

Newborn Screening Quality Assurance Program Biochemical Proficiency Testing Program Report 2023 Quarter 1 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 1 Newborn Screening Quality Assurance Program's (NSQAP) PT event. Data were collected in the NSQAP participant portal. <https://nbs.dynamics365portals.us/>

On January 10, 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 acetylcarnitine (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.

The following specimens did not meet the 80% domestic participant consensus and were not evaluated:

- Specimen 20231006004 – C10
- Specimens 20231007001-20231007005 - BIOPT Panel. NSQAP could not certify the 2023 quarter 1 BIOT panel therefore it is not evaluated.

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 certified PT specimens for homogeneity, accuracy, stability, and suitability for newborn screening assays. Most PT specimens were prepared from whole blood of 50% hematocrit. NSQAP produced PT specimens by using unaltered donor blood, enriching a single donor blood unit with analytes, or by pooling several units of red blood cells (RBCs), mixing with normal serum, and enriching with analytes. Specimens with normal G6PD enzyme activity were prepared from normal units of purchased cord blood.

- **Amino acid and acylcarnitine specimens** were enriched with commercially available or custom-synthesized standards. Small variances in enrichments and recoveries might result from impurities in the purchased (synthesized) materials.
 - **C0(L) and C2(L) PT deficient specimens** were produced by washing fresh RBCs at least six times then combining with charcoal-stripped serum.
- **Congenital hypothyroid PT specimens** were enriched with measured amounts of T4 and TSH after reconstituting washed RBCs with purchased T4-depleted charcoal-stripped serum.
- **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 serum 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: 1**

**Program: Amino Acids
Expected Values**

	Specimen				
	20231005001	20231005002	20231005003	20231005004	20231005005
Analyte	Expected Value				
Arg (µmol/L blood)	212.9	11.5	14.4	11.8	14.9
Cre (µmol/L blood)	400.4	396.8	393.3	339.4	401.7
Cit (µmol/L blood)	19.9	169.8	21.8	32.0	19.1
GAMT ratio	4.7	4.3	3.8	8.0	3.7
GUAC(µmol/L blood)	1.9	1.7	1.5	2.7	1.5
Leu (µmol/L blood)	88.6	88.6	141.4	758.6	146.7
Met (µmol/L blood)	12.8	11.7	214.0	33.1	14.1
Phe (µmol/L blood)	43.6	42.7	49.3	69.0	272.1
SUAC (µmol/L blood)	0.2	0.1	0.2	0.1	0.1
Tyr (µmol/L blood)	53.3	52.2	50.2	103.1	51.2
Val (µmol/L blood)	119.2	116.3	134.1	653.3	139.4

**Program: Amino Acids
Expected Clinical Assessments**

	Specimen				
	20231005001	20231005002	20231005003	20231005004	20231005005
Analyte	Expected Assessment				
Arg (µmol/L blood)	2	1	1	1	1
Cre (µmol/L blood)	1	1	1	1	1
Cit (µmol/L blood)	1	2	1	1	1
GAMT ratio	1	1	1	1	1
GUAC(µmol/L blood)	1	1	1	1	1
Leu (µmol/L blood)	1	1	1	2	1
Met (µmol/L blood)	1	1	2	1	1
Phe (µmol/L blood)	1	1	1	1	2
SUAC (µmol/L blood)	1	1	1	1	1
Tyr (µmol/L blood)	1	1	1	1	1
Val (µmol/L blood)	1	1	1	2	1

**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: 1**

**Program: Acylcarnitines
Expected Values**

	Specimen				
	20231006001	20231006002	20231006003	20231006004	20231006005
Analyte	Expected Value				
C0(L) (µmol/L blood)	25.25	24.89	25.15	22.86	23.19
C2(L) (µmol/L blood)	21.03	20.90	20.99	21.08	21.23
C3 (µmol/L blood)	12.67	0.65	0.60	0.61	0.64
C3DC (µmol/L blood)	0.02	0.01	0.01	0.02	0.02
C3DC+C4OH (µmol/L blood)	0.02	0.02	0.02	0.02	0.02
C4 (µmol/L blood)	0.04	0.04	0.04	0.04	0.04
C4OH (µmol/L blood)	0.04	0.04	0.03	0.04	0.04
C5 (µmol/L blood)	0.04	0.03	0.03	0.04	2.54
C5:1 (µmol/L blood)	0.01	0.01	0.01	0.01	0.01
C5DC (µmol/L blood)	0.02	0.02	1.52	0.02	0.02
C5OH (µmol/L blood)	0.28	0.26	0.27	0.28	0.29
C6 (µmol/L blood)	0.02	0.01	0.02	1.42	0.02
C8 (µmol/L blood)	0.01	0.01	0.01	1.62	0.02
C10 (µmol/L blood)	0.01	0.01	0.01	1.21	0.02
C10:1 (µmol/L blood)	0.01	0.01	0.01	1.01	0.02
C10:2 (µmol/L blood)	0.00	0.00	0.00	0.00	0.00
C14 (µmol/L blood)	0.07	1.47	0.08	0.06	0.06
C14:1 (µmol/L blood)	0.01	2.02	0.01	0.02	0.02
C16 (µmol/L blood)	0.77	0.75	0.75	0.53	0.55
C16OH (µmol/L blood)	0.02	1.03	0.02	0.02	0.02
C18 (µmol/L blood)	0.38	0.35	0.36	0.37	0.39
C18:1 (µmol/L blood)	0.56	0.55	0.57	0.62	0.64
C18OH (µmol/L blood)	0.01	1.01	0.00	0.00	0.00

Note: Expected Value = sum of endogenous and enrichment values

**Newborn Screening Quality Assurance Program
Specimen Certification
Year: 2023 Quarter: 1**

**Program: Acylcarnitines
Expected Clinical Assessments**

Analyte	Specimen				
	20231006001	20231006002	20231006003	20231006004	20231006005
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)	2	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	1	1	1
C5DC (µmol/L blood)	1	1	2	1	1
C5OH (µmol/L blood)	1	1	1	1	1
C6 (µmol/L blood)	1	1	1	2	1
C8 (µmol/L blood)	1	1	1	2	1
C10 (µmol/L blood)	1	1	1	NE	1
C10:1 (µmol/L blood)	1	1	1	2	1
C10:2 (µmol/L blood)	1	1	1	1	1
C14 (µmol/L blood)	1	2	1	1	1
C14:1 (µmol/L blood)	1	2	1	1	1
C16 (µmol/L blood)	1	1	1	1	1
C16OH (µmol/L blood)	1	2	1	1	1
C18 (µmol/L blood)	1	1	1	1	1
C18:1 (µmol/L blood)	1	1	1	1	1
C18OH (µmol/L blood)	1	2	1	1	1

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

**Newborn Screening Quality Assurance Program
Specimen Certification
Year: 2023 Quarter: 1**

**Program: HORMPT
Expected Values**

	Specimen				
	20231001001	20231001002	20231001003	20231001004	20231001005
Analyte	Expected Value				
T4 (µg/dL serum)	10.0	10.0	1.5	10.0	10.0
TSH (µIU/mL serum)	0.0	0.0	90.0	0.0	0.0
17OHP (ng/mL serum)	0.0	0.0	0.0	0.0	85.0
TGal (mg/dL blood)	0.0	0.0	0.0	25.0	0.0

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

	Specimen				
	20231001001	20231001002	20231001003	20231001004	20231001005
Analyte	Expected Assessment				
T4 (µg/dL serum)	1	1	2	1	1
TSH (µIU/mL serum)	1	1	2	1	1
17OHP (ng/mL serum)	1	1	1	1	2
TGal (mg/dL blood)	1	1	1	2	1

**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: 1**

**Program: Immunoreactive Trypsinogen
Expected Values**

	Specimen				
	20231008001	20231008002	20231008003	20231008004	20231008005
Analyte	Expected Value				
IRT (ng/mL blood)	142.9	9.0	27.7	198.0	21.6

**Program: Immunoreactive Trypsinogen
Specimen Certification**

	Specimen				
	20231008001	20231008002	20231008003	20231008004	20231008005
Analyte	Expected Assessment				
IRT (ng/mL blood)	2	1	1	2	1

**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: 1**

**Program: Biotinidase
Expected Clinical Assessments**

	Specimen				
	20231007001	20231007002	20231007003	20231007004	20231007005
Analyte	Expected Assessment				
BIOT	NE	NE	NE	NE	NE

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

	Specimen				
	20231009001	20231009002	20231009003	20231009004	20231009005
Analyte	Expected Assessment				
GALT	1	1	2	1	1

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

	Specimen				
	20231003001	20231003002	20231003003	20231003004	20231003005
Analyte	Expected Assessment				
G6PD	2	2	1	1	1

**Newborn Screening Quality Assurance Program
Frequency Distribution of Participants' Clinical Assessments
Year: 2023, Quarter 1**

**Program: Acylcarnitines (ACPT)
Domestic**

Analyte	Specimen Number									
	20231006001		20231006002		20231006003		20231006004		20231006005	
	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL
C0(L)	0	46	0	46	0	46	0	46	0	46
C2(L)	0	21	0	21	0	21	0	21	0	21
C3	46	0	0	46	0	46	0	46	0	46
C3DC	0	10	0	10	0	10	0	10	0	10
C3DC+C4OH	0	29	0	29	0	29	0	29	0	29
C4	0	42	0	42	0	42	0	42	0	42
C4OH	0	8	0	8	0	8	0	8	0	8
C5	0	46	0	46	0	46	0	46	46	0
C5:1	0	45	0	45	0	45	0	45	0	45
C5DC	0	44	0	44	44	0	0	44	0	44
C5OH	0	44	0	44	0	44	0	44	0	44
C6	0	40	0	40	0	40	40	0	0	40
C8	0	46	0	46	0	46	46	0	0	46
C10	0	41	0	41	0	41	28	13	0	41
C10:1	0	38	0	38	0	38	38	0	0	38
C10:2	0	26	0	26	0	26	0	26	0	26
C14	0	40	39	1	0	40	0	40	0	40
C14:1	0	46	44	2	0	46	0	46	0	46
C16	0	45	0	45	0	45	0	45	0	45
C16OH	0	46	46	0	0	46	0	46	0	46
C18	0	37	0	37	0	37	0	37	0	37
C18:1	0	39	0	39	0	39	0	39	0	39
C18OH	0	35	35	0	0	35	0	35	0	35

**Newborn Screening Quality Assurance Program
Frequency Distribution of Participants' Clinical Assessments
Year: 2023, Quarter 1**

**Program: Acylcarnitines (ACPT)
International**

Analyte	Specimen Number									
	20231006001		20231006002		20231006003		20231006004		20231006005	
	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL
C0(L)	2	239	2	239	1	240	1	240	2	239
C2(L)	0	192	1	191	0	192	1	191	2	190
C3	229	7	2	234	2	234	2	234	1	235
C3DC	1	65	1	65	1	65	1	65	1	65
C3DC+C4OH	0	101	0	101	0	101	0	101	0	101
C4	1	216	2	215	1	216	1	216	2	215
C4OH	1	61	1	61	1	61	1	61	3	59
C5	0	246	0	246	0	246	0	246	245	1
C5:1	1	209	3	207	4	206	1	209	3	207
C5DC	2	233	1	234	234	1	0	235	0	235
C5OH	1	204	2	203	4	201	5	200	3	202
C6	0	222	0	222	0	222	216	6	0	222
C8	0	249	0	249	0	249	245	4	0	249
C10	0	235	0	235	0	235	184	51	0	235
C10:1	0	207	0	207	0	207	199	8	0	207
C10:2	0	153	0	153	0	153	1	152	0	153
C14	2	222	213	11	1	223	1	223	1	223
C14:1	1	223	218	6	0	224	0	224	0	224
C16	2	223	2	223	2	223	4	221	5	220
C16OH	1	229	221	9	0	230	0	230	0	230
C18	1	218	1	218	1	218	1	218	1	218
C18:1	1	205	1	205	1	205	1	205	1	205
C18OH	1	187	173	15	1	187	0	188	0	188

**Newborn Screening Quality Assurance Program
Frequency Distribution of Participants' Clinical Assessments
Year: 2023, Quarter 1**

**Program: Acylcarnitines (ACPT)
Manufacturer**

Analyte	Specimen Number									
	20231006001		20231006002		20231006003		20231006004		20231006005	
	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL
C0(L)	0	9	0	9	0	9	0	9	0	9
C2(L)	1	4	1	4	1	4	1	4	1	4
C3	9	0	0	9	0	9	0	9	0	9
C3DC	0	3	0	3	0	3	0	3	0	3
C3DC+C4OH	0	3	0	3	0	3	0	3	0	3
C4	0	9	0	9	0	9	0	9	0	9
C4OH	0	3	0	3	0	3	0	3	0	3
C5	0	9	0	9	0	9	0	9	9	0
C5:1	0	7	0	7	0	7	0	7	0	7
C5DC	0	9	0	9	9	0	0	9	0	9
C5OH	0	6	0	6	0	6	0	6	0	6
C6	0	9	0	9	0	9	9	0	0	9
C8	0	9	0	9	0	9	9	0	0	9
C10	0	9	0	9	0	9	8	1	0	9
C10:1	0	7	0	7	0	7	7	0	0	7
C10:2	0	7	0	7	0	7	0	7	0	7
C14	0	9	9	0	0	9	0	9	0	9
C14:1	0	7	7	0	0	7	0	7	0	7
C16	0	9	0	9	0	9	0	9	0	9
C16OH	0	7	7	0	0	7	0	7	0	7
C18	0	9	0	9	0	9	0	9	0	9
C18:1	0	7	0	7	0	7	0	7	0	7
C18OH	0	7	7	0	0	7	0	7	0	7

**Newborn Screening Quality Assurance Program
Frequency Distribution of Participants' Clinical Assessments
Year: 2023, Quarter 1**

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

Analyte	Specimen Number									
	20231005001		20231005002		20231005003		20231005004		20231005005	
	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL
ARG	36	1	0	37	0	37	0	37	0	37
CIT	0	44	44	0	0	44	0	44	0	44
CRE	1	3	1	3	1	3	1	3	1	3
GAMTr	0	3	0	3	0	3	0	3	0	3
GUAC	1	5	1	5	1	5	1	5	1	5
LEU	0	44	0	44	0	44	44	0	0	44
MET	0	43	0	43	43	0	0	43	0	43
PHE	0	50	0	50	0	50	0	50	50	0
SUAC	0	42	0	42	0	42	0	42	0	42
TYR	0	48	0	48	0	48	1	47	0	48
VAL	0	30	0	30	0	30	30	0	0	30

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

Analyte	Specimen Number									
	20231005001		20231005002		20231005003		20231005004		20231005005	
	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL
ARG	184	12	2	194	0	196	1	195	1	195
CIT	3	211	212	2	2	212	6	208	2	212
CRE	0	4	0	4	0	4	0	4	0	4
GAMTr	0	2	0	2	0	2	1	1	0	2
GUAC	0	6	0	6	0	6	3	3	0	6
LEU	0	249	0	249	1	248	247	2	1	248
MET	2	234	1	235	231	5	13	223	1	235
PHE	1	300	1	300	0	301	6	295	298	3
SUAC	1	122	0	123	0	123	1	122	1	122
TYR	0	237	0	237	0	237	3	234	0	237
VAL	1	223	1	223	1	223	219	5	1	223

**Newborn Screening Quality Assurance Program
 Frequency Distribution of Participants' Clinical Assessments
 Year: 2023, Quarter 1**

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

Analyte	Specimen Number									
	20231005001		20231005002		20231005003		20231005004		20231005005	
	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL
ARG	8	1	1	8	0	9	0	9	0	9
CIT	0	9	9	0	0	9	0	9	0	9
LEU	0	11	0	11	0	11	11	0	0	11
MET	0	9	0	9	9	0	0	9	0	9
PHE	0	11	0	11	0	11	0	11	11	0
SUAC	0	9	0	9	0	9	0	9	0	9
TYR	0	9	0	9	0	9	0	9	0	9
VAL	0	9	0	9	0	9	9	0	0	9

**Newborn Screening Quality Assurance Program
 Frequency Distribution of Participants' Clinical Assessments
 Year: 2023, Quarter 1**

**Program: Biotinidase (BIOTPT)
 Domestic**

	Specimen Number									
	20231007001		20231007002		20231007003		20231007004		20231007005	
Analyte	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL
BIOT	7	34	41	0	8	33	8	33	8	33

**Program: Biotinidase (BIOTPT)
 International**

	Specimen Number									
	20231007001		20231007002		20231007003		20231007004		20231007005	
Analyte	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL
BIOT	14	153	164	3	14	153	12	155	14	153

**Program: Biotinidase (BIOTPT)
 Manufacturer**

	Specimen Number									
	20231007001		20231007002		20231007003		20231007004		20231007005	
Analyte	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL
BIOT	0	4	4	0	0	4	0	4	0	4

**Newborn Screening Quality Assurance Program
 Frequency Distribution of Participants' Clinical Assessments
 Year: 2023, Quarter 1**

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

	Specimen Number									
	20231009001		20231009002		20231009003		20231009004		20231009005	
Analyte	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL
GALT	0	41	0	41	41	0	0	41	0	41

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

	Specimen Number									
	20231009001		20231009002		20231009003		20231009004		20231009005	
Analyte	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL
GALT	0	102	0	102	102	0	0	102	0	102

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

	Specimen Number									
	20231009001		20231009002		20231009003		20231009004		20231009005	
Analyte	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL
GALT	0	3	0	3	3	0	0	3	0	3

**Newborn Screening Quality Assurance Program
Frequency Distribution of Participants' Clinical Assessments
Year: 2023, Quarter 1**

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

	Specimen Number									
	20231003001		20231003002		20231003003		20231003004		20231003005	
Analyte	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL
G6PD	2	0	2	0	0	2	0	2	0	2

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

	Specimen Number									
	20231003001		20231003002		20231003003		20231003004		20231003005	
Analyte	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL
G6PD	87	2	87	2	0	89	0	89	0	89

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

	Specimen Number									
	20231003001		20231003002		20231003003		20231003004		20231003005	
Analyte	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL
G6PD	4	0	4	0	0	4	0	4	0	4

**Newborn Screening Quality Assurance Program
Frequency Distribution of Participants' Clinical Assessments
Year: 2023, Quarter 1**

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

	Specimen Number									
	20231001001		20231001002		20231001003		20231001004		20231001005	
Analyte	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL
TGAL	0	20	0	20	0	20	20	0	0	20
T4	0	19	0	19	19	0	0	19	0	19
TSH	0	42	0	42	40	2	0	42	0	42
17OHP	1	40	1	40	0	41	1	40	40	1

Program: Hormones and Total Galactose (HORMPT)

International

	Specimen Number									
	20231001001		20231001002		20231001003		20231001004		20231001005	
Analyte	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL
TGAL	0	147	0	147	1	146	146	1	0	147
T4	0	42	0	42	42	0	0	42	0	42
TSH	0	266	0	266	266	0	0	266	1	265
17OHP	1	220	0	221	0	221	0	221	219	2

Program: Hormones and Total Galactose (HORMPT)

Manufacturer

	Specimen Number									
	20231001001		20231001002		20231001003		20231001004		20231001005	
Analyte	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL
TGAL	0	6	0	6	0	6	6	0	0	6
T4	0	6	1	5	6	0	0	6	0	6
TSH	0	12	0	12	12	0	0	12	0	12
17OHP	0	9	0	9	0	9	0	9	9	0

**Newborn Screening Quality Assurance Program
Frequency Distribution of Participants' Clinical Assessments
Year: 2023, Quarter 1**

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

	Specimen Number									
	20231008001		20231008002		20231008003		20231008004		20231008005	
Analyte	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL
IRT	43	0	0	43	0	43	43	0	0	43

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

	Specimen Number									
	20231008001		20231008002		20231008003		20231008004		20231008005	
Analyte	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL
IRT	167	1	1	167	3	165	166	2	2	166

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

	Specimen Number									
	20231008001		20231008002		20231008003		20231008004		20231008005	
Analyte	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL	ONL	WNL
IRT	6	0	0	6	0	6	6	0	0	6

**Newborn Screening Quality Assurance Program
Overall Statistics
Year: 2023, Quarter 1**

Program: Acylcarnitines (ACPT)

Analyte	Specimen Number	N	EV	Mean	SD	Min	Max	Comment
C0(L) (µmol/L blood)	20231006001	293	25.25	23.49	4.55	8.12	37.51	
	20231006002	292	24.89	22.91	4.38	3.26	36.71	
	20231006003	292	25.15	22.69	3.87	13.00	35.38	
	20231006004	294	22.86	21.71	4.05	9.47	35.20	
	20231006005	293	23.19	21.73	4.34	6.47	39.90	
C2(L) (µmol/L blood)	20231006001	216	21.03	19.81	3.45	9.35	34.40	
	20231006002	215	20.90	19.87	3.44	9.61	34.38	
	20231006003	215	20.99	19.89	3.82	9.15	47.08	
	20231006004	216	21.08	20.72	4.06	9.09	48.47	
	20231006005	215	21.23	21.01	3.89	9.64	38.21	
C3 (µmol/L blood)	20231006001	288	12.67	11.61	2.10	0.92	20.00	
	20231006002	287	0.65	0.65	0.14	0.07	1.50	
	20231006003	286	0.60	0.63	0.13	0.40	1.41	
	20231006004	286	0.61	0.67	0.13	0.38	1.38	
	20231006005	287	0.64	0.68	0.14	0.39	1.52	
C3DC (µmol/L blood)	20231006001	77	0.02	0.03	0.03	0.00	0.15	
	20231006002	77	0.01	0.03	0.04	0.00	0.17	
	20231006003	77	0.01	0.03	0.04	0.00	0.18	
	20231006004	76	0.02	0.03	0.04	0.00	0.28	
	20231006005	77	0.02	0.03	0.04	0.00	0.22	
C3DC+C4OH (µmol/L blood)	20231006001	129	0.02	0.04	0.03	0.00	0.20	
	20231006002	130	0.02	0.03	0.02	0.00	0.15	
	20231006003	129	0.02	0.03	0.02	0.00	0.18	
	20231006004	129	0.02	0.04	0.02	0.00	0.19	
	20231006005	129	0.02	0.07	0.04	0.00	0.26	

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

**Newborn Screening Quality Assurance Program
Overall Statistics
Year: 2023, Quarter 1**

Program: Acylcarnitines (ACPT)

Analyte	Specimen Number	N	EV	Mean	SD	Min	Max	Comment
C4 (µmol/L blood)	20231006001	263	0.04	0.06	0.04	0.00	0.32	
	20231006002	265	0.04	0.06	0.05	0.00	0.49	
	20231006003	263	0.04	0.05	0.04	0.00	0.27	
	20231006004	262	0.04	0.07	0.05	0.00	0.38	
	20231006005	262	0.04	0.06	0.04	0.00	0.35	
C4OH (µmol/L blood)	20231006001	72	0.04	0.05	0.03	0.01	0.13	
	20231006002	71	0.04	0.05	0.03	0.01	0.14	
	20231006003	71	0.03	0.05	0.03	0.01	0.18	
	20231006004	70	0.04	0.05	0.03	0.01	0.18	
	20231006005	70	0.04	0.10	0.06	0.02	0.31	
C5 (µmol/L blood)	20231006001	297	0.04	0.04	0.04	0.00	0.30	
	20231006002	297	0.03	0.05	0.04	0.00	0.33	
	20231006003	297	0.03	0.04	0.03	0.00	0.29	
	20231006004	296	0.04	0.05	0.05	0.00	0.80	
	20231006005	300	2.54	2.28	0.36	0.08	3.69	
C5:1 (µmol/L blood)	20231006001	260	0.01	0.02	0.02	0.00	0.17	
	20231006002	261	0.01	0.03	0.21	0.00	3.45	
	20231006003	260	0.01	0.02	0.04	0.00	0.44	
	20231006004	260	0.01	0.02	0.03	0.00	0.29	
	20231006005	260	0.01	0.02	0.02	0.00	0.17	
C5DC (µmol/L blood)	20231006001	286	0.02	0.03	0.03	0.00	0.21	
	20231006002	286	0.02	0.03	0.04	0.00	0.34	
	20231006003	287	1.52	1.55	0.58	0.10	3.62	
	20231006004	285	0.02	0.04	0.03	0.00	0.28	
	20231006005	286	0.02	0.03	0.03	0.00	0.28	

**Newborn Screening Quality Assurance Program
Overall Statistics
Year: 2023, Quarter 1**

Program: Acylcarnitines (ACPT)

Analyte	Specimen Number	N	EV	Mean	SD	Min	Max	Comment
C5OH (µmol/L blood)	20231006001	252	0.28	0.28	0.08	0.02	0.57	
	20231006002	252	0.26	0.27	0.07	0.06	0.55	
	20231006003	252	0.27	0.28	0.08	0.07	0.65	
	20231006004	252	0.28	0.30	0.09	0.00	0.62	
	20231006005	251	0.29	0.29	0.08	0.01	0.52	
C6 (µmol/L blood)	20231006001	265	0.02	0.02	0.02	0.00	0.16	
	20231006002	267	0.01	0.02	0.03	0.00	0.18	
	20231006003	267	0.02	0.02	0.03	0.00	0.20	
	20231006004	269	1.42	1.26	0.21	0.60	2.79	
	20231006005	266	0.02	0.02	0.03	0.00	0.18	
C8 (µmol/L blood)	20231006001	300	0.01	0.03	0.02	0.00	0.14	
	20231006002	300	0.01	0.03	0.02	0.00	0.15	
	20231006003	300	0.01	0.03	0.02	0.00	0.11	
	20231006004	301	1.62	1.54	0.29	0.13	2.91	
	20231006005	300	0.02	0.04	0.02	0.00	0.15	
C10 (µmol/L blood)	20231006001	281	0.01	0.03	0.02	0.00	0.11	
	20231006002	280	0.01	0.04	0.03	0.00	0.20	
	20231006003	277	0.01	0.03	0.02	0.00	0.16	
	20231006004	282	1.21	0.48	0.10	0.04	0.86	
	20231006005	279	0.02	0.03	0.02	0.00	0.12	
C10:1 (µmol/L blood)	20231006001	249	0.01	0.02	0.02	0.00	0.13	
	20231006002	248	0.01	0.02	0.03	0.00	0.15	
	20231006003	248	0.01	0.02	0.02	0.00	0.14	
	20231006004	250	1.01	0.86	0.28	0.03	2.15	
	20231006005	247	0.02	0.02	0.02	0.00	0.12	

**Newborn Screening Quality Assurance Program
Overall Statistics
Year: 2023, Quarter 1**

Program: Acylcarnitines (ACPT)

Analyte	Specimen Number	N	EV	Mean	SD	Min	Max	Comment
C10:2 (µmol/L blood)	20231006001	183	0.00	0.01	0.01	0.00	0.07	
	20231006002	184	0.00	0.01	0.02	0.00	0.09	
	20231006003	184	0.00	0.01	0.01	0.00	0.07	
	20231006004	184	0.00	0.01	0.02	0.00	0.13	
	20231006005	184	0.00	0.01	0.02	0.00	0.09	
C14 (µmol/L blood)	20231006001	269	0.07	0.07	0.03	0.00	0.27	
	20231006002	272	1.47	1.28	0.24	0.03	2.26	
	20231006003	268	0.08	0.07	0.02	0.00	0.19	
	20231006004	269	0.06	0.05	0.02	0.00	0.15	
	20231006005	269	0.06	0.05	0.02	0.00	0.19	
C14:1 (µmol/L blood)	20231006001	273	0.01	0.03	0.02	0.00	0.18	
	20231006002	274	2.02	0.92	0.19	0.45	1.75	
	20231006003	273	0.01	0.03	0.02	0.00	0.15	
	20231006004	273	0.02	0.03	0.02	0.00	0.14	
	20231006005	271	0.02	0.03	0.02	0.00	0.14	
C16 (µmol/L blood)	20231006001	276	0.77	0.74	0.15	0.11	1.35	
	20231006002	278	0.75	0.74	0.15	0.25	1.28	
	20231006003	276	0.75	0.73	0.16	0.07	1.38	
	20231006004	277	0.53	0.49	0.09	0.26	0.87	
	20231006005	277	0.55	0.49	0.10	0.26	1.12	
C16OH (µmol/L blood)	20231006001	279	0.02	0.01	0.01	0.00	0.09	
	20231006002	281	1.03	0.74	0.20	0.01	1.53	
	20231006003	279	0.02	0.01	0.01	0.00	0.10	
	20231006004	279	0.02	0.01	0.01	0.00	0.07	
	20231006005	279	0.02	0.01	0.01	0.00	0.09	

**Newborn Screening Quality Assurance Program
Overall Statistics
Year: 2023, Quarter 1**

Program: Acylcarnitines (ACPT)

Analyte	Specimen Number	N	EV	Mean	SD	Min	Max	Comment
C18 (µmol/L blood)	20231006001	262	0.38	0.39	0.08	0.01	0.74	
	20231006002	262	0.35	0.40	0.08	0.01	0.79	
	20231006003	262	0.36	0.39	0.09	0.01	0.88	
	20231006004	261	0.37	0.39	0.08	0.01	0.72	
	20231006005	261	0.39	0.39	0.08	0.01	0.80	
C18:1 (µmol/L blood)	20231006001	250	0.56	0.55	0.14	0.01	1.10	
	20231006002	249	0.55	0.55	0.13	0.01	1.05	
	20231006003	249	0.57	0.55	0.12	0.05	1.00	
	20231006004	249	0.62	0.62	0.13	0.09	1.10	
	20231006005	250	0.64	0.63	0.16	0.01	1.70	
C18OH (µmol/L blood)	20231006001	228	0.01	0.01	0.02	0.00	0.18	
	20231006002	228	1.01	0.60	0.21	0.00	1.72	
	20231006003	228	0.00	0.01	0.02	0.00	0.25	
	20231006004	226	0.00	0.01	0.01	0.00	0.09	
	20231006005	228	0.00	0.01	0.02	0.00	0.15	

**Newborn Screening Quality Assurance Program
Overall Statistics
Year: 2023, Quarter 1**

Program: Amino Acids (AAPT)

Analyte	Specimen Number	N	EV	Mean	SD	Min	Max	Comment
Arg (µmol/L blood)	20231005001	241	212.9	136.0	45.1	6.8	298.0	
	20231005002	237	11.5	11.1	4.6	0.0	37.9	
	20231005003	239	14.4	12.7	4.2	2.8	37.9	
	20231005004	239	11.8	10.6	3.7	0.7	33.6	
	20231005005	238	14.9	12.8	4.0	1.8	37.9	
Cre (µmol/L blood)	20231005001	8	400.4	370.1	50.9	298.7	436.9	
	20231005002	8	396.8	372.2	59.6	266.1	448.0	
	20231005003	8	393.3	348.3	55.1	263.4	435.5	
	20231005004	8	339.4	303.9	47.4	225.1	361.8	
	20231005005	8	401.7	351.5	45.8	278.1	405.1	
Cit (µmol/L blood)	20231005001	263	19.9	22.9	5.6	7.9	46.7	
	20231005002	265	169.8	143.5	25.9	23.0	209.4	
	20231005003	264	21.8	21.9	4.1	9.0	37.6	
	20231005004	264	32.0	29.2	5.2	10.0	48.0	
	20231005005	263	19.1	21.6	4.0	10.0	37.0	
GUAC (µmol/L blood)	20231005001	11	1.9	2.3	0.7	1.2	3.1	
	20231005002	11	1.7	2.3	0.6	1.3	3.2	
	20231005003	11	1.5	1.8	0.7	0.5	3.1	
	20231005004	11	2.7	3.3	0.9	1.8	4.7	
	20231005005	11	1.5	1.9	0.7	0.9	3.3	

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

**Newborn Screening Quality Assurance Program
Overall Statistics
Year: 2023, Quarter 1**

Program: Amino Acids (AAPT)

Analyte	Specimen Number	N	EV	Mean	SD	Min	Max	Comment
Leu (µmol/L blood)	20231005001	300	88.6	100.4	19.6	53.0	239.6	
	20231005002	299	88.6	99.5	17.6	15.8	154.4	
	20231005003	298	141.4	148.2	28.0	75.9	232.0	
	20231005004	301	758.6	648.9	101.3	311.6	901.2	
	20231005005	298	146.7	149.1	27.6	75.7	215.0	
Met (µmol/L blood)	20231005001	283	12.8	14.2	3.1	7.9	30.0	
	20231005002	284	11.7	14.5	3.4	6.6	40.8	
	20231005003	285	214.0	170.2	27.2	90.4	265.8	
	20231005004	284	33.1	34.4	6.1	14.0	57.4	
	20231005005	282	14.1	16.2	3.3	7.8	30.9	
Phe (µmol/L blood)	20231005001	355	43.6	48.1	11.3	12.1	103.0	
	20231005002	355	42.7	47.9	10.2	10.6	96.0	
	20231005003	359	49.3	57.0	15.2	16.1	143.0	
	20231005004	359	69.0	76.5	26.8	31.6	248.6	
	20231005005	358	272.1	252.0	39.6	93.9	376.0	
SUAC (µmol/L blood)	20231005001	167	0.2	0.5	0.4	0.0	2.5	
	20231005002	168	0.1	0.5	0.5	0.0	3.3	
	20231005003	169	0.2	0.5	0.5	0.0	3.4	
	20231005004	168	0.1	0.5	0.4	0.0	3.6	
	20231005005	168	0.1	0.5	0.5	0.0	3.3	
Tyr (µmol/L blood)	20231005001	292	53.3	58.9	10.6	31.0	125.2	
	20231005002	292	52.2	59.6	10.9	37.2	119.7	
	20231005003	292	50.2	55.7	12.0	34.4	156.0	
	20231005004	292	103.1	106.8	16.9	73.9	187.0	
	20231005005	292	51.2	55.7	10.1	35.2	125.0	

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

**Newborn Screening Quality Assurance Program
Overall Statistics
Year: 2023, Quarter 1**

Program: Amino Acids (AAPT)

Analyte	Specimen Number	N	EV	Mean	SD	Min	Max	Comment
Val (µmol/L blood)	20231005001	259	119.2	125.4	23.4	42.3	211.9	
	20231005002	260	116.3	126.0	23.8	27.8	191.8	
	20231005003	260	134.1	141.4	25.7	15.6	225.4	
	20231005004	261	653.3	543.4	106.2	125.0	787.7	
	20231005005	260	139.4	142.2	27.2	24.8	244.0	

**Newborn Screening Quality Assurance Program
Overall Statistics
Year: 2023, Quarter 1**

Program: Hormones and Total Galactose (HORMPT)

Analyte	Specimen Number	N	EV	Mean	SD	Min	Max	Comment
T4 (µg/dL serum)	20231001001	66	10.0	14.8	2.7	10.7	26.6	
	20231001002	66	10.0	14.0	2.8	8.1	25.0	
	20231001003	63	1.5	1.8	0.7	0.0	5.0	
	20231001004	66	10.0	15.8	2.5	10.3	23.7	
	20231001005	66	10.0	15.4	2.8	10.1	27.4	
TSH (µIU/mL serum)	20231001001	312	0.0	1.6	1.8	0.0	10.0	
	20231001002	312	0.0	1.3	2.0	0.0	12.0	
	20231001003	319	90.0	59.2	13.4	18.5	98.6	
	20231001004	313	0.0	2.4	1.8	0.0	14.2	
	20231001005	309	0.0	1.6	1.8	0.0	14.6	
17OHP (ng/mL serum)	20231001001	263	0.0	2.4	2.7	0.1	18.5	
	20231001002	261	0.0	2.0	2.4	0.0	23.5	
	20231001003	258	0.0	0.8	1.2	0.0	8.2	
	20231001004	260	0.0	1.9	2.3	0.0	21.2	
	20231001005	269	85.0	84.4	25.7	0.4	216.0	
TGal (mg/dL blood)	20231001001	166	0.0	1.2	1.2	0.0	5.4	
	20231001002	167	0.0	1.4	1.2	0.0	5.8	
	20231001003	168	0.0	1.5	1.5	0.0	7.3	
	20231001004	171	25.0	23.5	5.9	6.5	46.0	
	20231001005	168	0.0	1.4	1.3	0.0	7.3	

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

**Newborn Screening Quality Assurance Program
Overall Statistics
Year: 2023, Quarter 1**

Program: Immunoreactive Trypsinogen (IRTPT)

Analyte	Specimen Number	N	EV	Mean	SD	Min	Max	Comment
IRT (ng/mL blood)	20231008001	213	142.9	143.4	26.1	66.2	281.5	
	20231008002	211	9.0	9.9	4.4	2.0	32.0	
	20231008003	211	27.7	31.2	11.1	2.8	73.7	
	20231008004	214	198.0	196.7	41.7	14.9	372.5	
	20231008005	210	21.6	23.3	7.4	2.8	62.0	

Newborn Screening Quality Assurance Program
Year: 2023, Quarter: 1
Mean Reported Concentrations Sorted by Method
Program: Acylcarnitines (ACPT)

		Specimen Number																			
		20231006001				20231006002				20231006003				20231006004				20231006005			
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	25.25	27.91	5.22	5	24.89	25.34	5.72	5	25.15	25.96	3.19	5	22.86	24.70	3.24	5	23.19	25.01	2.27
	Derivatized - MS/MS MassChrom® Chromsystems	15	25.25	20.84	5.50	15	24.89	20.28	4.61	15	25.15	20.23	5.03	15	22.86	18.93	3.68	15	23.19	18.38	4.81
	Derivatized - MS/MS non-kit	65	25.25	27.44	4.75	65	24.89	25.93	4.77	64	25.15	25.19	4.24	66	22.86	24.71	4.69	65	23.19	24.99	5.21
	LC-MS/MS non-kit	3	25.25	27.90	6.18	3	24.89	28.04	5.23	3	25.15	26.98	7.08	3	22.86	25.88	5.50	3	23.19	26.44	5.72
	Non-derivatized - MS/MS MS2 Screening Neo (MS-Neo)Siemens	3	25.25	23.60	2.47	3	24.89	24.29	3.15	3	25.15	23.79	3.06	3	22.86	22.53	1.70	3	23.19	21.89	1.89
	Non-derivatized - MS/MS MassChrom® Chromsystems	31	25.25	21.72	3.42	31	24.89	21.68	3.50	31	25.15	21.33	3.46	31	22.86	20.35	3.34	31	23.19	20.65	3.09
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	51	25.25	22.19	2.39	51	24.89	21.93	2.52	51	25.15	21.90	2.52	51	22.86	20.33	2.37	51	23.19	20.84	3.51
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	82	25.25	22.37	2.98	81	24.89	22.37	3.02	82	25.15	22.18	2.73	82	22.86	21.18	2.51	82	23.19	20.80	2.47
	Non-derivatized - MS/MS non-kit	25	25.25	23.76	4.66	25	24.89	23.33	4.12	25	25.15	23.04	3.99	25	22.86	22.16	4.25	25	23.19	21.52	3.34
	Non-derivatized Labsystems Neomass AAAC Plus	8	25.25	19.71	4.10	8	24.89	19.14	5.26	8	25.15	19.35	4.40	8	22.86	17.34	3.71	8	23.19	18.65	4.24
Other	5	25.25	20.12	7.67	5	24.89	15.64	8.56	5	25.15	20.17	4.49	5	22.86	20.77	8.20	5	23.19	20.04	9.31	
C2(L) (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	5	21.03	23.04	2.73	5	20.90	22.74	3.56	5	20.99	24.00	2.91	5	21.08	24.72	3.04	5	21.23	26.16	4.39
	Derivatized - MS/MS MassChrom® Chromsystems	13	21.03	18.03	2.50	13	20.90	18.10	2.94	12	20.99	18.21	3.53	13	21.08	19.29	3.54	13	21.23	18.90	3.44
	Derivatized - MS/MS non-kit	53	21.03	21.45	4.45	52	20.90	21.56	4.43	52	20.99	21.05	4.26	52	21.08	21.95	4.52	52	21.23	22.53	4.95
	LC-MS/MS non-kit	3	21.03	18.40	4.96	3	20.90	17.83	7.14	3	20.99	17.26	6.46	3	21.08	18.47	6.94	3	21.23	18.88	7.68
	Non-derivatized - MS/MS MassChrom® Chromsystems	19	21.03	17.11	2.49	19	20.90	17.79	2.90	19	20.99	17.66	1.95	19	21.08	18.11	2.51	19	21.23	19.20	2.04
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	41	21.03	20.27	1.65	41	20.90	20.42	1.54	41	20.99	20.25	1.55	41	21.08	20.98	1.84	41	21.23	21.67	2.58
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	53	21.03	18.58	1.58	53	20.90	18.69	1.48	53	20.99	18.63	1.40	53	21.08	19.47	1.58	53	21.23	19.53	1.67
	Non-derivatized - MS/MS non-kit	18	21.03	20.49	4.10	18	20.90	20.05	3.50	19	20.99	21.62	7.16	19	21.08	23.05	7.59	18	21.23	21.16	4.06
	Non-derivatized Labsystems Neomass AAAC Plus	6	21.03	18.47	2.96	6	20.90	17.61	3.11	6	20.99	17.82	2.57	6	21.08	18.54	2.83	6	21.23	19.68	2.93
	Other	4	21.03	24.12	6.60	4	20.90	24.17	7.06	4	20.99	24.95	6.67	4	21.08	24.07	7.62	4	21.23	25.97	8.37

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

Newborn Screening Quality Assurance Program
Year: 2023, Quarter: 1
Mean Reported Concentrations Sorted by Method
Program: Acylcarnitines (ACPT)

		Specimen Number																			
		20231006001				20231006002				20231006003				20231006004				20231006005			
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	12.67	12.68	1.65	5	0.65	0.72	0.14	5	0.60	0.81	0.35	4	0.61	0.67	0.10	5	0.64	0.78	0.23
	Derivatized - MS/MS MassChrom® Chromsystems	14	12.67	10.01	1.37	15	0.65	0.57	0.09	15	0.60	0.59	0.16	15	0.61	0.59	0.10	15	0.64	0.60	0.15
	Derivatized - MS/MS non-kit	66	12.67	11.42	2.39	66	0.65	0.69	0.19	65	0.60	0.65	0.15	65	0.61	0.70	0.18	66	0.64	0.71	0.19
	Non-derivatized - MS/MS MS2 Screening Neo (MS-Neo)Siemens	3	12.67	10.89	0.94	3	0.65	0.62	0.08	3	0.60	0.60	0.07	3	0.61	0.62	0.02	3	0.64	0.61	0.05
	Non-derivatized - MS/MS MassChrom® Chromsystems	28	12.67	9.66	1.94	28	0.65	0.55	0.08	27	0.60	0.53	0.06	28	0.61	0.58	0.08	28	0.64	0.62	0.19
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	50	12.67	11.16	1.04	49	0.65	0.59	0.10	50	0.60	0.58	0.06	50	0.61	0.61	0.06	49	0.64	0.62	0.06
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	82	12.67	13.08	1.37	82	0.65	0.71	0.09	82	0.60	0.69	0.08	82	0.61	0.73	0.08	82	0.64	0.73	0.08
	Non-derivatized - MS/MS non-kit	25	12.67	11.84	2.13	25	0.65	0.66	0.12	25	0.60	0.63	0.10	25	0.61	0.70	0.12	25	0.64	0.67	0.11
	Non-derivatized Labsystems Neomass AAAC Plus	8	12.67	10.53	2.84	8	0.65	0.65	0.15	8	0.60	0.61	0.10	8	0.61	0.65	0.13	8	0.64	0.68	0.14
Other	5	12.67	9.49	1.84	4	0.65	0.58	0.07	4	0.60	0.56	0.07	4	0.61	0.59	0.09	4	0.64	0.59	0.09	
C3DC (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	.				3	0.01	0.05	0.06	.				3	0.02	0.11	0.15	3	0.02	0.07	0.10
	Derivatized - MS/MS MassChrom® Chromsystems	12	0.02	0.04	0.03	12	0.01	0.04	0.03	12	0.01	0.03	0.03	12	0.02	0.04	0.03	12	0.02	0.05	0.03
	Derivatized - MS/MS non-kit	59	0.02	0.03	0.03	59	0.01	0.03	0.04	59	0.01	0.03	0.04	58	0.02	0.03	0.02	58	0.02	0.03	0.03
	Other	3	0.02	0.05	0.06	.				3	0.01	0.06	0.09	.				3	0.02	0.05	0.07
C3DC+C4OH (µmol/L blood)	Non-derivatized - MS/MS MassChrom® Chromsystems	8	0.02	0.02	0.01	8	0.02	0.02	0.01	8	0.02	0.02	0.01	8	0.02	0.03	0.01	8	0.02	0.04	0.01
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	35	0.02	0.03	0.01	35	0.02	0.03	0.02	35	0.02	0.03	0.01	35	0.02	0.03	0.02	35	0.02	0.06	0.03
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	65	0.02	0.03	0.01	65	0.02	0.03	0.01	65	0.02	0.03	0.01	65	0.02	0.03	0.01	65	0.02	0.06	0.01
	Non-derivatized - MS/MS non-kit	14	0.02	0.04	0.03	14	0.02	0.04	0.02	14	0.02	0.04	0.02	14	0.02	0.05	0.03	14	0.02	0.10	0.07
	Non-derivatized Labsystems Neomass AAAC Plus	5	0.02	0.07	0.08	5	0.02	0.05	0.04	5	0.02	0.05	0.03	5	0.02	0.07	0.07	5	0.02	0.11	0.07

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

Newborn Screening Quality Assurance Program
Year: 2023, Quarter: 1
Mean Reported Concentrations Sorted by Method
Program: Acylcarnitines (ACPT)

		Specimen Number																			
		20231006001				20231006002				20231006003				20231006004				20231006005			
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	4	0.04	0.07	0.06	5	0.04	0.10	0.09	4	0.04	0.07	0.05	4	0.04	0.09	0.07	4	0.04	0.07	0.05
	Derivatized - MS/MS MassChrom® Chromsystems	13	0.04	0.08	0.08	15	0.04	0.06	0.03	15	0.04	0.07	0.06	15	0.04	0.10	0.06	15	0.04	0.05	0.02
	Derivatized - MS/MS non-kit	64	0.04	0.07	0.05	64	0.04	0.08	0.08	63	0.04	0.06	0.04	62	0.04	0.10	0.06	63	0.04	0.07	0.05
	LC-MS/MS non-kit	4	0.04	0.10	0.08	3	0.04	0.05	0.04	3	0.04	0.08	0.06	3	0.04	0.08	0.07	3	0.04	0.07	0.05
	Non-derivatized - MS/MS MassChrom® Chromsystems	23	0.04	0.06	0.05	23	0.04	0.06	0.06	23	0.04	0.07	0.06	23	0.04	0.07	0.06	23	0.04	0.06	0.06
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	47	0.04	0.06	0.02	47	0.04	0.06	0.02	47	0.04	0.05	0.02	47	0.04	0.07	0.02	46	0.04	0.07	0.02
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	72	0.04	0.04	0.01	72	0.04	0.04	0.01	72	0.04	0.04	0.01	72	0.04	0.04	0.01	72	0.04	0.04	0.01
	Non-derivatized - MS/MS non-kit	21	0.04	0.05	0.04	21	0.04	0.06	0.06	21	0.04	0.05	0.05	21	0.04	0.06	0.05	21	0.04	0.07	0.07
	Non-derivatized Labsystems Neomass AAAC Plus	8	0.04	0.07	0.05	8	0.04	0.07	0.05	8	0.04	0.07	0.05	8	0.04	0.09	0.06	8	0.04	0.08	0.05
Other	5	0.04	0.06	0.07	5	0.04	0.08	0.10	5	0.04	0.08	0.09	5	0.04	0.11	0.14	5	0.04	0.09	0.11	
C4OH (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	3	0.04	0.05	0.03	3	0.04	0.05	0.03	3	0.03	0.07	0.05	3	0.04	0.05	0.03	3	0.04	0.10	0.05
	Derivatized - MS/MS MassChrom® Chromsystems	10	0.04	0.06	0.02	10	0.04	0.05	0.02	10	0.03	0.05	0.02	10	0.04	0.06	0.02	10	0.04	0.09	0.04
	Derivatized - MS/MS non-kit	54	0.04	0.05	0.03	53	0.04	0.05	0.03	53	0.03	0.05	0.03	52	0.04	0.05	0.03	52	0.04	0.10	0.06
	Other	3	0.04	0.03	0.01	3	0.04	0.03	0.02	3	0.03	0.03	0.01	3	0.04	0.04	0.01	3	0.04	0.07	0.01
C5 (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	5	0.04	0.08	0.08	5	0.03	0.09	0.11	5	0.03	0.06	0.04	4	0.04	0.05	0.02	5	2.54	2.30	0.39
	Derivatized - MS/MS MassChrom® Chromsystems	15	0.04	0.08	0.06	15	0.03	0.10	0.09	15	0.03	0.07	0.06	14	0.04	0.07	0.03	15	2.54	2.32	0.39
	Derivatized - MS/MS non-kit	65	0.04	0.05	0.02	65	0.03	0.05	0.03	65	0.03	0.05	0.03	65	0.04	0.05	0.03	66	2.54	2.30	0.41
	LC-MS/MS non-kit	4	0.04	0.04	0.02	4	0.03	0.04	0.02	4	0.03	0.04	0.02	4	0.04	0.04	0.02	4	2.54	2.61	0.27
	Non-derivatized - MS/MS MS2 Screening Neo (MS-Neo)Siemens	3	0.04	0.03	0.00	3	0.03	0.03	0.00	3	0.03	0.03	0.00	3	0.04	0.04	0.01	3	2.54	2.28	0.04
	Non-derivatized - MS/MS MassChrom® Chromsystems	32	0.04	0.05	0.05	32	0.03	0.05	0.04	32	0.03	0.05	0.04	33	0.04	0.07	0.14	33	2.54	2.26	0.48
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	51	0.04	0.03	0.01	51	0.03	0.03	0.01	51	0.03	0.03	0.01	51	0.04	0.04	0.01	51	2.54	2.35	0.21
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	82	0.04	0.04	0.02	82	0.03	0.04	0.02	82	0.03	0.04	0.02	82	0.04	0.04	0.02	82	2.54	2.16	0.23

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

Newborn Screening Quality Assurance Program
Year: 2023, Quarter: 1
Mean Reported Concentrations Sorted by Method
Program: Acylcarnitines (ACPT)

		Specimen Number																			
		20231006001				20231006002				20231006003				20231006004				20231006005			
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 non-kit	28	0.04	0.04	0.02	28	0.03	0.04	0.02	28	0.03	0.04	0.02	28	0.04	0.05	0.02	28	2.54	2.44	0.33
	Non-derivatized Labsystems Neomass AAAC Plus	7	0.04	0.09	0.09	7	0.03	0.08	0.09	7	0.03	0.08	0.10	7	0.04	0.09	0.06	8	2.54	2.27	0.63
	Other	5	0.04	0.09	0.09	5	0.03	0.10	0.13	5	0.03	0.07	0.06	5	0.04	0.08	0.08	5	2.54	1.99	0.64
C5:1 (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	4	0.01	0.04	0.04	4	0.01	0.03	0.03	4	0.01	0.13	0.21	4	0.01	0.02	0.01	4	0.01	0.02	0.01
	Derivatized - MS/MS MassChrom® Chromsystems	15	0.01	0.03	0.03	15	0.01	0.04	0.04	15	0.01	0.04	0.04	15	0.01	0.03	0.02	15	0.01	0.04	0.04
	Derivatized - MS/MS non-kit	62	0.01	0.02	0.02	62	0.01	0.03	0.03	62	0.01	0.03	0.03	62	0.01	0.02	0.03	62	0.01	0.03	0.03
	LC-MS/MS non-kit	.				3	0.01	1.16	1.99	.				.				.			
	Non-derivatized - MS/MS MassChrom® Chromsystems	19	0.01	0.02	0.03	19	0.01	0.03	0.03	19	0.01	0.03	0.03	19	0.01	0.02	0.03	19	0.01	0.03	0.03
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	49	0.01	0.01	0.01	49	0.01	0.01	0.01	49	0.01	0.01	0.01	49	0.01	0.01	0.01	49	0.01	0.01	0.01
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	73	0.01	0.01	0.01	73	0.01	0.01	0.01	73	0.01	0.01	0.01	73	0.01	0.01	0.01	73	0.01	0.01	0.01
	Non-derivatized - MS/MS non-kit	22	0.01	0.03	0.04	22	0.01	0.02	0.03	22	0.01	0.03	0.03	22	0.01	0.02	0.03	22	0.01	0.03	0.04
	Non-derivatized Labsystems Neomass AAAC Plus	7	0.01	0.02	0.01	7	0.01	0.02	0.02	7	0.01	0.02	0.02	7	0.01	0.03	0.02	7	0.01	0.02	0.01
Other	5	0.01	0.05	0.07	5	0.01	0.03	0.03	5	0.01	0.02	0.02	5	0.01	0.08	0.12	5	0.01	0.05	0.05	
C5DC (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	5	0.02	0.07	0.08	5	0.02	0.04	0.04	5	1.52	2.79	0.87	5	0.02	0.06	0.05	5	0.02	0.05	0.04
	Derivatized - MS/MS MassChrom® Chromsystems	15	0.02	0.05	0.05	15	0.02	0.07	0.07	14	1.52	2.10	0.65	14	0.02	0.06	0.05	15	0.02	0.05	0.04
	Derivatized - MS/MS non-kit	67	0.02	0.02	0.03	67	0.02	0.03	0.03	68	1.52	1.04	0.46	67	0.02	0.03	0.03	67	0.02	0.02	0.02
	LC-MS/MS non-kit	3	0.02	0.02	0.00	.				3	1.52	1.43	1.07	3	0.02	0.03	0.01	3	0.02	0.03	0.01
	Non-derivatized - MS/MS MS2 Screening Neo (MS-Neo)Siemens	3	0.02	0.01	0.01	3	0.02	0.01	0.01	3	1.52	1.39	0.12	3	0.02	0.02	0.01	3	0.02	0.02	0.01
	Non-derivatized - MS/MS MassChrom® Chromsystems	33	0.02	0.05	0.04	33	0.02	0.05	0.04	33	1.52	2.15	0.65	33	0.02	0.07	0.05	33	0.02	0.06	0.05
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	47	0.02	0.02	0.01	47	0.02	0.03	0.02	47	1.52	1.74	0.24	47	0.02	0.03	0.02	47	0.02	0.03	0.01
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	75	0.02	0.02	0.01	75	0.02	0.02	0.02	75	1.52	1.43	0.18	75	0.02	0.02	0.01	75	0.02	0.02	0.01
Non-derivatized - MS/MS non-kit	26	0.02	0.02	0.01	27	0.02	0.04	0.06	27	1.52	1.68	0.41	26	0.02	0.04	0.02	27	0.02	0.03	0.04	

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

Newborn Screening Quality Assurance Program
Year: 2023, Quarter: 1
Mean Reported Concentrations Sorted by Method
Program: Acylcarnitines (ACPT)

		Specimen Number																			
		20231006001				20231006002				20231006003				20231006004				20231006005			
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	0.02	0.05	0.03	7	0.02	0.05	0.03	7	1.52	1.54	0.39	7	0.02	0.05	0.04	7	0.02	0.05	0.03
	Other	5	0.02	0.08	0.06	5	0.02	0.10	0.10	5	1.52	1.21	0.50	5	0.02	0.11	0.11	4	0.02	0.04	0.02
C5OH (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	4	0.28	0.16	0.04	4	0.26	0.16	0.04	4	0.27	0.17	0.06	4	0.28	0.24	0.14	4	0.29	0.23	0.14
	Derivatized - MS/MS MassChrom® Chromsystems	15	0.28	0.28	0.12	15	0.26	0.28	0.11	14	0.27	0.28	0.11	15	0.28	0.30	0.12	14	0.29	0.28	0.10
	Derivatized - MS/MS non-kit	65	0.28	0.26	0.07	65	0.26	0.25	0.06	66	0.27	0.26	0.08	65	0.28	0.29	0.09	65	0.29	0.28	0.06
	Non-derivatized - MS/MS MS2 Screening Neo (MS-Neo)Siemens	3	0.28	0.37	0.01	3	0.26	0.37	0.01	3	0.27	0.37	0.01	3	0.28	0.40	0.04	3	0.29	0.38	0.02
	Non-derivatized - MS/MS MassChrom® Chromsystems	16	0.28	0.20	0.03	16	0.26	0.19	0.04	16	0.27	0.20	0.04	16	0.28	0.21	0.05	16	0.29	0.21	0.05
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	44	0.28	0.26	0.06	44	0.26	0.26	0.05	44	0.27	0.27	0.05	44	0.28	0.28	0.05	44	0.29	0.27	0.06
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	70	0.28	0.31	0.06	70	0.26	0.31	0.07	70	0.27	0.31	0.06	70	0.28	0.34	0.07	70	0.29	0.32	0.06
	Non-derivatized - MS/MS non-kit	21	0.28	0.34	0.08	21	0.26	0.33	0.07	21	0.27	0.33	0.06	21	0.28	0.37	0.08	21	0.29	0.36	0.07
	Non-derivatized Labsystems Neomass AAAC Plus	7	0.28	0.21	0.08	7	0.26	0.21	0.09	7	0.27	0.21	0.07	7	0.28	0.25	0.07	7	0.29	0.24	0.10
Other	5	0.28	0.25	0.08	5	0.26	0.24	0.10	5	0.27	0.27	0.08	5	0.28	0.29	0.10	5	0.29	0.28	0.09	
C6 (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	5	0.02	0.02	0.02	5	0.01	0.02	0.02	4	0.02	0.02	0.02	5	1.42	1.14	0.18	5	0.02	0.03	0.02
	Derivatized - MS/MS MassChrom® Chromsystems	15	0.02	0.05	0.04	15	0.01	0.05	0.04	15	0.02	0.04	0.03	15	1.42	1.16	0.12	15	0.02	0.05	0.04
	Derivatized - MS/MS non-kit	62	0.02	0.02	0.02	63	0.01	0.03	0.03	64	0.02	0.03	0.03	65	1.42	1.21	0.30	63	0.02	0.04	0.03
	Non-derivatized - MS/MS MassChrom® Chromsystems	22	0.02	0.01	0.01	23	0.01	0.02	0.04	23	0.02	0.02	0.04	22	1.42	1.26	0.16	22	0.02	0.01	0.01
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	48	0.02	0.01	0.01	48	0.01	0.01	0.01	48	0.02	0.01	0.01	48	1.42	1.32	0.11	48	0.02	0.01	0.01
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	74	0.02	0.01	0.01	74	0.01	0.01	0.01	74	0.02	0.01	0.01	74	1.42	1.30	0.13	74	0.02	0.01	0.01
	Non-derivatized - MS/MS non-kit	23	0.02	0.02	0.02	23	0.01	0.01	0.02	23	0.02	0.01	0.02	23	1.42	1.31	0.20	23	0.02	0.02	0.01
	Non-derivatized Labsystems Neomass AAAC Plus	7	0.02	0.03	0.04	7	0.01	0.03	0.04	7	0.02	0.02	0.04	8	1.42	1.27	0.32	7	0.02	0.03	0.04
	Other	5	0.02	0.05	0.06	5	0.01	0.04	0.06	5	0.02	0.05	0.08	5	1.42	0.97	0.21	5	0.02	0.05	0.07

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

Newborn Screening Quality Assurance Program
Year: 2023, Quarter: 1
Mean Reported Concentrations Sorted by Method
Program: Acylcarnitines (ACPT)

		Specimen Number																			
		20231006001				20231006002				20231006003				20231006004				20231006005			
Analyte	Method	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD
C8 (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	5	0.01	0.03	0.04	5	0.01	0.02	0.02	5	0.01	0.02	0.02	5	1.62	1.66	0.28	5	0.02	0.03	0.02
	Derivatized - MS/MS MassChrom® Chromsystems	15	0.01	0.01	0.01	15	0.01	0.02	0.02	15	0.01	0.02	0.01	15	1.62	1.10	0.12	15	0.02	0.02	0.01
	Derivatized - MS/MS non-kit	66	0.01	0.02	0.03	65	0.01	0.02	0.02	65	0.01	0.02	0.02	67	1.62	1.62	0.35	65	0.02	0.03	0.02
	LC-MS/MS non-kit	5	0.01	0.05	0.05	5	0.01	0.06	0.06	5	0.01	0.05	0.05	4	1.62	1.29	0.81	5	0.02	0.07	0.05
	Non-derivatized - MS/MS MS2 Screening Neo (MS-Neo)Siemens	3	0.01	0.03	0.01	3	0.01	0.03	0.01	3	0.01	0.03	0.01	3	1.62	1.56	0.16	3	0.02	0.04	0.01
	Non-derivatized - MS/MS MassChrom® Chromsystems	33	0.01	0.03	0.01	33	0.01	0.04	0.01	33	0.01	0.04	0.01	32	1.62	1.49	0.20	33	0.02	0.05	0.01
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	52	0.01	0.04	0.01	52	0.01	0.04	0.01	52	0.01	0.04	0.01	52	1.62	1.66	0.13	52	0.02	0.05	0.02
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	82	0.01	0.04	0.02	83	0.01	0.04	0.02	83	0.01	0.04	0.02	83	1.62	1.52	0.19	83	0.02	0.04	0.01
	Non-derivatized - MS/MS non-kit	28	0.01	0.04	0.02	28	0.01	0.04	0.02	28	0.01	0.04	0.02	27	1.62	1.62	0.27	28	0.02	0.05	0.02
	Non-derivatized Labsystems Neomass AAAC Plus	7	0.01	0.06	0.02	7	0.01	0.05	0.02	7	0.01	0.05	0.02	8	1.62	1.39	0.48	7	0.02	0.06	0.02
Other	4	0.01	0.03	0.02	4	0.01	0.03	0.02	4	0.01	0.03	0.02	5	1.62	1.33	0.29	4	0.02	0.04	0.02	
C10 (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	5	0.01	0.03	0.02	5	0.01	0.06	0.07	4	0.01	0.02	0.01	5	1.21	0.43	0.05	5	0.02	0.02	0.01
	Derivatized - MS/MS MassChrom® Chromsystems	15	0.01	0.02	0.01	15	0.01	0.06	0.05	14	0.01	0.02	0.02	15	1.21	0.35	0.08	15	0.02	0.02	0.02
	Derivatized - MS/MS non-kit	63	0.01	0.03	0.03	60	0.01	0.04	0.03	61	0.01	0.03	0.03	62	1.21	0.52	0.13	62	0.02	0.03	0.02
	LC-MS/MS non-kit	3	0.01	0.04	0.04	3	0.01	0.04	0.02	3	0.01	0.04	0.02	.				3	0.02	0.04	0.03
	Non-derivatized - MS/MS MS2 Screening Neo (MS-Neo)Siemens	3	0.01	0.02	0.01	3	0.01	0.02	0.00	3	0.01	0.02	0.00	3	1.21	0.45	0.01	3	0.02	0.02	0.01
	Non-derivatized - MS/MS MassChrom® Chromsystems	28	0.01	0.03	0.01	28	0.01	0.03	0.01	28	0.01	0.03	0.02	28	1.21	0.46	0.11	28	0.02	0.03	0.02
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	51	0.01	0.03	0.01	51	0.01	0.04	0.01	51	0.01	0.03	0.01	51	1.21	0.48	0.05	51	0.02	0.03	0.01
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	76	0.01	0.03	0.01	76	0.01	0.03	0.01	76	0.01	0.03	0.01	76	1.21	0.46	0.06	76	0.02	0.03	0.01
	Non-derivatized - MS/MS non-kit	24	0.01	0.03	0.02	27	0.01	0.05	0.05	25	0.01	0.03	0.03	27	1.21	0.58	0.12	24	0.02	0.04	0.02
	Non-derivatized Labsystems Neomass AAAC Plus	8	0.01	0.04	0.02	8	0.01	0.05	0.04	8	0.01	0.03	0.01	8	1.21	0.44	0.15	8	0.02	0.04	0.02
Other	5	0.01	0.04	0.04	4	0.01	0.04	0.02	4	0.01	0.03	0.02	5	1.21	0.38	0.06	4	0.02	0.03	0.02	

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

Newborn Screening Quality Assurance Program
Year: 2023, Quarter: 1
Mean Reported Concentrations Sorted by Method
Program: Acylcarnitines (ACPT)

		Specimen Number																			
		20231006001				20231006002				20231006003				20231006004				20231006005			
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	5	0.01	0.01	0.01	5	0.01	0.02	0.02	5	0.01	0.03	0.03	5	1.01	1.02	0.15	5	0.02	0.03	0.03
	Derivatized - MS/MS MassChrom® Chromsystems	15	0.01	0.02	0.01	15	0.01	0.04	0.03	15	0.01	0.03	0.02	15	1.01	0.72	0.27	15	0.02	0.03	0.02
	Derivatized - MS/MS non-kit	60	0.01	0.03	0.03	59	0.01	0.04	0.03	59	0.01	0.03	0.03	60	1.01	1.00	0.35	58	0.02	0.03	0.03
	Non-derivatized - MS/MS MassChrom® Chromsystems	18	0.01	0.02	0.02	18	0.01	0.02	0.02	18	0.01	0.02	0.02	18	1.01	0.86	0.29	18	0.02	0.02	0.01
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	48	0.01	0.02	0.02	48	0.01	0.02	0.02	48	0.01	0.02	0.02	49	1.01	0.83	0.11	48	0.02	0.02	0.02
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	70	0.01	0.01	0.02	70	0.01	0.01	0.02	70	0.01	0.01	0.02	70	1.01	0.73	0.11	70	0.02	0.01	0.01
	Non-derivatized - MS/MS non-kit	21	0.01	0.01	0.02	21	0.01	0.02	0.02	21	0.01	0.01	0.03	20	1.01	1.00	0.33	21	0.02	0.02	0.02
	Non-derivatized Labsystems Neomass AAAC Plus	6	0.01	0.02	0.01	6	0.01	0.03	0.05	6	0.01	0.01	0.01	6	1.01	0.77	0.24	6	0.02	0.02	0.01
Other	3	0.01	0.01	0.01	3	0.01	0.01	0.01	3	0.01	0.01	0.00	4	1.01	0.68	0.33	3	0.02	0.01	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	11	0.00	0.02	0.02	10	0.00	0.02	0.03	10	0.00	0.02	0.01	11	0.00	0.02	0.02	10	0.00	0.02	0.03
	Derivatized - MS/MS non-kit	42	0.00	0.02	0.02	42	0.00	0.02	0.02	42	0.00	0.01	0.01	43	0.00	0.02	0.02	42	0.00	0.02	0.02
	Non-derivatized - MS/MS MassChrom® Chromsystems	7	0.00	0.03	0.02	7	0.00	0.02	0.02	7	0.00	0.02	0.02	7	0.00	0.03	0.02	7	0.00	0.02	0.02
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	41	0.00	0.00	0.01	41	0.00	0.01	0.01	41	0.00	0.00	0.01	41	0.00	0.01	0.01	41	0.00	0.00	0.01
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	57	0.00	0.00	0.01	58	0.00	0.01	0.01	58	0.00	0.01	0.01	57	0.00	0.01	0.01	58	0.00	0.01	0.01
	Non-derivatized - MS/MS non-kit	11	0.00	0.01	0.01	12	0.00	0.01	0.02	12	0.00	0.01	0.02	12	0.00	0.01	0.02	12	0.00	0.01	0.03
	Non-derivatized Labsystems Neomass AAAC Plus	6	0.00	0.01	0.02	6	0.00	0.02	0.02	6	0.00	0.01	0.02	5	0.00	0.01	0.01	6	0.00	0.02	0.02
C14 (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	5	0.07	0.10	0.10	5	1.47	1.11	0.16	5	0.08	0.07	0.02	5	0.06	0.04	0.01	5	0.06	0.05	0.01
	Derivatized - MS/MS MassChrom® Chromsystems	15	0.07	0.08	0.03	15	1.47	1.21	0.28	15	0.08	0.07	0.03	15	0.06	0.05	0.02	15	0.06	0.05	0.02
	Derivatized - MS/MS non-kit	63	0.07	0.08	0.03	65	1.47	1.36	0.26	61	0.08	0.08	0.03	63	0.06	0.06	0.03	63	0.06	0.06	0.03
	LC-MS/MS non-kit	3	0.07	0.05	0.02	4	1.47	1.04	0.68	3	0.08	0.07	0.02	3	0.06	0.05	0.02	4	0.06	0.08	0.06
	Non-derivatized - MS/MS MassChrom® Chromsystems	23	0.07	0.05	0.02	23	1.47	1.15	0.31	23	0.08	0.06	0.01	23	0.06	0.04	0.01	23	0.06	0.04	0.01

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

Newborn Screening Quality Assurance Program
Year: 2023, Quarter: 1
Mean Reported Concentrations Sorted by Method
Program: Acylcarnitines (ACPT)

		Specimen Number																			
		20231006001				20231006002				20231006003				20231006004				20231006005			
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)	Non-derivatized - MS/MS NeoBase™ PerkinElmer	48	0.07	0.06	0.01	49	1.47	1.32	0.13	49	0.08	0.06	0.01	49	0.06	0.04	0.01	49	0.06	0.04	0.01
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	73	0.07	0.06	0.01	73	1.47	1.29	0.14	73	0.08	0.06	0.01	73	0.06	0.04	0.01	72	0.06	0.04	0.01
	Non-derivatized - MS/MS non-kit	24	0.07	0.08	0.03	24	1.47	1.32	0.22	24	0.08	0.07	0.03	24	0.06	0.06	0.03	24	0.06	0.06	0.03
	Non-derivatized Labsystems Neomass AAAC Plus	8	0.07	0.07	0.04	7	1.47	1.03	0.25	8	0.08	0.07	0.03	8	0.06	0.06	0.03	8	0.06	0.06	0.04
	Other	5	0.07	0.08	0.04	5	1.47	1.02	0.12	5	0.08	0.08	0.05	4	0.06	0.05	0.03	4	0.06	0.06	0.02
C14:1 (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	5	0.01	0.02	0.00	4	2.02	0.84	0.21	5	0.01	0.02	0.01	5	0.02	0.02	0.01	5	0.02	0.02	0.01
	Derivatized - MS/MS MassChrom® Chromsystems	15	0.01	0.04	0.03	15	2.02	0.91	0.13	15	0.01	0.04	0.03	15	0.02	0.04	0.03	15	0.02	0.04	0.02
	Derivatized - MS/MS non-kit	64	0.01	0.03	0.03	65	2.02	1.01	0.23	63	0.01	0.03	0.02	63	0.02	0.04	0.03	62	0.02	0.04	0.02
	Non-derivatized - MS/MS MS2 Screening Neo (MS-Neo)Siemens	3	0.01	0.01	0.01	3	2.02	0.88	0.05	3	0.01	0.01	0.01	3	0.02	0.02	0.01	3	0.02	0.02	0.01
	Non-derivatized - MS/MS MassChrom® Chromsystems	19	0.01	0.02	0.01	19	2.02	0.76	0.13	19	0.01	0.02	0.01	19	0.02	0.02	0.01	19	0.02	0.02	0.01
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	50	0.01	0.03	0.02	50	2.02	0.90	0.11	51	0.01	0.03	0.02	51	0.02	0.03	0.02	51	0.02	0.03	0.02
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	81	0.01	0.02	0.01	81	2.02	0.90	0.13	81	0.01	0.02	0.01	81	0.02	0.02	0.01	81	0.02	0.02	0.01
	Non-derivatized - MS/MS non-kit	23	0.01	0.03	0.03	23	2.02	1.01	0.24	23	0.01	0.03	0.02	23	0.02	0.03	0.02	22	0.02	0.03	0.02
	Non-derivatized Labsystems Neomass AAAC Plus	7	0.01	0.03	0.04	7	2.02	0.93	0.37	7	0.01	0.04	0.05	7	0.02	0.04	0.04	7	0.02	0.05	0.05
Other	4	0.01	0.02	0.01	5	2.02	0.79	0.20	4	0.01	0.03	0.01	4	0.02	0.03	0.01	4	0.02	0.03	0.02	
C16 (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	5	0.77	0.85	0.13	5	0.75	0.78	0.15	4	0.75	0.72	0.22	5	0.53	0.57	0.09	5	0.55	0.50	0.04
	Derivatized - MS/MS MassChrom® Chromsystems	14	0.77	0.62	0.08	15	0.75	0.61	0.13	15	0.75	0.65	0.22	15	0.53	0.42	0.05	15	0.55	0.44	0.09
	Derivatized - MS/MS non-kit	64	0.77	0.75	0.17	65	0.75	0.74	0.15	64	0.75	0.72	0.16	65	0.53	0.50	0.10	65	0.55	0.50	0.11
	LC-MS/MS non-kit	3	0.77	0.68	0.09	3	0.75	0.70	0.16	3	0.75	0.69	0.14	3	0.53	0.43	0.16	3	0.55	0.47	0.15
	Non-derivatized - MS/MS MassChrom® Chromsystems	23	0.77	0.66	0.13	23	0.75	0.67	0.18	23	0.75	0.69	0.19	22	0.53	0.43	0.10	23	0.55	0.46	0.17
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	49	0.77	0.71	0.10	49	0.75	0.72	0.09	49	0.75	0.71	0.08	49	0.53	0.46	0.06	48	0.55	0.46	0.05
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	78	0.77	0.81	0.11	78	0.75	0.83	0.12	78	0.75	0.81	0.12	78	0.53	0.53	0.06	78	0.55	0.53	0.06

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

Newborn Screening Quality Assurance Program
Year: 2023, Quarter: 1
Mean Reported Concentrations Sorted by Method
Program: Acylcarnitines (ACPT)

		Specimen Number																			
		20231006001				20231006002				20231006003				20231006004				20231006005			
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)	Non-derivatized - MS/MS non-kit	25	0.77	0.72	0.13	25	0.75	0.72	0.11	25	0.75	0.68	0.19	25	0.53	0.50	0.13	25	0.55	0.48	0.11
	Non-derivatized Labsystems Neomass AAAC Plus	8	0.77	0.73	0.21	8	0.75	0.73	0.25	8	0.75	0.71	0.15	8	0.53	0.49	0.15	8	0.55	0.52	0.16
	Other	5	0.77	0.55	0.25	5	0.75	0.60	0.21	5	0.75	0.61	0.17	5	0.53	0.40	0.09	5	0.55	0.41	0.11
C16OH (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	5	0.02	0.02	0.01	4	1.03	0.81	0.15	5	0.02	0.02	0.01	5	0.02	0.02	0.02	5	0.02	0.03	0.02
	Derivatized - MS/MS MassChrom® Chromsystems	15	0.02	0.02	0.02	15	1.03	0.67	0.24	15	0.02	0.02	0.01	15	0.02	0.02	0.01	15	0.02	0.02	0.01
	Derivatized - MS/MS non-kit	65	0.02	0.02	0.02	66	1.03	0.79	0.21	64	0.02	0.02	0.02	64	0.02	0.02	0.02	63	0.02	0.02	0.02
	Non-derivatized - MS/MS MassChrom® Chromsystems	27	0.02	0.01	0.01	26	1.03	0.69	0.29	27	0.02	0.01	0.02	27	0.02	0.01	0.01	27	0.02	0.01	0.01
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	50	0.02	0.01	0.00	51	1.03	0.65	0.13	51	0.02	0.01	0.01	51	0.02	0.01	0.01	51	0.02	0.01	0.01
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	81	0.02	0.01	0.01	81	1.03	0.77	0.11	81	0.02	0.01	0.01	81	0.02	0.01	0.01	81	0.02	0.01	0.01
	Non-derivatized - MS/MS non-kit	21	0.02	0.01	0.01	22	1.03	0.82	0.27	21	0.02	0.01	0.01	21	0.02	0.01	0.01	21	0.02	0.01	0.01
	Non-derivatized Labsystems Neomass AAAC Plus	7	0.02	0.01	0.01	7	1.03	0.68	0.25	7	0.02	0.01	0.01	7	0.02	0.01	0.01	7	0.02	0.01	0.01
	Other	4	0.02	0.01	0.00	5	1.03	0.72	0.35	4	0.02	0.01	0.00	4	0.02	0.01	0.00	5	0.02	0.01	0.01
C18 (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	5	0.38	0.43	0.08	5	0.35	0.37	0.10	5	0.36	0.44	0.11	5	0.37	0.40	0.06	5	0.39	0.43	0.05
	Derivatized - MS/MS MassChrom® Chromsystems	15	0.38	0.38	0.09	15	0.35	0.41	0.10	15	0.36	0.37	0.07	15	0.37	0.39	0.09	15	0.39	0.39	0.08
	Derivatized - MS/MS non-kit	62	0.38	0.40	0.12	62	0.35	0.40	0.12	62	0.36	0.41	0.12	62	0.37	0.40	0.11	61	0.39	0.40	0.10
	LC-MS/MS non-kit	3	0.38	0.44	0.16	3	0.35	0.32	0.11	3	0.36	0.31	0.11	3	0.37	0.32	0.18	3	0.39	0.43	0.07
	Non-derivatized - MS/MS MassChrom® Chromsystems	22	0.38	0.40	0.07	22	0.35	0.43	0.09	22	0.36	0.40	0.14	21	0.37	0.39	0.05	22	0.39	0.43	0.09
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	49	0.38	0.38	0.04	49	0.35	0.39	0.04	49	0.36	0.38	0.03	49	0.37	0.38	0.04	49	0.39	0.39	0.07
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	70	0.38	0.39	0.04	70	0.35	0.40	0.05	70	0.36	0.39	0.05	70	0.37	0.40	0.04	70	0.39	0.40	0.04
	Non-derivatized - MS/MS non-kit	21	0.38	0.37	0.08	21	0.35	0.37	0.07	21	0.36	0.37	0.06	21	0.37	0.38	0.07	21	0.39	0.36	0.08
	Non-derivatized Labsystems Neomass AAAC Plus	8	0.38	0.39	0.13	8	0.35	0.40	0.14	8	0.36	0.38	0.11	8	0.37	0.38	0.11	8	0.39	0.41	0.13
Other	5	0.38	0.27	0.10	5	0.35	0.30	0.08	5	0.36	0.31	0.06	5	0.37	0.29	0.08	5	0.39	0.33	0.05	

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

Newborn Screening Quality Assurance Program
Year: 2023, Quarter: 1
Mean Reported Concentrations Sorted by Method
Program: Acylcarnitines (ACPT)

		Specimen Number																			
		20231006001				20231006002				20231006003				20231006004				20231006005			
Analyte	Method	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD	N	EV	Mean	SD
C18:1 (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	4	0.56	0.87	0.16	4	0.55	0.80	0.23	4	0.57	0.85	0.11	3	0.62	0.82	0.12	4	0.64	0.90	0.15
	Derivatized - MS/MS MassChrom® Chromsystems	15	0.56	0.54	0.20	15	0.55	0.55	0.21	15	0.57	0.59	0.15	15	0.62	0.63	0.17	15	0.64	0.61	0.21
	Derivatized - MS/MS non-kit	60	0.56	0.58	0.16	59	0.55	0.55	0.14	59	0.57	0.56	0.14	60	0.62	0.62	0.16	60	0.64	0.63	0.17
	Non-derivatized - MS/MS MassChrom® Chromsystems	17	0.56	0.48	0.11	17	0.55	0.50	0.12	17	0.57	0.50	0.17	17	0.62	0.56	0.14	18	0.64	0.63	0.30
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	48	0.56	0.55	0.07	48	0.55	0.56	0.06	48	0.57	0.54	0.05	48	0.62	0.60	0.07	47	0.64	0.61	0.06
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	69	0.56	0.55	0.10	69	0.55	0.57	0.08	69	0.57	0.56	0.07	69	0.62	0.63	0.08	69	0.64	0.63	0.08
	Non-derivatized - MS/MS non-kit	21	0.56	0.57	0.15	21	0.55	0.56	0.13	21	0.57	0.52	0.12	21	0.62	0.63	0.16	21	0.64	0.62	0.18
	Non-derivatized Labsystems Neomass AAAC Plus	7	0.56	0.51	0.19	7	0.55	0.55	0.22	7	0.57	0.53	0.17	7	0.62	0.59	0.22	7	0.64	0.63	0.24
Other	5	0.56	0.39	0.15	5	0.55	0.46	0.26	5	0.57	0.41	0.16	5	0.62	0.46	0.17	5	0.64	0.48	0.15	
C18OH (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	5	0.01	0.01	0.02	5	1.01	0.76	0.32	5	0.00	0.01	0.01	5	0.00	0.01	0.01	5	0.00	0.01	0.00
	Derivatized - MS/MS MassChrom® Chromsystems	14	0.01	0.01	0.01	14	1.01	0.57	0.34	14	0.00	0.02	0.01	14	0.00	0.02	0.01	14	0.00	0.01	0.01
	Derivatized - MS/MS non-kit	47	0.01	0.02	0.02	48	1.01	0.65	0.24	47	0.00	0.02	0.02	47	0.00	0.02	0.02	47	0.00	0.02	0.03
	Non-derivatized - MS/MS MassChrom® Chromsystems	19	0.01	0.00	0.01	18	1.01	0.53	0.20	19	0.00	0.01	0.01	19	0.00	0.00	0.00	19	0.00	0.00	0.01
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	48	0.01	0.01	0.03	48	1.01	0.55	0.14	48	0.00	0.01	0.01	47	0.00	0.00	0.01	48	0.00	0.00	0.01
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	68	0.01	0.00	0.01	68	1.01	0.61	0.11	68	0.00	0.00	0.01	68	0.00	0.00	0.00	68	0.00	0.00	0.00
	Non-derivatized - MS/MS non-kit	15	0.01	0.01	0.01	15	1.01	0.67	0.33	15	0.00	0.01	0.01	15	0.00	0.01	0.01	15	0.00	0.01	0.01
	Non-derivatized Labsystems Neomass AAAC Plus	7	0.01	0.00	0.01	7	1.01	0.59	0.25	7	0.00	0.01	0.01	7	0.00	0.00	0.01	7	0.00	0.01	0.01
Other	3	0.01	0.04	0.07	3	1.01	0.38	0.10	3	0.00	0.09	0.14	.				3	0.00	0.03	0.05	

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

Newborn Screening Quality Assurance Program
Year: 2023, Quarter: 1
Mean Reported Concentrations Sorted by Method
Program: Amino Acids (AAPT)

		Specimen Number																			
		20231005001				20231005002				20231005003				20231005004				20231005005			
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	212.9	87.3	17.8	5	11.5	6.4	1.9	5	14.4	8.9	2.0	5	11.8	8.3	1.9	5	14.9	9.0	1.7
	Derivatized - MS/MS MassChrom® Chromsystems	13	212.9	166.1	51.0	13	11.5	14.7	7.7	13	14.4	16.6	6.0	13	11.8	13.1	4.7	13	14.9	15.4	4.7
	Derivatized - MS/MS non-kit	52	212.9	86.0	39.1	49	11.5	9.5	5.8	51	14.4	10.5	5.0	51	11.8	9.1	5.6	51	14.9	10.8	6.1
	LC-MS/MS non-kit	6	212.9	95.9	48.3	6	11.5	8.0	3.3	6	14.4	9.1	3.2	6	11.8	7.9	3.8	6	14.9	9.2	3.8
	Non-derivatized - MS/MS MassChrom® Chromsystems	22	212.9	146.0	32.7	22	11.5	13.1	5.7	22	14.4	14.0	3.6	22	11.8	11.3	2.6	22	14.9	13.8	2.4
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	43	212.9	163.4	23.7	43	11.5	11.2	1.8	43	14.4	13.3	2.1	43	11.8	11.2	1.7	43	14.9	14.1	2.4
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	70	212.9	155.4	18.7	70	11.5	11.2	1.9	70	14.4	13.3	2.2	70	11.8	11.0	1.7	70	14.9	13.4	2.0
	Non-derivatized - MS/MS non-kit	14	212.9	124.9	39.7	14	11.5	11.1	6.5	14	14.4	11.6	3.4	14	11.8	9.8	3.5	14	14.9	11.6	3.1
	Non-derivatized Labsystems Neomass AAAC Plus	8	212.9	170.3	46.1	8	11.5	12.7	2.8	8	14.4	15.2	4.1	8	11.8	12.3	3.2	8	14.9	15.5	3.8
Other	6	212.9	117.5	55.4	5	11.5	12.4	7.8	5	14.4	15.4	12.9	5	11.8	12.2	9.4	4	14.9	9.7	2.0	
Cre (µmol/L blood)	Derivatized - MS/MS non-kit	5	400.4	367.4	52.3	5	396.8	372.2	71.9	5	393.3	344.2	69.5	5	339.4	301.0	53.9	5	401.7	347.5	55.6
Cit (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	5	19.9	24.4	4.0	5	169.8	179.9	30.0	5	21.8	26.4	3.9	5	32.0	30.6	5.4	5	19.1	26.7	3.8
	Derivatized - MS/MS MassChrom® Chromsystems	13	19.9	21.6	3.7	13	169.8	136.1	20.4	13	21.8	22.7	4.3	13	32.0	28.5	4.4	13	19.1	21.0	3.2
	Derivatized - MS/MS non-kit	53	19.9	18.3	4.3	54	169.8	121.1	26.9	53	21.8	19.0	4.0	53	32.0	25.6	5.2	53	19.1	18.6	3.9
	LC-MS/MS non-kit	6	19.9	17.8	5.6	6	169.8	134.0	28.0	6	21.8	19.2	5.1	6	32.0	26.3	7.4	6	19.1	18.0	4.8
	Non-derivatized - MS/MS MS2 Screening Neo (MS-Neo)Siemens	3	19.9	19.7	2.0	3	169.8	129.3	7.2	3	21.8	18.5	2.9	3	32.0	24.8	2.6	3	19.1	18.6	2.1
	Non-derivatized - MS/MS MassChrom® Chromsystems	22	19.9	22.3	5.9	22	169.8	148.3	18.6	22	21.8	23.7	5.8	22	32.0	31.0	4.1	22	19.1	22.6	4.3
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	51	19.9	25.8	3.2	51	169.8	159.9	14.7	51	21.8	23.3	2.4	51	32.0	32.1	3.4	51	19.1	23.9	2.6
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	76	19.9	24.2	3.9	76	169.8	150.4	15.8	76	21.8	22.5	2.9	76	32.0	30.0	4.1	76	19.1	22.5	3.0
	Non-derivatized - MS/MS non-kit	21	19.9	23.8	7.3	21	169.8	142.5	21.4	21	21.8	21.5	3.1	21	32.0	29.2	5.5	21	19.1	21.0	4.2
	Non-derivatized Labsystems Neomass AAAC Plus	7	19.9	32.7	10.4	8	169.8	147.9	30.7	8	21.8	23.0	6.9	8	32.0	29.3	8.2	7	19.1	20.5	4.9
Other	5	19.9	18.6	4.7	5	169.8	93.0	41.7	5	21.8	18.6	5.8	5	32.0	22.8	7.4	5	19.1	17.8	3.7	

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

Newborn Screening Quality Assurance Program
Year: 2023, Quarter: 1
Mean Reported Concentrations Sorted by Method
Program: Amino Acids (AAPT)

		Specimen Number																			
		20231005001				20231005002				20231005003				20231005004				20231005005			
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	7	1.9	2.4	0.7	7	1.7	2.4	0.6	7	1.5	1.8	0.5	7	2.7	3.5	0.8	7	1.5	1.9	0.4
Leu (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	5	88.6	100.3	22.3	5	88.6	100.2	18.8	5	141.4	127.6	6.3	5	758.6	611.7	76.0	5	146.7	131.4	10.5
	Derivatized - MS/MS MassChrom® Chromsystems	13	88.6	95.3	22.4	12	88.6	87.8	10.0	13	141.4	117.4	34.2	13	758.6	538.8	95.7	13	146.7	116.0	33.9
	Derivatized - MS/MS non-kit	53	88.6	91.7	18.1	53	88.6	93.1	19.7	53	141.4	122.1	20.1	54	758.6	596.2	86.5	53	146.7	123.0	19.6
	LC-MS/MS non-kit	8	88.6	88.8	26.9	9	88.6	83.5	36.7	8	141.4	138.7	52.3	8	758.6	623.3	155.9	8	146.7	136.6	47.1
	Non-derivatized - MS/MS MS2 Screening Neo (MS-Neo)Siemens	3	88.6	104.5	11.5	3	88.6	104.8	9.4	3	141.4	160.2	19.1	3	758.6	647.3	72.9	3	146.7	153.8	15.6
	Non-derivatized - MS/MS MassChrom® Chromsystems	32	88.6	100.1	14.3	32	88.6	99.6	15.8	32	141.4	156.4	17.7	32	758.6	650.2	79.2	32	146.7	158.0	18.2
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	52	88.6	109.6	11.8	52	88.6	110.5	11.9	51	141.4	169.7	18.3	52	758.6	746.6	73.7	52	146.7	171.6	18.4
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	84	88.6	100.0	13.3	84	88.6	99.9	11.4	84	141.4	152.6	18.9	84	758.6	649.1	65.7	83	146.7	154.0	16.5
	Non-derivatized - MS/MS non-kit	27	88.6	102.0	21.9	27	88.6	101.2	17.1	27	141.4	157.2	22.4	27	758.6	660.2	108.8	27	146.7	158.6	23.2
	Non-derivatized Labsystems Neomass AAAC Plus	8	88.6	93.0	19.9	8	88.6	96.3	22.0	8	141.4	146.5	31.5	8	758.6	607.6	124.6	8	146.7	141.8	36.0
Other	13	88.6	114.5	48.5	12	88.6	97.8	27.9	12	141.4	141.2	40.0	13	758.6	612.0	145.6	12	146.7	141.9	36.9	
Met (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	5	12.8	14.1	1.2	5	11.7	15.0	1.1	5	214.0	174.0	19.4	5	33.1	32.9	7.7	5	14.1	16.9	1.6
	Derivatized - MS/MS MassChrom® Chromsystems	13	12.8	13.1	2.8	13	11.7	13.4	4.1	13	214.0	149.5	35.3	13	33.1	29.8	7.3	13	14.1	14.4	4.2
	Derivatized - MS/MS non-kit	52	12.8	14.9	3.7	53	11.7	15.0	3.9	54	214.0	170.5	33.5	53	33.1	36.6	6.7	52	14.1	17.1	3.9
	LC-MS/MS non-kit	6	12.8	12.3	2.1	6	11.7	12.7	2.3	6	214.0	165.3	24.1	6	33.1	30.1	7.4	6	14.1	13.7	2.5
	Non-derivatized - MS/MS MS2 Screening Neo (MS-Neo)Siemens	3	12.8	13.7	0.4	3	11.7	13.8	0.1	3	214.0	169.5	10.5	3	33.1	31.7	3.9	3	14.1	15.5	1.2
	Non-derivatized - MS/MS MassChrom® Chromsystems	30	12.8	13.9	1.7	31	11.7	14.8	5.2	31	214.0	167.0	17.2	31	33.1	34.3	5.8	30	14.1	15.9	1.8
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	52	12.8	15.3	2.1	52	11.7	15.4	1.8	52	214.0	184.7	19.6	52	33.1	37.3	4.2	52	14.1	17.4	2.7
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	78	12.8	13.3	1.8	77	11.7	13.3	1.5	78	214.0	164.4	18.4	78	33.1	32.9	4.1	78	14.1	15.1	1.9
	Non-derivatized - MS/MS non-kit	27	12.8	15.1	4.5	27	11.7	15.2	3.7	27	214.0	182.0	26.8	27	33.1	35.9	5.5	27	14.1	17.7	4.4

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

Newborn Screening Quality Assurance Program
Year: 2023, Quarter: 1
Mean Reported Concentrations Sorted by Method
Program: Amino Acids (AAPT)

		Specimen Number																			
		20231005001				20231005002				20231005003				20231005004				20231005005			
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 Labsystems Neomass AAAC Plus	8	12.8	12.8	5.4	8	11.7	12.2	5.2	8	214.0	149.9	45.3	8	33.1	29.0	11.3	8	14.1	15.0	7.0
	Other	7	12.8	15.8	6.6	7	11.7	17.9	5.1	6	214.0	145.1	46.3	6	33.1	28.6	7.9	6	14.1	14.7	2.6
Phe (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	6	43.6	52.8	12.2	6	42.7	50.8	8.7	6	49.3	55.4	7.6	6	69.0	73.8	11.5	6	272.1	265.3	44.0
	Derivatized - MS/MS MassChrom® Chromsystems	14	43.6	49.1	10.1	14	42.7	50.5	15.8	14	49.3	55.3	9.2	14	69.0	69.6	9.9	14	272.1	219.8	44.4
	Derivatized - MS/MS non-kit	56	43.6	46.4	10.1	56	42.7	45.7	7.6	56	49.3	52.6	8.9	56	69.0	69.6	11.2	57	272.1	244.2	34.3
	GSP® Phe Neonatal PerkinElmer	13	43.6	47.3	8.0	13	42.7	50.9	7.1	13	49.3	66.4	10.9	13	69.0	88.2	16.1	13	272.1	271.5	17.8
	High-performance liquid chromatography (HPLC) non-kit	3	43.6	53.0	1.6	3	42.7	54.0	2.2	3	49.3	64.2	3.1	3	69.0	78.2	4.7	3	272.1	273.9	3.7
	LC-MS/MS non-kit	9	43.6	45.4	13.2	9	42.7	46.7	14.6	9	49.3	54.5	16.7	9	69.0	72.9	11.2	8	272.1	267.2	36.1
	NeoLISA® Phe Interscientifica	4	43.6	81.5	16.8	3	42.7	62.6	11.5	4	49.3	98.5	25.0	4	69.0	162.1	37.7	4	272.1	241.7	50.9
	Neonatal Phe LabSystems	6	43.6	70.2	15.7	6	42.7	62.6	27.5	6	49.3	83.6	20.0	6	69.0	124.3	33.0	6	272.1	280.2	24.7
	Neonatal® Phe Kit PerkinElmer	14	43.6	52.7	18.0	14	42.7	52.7	16.0	14	49.3	60.2	16.4	14	69.0	84.4	16.2	14	272.1	229.2	23.8
	Non-derivatized - MS/MS MS2 Screening Neo (MS-Neo)Siemens	3	43.6	51.8	4.2	3	42.7	52.2	4.2	3	49.3	59.8	7.0	3	69.0	73.3	10.9	3	272.1	267.9	30.5
	Non-derivatized - MS/MS MassChrom® Chromsystems	31	43.6	50.3	6.9	31	42.7	50.3	7.3	31	49.3	58.9	7.7	31	69.0	75.6	10.6	31	272.1	274.4	39.6
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	53	43.6	49.5	5.3	53	42.7	49.5	4.7	53	49.3	56.4	5.4	53	69.0	74.4	6.6	53	272.1	271.8	24.5
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	84	43.6	43.5	5.5	84	42.7	43.3	4.9	84	49.3	49.9	6.2	84	69.0	64.1	7.6	84	272.1	237.7	26.7
	Non-derivatized - MS/MS non-kit	32	43.6	47.5	8.8	32	42.7	46.6	6.4	32	49.3	56.7	12.8	32	69.0	73.6	17.2	32	272.1	256.3	41.0
	Non-derivatized Labsystems Neomass AAAC Plus	8	43.6	40.3	12.1	8	42.7	41.9	12.3	8	49.3	48.1	14.2	8	69.0	61.5	19.0	8	272.1	225.5	58.3
Other	15	43.6	50.0	24.1	16	42.7	53.6	20.1	19	49.3	78.1	36.8	19	69.0	130.9	69.6	18	272.1	259.0	78.9	

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

Newborn Screening Quality Assurance Program
Year: 2023, Quarter: 1
Mean Reported Concentrations Sorted by Method
Program: Amino Acids (AAPT)

		Specimen Number																			
		20231005001				20231005002				20231005003				20231005004				20231005005			
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	12	0.2	0.7	0.5	12	0.1	0.7	0.5	12	0.2	0.7	0.6	12	0.1	0.7	0.5	12	0.1	0.7	0.6
	Derivatized - MS/MS non-kit	23	0.2	0.7	0.3	23	0.1	0.7	0.4	24	0.2	0.6	0.4	23	0.1	0.7	0.4	23	0.1	0.6	0.4
	Non-derivatized - MS/MS MassChrom® Chromsystems	19	0.2	0.7	0.2	19	0.1	0.7	0.2	19	0.2	0.7	0.2	19	0.1	0.7	0.3	19	0.1	0.7	0.3
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	36	0.2	0.6	0.3	36	0.1	0.6	0.3	36	0.2	0.7	0.4	36	0.1	0.6	0.3	36	0.1	0.6	0.3
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	57	0.2	0.3	0.2	57	0.1	0.2	0.2	57	0.2	0.2	0.2	57	0.1	0.3	0.2	57	0.1	0.2	0.2
	Non-derivatized - MS/MS non-kit	13	0.2	0.7	0.5	14	0.1	0.8	0.8	14	0.2	0.8	0.8	14	0.1	0.9	0.9	14	0.1	0.8	0.8
	Non-derivatized Labsystems Neomass AAAC Plus	5	0.2	1.2	1.0	5	0.1	1.6	1.2	5	0.2	0.9	0.7	5	0.1	0.9	0.8	5	0.1	1.0	1.1
Tyr (µmol/L blood)	Derivatized - MS/MS ClinSpot® Complete Kit RECIPE	5	53.3	54.0	6.4	5	52.2	56.1	9.2	5	50.2	51.9	9.6	5	103.1	103.9	21.5	5	51.2	53.2	10.2
	Derivatized - MS/MS MassChrom® Chromsystems	14	53.3	64.2	11.3	14	52.2	65.4	13.8	14	50.2	59.7	11.5	14	103.1	115.2	17.7	14	51.2	59.2	9.9
	Derivatized - MS/MS non-kit	55	53.3	55.5	10.7	55	52.2	56.1	11.3	55	50.2	54.5	16.8	55	103.1	101.3	16.8	55	51.2	52.5	9.0
	LC-MS/MS non-kit	8	53.3	58.6	2.9	8	52.2	60.3	3.9	8	50.2	55.6	3.9	8	103.1	106.7	10.3	8	51.2	54.5	4.4
	Non-derivatized - MS/MS MS2 Screening Neo (MS-Neo)Siemens	3	53.3	54.6	2.6	3	52.2	55.3	3.2	3	50.2	50.1	3.5	3	103.1	96.3	11.6	3	51.2	49.2	3.5
	Non-derivatized - MS/MS MassChrom® Chromsystems	28	53.3	64.3	9.3	28	52.2	65.2	9.1	28	50.2	61.0	7.7	28	103.1	115.3	15.6	28	51.2	60.4	8.7
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	52	53.3	64.5	8.0	52	52.2	65.5	8.0	52	50.2	59.2	6.8	52	103.1	118.1	11.4	52	51.2	61.0	7.1
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	81	53.3	56.1	6.7	81	52.2	55.6	6.0	81	50.2	51.9	6.3	81	103.1	100.5	11.2	81	51.2	52.2	5.8
	Non-derivatized - MS/MS non-kit	28	53.3	55.7	9.7	28	52.2	57.2	8.2	28	50.2	53.5	8.7	28	103.1	102.6	15.5	28	51.2	53.9	8.1
	Non-derivatized Labsystems Neomass AAAC Plus	8	53.3	56.3	22.2	8	52.2	59.0	25.4	8	50.2	52.9	17.0	8	103.1	107.2	35.6	8	51.2	55.4	22.5
	Other	7	53.3	63.3	27.9	7	52.2	68.8	25.5	7	50.2	68.2	37.1	7	103.1	109.0	34.1	7	51.2	70.2	29.2

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

Newborn Screening Quality Assurance Program
Year: 2023, Quarter: 1
Mean Reported Concentrations Sorted by Method
Program: Amino Acids (AAPT)

		Specimen Number																			
		20231005001				20231005002				20231005003				20231005004				20231005005			
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	5	119.2	108.5	15.2	5	116.3	116.5	17.2	5	134.1	137.0	26.7	5	653.3	505.8	90.4	5	139.4	132.1	23.5
	Derivatized - MS/MS MassChrom® Chromsystems	13	119.2	103.8	23.8	13	116.3	108.8	33.0	13	134.1	117.9	28.1	13	653.3	435.0	110.0	13	139.4	115.4	34.1
	Derivatized - MS/MS non-kit	51	119.2	121.1	24.4	51	116.3	123.5	25.5	51	134.1	135.6	27.1	52	653.3	489.8	95.4	51	139.4	137.3	29.2
	LC-MS/MS non-kit	7	119.2	107.8	14.8	7	116.3	114.5	21.3	7	134.1	129.4	19.8	7	653.3	483.9	98.1	7	139.4	128.1	25.5
	Non-derivatized - MS/MS MS2 Screening Neo (MS-Neo)Siemens	3	119.2	137.9	19.8	3	116.3	140.3	17.4	3	134.1	154.1	13.7	3	653.3	575.8	28.8	3	139.4	146.5	9.7
	Non-derivatized - MS/MS MassChrom® Chromsystems	23	119.2	114.5	15.0	23	116.3	112.8	14.7	23	134.1	132.7	16.8	23	653.3	500.0	61.2	23	139.4	132.1	19.0
	Non-derivatized - MS/MS NeoBase™ PerkinElmer	49	119.2	143.7	19.6	49	116.3	144.6	19.3	49	134.1	161.3	20.2	49	653.3	650.3	79.5	49	139.4	163.6	20.3
	Non-derivatized - MS/MS NeoBase™2 PerkinElmer	71	119.2	128.3	15.1	71	116.3	127.9	13.5	71	134.1	143.5	15.0	71	653.3	568.4	58.8	71	139.4	146.3	15.7
	Non-derivatized - MS/MS non-kit	20	119.2	118.6	25.3	20	116.3	119.4	20.9	20	134.1	134.9	21.0	20	653.3	509.3	90.7	20	139.4	134.0	25.8
	Non-derivatized Labsystems Neomass AAAC Plus	8	119.2	120.1	18.7	8	116.3	120.5	17.4	8	134.1	137.6	20.5	8	653.3	538.4	85.2	8	139.4	134.4	23.5
Other	7	119.2	125.9	48.5	8	116.3	111.6	51.0	8	134.1	127.9	67.2	8	653.3	473.5	216.1	8	139.4	125.9	58.4	

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

Newborn Screening Quality Assurance Program
Year: 2023, Quarter: 1
Mean Reported Concentrations Sorted by Method
Program: Hormones and Total Galactose (HORMPT)

		Specimen Number																			
		20231001001				20231001002				20231001003				20231001004				20231001005			
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)	AutoDELFIAR Neonatal T4 PerkinElmer	13	10.0	14.3	1.9	13	10.0	14.1	2.1	14	1.5	1.7	0.5	13	10.0	15.3	1.6	13	10.0	15.7	2.2
	DELFIAR Neonatal T4 PerkinElmer	9	10.0	15.4	4.6	9	10.0	15.0	3.6	9	1.5	1.7	0.7	9	10.0	15.3	3.6	9	10.0	16.3	4.5
	GSP® T4 Neonatal PerkinElmer	28	10.0	14.6	1.8	28	10.0	13.5	1.8	24	1.5	1.6	0.5	28	10.0	16.1	2.3	28	10.0	15.1	2.1
	NeoMAP® T4 Interscientifica	6	10.0	14.4	2.1	6	10.0	13.1	2.1	6	1.5	2.2	0.5	6	10.0	14.0	2.0	6	10.0	14.5	2.4
	Other	10	10.0	15.9	4.0	10	10.0	14.9	5.0	10	1.5	1.9	1.5	10	10.0	17.1	2.9	10	10.0	15.9	3.8
TSH (µIU/mL serum)	AutoDELFIAR Neonatal hTSH PerkinElmer	66	0.0	0.7	0.5	66	0.0	0.4	0.5	68	90.0	63.1	11.4	67	0.0	1.6	0.7	66	0.0	0.8	0.8
	DELFIAR Neonatal TSH PerkinElmer	62	0.0	2.0	2.0	62	0.0	1.5	1.8	63	90.0	60.7	14.6	62	0.0	2.7	1.9	62	0.0	1.9	2.3
	GSP® hTSH Neonatal PerkinElmer	118	0.0	1.2	0.9	118	0.0	0.8	1.3	123	90.0	56.6	10.1	120	0.0	2.1	1.3	117	0.0	1.2	0.7
	NeoMAP® TSH Interscientifica	5	0.0	1.2	0.7	5	0.0	1.0	0.9	5	90.0	65.5	15.1	5	0.0	1.6	0.4	5	0.0	1.0	0.5
	Neonatal TSH LabSystems	19	0.0	5.5	2.7	19	0.0	5.7	3.2	18	90.0	55.4	15.5	18	0.0	5.4	3.3	17	0.0	4.8	2.9
	Other	17	0.0	1.9	1.9	17	0.0	2.2	2.5	17	90.0	62.6	19.2	16	0.0	3.3	1.9	17	0.0	2.1	2.4
	Trimaris Neonatal TSH FEIA	6	0.0	2.9	2.2	6	0.0	1.7	1.3	6	90.0	61.4	13.7	6	0.0	3.0	1.2	6	0.0	1.9	1.6
	ZenTech ELISA Neonatal TSH	16	0.0	2.4	1.0	16	0.0	2.1	0.8	16	90.0	54.9	22.6	16	0.0	3.1	1.2	16	0.0	2.6	1.3
17OHP (ng/mL serum)	AutoDELFIAR Neonatal 17OHP PerkinElmer	60	0.0	1.9	0.6	60	0.0	1.5	0.5	60	0.0	0.5	0.4	60	0.0	1.6	0.6	62	85.0	92.9	21.0
	DELFIAR Neonatal 17OHP PerkinElmer	45	0.0	1.8	1.6	45	0.0	2.2	3.8	45	0.0	0.7	1.2	45	0.0	1.9	3.3	44	85.0	81.6	28.7
	GSP® 17OHP Neonatal PerkinElmer	101	0.0	1.5	0.5	99	0.0	1.3	0.5	98	0.0	0.5	0.6	99	0.0	1.1	0.5	106	85.0	81.6	15.7
	LC-MS/MS non-kit	5	0.0	1.1	1.0	5	0.0	1.2	1.0	5	0.0	1.1	1.0	5	0.0	1.2	1.0	6	85.0	67.9	31.4
	NeoMAP® 17OHP Interscientifica	4	0.0	1.5	0.5	4	0.0	1.1	0.8	4	0.0	0.4	0.5	4	0.0	0.9	0.4	4	85.0	68.4	3.8
	Neonatal 17OHP LabSystems	14	0.0	4.4	4.3	14	0.0	2.1	1.0	14	0.0	1.2	1.6	14	0.0	2.4	1.4	13	85.0	85.2	57.1
	Other	19	0.0	4.6	4.4	19	0.0	4.4	3.4	18	0.0	2.2	2.1	18	0.0	3.5	2.5	19	85.0	87.3	35.8
	ZenTech ELISA Neonatal 17OHP	15	0.0	7.8	5.1	15	0.0	5.4	3.9	14	0.0	2.5	1.9	15	0.0	6.3	4.7	15	85.0	84.2	30.0

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

Newborn Screening Quality Assurance Program
Year: 2023, Quarter: 1
Mean Reported Concentrations Sorted by Method
Program: Hormones and Total Galactose (HORMPT)

		Specimen Number																			
		20231001001				20231001002				20231001003				20231001004				20231001005			
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	5	0.0	1.2	0.4	5	0.0	1.2	0.3	5	0.0	1.2	0.2	5	25.0	21.6	3.6	5	0.0	1.5	0.6
	Colorimetric -non-kit method	3	0.0	1.1	0.9	3	0.0	0.9	0.6	3	0.0	0.9	1.1	3	25.0	37.3	8.2	3	0.0	0.9	0.1
	Fluorescence TGal Neonatal PerkinElmer	41	0.0	0.8	1.0	41	0.0	1.3	1.0	41	0.0	1.6	1.3	41	25.0	20.9	3.0	41	0.0	1.0	1.2
	Fluorometric manual TGal - non-kit	5	0.0	1.9	1.6	6	0.0	2.3	1.9	7	0.0	2.2	2.5	9	25.0	25.3	10.2	7	0.0	3.1	3.0
	GSP® TGal Neonatal PerkinElmer	58	0.0	0.9	0.7	58	0.0	0.9	0.7	58	0.0	0.9	0.8	60	25.0	24.7	3.4	58	0.0	0.9	0.7
	NeoLISA® TGal Interscientifica	5	0.0	1.6	0.4	5	0.0	1.6	0.4	5	0.0	1.3	0.3	5	25.0	17.2	2.8	5	0.0	1.4	0.3
	Other	21	0.0	1.3	1.1	21	0.0	1.7	1.5	21	0.0	1.3	1.6	20	25.0	28.8	8.0	21	0.0	1.5	1.1
	ZenTech Neonatal TGal Enzymatic Colorimetric	27	0.0	2.5	1.4	27	0.0	2.5	1.5	27	0.0	2.9	1.8	27	25.0	20.5	4.6	27	0.0	2.4	1.4

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

Newborn Screening Quality Assurance Program
Year: 2023, Quarter: 1
Mean Reported Concentrations Sorted by Method
Program: Immunoreactive Trypsinogen (IRTPT)

		Specimen Number																			
		20231008001				20231008002				20231008003				20231008004				20231008005			
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	61	142.9	132.7	13.8	59	9.0	7.7	1.6	59	27.7	26.6	4.3	61	198.0	186.1	20.0	59	21.6	20.0	3.2
	DELFLIA® Neonatal IRT	33	142.9	130.3	24.8	33	9.0	9.2	3.3	33	27.7	26.8	6.6	33	198.0	181.8	53.4	32	21.6	21.4	5.4
	FEIA IRT Labsystems	8	142.9	175.5	39.6	8	9.0	11.8	5.7	8	27.7	43.7	19.8	8	198.0	215.9	48.7	8	21.6	28.8	14.3
	GSP® IRT Neonatal PerkinElmer, ng/mL blood	85	142.9	146.5	17.4	82	9.0	9.4	1.3	84	27.7	28.9	3.7	85	198.0	207.0	27.8	83	21.6	22.2	2.4
	NeoMAP® IRT Interscientifica	5	142.9	148.4	57.8	5	9.0	6.7	2.8	5	27.7	35.1	8.8	5	198.0	218.5	133.0	5	21.6	27.7	6.7
	Other	10	142.9	170.1	17.7	13	9.0	16.9	7.9	12	27.7	50.4	17.8	11	198.0	223.3	55.5	11	21.6	31.3	12.1
	ZenTech ELISA Neonatal IRT	10	142.9	155.9	34.8	9	9.0	20.4	5.6	9	27.7	58.9	8.5	10	198.0	159.7	43.1	10	21.6	40.6	12.4

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

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

Director

Rochelle P. Walensky, MD, MPH

Director National Center for Environmental Health

Robin M. Ikeda, MD, MPH (acting)

Director Division of Laboratory Sciences

James L. Pirkle, MD, PhD

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

Gyliann Peña, MS

Kostas Petritis, PhD

Daquille Peppers, MS

C. Austin Pickens, PhD

Blanche Temate, PhD

Robert Vogt, PhD

Irene Sofikitis Williams, MS

Golriz Yazdanpanah, MS

Sherri Zobel, BS

Production

Vinay Anumula, MS

Se'Von Mills, MS

Kizzy Stewart

ASSOCIATION OF PUBLIC HEALTH LABORATORIES SILVER SPRING, MD 20910

President

Denise Toney, PhD, HCLD(ABB)

Chairman, Newborn Screening Committee

Michele Caggana, Sc.D., FACMG and Joseph Orsini, Ph.D.

Chairman, Newborn Screening Quality Assurance Quality Control Subcommittee

Patrice Held, Ph.D

Chairman, Newborn Screening Molecular Subcommittee

Denise Kay, Ph.D and Richard Olney, MD, MPH

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