate Uridyltransferase (GALTPT)
 Domestic**

	Specimen Number									
	20234009001		20234009002		20234009003		20234009004		20234009005	
Analyte	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL
GALT	0	42	0	42	0	42	0	42	41	1

**Program: Galactose-1-phosphate Uridyltransferase (GALTPT)
 International**

	Specimen Number									
	20234009001		20234009002		20234009003		20234009004		20234009005	
Analyte	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL
GALT	0	101	0	101	1	100	2	99	99	2

**Newborn Screening Quality Assurance Program
 Frequency Distribution of Participants' Clinical Assessments
 Year: 2023, Quarter 4**

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**Program: Glucose-6-phosphate Dehydrogenase (G6PDPT)
 Domestic**

	Specimen Number									
	20234003001		20234003002		20234003003		20234003004		20234003005	
Analyte	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL
G6PD	0	2	2	0	0	2	0	2	2	0

**Program: Glucose-6-phosphate Dehydrogenase (G6PDPT)
 International**

	Specimen Number									
	20234003001		20234003002		20234003003		20234003004		20234003005	
Analyte	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL
G6PD	1	93	94	0	2	92	2	92	91	3

**Newborn Screening Quality Assurance Program
 Frequency Distribution of Participants' Clinical Assessments
 Year: 2023, Quarter 4**

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**Program: Hormones and Total Galactose (HORMPT)
 Domestic**

	Specimen Number									
	20234001001		20234001002		20234001003		20234001004		20234001005	
Analyte	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL
TGAL	0	19	0	19	0	19	1	18	19	0
T4	0	19	0	19	2	17	0	19	0	19
TSH	0	42	0	42	42	0	0	42	0	42
17OHP	1	40	0	41	0	41	40	1	1	40

**Program: Hormones and Total Galactose (HORMPT)
 International**

	Specimen Number									
	20234001001		20234001002		20234001003		20234001004		20234001005	
Analyte	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL
TGAL	1	147	1	147	1	147	1	147	141	7
T4	0	42	1	41	11	31	0	42	0	42
TSH	1	271	1	271	270	2	0	272	1	271
17OHP	0	231	1	230	1	230	223	8	2	229

**Newborn Screening Quality Assurance Program
 Frequency Distribution of Participants' Clinical Assessments
 Year: 2023, Quarter 4**

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**Program: Immunoreactive Trypsinogen (IRTPT)
 Domestic**

	Specimen Number									
	20234008001		20234008002		20234008003		20234008004		20234008005	
Analyte	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL
IRT	43	0	0	43	0	43	0	43	43	0

**Program: Immunoreactive Trypsinogen (IRTPT)
 International**

	Specimen Number									
	20234008001		20234008002		20234008003		20234008004		20234008005	
Analyte	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL
IRT	173	2	1	174	0	175	2	173	169	6

**Newborn Screening Quality Assurance Program
Overall Statistics
Year: 2023, Quarter 4**

Program: Acylcarnitines (ACPT)

Analyte	Specimen Number	N	EV	Mean	SD	Min	Max	Comment
C0(L) (µmol/L blood)	20234006001	293	41.45	40.12	6.80	19.90	69.80	
	20234006002	295	41.92	41.02	7.47	10.27	70.95	
	20234006003	294	43.29	40.35	6.66	15.81	68.00	
	20234006004	293	47.98	47.17	6.97	25.50	74.40	
	20234006005	293	48.98	44.43	7.20	13.45	66.74	
C2(L) (µmol/L blood)	20234006001	215	29.01	27.54	6.10	4.05	52.36	
	20234006002	215	29.39	27.42	6.05	7.24	51.83	
	20234006003	216	30.15	27.86	6.39	5.07	58.51	
	20234006004	215	31.45	29.86	6.37	1.99	58.70	
	20234006005	215	37.28	34.85	7.47	6.42	63.04	
C3 (µmol/L blood)	20234006001	287	0.88	0.85	0.19	0.05	1.72	
	20234006002	287	0.91	0.83	0.16	0.27	1.72	
	20234006003	287	0.76	0.72	0.15	0.07	1.49	
	20234006004	288	0.65	0.67	0.17	0.03	2.10	
	20234006005	291	0.66	0.65	0.20	0.23	2.11	
C3DC (µmol/L blood)	20234006001	75	0.02	0.04	0.04	0.00	0.22	
	20234006002	74	0.02	0.05	0.04	0.00	0.18	
	20234006003	74	0.02	0.03	0.03	0.00	0.13	
	20234006004	75	0.16	0.03	0.03	0.00	0.16	
	20234006005	75	0.03	0.04	0.04	0.00	0.22	
C3DC+C4OH (µmol/L blood)	20234006001	134	0.03	0.04	0.02	0.00	0.12	
	20234006002	134	0.03	0.04	0.02	0.00	0.14	
	20234006003	134	0.04	0.05	0.02	0.00	0.17	
	20234006004	133	0.04	0.05	0.02	0.00	0.15	
	20234006005	134	0.06	0.12	0.05	0.00	0.31	

Note: EV = Expected Value, SD= Standard Deviation. N < 3 not shown.

**Newborn Screening Quality Assurance Program
Overall Statistics
Year: 2023, Quarter 4**

Program: Acylcarnitines (ACPT)

Analyte	Specimen Number	N	EV	Mean	SD	Min	Max	Comment
C4 (µmol/L blood)	20234006001	267	0.03	0.05	0.05	0.00	0.41	
	20234006002	266	0.03	0.05	0.03	0.00	0.20	
	20234006003	266	0.09	0.10	0.05	0.01	0.38	
	20234006004	266	0.03	0.05	0.03	0.00	0.30	
	20234006005	264	0.04	0.05	0.03	0.00	0.19	
C4OH (µmol/L blood)	20234006001	72	0.04	0.05	0.03	0.01	0.14	
	20234006002	72	0.04	0.05	0.03	0.01	0.16	
	20234006003	73	0.06	0.07	0.08	0.01	0.69	
	20234006004	73	0.04	0.06	0.03	0.01	0.21	
	20234006005	71	0.09	0.15	0.06	0.02	0.31	
C5 (µmol/L blood)	20234006001	295	0.02	0.03	0.03	0.00	0.20	
	20234006002	295	0.02	0.03	0.03	0.00	0.26	
	20234006003	294	0.06	0.07	0.03	0.01	0.29	
	20234006004	298	0.03	0.04	0.04	0.00	0.33	
	20234006005	297	3.05	3.12	0.50	0.95	5.14	
C5:1 (µmol/L blood)	20234006001	257	0.01	0.01	0.01	0.00	0.08	
	20234006002	257	0.01	0.02	0.02	0.00	0.10	
	20234006003	260	1.51	0.91	0.32	0.01	2.73	
	20234006004	259	0.01	0.02	0.02	0.00	0.10	
	20234006005	260	0.01	0.02	0.02	0.00	0.12	
C5DC (µmol/L blood)	20234006001	282	0.01	0.03	0.03	0.00	0.18	
	20234006002	281	0.01	0.04	0.04	0.00	0.22	
	20234006003	283	0.01	0.04	0.03	0.00	0.21	
	20234006004	282	0.02	0.04	0.03	0.00	0.19	
	20234006005	283	0.02	0.04	0.03	0.00	0.18	

**Newborn Screening Quality Assurance Program
Overall Statistics
Year: 2023, Quarter 4**

Program: Acylcarnitines (ACPT)

Analyte	Specimen Number	N	EV	Mean	SD	Min	Max	Comment
C5OH (μmol/L blood)	20234006001	253	0.16	0.21	0.06	0.05	0.40	
	20234006002	253	0.18	0.20	0.06	0.01	0.44	
	20234006003	255	2.78	1.94	0.53	0.13	3.73	
	20234006004	252	0.22	0.23	0.07	0.02	0.51	
	20234006005	253	0.14	0.23	0.09	0.05	0.63	
C6 (μmol/L blood)	20234006001	269	0.01	0.02	0.02	0.00	0.15	
	20234006002	269	0.01	0.02	0.02	0.00	0.13	
	20234006003	269	0.01	0.02	0.02	0.00	0.12	
	20234006004	270	0.01	0.02	0.02	0.00	0.16	
	20234006005	268	0.01	0.02	0.02	0.00	0.12	
C8 (μmol/L blood)	20234006001	300	0.01	0.02	0.02	0.00	0.12	
	20234006002	300	0.01	0.04	0.02	0.00	0.11	
	20234006003	301	0.01	0.02	0.02	0.00	0.11	
	20234006004	301	0.01	0.02	0.01	0.00	0.08	
	20234006005	303	0.01	0.02	0.02	0.00	0.17	
C10 (μmol/L blood)	20234006001	281	0.01	0.03	0.04	0.00	0.22	
	20234006002	285	0.01	0.22	0.11	0.01	0.66	
	20234006003	283	0.01	0.02	0.02	0.00	0.15	
	20234006004	280	0.01	0.02	0.01	0.00	0.10	
	20234006005	279	0.01	0.02	0.02	0.00	0.12	
C10:1 (μmol/L blood)	20234006001	248	0.01	0.05	0.08	0.00	0.74	
	20234006002	246	0.01	0.02	0.02	0.00	0.13	
	20234006003	248	0.01	0.02	0.02	0.00	0.13	
	20234006004	248	0.01	0.02	0.02	0.00	0.13	
	20234006005	246	0.01	0.02	0.02	0.00	0.14	

**Newborn Screening Quality Assurance Program
Overall Statistics
Year: 2023, Quarter 4**

Program: Acylcarnitines (ACPT)

Analyte	Specimen Number	N	EV	Mean	SD	Min	Max	Comment
C10:2 (µmol/L blood)	20234006001	180	0.00	0.02	0.03	0.00	0.23	
	20234006002	181	0.00	0.01	0.01	0.00	0.06	
	20234006003	180	0.00	0.01	0.01	0.00	0.06	
	20234006004	182	0.00	0.01	0.01	0.00	0.08	
	20234006005	181	0.00	0.01	0.01	0.00	0.06	
C14 (µmol/L blood)	20234006001	274	3.02	2.92	0.70	0.02	6.28	
	20234006002	273	0.02	0.11	0.08	0.02	0.72	
	20234006003	272	0.03	0.04	0.02	0.01	0.13	
	20234006004	270	0.02	0.03	0.02	0.00	0.11	
	20234006005	274	0.06	0.07	0.03	0.01	0.26	
C14:1 (µmol/L blood)	20234006001	275	6.01	4.59	1.23	0.03	9.99	
	20234006002	273	0.01	0.10	0.14	0.00	0.95	
	20234006003	273	0.01	0.02	0.02	0.00	0.13	
	20234006004	273	0.01	0.02	0.02	0.00	0.12	
	20234006005	273	0.02	0.03	0.02	0.00	0.13	
C16 (µmol/L blood)	20234006001	277	0.48	0.58	0.13	0.01	1.12	
	20234006002	276	20.51	18.14	3.37	0.59	29.59	
	20234006003	275	0.62	0.74	0.19	0.00	1.67	
	20234006004	276	0.42	0.49	0.10	0.02	0.87	
	20234006005	278	0.76	0.80	0.18	0.00	2.08	
C16OH (µmol/L blood)	20234006001	285	0.01	0.01	0.01	0.00	0.07	
	20234006002	283	0.01	0.03	0.02	0.00	0.09	
	20234006003	284	0.01	0.01	0.01	0.00	0.07	
	20234006004	286	2.01	1.39	0.41	0.00	3.30	
	20234006005	286	0.01	0.02	0.02	0.00	0.21	

**Newborn Screening Quality Assurance Program
Overall Statistics
Year: 2023, Quarter 4**

Program: Acylcarnitines (ACPT)

Analyte	Specimen Number	N	EV	Mean	SD	Min	Max	Comment
C18 (µmol/L blood)	20234006001	261	0.39	0.44	0.08	0.20	0.77	
	20234006002	258	6.41	5.73	0.90	2.90	9.25	
	20234006003	261	0.42	0.47	0.10	0.01	0.95	
	20234006004	260	0.30	0.39	0.07	0.20	0.69	
	20234006005	262	0.41	0.45	0.10	0.00	0.94	
C18:1 (µmol/L blood)	20234006001	251	0.47	0.51	0.12	0.09	1.08	
	20234006002	254	20.51	13.27	3.43	0.09	28.57	
	20234006003	254	0.73	0.82	0.23	0.02	1.81	
	20234006004	252	0.59	0.64	0.16	0.02	1.44	
	20234006005	253	0.85	0.89	0.29	0.02	3.58	
C18OH (µmol/L blood)	20234006001	230	0.01	0.01	0.01	0.00	0.06	
	20234006002	230	0.00	0.02	0.01	0.00	0.09	
	20234006003	229	0.01	0.01	0.01	0.00	0.06	
	20234006004	231	2.01	1.22	0.43	0.00	2.82	
	20234006005	229	0.01	0.01	0.01	0.00	0.09	

**Newborn Screening Quality Assurance Program
Overall Statistics
Year: 2023, Quarter 4**

Program: Amino Acids (AAPT)

Analyte	Specimen Number	N	EV	Mean	SD	Min	Max	Comment
Arg (µmol/L blood)	20234005001	238	6.1	6.3	2.5	2.0	17.6	
	20234005002	237	4.9	4.9	1.9	1.4	16.9	
	20234005003	238	5.4	6.7	2.5	2.0	19.8	
	20234005004	239	4.1	4.6	2.1	1.5	17.0	
	20234005005	238	7.1	9.1	2.7	1.0	20.0	
CRE	20234005001	12	71.3	77.9	39.0	7.1	139.8	
	20234005002	12	405.7	393.4	137.9	15.4	600.5	
	20234005003	12	329.2	316.3	115.5	18.6	507.5	
	20234005004	12	369.9	397.7	142.8	15.7	638.0	
	20234005005	12	312.8	315.7	111.0	14.8	470.7	
Cit (µmol/L blood)	20234005001	262	4.7	7.2	1.8	2.0	16.0	
	20234005002	264	10.0	14.8	2.7	6.3	25.3	
	20234005003	263	7.0	11.0	2.1	4.8	19.8	
	20234005004	264	10.7	14.4	2.8	4.4	25.6	
	20234005005	264	3.5	6.0	2.0	0.0	17.1	
GUAC (µmol/L blood)	20234005001	17	21.3	22.7	7.0	15.8	46.6	
	20234005002	17	1.0	1.6	0.7	0.7	2.8	
	20234005003	17	1.0	1.7	1.3	0.6	6.0	
	20234005004	17	1.1	1.5	0.8	0.8	4.0	
	20234005005	17	0.8	1.3	0.7	0.5	3.0	

Note: EV = Expected Value, SD= Standard Deviation. N < 3 not shown.

**Newborn Screening Quality Assurance Program
Overall Statistics
Year: 2023, Quarter 4**

Program: Amino Acids (AAPT)

Analyte	Specimen Number	N	EV	Mean	SD	Min	Max	Comment
Leu (µmol/L blood)	20234005001	298	18.9	22.9	7.2	4.2	83.1	
	20234005002	296	14.5	22.3	11.5	0.0	106.9	
	20234005003	298	19.0	26.0	10.8	4.4	95.5	
	20234005004	296	14.1	21.8	10.8	0.0	113.7	
	20234005005	300	621.2	537.4	75.1	283.0	850.4	
Met (µmol/L blood)	20234005001	285	1.2	2.4	2.6	0.0	19.2	
	20234005002	286	2.0	3.6	2.9	0.7	20.3	
	20234005003	288	203.3	150.8	26.8	48.0	243.7	
	20234005004	288	2.1	3.5	3.2	0.0	25.7	
	20234005005	288	1.7	2.8	2.9	0.0	24.9	
Phe (µmol/L blood)	20234005001	356	6.3	9.3	8.5	0.0	57.4	
	20234005002	360	356.4	301.9	46.1	128.3	449.1	
	20234005003	359	8.6	12.3	10.3	0.0	84.7	
	20234005004	360	6.1	12.8	15.9	0.0	115.1	
	20234005005	357	6.6	11.8	16.3	0.0	110.8	
SUAC (µmol/L blood)	20234005001	169	0.2	0.5	0.4	0.0	2.8	
	20234005002	169	0.2	0.6	0.5	0.0	3.3	
	20234005003	169	0.2	0.5	0.5	0.0	3.2	
	20234005004	171	70.2	28.9	14.4	6.1	93.0	
	20234005005	169	0.2	0.6	0.6	0.0	3.8	
Tyr (µmol/L blood)	20234005001	294	10.5	11.9	4.9	1.7	51.9	
	20234005002	295	17.8	19.6	5.0	1.0	49.0	
	20234005003	294	17.6	18.8	4.2	3.9	44.2	
	20234005004	296	817.1	679.6	98.8	426.4	1013.8	
	20234005005	294	17.6	17.2	6.0	1.0	57.6	

Note: EV = Expected Value, SD= Standard Deviation. N < 3 not shown.

**Newborn Screening Quality Assurance Program
Overall Statistics
Year: 2023, Quarter 4**

Program: Amino Acids (AAPT)

Analyte	Specimen Number	N	EV	Mean	SD	Min	Max	Comment
Val (μmol/L blood)	20234005001	259	25.3	39.2	20.1	3.9	164.0	
	20234005002	260	20.9	28.2	13.3	1.7	100.0	
	20234005003	260	23.7	30.9	11.5	5.1	100.4	
	20234005004	258	20.4	27.4	10.9	8.1	87.8	
	20234005005	262	629.0	509.8	96.7	103.6	796.0	

**Newborn Screening Quality Assurance Program
Overall Statistics
Year: 2023, Quarter 4**

Program: Hormones and Total Galactose (HORMPT)

Analyte	Specimen Number	N	EV	Mean	SD	Min	Max	Comment
T4 (µg/dL serum)	20234001001	67	15.4	17.5	3.4	11.6	34.6	
	20234001002	66	15.5	17.2	3.2	10.7	29.8	
	20234001003	68	8.2	8.3	2.5	1.1	16.0	
	20234001004	66	15.4	16.7	2.9	10.2	29.4	
	20234001005	67	16.0	17.5	4.3	9.5	35.9	
TSH (µIU/mL serum)	20234001001	312	1.4	1.7	1.9	0.0	12.8	
	20234001002	309	1.5	1.6	1.3	0.0	7.5	
	20234001003	323	91.6	80.5	19.5	17.9	138.2	
	20234001004	310	1.4	1.5	1.2	0.0	8.2	
	20234001005	309	1.2	1.3	1.2	0.0	7.1	
17OHP (ng/mL serum)	20234001001	265	0.3	1.0	1.2	0.0	8.4	
	20234001002	266	0.8	1.7	1.7	0.0	14.3	
	20234001003	266	0.9	1.1	1.2	0.0	8.3	
	20234001004	277	86.3	92.8	24.8	0.8	212.4	
	20234001005	268	0.9	2.0	2.5	0.0	21.5	
TGal (mg/dL blood)	20234001001	165	0.0	1.3	1.3	0.0	7.6	
	20234001002	165	0.0	1.3	1.4	0.0	7.1	
	20234001003	166	0.9	1.5	1.7	0.0	13.2	
	20234001004	164	0.0	1.3	1.3	0.0	7.2	
	20234001005	168	25.0	23.9	5.6	8.5	45.7	

Note: EV = Expected Value, SD= Standard Deviation. N < 3 not shown.

**Newborn Screening Quality Assurance Program
Overall Statistics
Year: 2023, Quarter 4**

Program: Immunoreactive Trypsinogen (IRTPT)

Analyte	Specimen Number	N	EV	Mean	SD	Min	Max	Comment
IRT (ng/mL blood)	20234008001	220	249.6	235.1	54.2	40.2	418.6	
	20234008002	217	10.5	12.3	6.0	0.0	57.9	
	20234008003	213	5.5	6.8	3.9	0.0	26.2	
	20234008004	216	14.0	14.3	5.2	4.7	44.0	
	20234008005	220	133.8	132.0	30.9	10.8	269.0	

Newborn Screening Quality Assurance Program
Year: 2023, Quarter: 4
Mean Reported Concentrations Sorted by Method
Program: Acylcarnitines (ACPT)

		Specimen Number																			
		20234006001				20234006002				20234006003				20234006004				20234006005			
Analyte	Method	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD
C0(L) (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	5	41.45	45.74	9.37	5	41.92	49.32	9.85	5	43.29	43.68	10.78	5	47.98	48.87	9.50	5	48.98	49.72	11.49
	Derivatized - MS/MS MassChrom® Chromsystems	13	41.45	34.14	4.90	13	41.92	36.50	4.64	13	43.29	35.02	5.54	13	47.98	39.90	5.06	13	48.98	38.85	4.93
	Derivatized - MS/MS non-kit	65	41.45	42.57	9.28	64	41.92	46.00	8.79	64	43.29	41.80	7.38	65	47.98	49.23	8.33	63	48.98	46.88	7.81
	LC-MS/MS non-kit	3	41.45	33.08	9.59	4	41.92	41.59	18.04	4	43.29	40.25	20.04	.				3	48.98	34.03	15.88
	Non-derivatized - MS/MS MS2 Screening Neo (MS-Neo)Siemens	5	41.45	42.16	2.04	5	41.92	43.67	1.72	5	43.29	43.95	3.71	5	47.98	50.11	4.29	5	48.98	48.69	4.00
	Non-derivatized - MS/MS MassChrom® Chromsystems	32	41.45	39.93	6.10	34	41.92	38.15	8.54	33	43.29	39.52	7.55	33	47.98	47.39	7.47	34	48.98	43.26	8.35
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	46	41.45	38.97	5.32	46	41.92	39.26	4.50	46	43.29	39.63	4.71	46	47.98	46.59	5.84	46	48.98	43.52	6.08
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	91	41.45	40.64	4.72	91	41.92	40.69	5.14	91	43.29	40.96	5.05	91	47.98	47.79	5.58	91	48.98	45.11	5.74
	Non-derivatized - MS/MS non-kit	20	41.45	39.17	6.09	20	41.92	39.64	5.82	20	43.29	40.96	6.51	20	47.98	46.38	6.70	20	48.98	43.62	6.94
	Non-derivatized Labsystems Neomass AAAC Plus	9	41.45	33.36	5.77	9	41.92	33.00	4.93	9	43.29	33.69	7.11	9	47.98	40.74	6.13	9	48.98	39.00	6.46
Other	4	41.45	38.08	3.56	4	41.92	38.56	3.89	4	43.29	39.00	2.61	4	47.98	42.57	4.09	4	48.98	41.30	3.24	
C2(L) (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	5	29.01	33.61	7.48	5	29.39	31.83	5.34	5	30.15	32.68	4.01	5	31.45	35.02	6.28	5	37.28	42.33	5.51
	Derivatized - MS/MS MassChrom® Chromsystems	11	29.01	23.23	3.24	11	29.39	23.51	3.34	11	30.15	24.47	3.00	11	31.45	26.41	3.41	11	37.28	29.30	4.61
	Derivatized - MS/MS non-kit	51	29.01	30.44	7.92	51	29.39	30.04	8.08	51	30.15	30.83	8.16	51	31.45	33.09	8.58	51	37.28	38.23	9.50
	LC-MS/MS non-kit	.				.				3	30.15	34.81	21.48	.				.			
	Non-derivatized - MS/MS MassChrom® Chromsystems	20	29.01	23.07	7.00	20	29.39	22.85	5.60	20	30.15	22.37	6.34	20	31.45	25.54	5.13	20	37.28	30.25	6.36
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	40	29.01	27.87	2.69	40	29.39	27.91	2.41	40	30.15	28.22	2.26	40	31.45	30.52	2.58	40	37.28	35.10	3.51
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	59	29.01	26.38	2.62	59	29.39	26.17	2.65	59	30.15	26.31	2.49	59	31.45	28.21	3.06	59	37.28	32.85	4.04
	Non-derivatized - MS/MS non-kit	17	29.01	30.25	7.51	17	29.39	31.15	8.10	17	30.15	31.01	7.34	17	31.45	32.85	6.69	17	37.28	39.93	9.54
	Non-derivatized Labsystems Neomass AAAC Plus	7	29.01	23.79	5.84	7	29.39	24.69	6.71	7	30.15	23.08	6.16	7	31.45	26.45	6.98	7	37.28	32.03	8.23

Note: EV = Expected Value, SD = Standard Deviation. Methods N < 3 not shown.

Newborn Screening Quality Assurance Program
Year: 2023, Quarter: 4
Mean Reported Concentrations Sorted by Method
Program: Acylcarnitines (ACPT)

		Specimen Number																			
		20234006001				20234006002				20234006003				20234006004				20234006005			
Analyte	Method	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD
C3 (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	5	0.88	1.00	0.18	5	0.91	0.99	0.32	5	0.76	0.63	0.32	4	0.65	0.68	0.12	5	0.66	0.75	0.21
	Derivatized - MS/MS MassChrom® Chromsystems	13	0.88	0.68	0.19	13	0.91	0.66	0.14	13	0.76	0.62	0.14	13	0.65	0.57	0.14	13	0.66	0.53	0.12
	Derivatized - MS/MS non-kit	63	0.88	0.94	0.24	62	0.91	0.86	0.17	64	0.76	0.78	0.19	64	0.65	0.75	0.24	65	0.66	0.73	0.28
	LC-MS/MS non-kit				3	0.66	1.17	0.82
	Non-derivatized - MS/MS MS2 Screening Neo (MS-Neo)Siemens	5	0.88	0.81	0.05	5	0.91	0.82	0.04	5	0.76	0.72	0.07	5	0.65	0.63	0.08	5	0.66	0.61	0.06
	Non-derivatized - MS/MS MassChrom® Chromsystems	30	0.88	0.69	0.16	30	0.91	0.69	0.12	30	0.76	0.58	0.13	30	0.65	0.56	0.08	30	0.66	0.53	0.07
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	46	0.88	0.78	0.07	46	0.91	0.78	0.08	46	0.76	0.67	0.07	46	0.65	0.61	0.07	46	0.66	0.57	0.07
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	89	0.88	0.90	0.09	90	0.91	0.88	0.12	89	0.76	0.76	0.09	90	0.65	0.70	0.11	90	0.66	0.66	0.09
	Non-derivatized - MS/MS non-kit	21	0.88	0.93	0.26	21	0.91	0.94	0.25	20	0.76	0.75	0.16	21	0.65	0.73	0.22	21	0.66	0.66	0.15
	Non-derivatized Labsystems Neomass AAAC Plus	9	0.88	0.70	0.11	9	0.91	0.68	0.16	9	0.76	0.62	0.13	9	0.65	0.58	0.14	9	0.66	0.52	0.09
Other	4	0.88	0.81	0.06	4	0.91	0.81	0.09	4	0.76	0.71	0.04	4	0.65	0.73	0.21	4	0.66	0.83	0.51	
C3DC (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	3	0.02	0.08	0.07	3	0.02	0.10	0.06	3	0.02	0.07	0.04	3	0.16	0.07	0.04	3	0.03	0.08	0.06
	Derivatized - MS/MS MassChrom® Chromsystems	11	0.02	0.03	0.01	10	0.02	0.06	0.04	11	0.02	0.03	0.02	11	0.16	0.03	0.01	11	0.03	0.04	0.02
	Derivatized - MS/MS non-kit	56	0.02	0.03	0.04	56	0.02	0.04	0.03	56	0.02	0.03	0.03	56	0.16	0.03	0.03	56	0.03	0.04	0.03
	Other	4	0.02	0.06	0.06	4	0.02	0.07	0.06	3	0.02	0.05	0.02	4	0.16	0.07	0.06	4	0.03	0.10	0.08
C3DC+C4OH (µmol/L blood)	Non-derivatized - MS/MS MassChrom® Chromsystems	10	0.03	0.03	0.02	10	0.03	0.03	0.02	10	0.04	0.04	0.02	10	0.04	0.03	0.02	10	0.06	0.08	0.04
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	35	0.03	0.04	0.01	35	0.03	0.04	0.01	35	0.04	0.05	0.01	35	0.04	0.04	0.01	35	0.06	0.10	0.02
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	69	0.03	0.04	0.01	69	0.03	0.04	0.01	69	0.04	0.05	0.01	68	0.04	0.05	0.02	69	0.06	0.11	0.02
	Non-derivatized - MS/MS non-kit	11	0.03	0.06	0.03	11	0.03	0.06	0.03	11	0.04	0.08	0.05	11	0.04	0.08	0.05	11	0.06	0.19	0.10
	Non-derivatized Labsystems Neomass AAAC Plus	6	0.03	0.03	0.02	6	0.03	0.03	0.03	6	0.04	0.04	0.02	6	0.04	0.03	0.02	6	0.06	0.09	0.03

Note: EV = Expected Value, SD = Standard Deviation. Methods N < 3 not shown.

Newborn Screening Quality Assurance Program
Year: 2023, Quarter: 4
Mean Reported Concentrations Sorted by Method
Program: Acylcarnitines (ACPT)

		Specimen Number																			
		20234006001				20234006002				20234006003				20234006004				20234006005			
Analyte	Method	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD
C4 (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	5	0.03	0.06	0.04	4	0.03	0.04	0.00	5	0.09	0.10	0.02	4	0.03	0.04	0.02	5	0.04	0.06	0.03
	Derivatized - MS/MS MassChrom® Chromsystems	13	0.03	0.07	0.11	13	0.03	0.05	0.04	12	0.09	0.10	0.04	13	0.03	0.05	0.03	13	0.04	0.06	0.04
	Derivatized - MS/MS non-kit	62	0.03	0.07	0.06	62	0.03	0.06	0.04	63	0.09	0.12	0.06	61	0.03	0.07	0.05	61	0.04	0.06	0.03
	LC-MS/MS non-kit	4	0.03	0.11	0.15	3	0.03	0.04	0.03	4	0.09	0.10	0.07	4	0.03	0.05	0.03	4	0.04	0.06	0.04
	Non-derivatized - MS/MS MS2 Screening Neo (MS-Neo)Siemens	3	0.03	0.03	0.01	3	0.03	0.03	0.01	3	0.09	0.08	0.02	3	0.03	0.03	0.01	3	0.04	0.03	0.01
	Non-derivatized - MS/MS MassChrom® Chromsystems	23	0.03	0.05	0.03	24	0.03	0.05	0.03	24	0.09	0.09	0.04	24	0.03	0.04	0.03	24	0.04	0.05	0.03
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	44	0.03	0.05	0.02	44	0.03	0.05	0.02	44	0.09	0.10	0.02	44	0.03	0.05	0.02	44	0.04	0.06	0.02
	Non-derivatized - MS/MS NeoBase™ 2 PerkinElmer	80	0.03	0.04	0.01	80	0.03	0.04	0.02	79	0.09	0.08	0.01	80	0.03	0.04	0.01	79	0.04	0.04	0.01
	Non-derivatized - MS/MS non-kit	20	0.03	0.06	0.05	20	0.03	0.06	0.05	19	0.09	0.12	0.08	20	0.03	0.05	0.04	19	0.04	0.05	0.03
	Non-derivatized Labsystems Neomass AAAC Plus	9	0.03	0.04	0.02	9	0.03	0.04	0.03	9	0.09	0.07	0.03	9	0.03	0.04	0.02	9	0.04	0.05	0.03
Other	4	0.03	0.04	0.02	4	0.03	0.04	0.02	4	0.09	0.10	0.03	4	0.03	0.05	0.03	3	0.04	0.05	0.02	
C4OH (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	3	0.04	0.07	0.02	3	0.04	0.09	0.04	3	0.06	0.08	0.02	3	0.04	0.12	0.08	3	0.09	0.15	0.06
	Derivatized - MS/MS MassChrom® Chromsystems	8	0.04	0.06	0.03	8	0.04	0.06	0.02	8	0.06	0.07	0.03	8	0.04	0.07	0.03	8	0.09	0.16	0.04
	Derivatized - MS/MS non-kit	52	0.04	0.05	0.03	52	0.04	0.05	0.03	53	0.06	0.08	0.09	53	0.04	0.06	0.03	51	0.09	0.15	0.06
	Other	6	0.04	0.05	0.04	6	0.04	0.05	0.04	6	0.06	0.06	0.05	6	0.04	0.05	0.04	6	0.09	0.11	0.05
C5 (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	4	0.02	0.03	0.02	5	0.02	0.08	0.10	4	0.06	0.09	0.04	4	0.03	0.04	0.02	4	3.05	3.27	1.61
	Derivatized - MS/MS MassChrom® Chromsystems	11	0.02	0.05	0.05	12	0.02	0.04	0.02	12	0.06	0.09	0.04	13	0.03	0.06	0.08	13	3.05	2.93	0.69
	Derivatized - MS/MS non-kit	65	0.02	0.04	0.03	65	0.02	0.04	0.03	64	0.06	0.09	0.05	65	0.03	0.04	0.02	65	3.05	3.15	0.60
	LC-MS/MS non-kit	3	0.02	0.04	0.04	3	0.02	0.04	0.03	3	0.06	0.07	0.05	3	0.03	0.05	0.04	3	3.05	3.36	0.70
	Non-derivatized - MS/MS MS2 Screening Neo (MS-Neo)Siemens	5	0.02	0.02	0.01	5	0.02	0.02	0.00	5	0.06	0.06	0.01	5	0.03	0.02	0.01	5	3.05	3.48	0.29
	Non-derivatized - MS/MS MassChrom® Chromsystems	32	0.02	0.03	0.02	30	0.02	0.03	0.01	31	0.06	0.06	0.01	33	0.03	0.05	0.07	33	3.05	3.21	0.33
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	47	0.02	0.02	0.01	47	0.02	0.03	0.03	47	0.06	0.06	0.02	47	0.03	0.03	0.01	47	3.05	3.20	0.42

Note: EV = Expected Value, SD = Standard Deviation. Methods N < 3 not shown.

Newborn Screening Quality Assurance Program
Year: 2023, Quarter: 4
Mean Reported Concentrations Sorted by Method
Program: Acylcarnitines (ACPT)

		Specimen Number																			
		20234006001				20234006002				20234006003				20234006004				20234006005			
Analyte	Method	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD
C5 (µmol/L blood)	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	90	0.02	0.03	0.02	90	0.02	0.03	0.02	90	0.06	0.06	0.02	90	0.03	0.03	0.03	90	3.05	2.99	0.34
	Non-derivatized - MS/MS non-kit	25	0.02	0.04	0.04	25	0.02	0.04	0.05	25	0.06	0.08	0.04	25	0.03	0.04	0.04	24	3.05	3.39	0.53
	Non-derivatized Labsystems Neomass AAAC Plus	9	0.02	0.06	0.03	9	0.02	0.06	0.03	9	0.06	0.09	0.03	9	0.03	0.06	0.03	9	3.05	2.82	0.38
	Other	4	0.02	0.02	0.01	4	0.02	0.02	0.01	4	0.06	0.06	0.01	4	0.03	0.03	0.01	4	3.05	2.94	0.30
C5:1 (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	5	0.01	0.03	0.03	5	0.01	0.02	0.02	5	1.51	1.35	0.73	5	0.01	0.02	0.02	4	0.01	0.01	0.01
	Derivatized - MS/MS MassChrom® Chromsystems	12	0.01	0.02	0.01	13	0.01	0.03	0.02	13	1.51	0.97	0.24	13	0.01	0.03	0.03	13	0.01	0.03	0.02
	Derivatized - MS/MS non-kit	57	0.01	0.02	0.02	57	0.01	0.03	0.02	61	1.51	1.07	0.34	59	0.01	0.02	0.02	60	0.01	0.03	0.02
	Non-derivatized - MS/MS MS2 Screening Neo (MS-Neo)Siemens	4	0.01	0.00	0.01	4	0.01	0.01	0.01	4	1.51	1.03	0.21	4	0.01	0.00	0.01	4	0.01	0.01	0.01
	Non-derivatized - MS/MS MassChrom® Chromsystems	21	0.01	0.02	0.02	21	0.01	0.02	0.02	21	1.51	0.74	0.40	21	0.01	0.02	0.02	21	0.01	0.02	0.01
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	45	0.01	0.01	0.01	45	0.01	0.01	0.01	45	1.51	0.82	0.18	45	0.01	0.01	0.01	45	0.01	0.01	0.01
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	80	0.01	0.01	0.01	80	0.01	0.01	0.01	80	1.51	0.84	0.16	80	0.01	0.01	0.01	80	0.01	0.01	0.01
	Non-derivatized - MS/MS non-kit	20	0.01	0.02	0.02	19	0.01	0.02	0.03	18	1.51	1.10	0.46	19	0.01	0.02	0.02	20	0.01	0.03	0.03
	Non-derivatized Labsystems Neomass AAAC Plus	8	0.01	0.01	0.01	8	0.01	0.01	0.01	8	1.51	0.60	0.27	8	0.01	0.01	0.01	8	0.01	0.01	0.01
	Other	4	0.01	0.01	0.01	4	0.01	0.01	0.00	4	1.51	0.90	0.05	4	0.01	0.01	0.00	4	0.01	0.01	0.00
C5DC (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	5	0.01	0.05	0.05	5	0.01	0.11	0.06	5	0.01	0.03	0.01	5	0.02	0.03	0.01	5	0.02	0.05	0.03
	Derivatized - MS/MS MassChrom® Chromsystems	13	0.01	0.05	0.04	11	0.01	0.06	0.04	13	0.01	0.04	0.02	13	0.02	0.05	0.05	13	0.02	0.05	0.04
	Derivatized - MS/MS non-kit	65	0.01	0.02	0.03	66	0.01	0.05	0.04	66	0.01	0.03	0.03	66	0.02	0.03	0.02	66	0.02	0.03	0.03
	Non-derivatized - MS/MS MS2 Screening Neo (MS-Neo)Siemens	5	0.01	0.02	0.01	5	0.01	0.02	0.01	5	0.01	0.03	0.01	5	0.02	0.03	0.01	5	0.02	0.03	0.01
	Non-derivatized - MS/MS MassChrom® Chromsystems	33	0.01	0.06	0.03	33	0.01	0.06	0.03	33	0.01	0.07	0.04	33	0.02	0.06	0.03	33	0.02	0.08	0.04
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	42	0.01	0.03	0.02	42	0.01	0.03	0.02	42	0.01	0.05	0.02	42	0.02	0.04	0.02	42	0.02	0.05	0.02
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	83	0.01	0.02	0.01	83	0.01	0.02	0.01	83	0.01	0.03	0.02	83	0.02	0.03	0.02	83	0.02	0.03	0.02
	Non-derivatized - MS/MS non-kit	23	0.01	0.04	0.04	23	0.01	0.05	0.05	23	0.01	0.06	0.04	23	0.02	0.05	0.04	23	0.02	0.06	0.04

Note: EV = Expected Value, SD = Standard Deviation. Methods N < 3 not shown.

Newborn Screening Quality Assurance Program
Year: 2023, Quarter: 4
Mean Reported Concentrations Sorted by Method
Program: Acylcarnitines (ACPT)

		Specimen Number																			
		20234006001				20234006002				20234006003				20234006004				20234006005			
Analyte	Method	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD
C5DC (µmol/L blood)	Non-derivatized Labsystems Neomass AAAC Plus	7	0.01	0.04	0.02	7	0.01	0.03	0.01	7	0.01	0.05	0.03	6	0.02	0.05	0.02	7	0.02	0.05	0.03
	Other	4	0.01	0.03	0.01	4	0.01	0.03	0.01	4	0.01	0.04	0.03	4	0.02	0.04	0.03	4	0.02	0.04	0.02
C5OH (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	5	0.16	0.16	0.02	5	0.18	0.16	0.04	5	2.78	2.08	0.39	5	0.22	0.23	0.14	5	0.14	0.23	0.23
	Derivatized - MS/MS MassChrom® Chromsystems	13	0.16	0.20	0.07	13	0.18	0.19	0.08	13	2.78	1.76	0.65	13	0.22	0.23	0.11	13	0.14	0.17	0.09
	Derivatized - MS/MS non-kit	65	0.16	0.17	0.05	65	0.18	0.16	0.05	66	2.78	2.07	0.57	64	0.22	0.20	0.06	65	0.14	0.15	0.07
	Non-derivatized - MS/MS MS2 Screening Neo (MS-Neo)Siemens	5	0.16	0.28	0.02	5	0.18	0.28	0.03	5	2.78	2.94	0.23	5	0.22	0.32	0.05	5	0.14	0.29	0.06
	Non-derivatized - MS/MS MassChrom® Chromsystems	17	0.16	0.15	0.05	17	0.18	0.17	0.09	17	2.78	1.16	0.45	17	0.22	0.17	0.05	17	0.14	0.18	0.06
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	39	0.16	0.21	0.04	39	0.18	0.21	0.05	39	2.78	1.75	0.22	39	0.22	0.23	0.04	39	0.14	0.23	0.05
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	76	0.16	0.25	0.05	76	0.18	0.24	0.04	76	2.78	2.04	0.31	76	0.22	0.27	0.06	76	0.14	0.30	0.06
	Non-derivatized - MS/MS non-kit	19	0.16	0.25	0.06	19	0.18	0.24	0.06	20	2.78	2.32	0.48	19	0.22	0.27	0.06	19	0.14	0.27	0.07
	Non-derivatized Labsystems Neomass AAAC Plus	8	0.16	0.14	0.03	8	0.18	0.15	0.04	8	2.78	1.23	0.24	8	0.22	0.18	0.05	8	0.14	0.16	0.04
Other	4	0.16	0.20	0.05	4	0.18	0.20	0.05	4	2.78	2.08	0.51	4	0.22	0.22	0.06	4	0.14	0.25	0.10	
C6 (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	5	0.01	0.01	0.01	5	0.01	0.01	0.00	5	0.01	0.01	0.01	5	0.01	0.01	0.00	5	0.01	0.02	0.04
	Derivatized - MS/MS MassChrom® Chromsystems	13	0.01	0.04	0.02	13	0.01	0.04	0.02	13	0.01	0.02	0.01	13	0.01	0.03	0.01	13	0.01	0.03	0.02
	Derivatized - MS/MS non-kit	61	0.01	0.02	0.03	60	0.01	0.03	0.02	60	0.01	0.02	0.02	62	0.01	0.03	0.03	60	0.01	0.02	0.02
	LC-MS/MS non-kit	3	0.01	0.02	0.02	3	0.01	0.02	0.02	3	0.01	0.02	0.02	3	0.01	0.01	0.01	3	0.01	0.01	0.01
	Non-derivatized - MS/MS MS2 Screening Neo (MS-Neo)Siemens	3	0.01	0.00	0.01	3	0.01	0.01	0.01	3	0.01	0.01	0.01	3	0.01	0.01	0.01	3	0.01	0.01	0.01
	Non-derivatized - MS/MS MassChrom® Chromsystems	24	0.01	0.02	0.03	25	0.01	0.02	0.02	25	0.01	0.02	0.02	24	0.01	0.01	0.01	25	0.01	0.02	0.02
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	44	0.01	0.02	0.02	44	0.01	0.02	0.02	44	0.01	0.01	0.01	44	0.01	0.01	0.01	44	0.01	0.02	0.01
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	82	0.01	0.01	0.01	82	0.01	0.01	0.01	82	0.01	0.01	0.01	82	0.01	0.01	0.01	82	0.01	0.01	0.01
	Non-derivatized - MS/MS non-kit	21	0.01	0.02	0.02	21	0.01	0.02	0.02	21	0.01	0.02	0.02	21	0.01	0.02	0.02	21	0.01	0.02	0.02
Non-derivatized Labsystems Neomass AAAC Plus	9	0.01	0.03	0.04	9	0.01	0.03	0.04	9	0.01	0.02	0.04	9	0.01	0.03	0.04	8	0.01	0.01	0.01	

Note: EV = Expected Value, SD = Standard Deviation. Methods N < 3 not shown.

Newborn Screening Quality Assurance Program
Year: 2023, Quarter: 4
Mean Reported Concentrations Sorted by Method
Program: Acylcarnitines (ACPT)

		Specimen Number																			
		20234006001				20234006002				20234006003				20234006004				20234006005			
Analyte	Method	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD
C6 (µmol/L blood)	Other	4	0.01	0.01	0.01	4	0.01	0.01	0.00	4	0.01	0.01	0.00	4	0.01	0.01	0.01	4	0.01	0.01	0.01
C8 (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	5	0.01	0.02	0.02	5	0.01	0.03	0.01	5	0.01	0.01	0.01	5	0.01	0.02	0.02	5	0.01	0.01	0.01
	Derivatized - MS/MS MassChrom® Chromsystems	13	0.01	0.02	0.01	13	0.01	0.03	0.01	13	0.01	0.01	0.01	13	0.01	0.01	0.01	13	0.01	0.01	0.01
	Derivatized - MS/MS non-kit	61	0.01	0.03	0.02	62	0.01	0.04	0.02	64	0.01	0.02	0.02	65	0.01	0.02	0.02	64	0.01	0.03	0.03
	LC-MS/MS non-kit	4	0.01	0.04	0.03	4	0.01	0.05	0.02	4	0.01	0.03	0.02	4	0.01	0.02	0.02	4	0.01	0.02	0.02
	Non-derivatized - MS/MS MS2 Screening Neo (MS-Neo)Siemens	5	0.01	0.01	0.00	5	0.01	0.03	0.00	5	0.01	0.01	0.00	5	0.01	0.01	0.00	5	0.01	0.01	0.00
	Non-derivatized - MS/MS MassChrom® Chromsystems	34	0.01	0.02	0.02	34	0.01	0.03	0.01	33	0.01	0.01	0.01	34	0.01	0.02	0.01	34	0.01	0.02	0.01
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	48	0.01	0.02	0.01	48	0.01	0.04	0.01	48	0.01	0.01	0.01	48	0.01	0.02	0.01	48	0.01	0.01	0.01
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	93	0.01	0.02	0.01	93	0.01	0.03	0.01	93	0.01	0.01	0.01	92	0.01	0.01	0.01	93	0.01	0.01	0.01
	Non-derivatized - MS/MS non-kit	24	0.01	0.03	0.02	24	0.01	0.04	0.02	23	0.01	0.02	0.02	23	0.01	0.03	0.02	24	0.01	0.03	0.03
	Non-derivatized Labsystems Neomass AAAC Plus	9	0.01	0.04	0.04	8	0.01	0.04	0.02	9	0.01	0.03	0.04	8	0.01	0.02	0.02	9	0.01	0.04	0.04
Other	4	0.01	0.03	0.03	4	0.01	0.05	0.03	4	0.01	0.02	0.03	4	0.01	0.03	0.03	4	0.01	0.03	0.02	
C10 (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	5	0.01	0.07	0.09	5	0.01	0.07	0.04	5	0.01	0.01	0.02	5	0.01	0.01	0.01	5	0.01	0.02	0.02
	Derivatized - MS/MS MassChrom® Chromsystems	12	0.01	0.06	0.03	13	0.01	0.17	0.17	13	0.01	0.02	0.02	13	0.01	0.02	0.01	13	0.01	0.03	0.02
	Derivatized - MS/MS non-kit	60	0.01	0.07	0.05	63	0.01	0.15	0.12	62	0.01	0.03	0.03	61	0.01	0.02	0.02	60	0.01	0.03	0.02
	Non-derivatized - MS/MS MS2 Screening Neo (MS-Neo)Siemens	5	0.01	0.01	0.00	5	0.01	0.19	0.04	5	0.01	0.01	0.00	5	0.01	0.01	0.00	5	0.01	0.01	0.01
	Non-derivatized - MS/MS MassChrom® Chromsystems	29	0.01	0.02	0.01	29	0.01	0.21	0.13	29	0.01	0.02	0.01	29	0.01	0.02	0.01	29	0.01	0.02	0.01
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	46	0.01	0.02	0.01	46	0.01	0.27	0.08	46	0.01	0.02	0.01	46	0.01	0.02	0.01	46	0.01	0.02	0.01
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	85	0.01	0.01	0.01	85	0.01	0.24	0.07	85	0.01	0.02	0.01	85	0.01	0.01	0.01	85	0.01	0.02	0.01
	Non-derivatized - MS/MS non-kit	24	0.01	0.04	0.04	24	0.01	0.27	0.14	23	0.01	0.04	0.04	21	0.01	0.02	0.02	21	0.01	0.03	0.03
	Non-derivatized Labsystems Neomass AAAC Plus	9	0.01	0.02	0.01	9	0.01	0.18	0.06	9	0.01	0.02	0.01	9	0.01	0.02	0.01	9	0.01	0.02	0.01
	Other	4	0.01	0.04	0.01	4	0.01	0.26	0.14	4	0.01	0.03	0.01	4	0.01	0.03	0.02	4	0.01	0.05	0.03

Note: EV = Expected Value, SD = Standard Deviation. Methods N < 3 not shown.

Newborn Screening Quality Assurance Program
Year: 2023, Quarter: 4
Mean Reported Concentrations Sorted by Method
Program: Acylcarnitines (ACPT)

		Specimen Number																			
		20234006001				20234006002				20234006003				20234006004				20234006005			
Analyte	Method	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD
C10:1 (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	4	0.01	0.19	0.19	4	0.01	0.02	0.02	4	0.01	0.01	0.01	4	0.01	0.02	0.03	4	0.01	0.03	0.04
	Derivatized - MS/MS MassChrom® Chromsystems	13	0.01	0.12	0.15	13	0.01	0.02	0.01	13	0.01	0.02	0.01	13	0.01	0.02	0.01	13	0.01	0.02	0.01
	Derivatized - MS/MS non-kit	57	0.01	0.12	0.11	56	0.01	0.03	0.03	57	0.01	0.03	0.03	58	0.01	0.03	0.03	55	0.01	0.03	0.03
	Non-derivatized - MS/MS MassChrom® Chromsystems	20	0.01	0.03	0.05	20	0.01	0.02	0.03	20	0.01	0.01	0.02	20	0.01	0.02	0.02	20	0.01	0.02	0.02
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	44	0.01	0.03	0.03	44	0.01	0.02	0.02	44	0.01	0.02	0.02	44	0.01	0.02	0.02	44	0.01	0.02	0.02
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	79	0.01	0.01	0.02	79	0.01	0.01	0.01	79	0.01	0.01	0.01	79	0.01	0.01	0.01	79	0.01	0.01	0.01
	Non-derivatized - MS/MS non-kit	18	0.01	0.02	0.03	17	0.01	0.02	0.03	18	0.01	0.03	0.04	17	0.01	0.02	0.03	18	0.01	0.03	0.04
	Non-derivatized Labsystems Neomass AAAC Plus	7	0.01	0.02	0.02	7	0.01	0.01	0.01	7	0.01	0.01	0.01	7	0.01	0.01	0.01	7	0.01	0.02	0.01
Other	3	0.01	0.03	0.02	3	0.01	0.02	0.00	3	0.01	0.02	0.01	3	0.01	0.02	0.01	3	0.01	0.02	0.01	
C10:2 (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	4	0.00	0.01	0.01	4	0.00	0.01	0.01	4	0.00	0.01	0.01	4	0.00	0.01	0.01	4	0.00	0.01	0.01
	Derivatized - MS/MS MassChrom® Chromsystems	9	0.00	0.02	0.01	9	0.00	0.01	0.01	9	0.00	0.02	0.01	9	0.00	0.02	0.02	9	0.00	0.01	0.01
	Derivatized - MS/MS non-kit	40	0.00	0.03	0.04	39	0.00	0.02	0.02	38	0.00	0.01	0.01	39	0.00	0.02	0.02	39	0.00	0.02	0.01
	Non-derivatized - MS/MS MassChrom® Chromsystems	7	0.00	0.03	0.02	8	0.00	0.02	0.01	8	0.00	0.02	0.01	8	0.00	0.02	0.01	8	0.00	0.02	0.01
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	35	0.00	0.03	0.03	37	0.00	0.01	0.01	37	0.00	0.00	0.01	37	0.00	0.00	0.01	37	0.00	0.00	0.01
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	64	0.00	0.02	0.03	64	0.00	0.00	0.01	64	0.00	0.00	0.01	64	0.00	0.01	0.01	64	0.00	0.00	0.01
	Non-derivatized - MS/MS non-kit	10	0.00	0.02	0.01	10	0.00	0.01	0.01	10	0.00	0.01	0.01	10	0.00	0.01	0.01	10	0.00	0.01	0.01
	Non-derivatized Labsystems Neomass AAAC Plus	7	0.00	0.04	0.04	6	0.00	0.00	0.01	6	0.00	0.00	0.01	7	0.00	0.02	0.03	6	0.00	0.01	0.01
Other	3	0.00	0.02	0.01	3	0.00	0.01	0.01	3	0.00	0.01	0.01	3	0.00	0.01	0.01	3	0.00	0.01	0.01	

Note: EV = Expected Value, SD = Standard Deviation. Methods N < 3 not shown.

Newborn Screening Quality Assurance Program
Year: 2023, Quarter: 4
Mean Reported Concentrations Sorted by Method
Program: Acylcarnitines (ACPT)

		Specimen Number																			
		20234006001				20234006002				20234006003				20234006004				20234006005			
Analyte	Method	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD
C14 (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	5	3.02	2.45	0.46	5	0.02	0.19	0.15	5	0.03	0.04	0.02	5	0.02	0.03	0.01	4	0.06	0.06	0.01
	Derivatized - MS/MS MassChrom® Chromsystems	13	3.02	2.61	0.61	13	0.02	0.15	0.08	13	0.03	0.04	0.02	13	0.02	0.03	0.01	13	0.06	0.07	0.02
	Derivatized - MS/MS non-kit	63	3.02	3.21	0.97	61	0.02	0.19	0.12	61	0.03	0.05	0.03	59	0.02	0.04	0.02	63	0.06	0.08	0.03
	LC-MS/MS non-kit	4	3.02	2.43	1.74	4	0.02	0.17	0.08	3	0.03	0.04	0.02	3	0.02	0.03	0.01	4	0.06	0.08	0.03
	Non-derivatized - MS/MS MS2 Screening Neo (MS-Neo)Siemens	4	3.02	3.07	0.26	4	0.02	0.08	0.02	4	0.03	0.03	0.01	4	0.02	0.03	0.01	4	0.06	0.07	0.01
	Non-derivatized - MS/MS MassChrom® Chromsystems	25	3.02	2.51	0.85	25	0.02	0.07	0.03	25	0.03	0.03	0.01	25	0.02	0.02	0.01	25	0.06	0.06	0.01
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	44	3.02	3.04	0.35	44	0.02	0.08	0.02	44	0.03	0.03	0.01	44	0.02	0.03	0.01	44	0.06	0.07	0.01
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	82	3.02	2.87	0.43	82	0.02	0.08	0.02	82	0.03	0.03	0.01	82	0.02	0.03	0.01	82	0.06	0.06	0.01
	Non-derivatized - MS/MS non-kit	21	3.02	2.97	0.58	22	0.02	0.11	0.06	22	0.03	0.04	0.03	22	0.02	0.04	0.02	22	0.06	0.09	0.05
	Non-derivatized Labsystems Neomass AAAC Plus	9	3.02	2.57	0.42	9	0.02	0.06	0.02	9	0.03	0.03	0.02	9	0.02	0.03	0.01	9	0.06	0.06	0.02
Other	4	3.02	2.81	0.14	4	0.02	0.09	0.03	4	0.03	0.04	0.01	4	0.02	0.04	0.02	4	0.06	0.07	0.01	
C14:1 (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	4	6.01	5.52	2.24	5	0.01	0.23	0.35	5	0.01	0.03	0.03	5	0.01	0.03	0.03	4	0.02	0.05	0.04
	Derivatized - MS/MS MassChrom® Chromsystems	13	6.01	4.42	0.87	13	0.01	0.23	0.20	13	0.01	0.03	0.01	13	0.01	0.03	0.01	13	0.02	0.03	0.01
	Derivatized - MS/MS non-kit	64	6.01	5.61	1.54	61	0.01	0.23	0.19	62	0.01	0.03	0.02	62	0.01	0.03	0.02	62	0.02	0.04	0.03
	Non-derivatized - MS/MS MS2 Screening Neo (MS-Neo)Siemens	5	6.01	4.07	0.50	5	0.01	0.03	0.02	5	0.01	0.01	0.01	5	0.01	0.02	0.01	5	0.02	0.02	0.01
	Non-derivatized - MS/MS MassChrom® Chromsystems	20	6.01	3.59	1.33	20	0.01	0.03	0.03	20	0.01	0.02	0.01	20	0.01	0.02	0.01	20	0.02	0.02	0.01
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	46	6.01	4.45	0.85	46	0.01	0.06	0.05	46	0.01	0.03	0.02	46	0.01	0.03	0.02	46	0.02	0.03	0.02
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	90	6.01	4.23	0.47	90	0.01	0.03	0.03	90	0.01	0.02	0.01	90	0.01	0.02	0.01	90	0.02	0.02	0.01
	Non-derivatized - MS/MS non-kit	19	6.01	4.61	1.34	19	0.01	0.04	0.05	18	0.01	0.02	0.01	18	0.01	0.02	0.01	19	0.02	0.03	0.03
	Non-derivatized Labsystems Neomass AAAC Plus	8	6.01	4.02	1.07	8	0.01	0.05	0.06	8	0.01	0.03	0.03	8	0.01	0.03	0.04	8	0.02	0.03	0.04
	Other	4	6.01	4.66	0.60	4	0.01	0.07	0.07	4	0.01	0.02	0.01	4	0.01	0.03	0.01	4	0.02	0.03	0.01

Note: EV = Expected Value, SD = Standard Deviation. Methods N < 3 not shown.

Newborn Screening Quality Assurance Program
Year: 2023, Quarter: 4
Mean Reported Concentrations Sorted by Method
Program: Acylcarnitines (ACPT)

		Specimen Number																			
		20234006001				20234006002				20234006003				20234006004				20234006005			
Analyte	Method	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD
C16 (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	5	0.48	0.53	0.28	5	20.51	22.20	1.84	5	0.62	0.73	0.11	5	0.42	0.55	0.10	4	0.76	0.74	0.21
	Derivatized - MS/MS MassChrom® Chromsystems	13	0.48	0.50	0.23	13	20.51	14.50	2.06	13	0.62	0.61	0.21	13	0.42	0.41	0.08	13	0.76	0.66	0.08
	Derivatized - MS/MS non-kit	63	0.48	0.58	0.12	63	20.51	17.33	3.48	63	0.62	0.77	0.23	63	0.42	0.51	0.11	64	0.76	0.83	0.19
	LC-MS/MS non-kit	3	0.48	0.58	0.19	3	20.51	16.60	6.19	.				3	0.42	0.59	0.17	3	0.76	0.79	0.08
	Non-derivatized - MS/MS MS2 Screening Neo (MS-Neo)Siemens	4	0.48	0.57	0.03	4	20.51	19.29	1.46	4	0.62	0.73	0.05	4	0.42	0.46	0.05	4	0.76	0.80	0.09
	Non-derivatized - MS/MS MassChrom® Chromsystems	25	0.48	0.49	0.11	24	20.51	15.16	3.95	25	0.62	0.60	0.12	25	0.42	0.41	0.07	25	0.76	0.65	0.10
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	45	0.48	0.56	0.06	45	20.51	18.56	1.82	45	0.62	0.76	0.18	45	0.42	0.48	0.05	45	0.76	0.78	0.10
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	86	0.48	0.63	0.11	85	20.51	20.15	2.76	86	0.62	0.79	0.17	86	0.42	0.53	0.09	86	0.76	0.87	0.16
	Non-derivatized - MS/MS non-kit	20	0.48	0.57	0.14	21	20.51	17.18	2.52	19	0.62	0.69	0.10	20	0.42	0.47	0.09	22	0.76	0.87	0.32
	Non-derivatized Labsystems Neomass AAAC Plus	9	0.48	0.46	0.06	9	20.51	16.17	1.47	9	0.62	0.61	0.12	9	0.42	0.41	0.03	9	0.76	0.68	0.05
Other	4	0.48	0.54	0.02	4	20.51	17.58	1.22	4	0.62	0.71	0.07	3	0.42	0.43	0.03	3	0.76	0.72	0.04	
C16OH (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	5	0.01	0.01	0.01	5	0.01	0.05	0.01	5	0.01	0.02	0.02	5	2.01	2.08	0.81	4	0.01	0.02	0.01
	Derivatized - MS/MS MassChrom® Chromsystems	13	0.01	0.01	0.01	13	0.01	0.04	0.02	13	0.01	0.02	0.01	13	2.01	1.34	0.36	13	0.01	0.02	0.01
	Derivatized - MS/MS non-kit	63	0.01	0.02	0.02	62	0.01	0.04	0.02	62	0.01	0.02	0.01	65	2.01	1.44	0.51	65	0.01	0.03	0.03
	Non-derivatized - MS/MS MS2 Screening Neo (MS-Neo)Siemens	4	0.01	0.00	0.00	4	0.01	0.02	0.00	4	0.01	0.00	0.00	4	2.01	1.26	0.12	4	0.01	0.01	0.00
	Non-derivatized - MS/MS MassChrom® Chromsystems	31	0.01	0.01	0.00	31	0.01	0.03	0.01	31	0.01	0.01	0.01	31	2.01	1.29	0.51	31	0.01	0.01	0.01
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	46	0.01	0.01	0.01	46	0.01	0.03	0.01	46	0.01	0.01	0.01	46	2.01	1.31	0.20	46	0.01	0.01	0.01
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	89	0.01	0.01	0.01	89	0.01	0.03	0.01	89	0.01	0.01	0.01	89	2.01	1.39	0.27	89	0.01	0.01	0.01
	Non-derivatized - MS/MS non-kit	20	0.01	0.01	0.01	19	0.01	0.04	0.02	20	0.01	0.01	0.01	19	2.01	1.67	0.56	20	0.01	0.01	0.01
	Non-derivatized Labsystems Neomass AAAC Plus	8	0.01	0.01	0.00	8	0.01	0.02	0.01	8	0.01	0.01	0.01	8	2.01	1.17	0.21	8	0.01	0.01	0.01
	Other	4	0.01	0.01	0.01	4	0.01	0.04	0.02	4	0.01	0.02	0.02	4	2.01	1.26	0.27	4	0.01	0.02	0.01

Note: EV = Expected Value, SD = Standard Deviation. Methods N < 3 not shown.

Newborn Screening Quality Assurance Program
Year: 2023, Quarter: 4
Mean Reported Concentrations Sorted by Method
Program: Acylcarnitines (ACPT)

		Specimen Number																			
		20234006001				20234006002				20234006003				20234006004				20234006005			
Analyte	Method	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD
C18 (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	5	0.39	0.48	0.06	5	6.41	6.21	0.91	5	0.42	0.43	0.09	5	0.30	0.41	0.04	4	0.41	0.44	0.07
	Derivatized - MS/MS MassChrom® Chromsystems	13	0.39	0.42	0.09	13	6.41	5.53	1.00	13	0.42	0.44	0.08	13	0.30	0.39	0.08	13	0.41	0.46	0.09
	Derivatized - MS/MS non-kit	58	0.39	0.43	0.09	59	6.41	5.47	1.12	58	0.42	0.48	0.13	58	0.30	0.40	0.09	59	0.41	0.47	0.13
	Non-derivatized - MS/MS MS2 Screening Neo (MS-Neo)Siemens	3	0.39	0.39	0.03	3	6.41	5.33	0.69	3	0.42	0.43	0.05	3	0.30	0.34	0.07	3	0.41	0.40	0.06
	Non-derivatized - MS/MS MassChrom® Chromsystems	25	0.39	0.43	0.10	23	6.41	6.01	1.28	25	0.42	0.48	0.12	25	0.30	0.39	0.08	25	0.41	0.44	0.07
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	44	0.39	0.45	0.05	44	6.41	5.96	0.52	44	0.42	0.49	0.08	44	0.30	0.40	0.04	44	0.41	0.44	0.05
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	78	0.39	0.45	0.04	78	6.41	5.89	0.52	79	0.42	0.47	0.07	78	0.30	0.40	0.04	79	0.41	0.44	0.09
	Non-derivatized - MS/MS non-kit	20	0.39	0.47	0.10	19	6.41	5.74	0.98	20	0.42	0.51	0.15	19	0.30	0.41	0.09	20	0.41	0.49	0.13
	Non-derivatized Labsystems Neomass AAAC Plus	9	0.39	0.32	0.07	9	6.41	4.42	0.72	9	0.42	0.34	0.08	9	0.30	0.29	0.05	9	0.41	0.34	0.05
Other	4	0.39	0.42	0.03	4	6.41	5.65	0.38	4	0.42	0.43	0.06	4	0.30	0.40	0.08	4	0.41	0.50	0.20	
C18:1 (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	4	0.47	0.65	0.29	4	20.51	18.68	6.80	5	0.73	1.13	0.52	4	0.59	0.75	0.29	4	0.85	1.08	0.54
	Derivatized - MS/MS MassChrom® Chromsystems	13	0.47	0.46	0.15	13	20.51	11.80	2.85	13	0.73	0.73	0.17	13	0.59	0.56	0.13	13	0.85	0.80	0.25
	Derivatized - MS/MS non-kit	58	0.47	0.51	0.14	60	20.51	12.50	4.17	59	0.73	0.85	0.29	59	0.59	0.64	0.21	59	0.85	0.87	0.27
	Non-derivatized - MS/MS MS2 Screening Neo (MS-Neo)Siemens	3	0.47	0.46	0.07	3	20.51	12.52	2.48	3	0.73	0.75	0.15	3	0.59	0.57	0.17	3	0.85	0.83	0.18
	Non-derivatized - MS/MS MassChrom® Chromsystems	20	0.47	0.48	0.20	21	20.51	11.68	5.30	21	0.73	0.76	0.36	20	0.59	0.65	0.25	21	0.85	0.93	0.66
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	44	0.47	0.52	0.07	44	20.51	14.27	1.71	44	0.73	0.86	0.16	44	0.59	0.65	0.08	44	0.85	0.90	0.13
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	77	0.47	0.53	0.07	77	20.51	13.60	1.80	77	0.73	0.81	0.12	77	0.59	0.64	0.09	77	0.85	0.89	0.12
	Non-derivatized - MS/MS non-kit	19	0.47	0.54	0.15	19	20.51	14.24	3.77	19	0.73	0.87	0.27	19	0.59	0.67	0.17	20	0.85	1.01	0.47
	Non-derivatized Labsystems Neomass AAAC Plus	8	0.47	0.40	0.10	8	20.51	12.02	4.97	8	0.73	0.63	0.12	8	0.59	0.53	0.17	8	0.85	0.71	0.15
Other	4	0.47	0.53	0.01	4	20.51	14.29	0.46	4	0.73	0.83	0.06	4	0.59	0.70	0.15	3	0.85	0.86	0.02	

Note: EV = Expected Value, SD = Standard Deviation. Methods N < 3 not shown.

Newborn Screening Quality Assurance Program
Year: 2023, Quarter: 4
Mean Reported Concentrations Sorted by Method
Program: Acylcarnitines (ACPT)

		Specimen Number																			
		20234006001				20234006002				20234006003				20234006004				20234006005			
Analyte	Method	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD
C18OH (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	5	0.01	0.00	0.01	5	0.00	0.02	0.01	4	0.01	0.01	0.01	5	2.01	1.83	0.81	4	0.01	0.01	0.01
	Derivatized - MS/MS MassChrom® Chromsystems	12	0.01	0.01	0.00	12	0.00	0.03	0.02	12	0.01	0.02	0.02	12	2.01	1.28	0.62	12	0.01	0.02	0.01
	Derivatized - MS/MS non-kit	46	0.01	0.01	0.01	45	0.00	0.03	0.02	45	0.01	0.02	0.01	47	2.01	1.31	0.52	46	0.01	0.02	0.02
	Non-derivatized - MS/MS MassChrom® Chromsystems	21	0.01	0.00	0.01	21	0.00	0.01	0.01	21	0.01	0.00	0.01	21	2.01	1.18	0.61	21	0.01	0.01	0.01
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	43	0.01	0.00	0.00	43	0.00	0.01	0.01	43	0.01	0.00	0.01	43	2.01	1.22	0.19	43	0.01	0.01	0.01
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	75	0.01	0.00	0.01	76	0.00	0.02	0.01	76	0.01	0.00	0.01	76	2.01	1.16	0.28	76	0.01	0.01	0.01
	Non-derivatized - MS/MS non-kit	15	0.01	0.01	0.01	15	0.00	0.03	0.02	15	0.01	0.01	0.01	14	2.01	1.37	0.60	15	0.01	0.01	0.01
	Non-derivatized Labsystems Neomass AAAC Plus	8	0.01	0.00	0.00	8	0.00	0.01	0.01	8	0.01	0.01	0.01	8	2.01	0.95	0.33	8	0.01	0.00	0.01
Other	3	0.01	0.00	0.01	3	0.00	0.01	0.00	3	0.01	0.01	0.02	3	2.01	0.99	0.22	.				

Note: EV = Expected Value, SD = Standard Deviation. Methods N < 3 not shown.

Newborn Screening Quality Assurance Program
Year: 2023, Quarter: 4
Mean Reported Concentrations Sorted by Method
Program: Amino Acids (AAPT)

		Specimen Number																			
		20234005001				20234005002				20234005003				20234005004				20234005005			
Analyte	Method	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD
Arg (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	5	6.1	7.2	5.8	5	4.9	5.4	2.8	5	5.4	5.7	1.9	5	4.1	4.3	1.9	4	7.1	6.2	0.8
	Derivatized - MS/MS MassChrom® Chromsystems	10	6.1	7.7	2.7	9	4.9	5.6	0.6	9	5.4	8.0	3.7	10	4.1	5.6	2.5	10	7.1	11.4	3.4
	Derivatized - MS/MS non-kit	50	6.1	7.3	3.3	49	4.9	5.5	2.6	50	5.4	6.9	3.4	49	4.1	5.6	3.4	49	7.1	8.8	3.5
	LC-MS/MS non-kit	3	6.1	7.2	4.2	4	4.9	7.6	4.8	4	5.4	7.2	3.3	4	4.1	5.5	3.8	4	7.1	9.2	7.9
	Non-derivatized - MS/MS MassChrom® Chromsystems	23	6.1	7.8	2.4	23	4.9	5.7	1.6	23	5.4	8.8	2.9	24	4.1	4.5	1.1	23	7.1	10.6	2.2
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	40	6.1	5.1	1.0	40	4.9	4.0	0.8	40	5.4	5.7	1.2	40	4.1	3.8	0.7	40	7.1	8.5	1.6
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	77	6.1	5.6	0.8	77	4.9	4.4	0.7	77	5.4	6.2	0.7	77	4.1	4.2	0.8	77	7.1	8.8	1.0
	Non-derivatized - MS/MS non-kit	15	6.1	7.6	3.9	15	4.9	6.2	3.4	15	5.4	7.9	3.7	15	4.1	5.6	2.8	15	7.1	10.7	3.8
	Non-derivatized Labsystems Neomass AAAC Plus	9	6.1	6.2	1.7	9	4.9	4.4	0.8	9	5.4	6.3	2.0	9	4.1	4.6	1.7	9	7.1	8.8	2.0
Other	4	6.1	6.2	0.7	4	4.9	5.1	0.8	4	5.4	6.5	0.9	4	4.1	4.7	0.5	5	7.1	8.0	3.6	
CRE	Derivatized - MS/MS non-kit	8	71.3	86.7	40.8	8	405.7	438.6	82.2	8	329.2	358.4	77.9	8	369.9	446.1	91.0	8	312.8	361.0	60.6
Cit (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	5	4.7	8.0	3.4	5	10.0	14.3	3.4	5	7.0	11.3	2.0	5	10.7	9.1	1.5	4	3.5	5.9	0.1
	Derivatized - MS/MS MassChrom® Chromsystems	10	4.7	7.3	1.2	10	10.0	14.8	2.0	9	7.0	11.3	1.4	10	10.7	14.4	1.8	10	3.5	7.0	2.8
	Derivatized - MS/MS non-kit	53	4.7	7.0	2.2	53	10.0	14.8	3.4	54	7.0	10.8	2.6	53	10.7	14.3	3.4	54	3.5	6.1	2.3
	LC-MS/MS non-kit	4	4.7	7.8	1.3	5	10.0	17.0	2.9	5	7.0	9.0	2.0	5	10.7	12.6	5.9	5	3.5	5.0	2.6
	Non-derivatized - MS/MS MS2 Screening Neo (MS-Neo)Siemens	4	4.7	5.8	0.4	4	10.0	13.0	1.2	4	7.0	9.7	1.0	4	10.7	13.0	1.0	4	3.5	4.2	1.6
	Non-derivatized - MS/MS MassChrom® Chromsystems	23	4.7	7.7	1.6	24	10.0	15.9	2.0	24	7.0	12.0	1.6	24	10.7	15.2	2.4	24	3.5	6.3	1.1
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	48	4.7	7.4	1.3	48	10.0	14.8	1.7	48	7.0	11.1	1.7	48	10.7	14.6	2.0	48	3.5	5.8	1.5
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	83	4.7	7.1	1.2	83	10.0	14.6	2.1	83	7.0	11.0	1.4	83	10.7	14.7	2.0	83	3.5	5.8	1.0
	Non-derivatized - MS/MS non-kit	19	4.7	7.4	2.9	19	10.0	16.4	3.4	18	7.0	12.1	2.6	19	10.7	14.8	4.1	19	3.5	7.5	4.1
	Non-derivatized Labsystems Neomass AAAC Plus	8	4.7	4.9	2.0	8	10.0	9.6	2.7	8	7.0	7.5	2.6	8	10.7	11.1	2.9	9	3.5	5.3	3.3
Other	5	4.7	9.1	3.2	5	10.0	14.1	2.5	5	7.0	12.8	3.6	5	10.7	15.2	2.7	4	3.5	6.5	1.5	

Note: EV = Expected Value, SD = Standard Deviation. Methods N < 3 not shown.

Newborn Screening Quality Assurance Program
Year: 2023, Quarter: 4
Mean Reported Concentrations Sorted by Method
Program: Amino Acids (AAPT)

		Specimen Number																			
		20234005001				20234005002				20234005003				20234005004				20234005005			
Analyte	Method	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD
GUAC (µmol/L blood)	Derivatized - MS/MS non-kit	12	21.3	23.4	8.3	12	1.0	1.7	0.7	12	1.0	1.5	0.7	12	1.1	1.7	0.8	12	0.8	1.5	0.7
	Non-derivatized - MS/MS non-kit	3	21.3	20.5	1.6	3	1.0	1.2	0.3	3	1.0	0.9	0.3	3	1.1	1.1	0.2	3	0.8	0.9	0.2
Leu (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	5	18.9	26.6	17.3	4	14.5	27.9	20.1	5	19.0	31.1	22.8	5	14.1	40.2	42.4	5	621.2	546.4	52.3
	Derivatized - MS/MS MassChrom® Chromsystems	10	18.9	22.8	6.5	10	14.5	28.7	10.3	10	19.0	29.0	7.9	10	14.1	27.4	7.7	10	621.2	443.0	87.4
	Derivatized - MS/MS non-kit	53	18.9	22.2	10.0	52	14.5	27.7	16.7	52	19.0	27.5	14.9	51	14.1	25.8	13.1	55	621.2	526.1	83.7
	LC-MS/MS non-kit	7	18.9	21.6	11.3	7	14.5	20.6	16.2	8	19.0	30.7	24.8	8	14.1	25.5	21.6	7	621.2	573.5	87.9
	Non-derivatized - MS/MS MS2 Screening Neo (MS-Neo)Siemens	4	18.9	21.0	3.8	4	14.5	16.5	2.2	4	19.0	21.3	2.7	4	14.1	16.3	2.7	4	621.2	568.7	54.9
	Non-derivatized - MS/MS MassChrom® Chromsystems	33	18.9	23.3	5.4	33	14.5	21.7	14.9	33	19.0	26.2	12.3	33	14.1	21.0	14.6	33	621.2	528.9	51.5
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	51	18.9	23.9	3.4	51	14.5	20.3	3.1	51	19.0	24.6	2.6	51	14.1	19.7	2.6	51	621.2	579.8	59.5
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	89	18.9	21.8	3.2	89	14.5	19.9	3.7	89	19.0	24.0	3.3	89	14.1	19.5	3.6	89	621.2	522.6	54.3
	Non-derivatized - MS/MS non-kit	24	18.9	22.2	3.7	24	14.5	20.5	6.9	24	19.0	25.0	7.0	24	14.1	20.2	7.3	25	621.2	526.6	101.9
	Non-derivatized Labsystems Neomass AAAC Plus	9	18.9	20.7	6.4	9	14.5	17.9	7.4	9	19.0	21.2	6.9	9	14.1	18.6	8.7	9	621.2	554.1	103.6
Other	11	18.9	31.4	18.8	11	14.5	30.1	26.1	11	19.0	40.7	22.3	10	14.1	25.5	8.1	10	621.2	609.4	63.3	
Met (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	5	1.2	4.0	5.9	5	2.0	2.9	1.5	5	203.3	159.7	20.8	5	2.1	4.7	2.1	5	1.7	2.2	1.9
	Derivatized - MS/MS MassChrom® Chromsystems	10	1.2	2.7	1.4	10	2.0	3.5	1.4	10	203.3	131.2	20.9	10	2.1	4.0	2.4	10	1.7	3.1	1.6
	Derivatized - MS/MS non-kit	52	1.2	3.2	3.8	53	2.0	4.3	4.2	54	203.3	155.0	29.5	53	2.1	4.5	4.2	53	1.7	3.7	4.2
	LC-MS/MS non-kit	6	1.2	3.0	3.4	6	2.0	3.6	3.3	7	203.3	152.6	58.4	7	2.1	6.5	6.2	7	1.7	3.9	3.4
	Non-derivatized - MS/MS MS2 Screening Neo (MS-Neo)Siemens	4	1.2	1.6	0.3	4	2.0	2.8	0.5	4	203.3	152.8	16.1	4	2.1	2.2	0.7	4	1.7	1.4	0.7
	Non-derivatized - MS/MS MassChrom® Chromsystems	33	1.2	2.3	0.9	33	2.0	2.9	1.0	33	203.3	142.4	18.5	33	2.1	3.0	0.9	33	1.7	2.6	0.9
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	49	1.2	2.5	1.3	49	2.0	4.0	2.0	49	203.3	160.3	16.9	49	2.1	3.4	1.3	49	1.7	2.7	1.1
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	85	1.2	1.6	1.1	85	2.0	2.7	0.9	85	203.3	147.2	16.1	85	2.1	2.4	0.7	85	1.7	1.9	0.5

Note: EV = Expected Value, SD = Standard Deviation. Methods N < 3 not shown.

Newborn Screening Quality Assurance Program
Year: 2023, Quarter: 4
Mean Reported Concentrations Sorted by Method
Program: Amino Acids (AAPT)

		Specimen Number																			
		20234005001				20234005002				20234005003				20234005004				20234005005			
Analyte	Method	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD
Met (µmol/L blood)	Non-derivatized - MS/MS non-kit	24	1.2	2.7	3.3	23	2.0	4.0	3.9	24	203.3	160.0	41.1	24	2.1	3.7	4.4	24	1.7	3.6	4.9
	Non-derivatized Labsystems Neomass AAAC Plus	9	1.2	2.7	6.2	9	2.0	3.7	6.0	9	203.3	131.1	50.4	9	2.1	3.4	6.2	9	1.7	3.0	5.6
	Other	6	1.2	4.0	3.7	7	2.0	8.2	7.1	6	203.3	149.7	40.5	7	2.1	7.8	8.5	7	1.7	6.5	7.1
Phe (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	6	6.3	7.5	4.4	6	356.4	330.1	61.0	6	8.6	8.7	3.0	6	6.1	8.0	4.2	6	6.6	8.8	7.9
	Derivatized - MS/MS MassChrom® Chromsystems	10	6.3	8.6	3.0	11	356.4	300.4	47.4	11	8.6	13.7	4.6	11	6.1	10.2	4.5	10	6.6	8.8	2.8
	Derivatized - MS/MS non-kit	56	6.3	7.3	1.7	58	356.4	298.7	47.0	57	8.6	10.4	2.6	57	6.1	8.6	2.2	57	6.6	7.4	1.9
	GSP® Phe Neonatal PerkinElmer	9	6.3	7.9	8.7	9	356.4	288.2	23.7	9	8.6	8.3	6.3	9	6.1	12.8	10.0	9	6.6	10.9	7.3
	LC-MS/MS non-kit	7	6.3	9.6	6.5	7	356.4	328.6	40.2	8	8.6	14.8	10.8	8	6.1	11.7	7.7	8	6.6	9.1	6.4
	NeoLISA® Phe Interscientifica	3	6.3	24.4	8.3	3	356.4	249.5	42.5	3	8.6	31.6	7.4	3	6.1	106.9	9.4	3	6.6	73.7	4.7
	Neonatal Phe LabSystems	10	6.3	25.6	22.2	10	356.4	282.3	85.2	11	8.6	28.0	26.6	11	6.1	33.1	27.4	10	6.6	50.3	39.9
	Neonatal® Phe Kit PerkinElmer	15	6.3	20.8	14.4	16	356.4	276.7	36.4	15	8.6	24.4	17.0	16	6.1	34.5	21.3	15	6.6	28.0	15.5
	Non-derivatized - MS/MS MS2 Screening Neo (MS-Neo)Siemens	4	6.3	6.6	0.8	4	356.4	308.2	10.0	4	8.6	8.8	1.4	4	6.1	7.7	1.1	4	6.6	6.2	0.9
	Non-derivatized - MS/MS MassChrom® Chromsystems	34	6.3	7.9	2.0	33	356.4	336.7	46.1	34	8.6	10.8	2.0	34	6.1	8.8	1.3	34	6.6	7.7	1.5
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	51	6.3	8.0	2.9	51	356.4	321.1	37.0	51	8.6	11.0	3.0	51	6.1	9.5	2.6	51	6.6	7.6	1.9
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	92	6.3	6.5	1.8	92	356.4	284.9	26.6	92	8.6	9.0	1.6	92	6.1	7.7	1.7	92	6.6	6.3	1.8
	Non-derivatized - MS/MS non-kit	29	6.3	8.7	9.3	28	356.4	300.2	49.6	29	8.6	11.2	11.6	29	6.1	9.9	8.8	29	6.6	8.4	8.6
	Non-derivatized Labsystems Neomass AAAC Plus	7	6.3	5.1	2.1	7	356.4	282.6	48.2	7	8.6	7.4	2.4	7	6.1	6.3	2.3	7	6.6	5.2	2.0
	Other	16	6.3	18.9	16.6	18	356.4	319.3	61.2	15	8.6	24.3	22.8	15	6.1	36.7	32.7	15	6.6	46.3	33.9

Note: EV = Expected Value, SD = Standard Deviation. Methods N < 3 not shown.

Newborn Screening Quality Assurance Program
Year: 2023, Quarter: 4
Mean Reported Concentrations Sorted by Method
Program: Amino Acids (AAPT)

		Specimen Number																			
		20234005001				20234005002				20234005003				20234005004				20234005005			
Analyte	Method	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD
SUAC (µmol/L blood)	Derivatized - MS/MS MassChrom® Chromsystems	8	0.2	0.7	0.4	8	0.2	0.6	0.3	8	0.2	0.6	0.3	9	70.2	26.8	10.9	8	0.2	0.7	0.4
	Derivatized - MS/MS non-kit	22	0.2	0.7	0.5	22	0.2	0.7	0.7	22	0.2	0.7	0.7	24	70.2	44.4	21.4	22	0.2	0.8	0.8
	Non-derivatized - MS/MS MassChrom® Chromsystems	20	0.2	0.7	0.5	20	0.2	0.9	0.6	20	0.2	0.8	0.5	20	70.2	35.6	9.1	20	0.2	0.9	0.6
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	35	0.2	0.6	0.3	35	0.2	0.6	0.3	35	0.2	0.6	0.4	35	70.2	26.3	6.0	35	0.2	0.7	0.4
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	62	0.2	0.2	0.2	62	0.2	0.2	0.2	62	0.2	0.2	0.2	61	70.2	20.6	4.3	62	0.2	0.3	0.2
	Non-derivatized - MS/MS non-kit	16	0.2	0.6	0.6	16	0.2	0.8	0.5	16	0.2	0.7	0.5	15	70.2	36.4	21.2	16	0.2	0.7	0.6
	Non-derivatized Labsystems Neomass AAAC Plus	4	0.2	1.2	0.8	4	0.2	1.3	1.2	4	0.2	1.2	0.7	4	70.2	32.0	16.7	4	0.2	1.2	1.4
Tyr (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	5	10.5	10.0	3.6	5	17.8	19.3	6.6	5	17.6	14.5	1.4	5	817.1	639.8	62.0	5	17.6	14.2	2.6
	Derivatized - MS/MS MassChrom® Chromsystems	11	10.5	11.5	3.0	11	17.8	22.3	9.8	10	17.6	18.1	2.8	11	817.1	633.3	51.0	10	17.6	17.1	3.5
	Derivatized - MS/MS non-kit	55	10.5	11.5	6.2	56	17.8	18.5	3.5	56	17.6	17.5	3.2	57	817.1	657.8	118.1	56	17.6	16.7	5.0
	LC-MS/MS non-kit	7	10.5	11.8	5.9	7	17.8	18.9	2.5	7	17.6	17.9	4.5	7	817.1	638.6	103.8	7	17.6	15.7	5.7
	Non-derivatized - MS/MS MS2 Screening Neo (MS-Neo)Siemens	4	10.5	8.9	0.9	4	17.8	16.9	0.9	4	17.6	16.4	1.7	4	817.1	663.3	26.4	4	17.6	12.8	1.5
	Non-derivatized - MS/MS MassChrom® Chromsystems	29	10.5	13.6	5.0	29	17.8	22.7	5.4	29	17.6	22.5	5.3	29	817.1	752.8	117.7	29	17.6	20.2	8.5
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	49	10.5	12.3	2.1	49	17.8	20.6	3.0	49	17.6	19.9	2.5	49	817.1	742.8	84.1	49	17.6	18.3	4.4
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	90	10.5	11.4	2.0	90	17.8	18.7	2.1	90	17.6	18.3	2.0	90	817.1	649.7	59.8	90	17.6	16.4	3.4
	Non-derivatized - MS/MS non-kit	25	10.5	11.6	4.5	25	17.8	20.2	6.0	25	17.6	19.0	4.4	26	817.1	676.6	82.8	25	17.6	16.6	6.7
	Non-derivatized Labsystems Neomass AAAC Plus	9	10.5	11.1	12.5	9	17.8	16.0	10.7	9	17.6	15.9	11.4	9	817.1	593.6	76.7	9	17.6	13.4	10.7
Other	7	10.5	20.5	12.0	7	17.8	25.0	11.2	7	17.6	23.7	7.3	6	817.1	786.0	101.4	7	17.6	26.6	15.6	

Note: EV = Expected Value, SD = Standard Deviation. Methods N < 3 not shown.

Newborn Screening Quality Assurance Program
Year: 2023, Quarter: 4
Mean Reported Concentrations Sorted by Method
Program: Amino Acids (AAPT)

		Specimen Number																			
		20234005001				20234005002				20234005003				20234005004				20234005005			
Analyte	Method	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD
Val (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	4	25.3	61.6	50.8	5	20.9	31.0	17.0	5	23.7	32.2	16.9	5	20.4	30.4	16.0	5	629.0	531.3	96.7
	Derivatized - MS/MS MassChrom® Chromsystems	10	25.3	52.7	29.4	9	20.9	35.2	25.4	9	23.7	36.8	24.6	9	20.4	26.7	11.2	10	629.0	386.6	128.0
	Derivatized - MS/MS non-kit	50	25.3	51.9	30.5	49	20.9	35.5	15.3	49	23.7	37.9	14.8	49	20.4	35.5	14.8	52	629.0	464.6	97.5
	LC-MS/MS non-kit	6	25.3	59.4	51.6	6	20.9	45.6	32.8	6	23.7	45.9	26.7	6	20.4	39.5	23.5	5	629.0	515.4	29.6
	Non-derivatized - MS/MS MS2 Screening Neo (MS-Neo)Siemens	4	25.3	30.5	5.5	4	20.9	23.1	4.2	4	23.7	25.9	4.4	4	20.4	22.9	4.3	4	629.0	546.7	14.3
	Non-derivatized - MS/MS MassChrom® Chromsystems	23	25.3	30.2	4.7	24	20.9	22.2	3.4	24	23.7	25.4	4.0	24	20.4	21.7	3.6	24	629.0	463.6	73.4
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	48	25.3	36.7	5.3	48	20.9	26.9	4.4	48	23.7	30.3	4.1	47	20.4	26.3	3.8	48	629.0	587.4	79.3
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	78	25.3	34.2	6.8	78	20.9	24.7	5.2	78	23.7	28.4	5.7	78	20.4	24.4	5.1	78	629.0	520.5	44.9
	Non-derivatized - MS/MS non-kit	19	25.3	31.4	9.8	20	20.9	26.4	18.3	20	23.7	28.4	13.7	19	20.4	26.2	10.9	20	629.0	458.9	125.2
	Non-derivatized Labsystems Neomass AAAC Plus	9	25.3	31.6	7.4	9	20.9	22.4	7.7	9	23.7	24.3	7.2	9	20.4	23.6	7.8	9	629.0	546.3	110.1
Other	7	25.3	36.2	18.5	7	20.9	35.9	28.3	7	23.7	30.4	7.4	7	20.4	32.2	24.8	6	629.0	605.7	113.2	

Note: EV = Expected Value, SD = Standard Deviation. Methods N < 3 not shown.

Newborn Screening Quality Assurance Program
Year: 2023, Quarter: 4
Mean Reported Concentrations Sorted by Method
Program: Hormones and Total Galactose (HORMPT)

		Specimen Number																			
		20234001001				20234001002				20234001003				20234001004				20234001005			
Analyte	Method	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD
T4 (µg/dL serum)	AutoDELFLIA® Neonatal T4 PerkinElmer	15	15.4	15.8	2.7	15	15.5	14.8	2.5	15	8.2	7.3	1.8	15	15.4	15.1	2.0	15	16.0	15.5	1.6
	DELFLIA® Neonatal T4 PerkinElmer	8	15.4	19.8	6.5	7	15.5	16.9	2.7	9	8.2	8.9	3.9	7	15.4	15.0	2.8	8	16.0	18.2	8.0
	GSP® T4 Neonatal PerkinElmer	27	15.4	17.1	1.4	27	15.5	17.4	2.3	27	8.2	8.4	1.1	27	15.4	16.5	1.8	27	16.0	16.9	1.7
	NeoMAP® T4 Interscientifica	5	15.4	16.9	1.9	5	15.5	17.8	1.7	5	8.2	12.5	1.6	5	15.4	18.2	1.6	5	16.0	17.8	1.8
	Other	12	15.4	19.5	3.9	12	15.5	19.7	4.7	12	8.2	7.4	2.7	12	15.4	19.7	4.1	12	16.0	20.7	6.4
TSH (µIU/mL serum)	AutoDELFLIA® Neonatal hTSH PerkinElmer	71	1.4	0.8	0.7	71	1.5	1.0	0.8	72	91.6	86.4	16.9	71	1.4	0.9	0.8	71	1.2	0.7	0.7
	DELFLIA® Neonatal TSH PerkinElmer	61	1.4	1.8	1.9	60	1.5	1.5	1.1	62	91.6	79.7	22.8	61	1.4	1.5	0.9	60	1.2	1.3	0.9
	GSP® hTSH Neonatal PerkinElmer	114	1.4	1.2	0.8	113	1.5	1.3	0.6	121	91.6	79.9	12.9	113	1.4	1.3	0.6	112	1.2	1.1	0.6
	NeoMAP® TSH Interscientifica	5	1.4	1.3	0.3	5	1.5	1.4	0.5	5	91.6	98.3	11.8	5	1.4	1.3	0.3	5	1.2	1.1	0.2
	Neonatal TSH LabSystems	21	1.4	4.4	2.5	20	1.5	3.7	2.0	21	91.6	79.2	29.2	20	1.4	4.0	2.1	20	1.2	3.7	1.8
	Other	18	1.4	3.4	3.4	19	1.5	2.3	1.8	20	91.6	74.2	28.4	18	1.4	2.1	1.6	18	1.2	1.9	1.4
	Trimaris Neonatal TSH FEIA	5	1.4	4.3	2.4	5	1.5	1.2	0.6	5	91.6	72.4	5.0	5	1.4	1.7	1.3	5	1.2	1.0	0.6
	ZenTech ELISA Neonatal TSH	13	1.4	3.3	1.8	13	1.5	3.0	1.8	13	91.6	63.0	25.9	13	1.4	2.4	1.1	14	1.2	2.4	1.4
17OHP (ng/mL serum)	AutoDELFLIA® Neonatal 17OHP PerkinElmer	64	0.3	0.8	0.4	65	0.8	1.4	0.7	65	0.9	0.7	0.4	65	86.3	103.3	21.8	64	0.9	1.5	0.5
	DELFLIA® Neonatal 17OHP PerkinElmer	47	0.3	0.8	0.7	47	0.8	1.6	1.9	48	0.9	0.8	0.8	47	86.3	91.9	29.6	48	0.9	1.8	2.0
	GSP® 17OHP Neonatal PerkinElmer	98	0.3	0.7	0.6	98	0.8	1.0	0.5	98	0.9	0.8	0.5	106	86.3	90.7	15.9	98	0.9	1.1	0.5
	LC-MS/MS non-kit	6	0.3	1.2	0.9	6	0.8	1.6	0.9	5	0.9	1.4	1.2	7	86.3	78.4	34.6	6	0.9	1.2	0.9
	NeoMAP® 17OHP Interscientifica	4	0.3	0.5	0.3	4	0.8	1.4	0.5	4	0.9	1.1	0.5	4	86.3	91.3	11.3	4	0.9	1.3	0.3
	Neonatal 17OHP LabSystems	15	0.3	1.2	1.0	15	0.8	2.8	1.7	15	0.9	1.5	0.8	15	86.3	69.0	27.6	15	0.9	2.0	1.3
	Other	17	0.3	2.8	2.4	17	0.8	2.9	1.7	17	0.9	2.3	1.8	18	86.3	99.8	26.6	19	0.9	5.4	5.7
	ZenTech ELISA Neonatal 17OHP	13	0.3	2.7	1.7	12	0.8	3.9	2.7	13	0.9	3.4	2.2	13	86.3	87.1	44.5	12	0.9	5.4	3.5

Note: EV = Expected Value, SD = Standard Deviation. Methods N < 3 not shown.

Newborn Screening Quality Assurance Program
Year: 2023, Quarter: 4
Mean Reported Concentrations Sorted by Method
Program: Hormones and Total Galactose (HORMPT)

		Specimen Number																			
		20234001001				20234001002				20234001003				20234001004				20234001005			
Analyte	Method	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD
TGal (mg/dL blood)	50hr Reagent Kit Spotcheck® TGal Astoria-Pacific	4	0.0	1.8	0.4	4	0.0	2.0	0.5	4	0.9	1.8	0.4	4	0.0	2.1	0.5	4	25.0	25.1	3.7
	Colorimetric -non-kit method	3	0.0	2.3	1.6	3	0.0	2.6	1.1	3	0.9	1.7	1.5	3	0.0	2.2	0.5	.			
	Fluorescence TGal Neonatal PerkinElmer	42	0.0	0.6	0.6	42	0.0	0.6	0.7	42	0.9	1.1	1.0	42	0.0	0.5	0.6	42	25.0	19.7	3.5
	Fluorometric manual TGal - non-kit	6	0.0	2.4	1.3	6	0.0	2.0	1.6	6	0.9	2.5	1.3	6	0.0	2.2	1.7	7	25.0	24.9	8.4
	GSP® TGal Neonatal PerkinElmer	59	0.0	0.6	0.3	59	0.0	0.6	0.3	59	0.9	0.7	0.3	58	0.0	0.6	0.4	62	25.0	25.6	2.6
	NeoLISA® TGal Interscientifica	5	0.0	2.3	0.6	5	0.0	2.3	0.2	5	0.9	2.5	0.6	5	0.0	2.6	0.8	5	25.0	19.8	7.3
	Other	23	0.0	1.9	2.0	23	0.0	2.1	2.2	24	0.9	2.5	3.2	23	0.0	1.8	1.8	23	25.0	28.9	6.1
	UMTEST® TGal Neonatal TecnoSuma	3	0.0	2.1	0.5	3	0.0	2.3	0.6	3	0.9	1.9	0.8	3	0.0	2.2	0.8	3	25.0	28.0	1.5
	ZenTech Neonatal TGal Enzymatic Colorimetric	20	0.0	3.2	1.1	20	0.0	3.3	1.3	20	0.9	3.3	1.3	20	0.0	3.2	1.1	20	25.0	19.7	3.5

Note: EV = Expected Value, SD = Standard Deviation. Methods N < 3 not shown.

Newborn Screening Quality Assurance Program
Year: 2023, Quarter: 4
Mean Reported Concentrations Sorted by Method
Program: Immunoreactive Trypsinogen (IRTPT)

		Specimen Number																			
		20234008001				20234008002				20234008003				20234008004				20234008005			
Analyte	Method	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD
IRT (ng/mL blood)	AutoDELFLIA® Neonatal IRT PerkinElmer	65	249.6	227.6	34.2	64	10.5	10.3	1.6	64	5.5	5.0	1.1	64	14.0	13.2	2.4	65	133.8	127.5	16.0
	DELFLIA® Neonatal IRT	32	249.6	192.5	53.2	30	10.5	11.5	2.7	30	5.5	5.3	4.0	31	14.0	12.2	5.1	32	133.8	102.2	29.6
	ELISA Neonatal Trypsin MP Biomedicals	.				3	10.5	13.1	5.2	3	5.5	7.4	3.1	3	14.0	21.4	11.3	.			
	FEIA IRT Labsystems	11	249.6	241.6	57.2	11	10.5	14.9	10.2	11	5.5	9.3	6.2	11	14.0	13.8	7.7	10	133.8	141.8	31.1
	GSP® IRT Neonatal PerkinElmer, ng/mL blood	83	249.6	263.6	30.3	80	10.5	11.1	1.8	77	5.5	6.7	1.8	81	14.0	13.4	2.1	84	133.8	136.1	15.0
	NeoMAP® IRT Interscientifica	5	249.6	123.3	18.6	5	10.5	15.3	4.9	5	5.5	6.5	3.5	5	14.0	18.2	6.2	5	133.8	118.2	23.8
	Other	12	249.6	273.2	88.0	14	10.5	18.4	12.5	13	5.5	13.1	6.9	11	14.0	22.3	5.0	12	133.8	176.3	68.0
	ZenTech ELISA Neonatal IRT	10	249.6	167.2	24.0	10	10.5	23.0	14.3	10	5.5	12.1	5.9	10	14.0	24.1	9.7	10	133.8	148.6	26.8

Note: EV = Expected Value, SD = Standard Deviation. Methods N < 3 not shown.

This *NEWBORN SCREENING QUALITY ASSURANCE PROGRAM* 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.

CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC) ATLANTA, GA 30341

Director

Mandy K. Cohen, MD, MPH

Director National Center for Environmental Health

Aaron Bernstein, MD, MPH

Director Division of Laboratory Sciences

Amy Mowbray, PhD (acting)

Chief Newborn Screening and Molecular Biology Branch

Carla Cuthbert, PhD

Contributors

John Bernstein, MS

Christofer Brown, BS

Anthony Cervalli, BS

Michelle Chaney, BS

David Cobb, PhD

Alora Colvin, BS

Elya Courtney, MPH

Suzanne Cordovado, PhD

Katherine Duneman, MS

Ernesto Gonzales Reyes, PhD

Christopher Greene, PhD

Rosemary Hage, PhD

Laura Hancock, MS

Miyono Hendrix, MS

Omar Aboul Houda, BS

Samantha Isenberg, PhD

Jihyun Kim, MS

Francis Lee, PhD

LiXia Li, PhD

Timothy Lim, PhD

Elizabeth McCown, BS

Joanne Mei, PhD

Auriel Moseley, MS

Stanimila Nikolova, PhD

Ivy Onyechi, MS

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INQUIRIES TO:

Sherri Zobel, Editor

Centers for Disease Control and Prevention (CDC), Newborn Screening Quality Assurance Program
Mailstop S110-3, 4770 Buford Highway, N.E., Atlanta, GA 30341-3724 Email: NSQAPDMT@cdc.gov