MEDICAL LABORATORY EVALUATION

INTERNATIONAL PARTICIPANT SUMMARY

2 • 0 • 0 • 3

Immunology and Chemistry
MLE – B3

Total Commitment to Education and Service
Provided by ACP Services, Inc.

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2003 Evaluation Criteria

Qualitative

For qualitative procedures, evaluation is based on 80% participant consensus

Infectious Mononucleosis	80% Participant Consensus
Rheumatoid Factor	80% Participant Consensus
Anti-Streptolysin O (ASO)	80% Participant Consensus
C-Reactive Protein	80% Participant Consensus
Syphilis Serology	80% Participant Consensus
H. *pylori* Antibody Detection	80% Participant Consensus
Viral Markers	80% Participant Consensus

Quantitative

For quantitative procedures, a mean and standard deviation (SD) are calculated for each analyte's "All Method" group. Acceptable performance is established on a target value ± the intervals below. An explanation on how to calculate the range of acceptability based upon these limits is also provided in your MLE Program Guide on pages 44-45 under the heading "Acceptable Ranges for Quantitative Results."

Acid Phosphatase	± 3 SD
Albumin	± 3 SD
Alkaline Phosphatase	± 3 SD
Alpha-fetoprotein	± 3 SD
ALT (SGPT)	± 3 SD
Amylase	± 3 SD
Anti-Streptolysin O (Titer)	Not Evaluated
Anti-Streptolysin O (Int. Units)	Not Evaluated
AST (SGOT)	± 3 SD
Bilirubin, Direct	± 3 SD
Bilirubin, Total	± 3 SD
C-Reactive Protein	± 3 SD
CA 125	± 3 SD
CA 15-3	± 3 SD
Calcium	± 3 SD
Calcium, Ionized	± 3 SD
CEA	± 3 SD
Cholesterol	± 3 SD
Chloride	± 3 SD
CK-MB	± 3 SD
CO_2	± 3 SD
Cortisol	± 3 SD
Creatine Kinase	± 3 SD
Creatinine	± 3 SD
Estradiol	± 3 SD
Ferritin	± 3 SD
Folate	± 3 SD
FSH	± 3 SD
GGT	± 3 SD
Glucose, Serum	± 3 SD
HDL Cholesterol	± 3 SD
HCG, Serum—Quantitative	± 3 SD
Iron	± 3 SD
Lactate Dehydrogenase	± 3 SD
LDL Cholesterol	± 3 SD
Lipase	Not Evaluated
LH	± 3 SD
Magnesium	± 3 SD
Myoglobin	± 3 SD
pCO_2	± 3 SD
Phosphorus	± 3 SD
pH	± 3 SD
pO_2	± 3 SD
Potassium	± 3 SD
Prolactin	± 3 SD
Progesterone	± 3 SD
Protein, Total	± 3 SD
PSA	± 3 SD
PSA, Free	± 3 SD
Rheumatoid Factor (Titer)	Not Evaluated
Rheumatoid Factor (Int. Units)	Not Evaluated
Rubella (Int. Units)	Not Evaluated
Sodium	± 3 SD
Syphilis Serology (Titer)	Not Evaluated
T_3 Uptake (% Uptake)	± 3 SD
T3, Free	± 3 SD
T4, Free	± 3 SD
Testosterone	± 3 SD
Thyroxine, Total T_4	± 3 SD
TIBC	± 3 SD
Triglyceride	± 3 SD
Triiodothyronine, Total T_3	± 3 SD
Troponin I	Not Evaluated
TSH	± 3 SD
Urea Nitrogen	± 3 SD
Uric Acid	± 3 SD
Vitamin B_{12}	± 3 SD

Infectious Mononucleosis

Method	Specimen IM-11 Negative	Specimen IM-11 Positive	Specimen IM-12 Negative	Specimen IM-12 Positive	Specimen IM-13 Negative	Specimen IM-13 Positive
All Methods	3	1	1	3	3	1
Omega Diagnostics	1	-	-	1	1	-
Stanbio	2	-	-	2	2	-

	Specimen IM-14		Specimen IM-15	
All Methods	1	3	3	1
Omega Diagnostics	-	1	1	-
Stanbio	-	2	2	-

Specimens IM-11 – IM-15 are ungraded challenges due to a lack of participant consensus.

Rheumatoid Factor—Qualitative

Method	Specimen RF-11 Negative	Specimen RF-11 Positive	Specimen RF-12 Negative	Specimen RF-12 Positive	Specimen RF-13 Negative	Specimen RF-13 Positive
All Methods	-	5	5	-	-	5
Omega Diagnostics	-	2	2	-	-	2
Roche Modular Analytics	-	1	1	-	-	1
Stanbio	-	1	1	-	-	1

	Specimen RF-14		Specimen RF-15	
All Methods	5	-	-	5
Omega Diagnostics	2	-	-	2
Roche Modular Analytics	1	-	-	1
Stanbio	1	-	-	1

Rheumatoid Factor—Quantitative (Titer)

This portion is not evaluated. Results reported are as follows:

Specimen/Method	2/4	8/10	16/20	32/40	64/80	128/160	256/320	512/640	1024/1280	2048/2560	>2560
Specimen RF-11											
All Methods	1	-	-	-	-	-	-	-	-	-	-
Specimen RF-13											
All Methods	1	-	-	-	-	-	-	-	-	-	-
Specimen RF-15											
All Methods	1	-	-	-	-	-	-	-	-	-	-

Rheumatoid Factor—Quantitative (IU)

This portion is not evaluated. Results reported are as follows:

Specimen/Method	Labs	Mean	SD	CV	Median	Low Value	High Value
Specimen RF-11							
All Methods	2	-	-	-	70	68	72
Behring Nephelometer	1	-	-	-	72	72	72
Specimen RF-13							
All Methods	2	-	-	-	68	57	78
Behring Nephelometer	1	-	-	-	78	78	78
Specimen RF-15							
All Methods	2	-	-	-	77	65	88
Behring Nephelometer	1	-	-	-	88	88	88

Anti-Streptolysin O (ASO)—Qualitative

	Specimen AS-11		Specimen AS-12		Specimen AS-13	
Method	Negative	Positive	Negative	Positive	Negative	Positive
All Methods	-	4	4	-	-	4
Omega Diagnostics	-	1	1	-	-	1
Stanbio	-	2	2	-	-	2

	Specimen AS-14		Specimen AS-15	
All Methods	4	-	-	4
Omega Diagnostics	1	-	-	1
Stanbio	2	-	-	2

Anti-Streptolysin O (ASO)—Quantitative (cont'd)

This portion is not evaluated. Results reported are as follows:

	Todd Units / International Units										Streptozyme	
Specimen/Method	≤50	100	125	166-200	250-300	333-400	500-600	625	800-833	=2500	100-200	400-800
Specimen AS-11												
All Methods	-	-	-	-	-	1	1	-	-	1	-	-
Behring Nephelometer	-	-	-	-	-	-	-	-	-	1	-	-
Roche Modular Analytics	-	-	-	-	-	-	1	-	-	-	-	-
Stanbio	-	-	-	-	-	1	-	-	-	-	-	-
Specimen AS-13												
All Methods	-	-	-	-	-	2	-	-	1	-	-	-
Behring Nephelometer	-	-	-	-	-	1	-	-	-	-	-	-
Roche Modular Analytics	-	-	-	-	-	-	-	-	1	-	-	-
Stanbio	-	-	-	-	-	1	-	-	-	-	-	-

Anti-Streptolysin O (ASO)—Quantitative (cont'd)

This portion is not evaluated. Results reported are as follows:

	Todd Units / International Units										*Streptozyme*	
Specimen/Method	***≤50***	***100***	***125***	***166-200***	***250-300***	***333-400***	***500-600***	***625***	***800-833***	***=2500***	***100-200***	***400-800***
Specimen AS-15												
All Methods	-	-	-	-	-	1	-	2	-	-	-	-
Behring Nephelometer	-	-	-	-	-	-	-	1	-	-	-	-
Roche Modular Analytics	-	-	-	-	-	-	-	1	-	-	-	-
Stanbio	-	-	-	-	-	1	-	-	-	-	-	-

C-Reactive Protein ¾ Qualitative

	Specimen CR-5		**Specimen CR-6**	
Method	***Negative***	***Positive***	***Negative***	***Positive***
All Methods	-	4	4	-
Omega Diagnostics	-	1	1	-
Stanbio	-	2	2	-

C-Reactive Protein ¾ Quantitative (mg/dL)

Specimen/Method	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Low Value***	***High Value***
Specimen CR-5							
All Methods	3	-	-	-	7.20	2.19	20.40
Beckman Nephelometer	1	-	-	-	2.19	2.19	2.19
Roche Modular Analytics	1	-	-	-	7.20	7.20	7.20
Specimen CR-6							
All Methods	1	-	-	-	0.03	0.03	0.03
Beckman Nephelometer	1	-	-	-	0.03	0.03	0.03
Roche Modular Analytics	-	-	-	-	-	-	-

Rubella ¾ Quantitative (IU/mL)

This portion is not evaluated. Results reported are as follows:

Specimen/Method	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Low Value*	*High Value*
Specimen RU-11							
All Methods	2	-	-	-	38.7	35.1	42.2
Abbott AxSYM	1	-	-	-	42.2	42.2	42.2
DPC – Immulite	1	-	-	-	35.1	35.1	35.1
Specimen RU-12							
All Methods	2	-	-	-	39.0	37.7	40.2
Abbott AxSYM	1	-	-	-	37.7	37.7	37.7
DPC – Immulite	1	-	-	-	40.2	40.2	40.2
Specimen RU-13							
All Methods	-	-	-	-	-	-	-
Specimen RU-14							
All Methods	-	-	-	-	-	-	-
Specimen RU-15							
All Methods	2	-	-	-	38.5	35.7	41.3
Abbott AxSYM	1	-	-	-	41.3	41.3	41.3
DPC – Immulite	1	-	-	-	35.7	35.7	35.7

Syphilis Serology – VDRL Slide

	Specimen SY-11		Specimen SY-12		Specimen SY-13	
Method	*Reactive*	*Non-Reactive*	*Reactive*	*Non-Reactive*	*Reactive*	*Non-Reactive*
All Methods	-	1	1	-	-	1

	Specimen SY-14		Specimen SY-15	
All Methods	1	-	-	1

Syphilis Serology - MHA-TP

	Specimen SY-11		Specimen SY-12		Specimen SY-13	
Method	*Reactive*	*Non-Reactive*	*Reactive*	*Non-Reactive*	*Reactive*	*Non-Reactive*
All Methods	-	2	2	-	-	2
SPINREACT	-	2	2	-	-	2

	Specimen SY-14		Specimen SY-15	
All Methods	2	-	-	2
SPINREACT	2	-	-	2

Syphilis Serology - Qualitative: RPR

Method	Specimen SY-11 Reactive	Specimen SY-11 Non-Reactive	Specimen SY-12 Reactive	Specimen SY-12 Non-Reactive	Specimen SY-13 Reactive	Specimen SY-13 Non-Reactive
All Methods	-	9	9	-	-	9
SPINREACT	-	9	9	-	-	9

Method	Specimen SY-14 Reactive	Specimen SY-14 Non-Reactive	Specimen SY-15 Reactive	Specimen SY-15 Non-Reactive
All Methods	9	-	-	9
SPINREACT	9	-	-	9

Syphilis Serology - Quantitative: RPR (Titer)

This portion is not evaluated. Results reported are as follows:

Specimen/Method	1	2	4	8	16	32	64	>64
Specimen SY-12								
All Methods	3	3	2	-	-	-	-	1
SPINREACT	3	3	2	-	-	-	-	1
Specimen SY-14								
All Methods	3	2	2	-	-	-	-	1
SPINREACT	3	2	2	-	-	-	-	1

H. *pylori* Antibody Detection

Method	Specimen HP-5 Negative	Specimen HP-5 Positive	Specimen HP-6 Negative	Specimen HP-6 Positive
All Methods	1	-	-	-

Viral Markers – Anti-HBc

Method	Specimen VM-11 Negative	Specimen VM-11 Positive	Specimen VM-12 Negative	Specimen VM-12 Positive	Specimen VM-13 Negative	Specimen VM-13 Positive
All Methods	4	2	6	-	1	5
Abbott AxSYM	1	1	2	-	-	2
bioMerieux Vitek, Mini Vidas	3	1	4	-	1	3

Method	Specimen VM-14 Negative	Specimen VM-14 Positive	Specimen VM-15 Negative	Specimen VM-15 Positive
All Methods	3	3	1	4
Abbott AxSYM	1	1	1	1
bioMerieux Vitek, Mini Vidas	2	2	-	3

Specimens VM-11 and VM-14 are ungraded challenges due to less than 80% participant consensus.

Viral Markers – Anti-HIV

Method	Specimen VM-11 *Negative*	Specimen VM-11 *Positive*	Specimen VM-12 *Negative*	Specimen VM-12 *Positive*	Specimen VM-13 *Negative*	Specimen VM-13 *Positive*
All Methods	7	-	7	-	7	-
Abbott AxSYM	2	-	2	-	2	-
bioMerieux Vitek, Mini Vidas	5	-	5	-	5	-

	Specimen VM-14		Specimen VM-15	
All Methods	7	-	-	7
Abbott AxSYM	2	-	-	2
bioMerieux Vitek, Mini Vidas	5	-	-	5

Viral Markers – HAV

Method	Specimen VM-11 *Negative*	Specimen VM-11 *Positive*	Specimen VM-12 *Negative*	Specimen VM-12 *Positive*	Specimen VM-13 *Negative*	Specimen VM-13 *Positive*
All Methods	6	-	5	1	4	2
Abbott AxSYM	3	-	2	1	2	1
bioMerieux Vitek, Mini Vidas	3	-	3	-	2	1

	Specimen VM-14		Specimen VM-15	
All Methods	1	5	4	2
Abbott AxSYM	-	3	2	1
bioMerieux Vitek, Mini Vidas	1	2	2	1

Specimens VM-11, 12, 13 and 15 are IGM negative. Specimens VM-13 and VM-15 are ungraded challenges due to less than 80% participant consensus.

Viral Markers – HbeAg

Method	Specimen VM-11 *Negative*	Specimen VM-11 *Positive*	Specimen VM-12 *Negative*	Specimen VM-12 *Positive*	Specimen VM-13 *Negative*	Specimen VM-13 *Positive*
All Methods	4	-	4	-	1	3
Abbott AxSYM	1	-	1	-	-	1
bioMerieux Vitek, Mini Vidas	3	-	3	-	1	2

	Specimen VM-14		Specimen VM-15	
All Methods	3	1	4	-
Abbott AxSYM	1	-	1	-
bioMerieux Vitek, Mini Vidas	2	1	3	-

Specimens VM-13 and VM-14 are ungraded challenges due to less than 80% participant consensus.

Viral Markers – HbsAb

Method	Specimen VM-11 *Negative*	Specimen VM-11 *Positive*	Specimen VM-12 *Negative*	Specimen VM-12 *Positive*	Specimen VM-13 *Negative*	Specimen VM-13 *Positive*
All Methods	4	-	-	4	4	-
Abbott AxSYM	3	-	-	3	3	-
bioMerieux Vitek, Mini Vidas	1	-	-	1	1	-

	Specimen VM-14		Specimen VM-15	
All Methods	-	4	-	4
Abbott AxSYM	-	3	-	3
bioMerieux Vitek, Mini Vidas	-	1	-	1

Viral Markers – HbsAg

Method	Specimen VM-11 *Negative*	Specimen VM-11 *Positive*	Specimen VM-12 *Negative*	Specimen VM-12 *Positive*	Specimen VM-13 *Negative*	Specimen VM-13 *Positive*
All Methods	7	-	7	-	1	6
Abbott AxSYM	3	-	3	-	-	3
bioMerieux Vitek, Mini Vidas	4	-	4	-	1	3

	Specimen VM-14		Specimen VM-15	
All Methods	5	2	6	1
Abbott AxSYM	2	1	2	1
bioMerieux Vitek, Mini Vidas	3	1	4	-

Specimen VM-14 is an ungraded challenge due to less than 80% participant consensus.

Viral Markers – HCV

Method	Specimen VM-11 *Negative*	Specimen VM-11 *Positive*	Specimen VM-12 *Negative*	Specimen VM-12 *Positive*	Specimen VM-13 *Negative*	Specimen VM-13 *Positive*
All Methods	4	-	-	4	4	1
Abbott AxSYM	1	-	-	2	2	-
Abbott Imx	1	-	-	1	-	1
Roche Cobas CORE	1	-	-	-	1	-

	Specimen VM-14		Specimen VM-15	
All Methods	1	4	4	1
Abbott AxSYM	-	2	2	-
Abbott Imx	-	1	-	1
Roche Cobas CORE	1	-	1	-

Albumin (g/dL)

	Specimen CH-11					Specimen CH-12				
Reagent/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	9	3.27	0.42	12.8	3.3	9	2.47	0.39	15.7	2.5
	Specimen CH-13					**Specimen CH-14**				
All Methods	9	1.66	0.30	18.4	1.8	9	3.86	0.51	13.3	3.9
	Specimen CH-15									
All Methods	9	2.61	0.39	14.9	2.7					

Bilirubin, Direct (mg/dL)

	Specimen CH-11					Specimen CH-12				
Reagent/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	9	0.38	0.22	57.4	0.4	9	0.91	0.34	37.8	0.9

Bilirubin, Total (mg/dL)

	Specimen CH-11					Specimen CH-12				
Reagent/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	9	0.93	0.13	14.2	0.9	9	2.08	0.18	8.6	2.1
	Specimen CH-13					**Specimen CH-14**				
All Methods	9	3.48	0.35	10.0	3.5	9	1.28	0.15	11.6	1.3
	Specimen CH-15									
All Methods	9	0.54	0.13	24.5	0.6					

Calcium (mg/dL)

	Specimen CH-11					Specimen CH-12				
Reagent/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	7	9.36	0.30	3.3	9.4	7	9.56	0.39	4.1	9.4
	Specimen CH-13					**Specimen CH-14**				
All Methods	7	9.63	0.42	4.3	9.5	7	5.50	0.66	11.9	5.5
	Specimen CH-15									
All Methods	7	13.36	0.34	2.6	13.3					

Creatinine (mg/dL)

	Specimen CH-11					Specimen CH-12				
Reagent/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	9	1.43	0.46	32.4	1.6	9	4.12	0.52	12.6	4.3
	Specimen CH-13					**Specimen CH-14**				
All Methods	9	6.67	0.78	11.8	6.7	9	0.87	0.22	25.2	0.9
	Specimen CH-15									
All Methods	8	2.33	0.33	14.1	2.4					

Glucose (mg/dL)

	Specimen CH-11					Specimen CH-12				
Reagent/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	9	148.9	8.9	5.9	148	9	125.0	8.5	6.8	124
	Specimen CH-13					**Specimen CH-14**				
All Methods	9	101.9	7.4	7.3	102	9	44.4	4.3	9.8	44
	Specimen CH-15									
All Methods	9	253.1	13.5	5.3	251					

Iron (mcg/dL)

	Specimen CH-11					Specimen CH-12				
Reagent/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	2	-	-	-	342	2	-	-	-	216
	Specimen CH-13					**Specimen CH-14**				
All Methods	2	-	-	-	88	2	-	-	-	442
	Specimen CH-15									
All Methods	2	-	-	-	226					

Magnesium (mg/dL)

	Specimen CH-11					Specimen CH-12				
Reagent/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	5	2.28	0.28	12.2	2.2	5	4.18	0.47	11.1	4.2
	Specimen CH-13					**Specimen CH-14**				
All Methods	5	6.20	0.86	13.9	6.4	5	2.88	0.18	6.2	2.9
	Specimen CH-15									
All Methods	5	1.54	0.34	22.3	1.4					

Phosphorus (mg/dL)

	Specimen CH-11					Specimen CH-12				
Reagent/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	7	2.70	0.26	9.6	2.7	7	4.16	0.28	6.6	4.2

Protein, Total (g/dL)

	Specimen CH-11					Specimen CH-12				
Reagent/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	9	7.01	0.50	7.1	7.0	9	5.31	0.35	6.6	5.3
	Specimen CH-13					**Specimen CH-14**				
All Methods	9	3.57	0.22	6.3	3.6	9	8.17	0.87	10.6	8.3
	Specimen CH-15									
All Methods	9	5.58	0.64	11.4	5.7					

TIBC (mcg/dL)

	Specimen CH-11					Specimen CH-12				
Reagent/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	1	-	-	-	475	1	-	-	-	344

Urea Nitrogen (mg/dL)

	Specimen CH-11					Specimen CH-12				
Reagent/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	9	34.1	18.7	54.8	31	9	25.8	10.2	39.6	22
	Specimen CH-13					**Specimen CH-14**				
All Methods	9	14.2	5.4	38.3	13	9	23.0	8.4	36.4	19
	Specimen CH-15									
All Methods	9	52.3	20.6	39.4	44					

Uric Acid (mg/dL)

	Specimen CH-11					Specimen CH-12				
Reagent/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	9	7.14	0.38	5.3	7.1	9	6.74	0.58	8.6	6.7
	Specimen CH-13					**Specimen CH-14**				
All Methods	9	6.18	0.49	8.0	6.0	9	1.91	0.28	14.4	1.8
	Specimen CH-15									
All Methods	9	12.70	0.64	5.0	12.5					

Chloride (mmol/L)

	Specimen CH-11					Specimen CH-12				
Method/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	5	105.2	6.6	6.2	101	5	108.2	6.4	5.9	105
	Specimen CH-13					**Specimen CH-14**				
All Methods	5	110.8	5.8	5.2	108	5	122.6	8.4	6.8	120
	Specimen CH-15									
All Methods	5	90.2	6.8	7.5	88					

CO_2 (mmol/L)

	Specimen CH-11					Specimen CH-12				
Method/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	3	-	-	-	29	3	-	-	-	30

Potassium (mmol/L)

	Specimen CH-11					Specimen CH-12				
Method/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	7	3.33	0.24	7.3	3.4	7	4.77	0.11	2.3	4.8
	Specimen CH-13					**Specimen CH-14**				
All Methods	7	6.20	0.24	4.0	6.2	7	4.60	0.10	2.2	4.6
	Specimen CH-15									
All Methods	7	2.10	0.15	7.3	2.2					

Sodium (mmol/L)

	Specimen CH-11					Specimen CH-12				
Method/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	7	138.7	4.3	3.1	138	7	138.9	2.3	1.7	138
	Specimen CH-13					**Specimen CH-14**				
All Methods	7	138.3	3.1	2.3	137	7	162.0	1.6	1.0	162
	Specimen CH-15									
All Methods	7	117.0	2.6	2.2	117					

Serum hCG - Quantitative (mIU/mL)

The vendor assay values for specimens HCG-12, HCG-14 and HCG-15 are <2.0 mIU/mL, <2.0 mIU/mL and <2.0 mIU/mL, respectively.

	Specimen HCG-11					Specimen HCG-13				
Method	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	1	-	-	-	410	1	-	-	-	6098

Acid Phosphatase (IU/L)

	Specimen CH-11					Specimen CH-12				
Method/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	1	-	-	-	1.0	-	-	-	-	-

ALT (SGPT) (IU/L)

	Specimen CH-11					Specimen CH-12				
Method/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	9	225.0	29.8	13.3	233	9	124.8	20.7	16.6	116
	Specimen CH-13					**Specimen CH-14**				
All Methods	9	29.3	9.6	32.7	23	9	94.0	14.3	15.2	87
	Specimen CH-15									
All Methods	9	359.1	46.5	13.0	356					

Alkaline Phosphatase (IU/L)

	Specimen CH-11					Specimen CH-12				
Method/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	9	444.6	228.1	51.3	329	9	243.6	124.2	51.0	181
	Specimen CH-13					**Specimen CH-14**				
All Methods	9	59.2	31.4	53.0	47	9	201.9	106.3	52.6	145
	Specimen CH-15									
All Methods	8	470.3	233.8	49.7	474					

AST (SGOT) (IU/L)

	Specimen CH-11					Specimen CH-12				
Method/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	9	194.0	59.2	30.5	162	9	108.7	36.7	33.7	95
	Specimen CH-13					**Specimen CH-14**				
All Methods	9	23.2	8.1	34.8	20	9	87.6	31.6	36.1	73
	Specimen CH-15									
All Methods	9	315.4	77.0	24.4	275					

Creatine Kinase (IU/L)

	Specimen CH-11					Specimen CH-12				
Method/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	5	321.0	40.5	12.6	313	5	182.2	25.6	14.1	187
	Specimen CH-13					**Specimen CH-14**				
All Methods	5	43.4	13.9	32.0	43	5	494.8	80.5	16.3	479
	Specimen CH-15									
All Methods	5	145.6	16.7	11.58	156					

GGT (IU/L)

	Specimen CH-11					Specimen CH-12				
Method/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	7	218.9	54.5	24.9	212	7	129.0	29.4	22.8	119

Amylase (IU/L)

	Specimen CH-11					Specimen CH-12				
Method/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	7	336.0	98.5	29.3	326	7	220.7	64.7	29.3	213
	Specimen CH-13					**Specimen CH-14**				
All Methods	7	98.3	30.3	30.9	95	7	171.3	46.2	27.0	170
	Specimen CH-15									
All Methods	7	514.4	160.8	31.3	484					

Lactate Dehydrogenese (LDH) (IU/L)

	Specimen CH-11				Specimen CH-12				
Method/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	7	778.6	489.6	62.9	422	7	500.7	313.0	62.5	275
	Specimen CH-13					**Specimen CH-14**				
All Methods	7	212.6	131.2	61.7	127	7	424.9	258.8	60.9	241
	Specimen CH-15									
All Methods	7	1159.6	742.9	64.1	668					

Lipase (IU/L)

	Specimen CH-11				Specimen CH-12				
Method/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	7	423.7	450.8	106.4	329	7	264.9	275.2	103.9	210

Cortisol (mcg/dL)

	Specimen CH-11				Specimen CH-12				
Method/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	1	-	-	-	221.3	1	-	-	-	158.5
	Specimen CH-13					**Specimen CH-14**				
All Methods	1	-	-	-	64.3	1	-	-	-	254.9
	Specimen CH-15									
All Methods	1	-	-	-	217.0					

T Uptake (uptake units)

	Specimen CH-11				Specimen CH-12				
Method/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	1	-	-	-	0.35	1	-	-	-	0.31
	Specimen CH-13					**Specimen CH-14**				
All Methods	1	-	-	-	0.20	1	-	-	-	0.46
	Specimen CH-15									
All Methods	1	-	-	-	0.31					

Triiodothyronine (ng/mL)

	Specimen CH-11				Specimen CH-12				
Method/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	6	4.68	2.04	43.5	4.3	6	3.25	1.55	47.6	2.9
	Specimen CH-13					**Specimen CH-14**				
All Methods	6	1.68	1.68	99.5	1.0	6	5.77	2.64	45.8	5.3
	Specimen CH-15									
All Methods	6	3.38	1.68	49.6	2.8					

Free T_3 (pg/mL)

	Specimen CH-11					Specimen CH-12				
Method/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	2	-	-	-	5.6	2	-	-	-	3.7

Thyroxine (mcg/dL)

	Specimen CH-11					Specimen CH-12				
Method/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	6	9.55	1.20	12.5	9.5	6	6.28	0.95	15.2	6.2
	Specimen CH-13					**Specimen CH-14**				
All Methods	6	6.58	9.49	144.2	3.0	6	13.33	1.93	14.5	12.7
	Specimen CH-15									
All Methods	6	6.88	0.91	13.2	7.0					

Free Thyroxine (ng/dL)

	Specimen CH-11					Specimen CH-12				
Method/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	3	-	-	-	2.9	3	-	-	-	1.9
	Specimen CH-13					**Specimen CH-14**				
All Methods	3	-	-	-	0.9	3	-	-	-	3.4
	Specimen CH-15									
All Methods	3	-	-	-	1.9					

TSH (mU/mL)

	Specimen CH-11					Specimen CH-12				
Method/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	7	5.21	0.79	15.1	5.3	7	3.21	0.31	9.6	3.3
	Specimen CH-13					**Specimen CH-14**				
All Methods	7	1.14	0.10	8.5	1.1	7	8.04	1.24	15	7.9
	Specimen CH-15									
All Methods	7	2.34	0.21	9.2	2.3					

Cholesterol, Total (mg/dL)

	Specimen CH-11					Specimen CH-12				
Method/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	9	227.1	19.2	8.5	226	9	168.1	12.6	7.5	166
	Specimen CH-13					**Specimen CH-14**				
All Methods	9	112.8	9.2	8.2	114	9	243.9	15.0	6.2	240
	Specimen CH-15									
All Methods	9	208.4	14.6	7.0	204					

LDL Cholesterol (mg/dL)

	Specimen CH-11					Specimen CH-12				
Method/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	6	130.0	56.2	43.2	155	6	92.3	38.2	41.4	106

Cholesterol, HDL (mg/dL)

	Specimen CH-11					Specimen CH-12				
Method/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	7	47.9	16.1	33.7	48	7	36.7	9.0	24.4	38
	Specimen CH-13					**Specimen CH-14**				
All Methods	7	28.3	6.3	22.2	29	7	55.3	22.3	40.3	55
	Specimen CH-15									
All Methods	7	43.6	9.1	20.8	46					

Triglycerides (mg/dL)

	Specimen CH-11					Specimen CH-12				
Method/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	9	166.8	14.0	8.4	160	9	131.2	10.8	8.3	130
	Specimen CH-13					**Specimen CH-14**				
All Methods	9	97.2	9.2	9.5	97	9	199.1	16.7	8.4	194
	Specimen CH-15									
All Methods	9	136.4	8.3	6.1	137					

Blood Gases – pH

	Specimen CH-11					Specimen CH-12				
Method/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	3	-	-	-	7.09	3	-	-	-	7.40
	Specimen CH-13					**Specimen CH-14**				
All Methods	3	-	-	-	7.11	3	-	-	-	7.21
	Specimen CH-15									
All Methods	3	-	-	-	7.17					

Blood Gases - pCO_2 (mmHg)

	Specimen CH-11					Specimen CH-12				
Method/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	3	-	-	-	22.4	3	-	-	-	44.2
	Specimen CH-13					**Specimen CH-14**				
All Methods	3	-	-	-	19.1	3	-	-	-	24.9
	Specimen CH-15									
All Methods	3	-	-	-	48.9					

Blood Gases - pO_2 (mmHg)

	Specimen CH-11				Specimen CH-12				
Method/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	3	-	-	-	115.3	3	-	-	-	110.0
	Specimen CH-13					**Specimen CH-14**				
All Methods	3	-	-	-	130.0	3	-	-	-	86.3
	Specimen CH-15									
All Methods	3	-	-	-	152.8					

Blood Gases - Ionized Calcium (mmol/L)

	Specimen CH-11				Specimen CH-12				
Method/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	3	-	-	-	1.50	3	-	-	-	1.09

Blood Gases - Chloride (mmol/L)

	Specimen CH-11				Specimen CH-12				
Method/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	2	-	-	-	100	2	-	-	-	93
	Specimen CH-13					**Specimen CH-14**				
All Methods	2	-	-	-	110	2	-	-	-	80
	Specimen CH-15									
All Methods	2	-	-	-	76					

Blood Gases - Potassium (mmol/L)

	Specimen CH-11				Specimen CH-12				
Method/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	3	-	-	-	2.4	3	-	-	-	4.1
	Specimen CH-13					**Specimen CH-14**				
All Methods	3	-	-	-	1.8	3	-	-	-	4.2
	Specimen CH-15									
All Methods	3	-	-	-	2.2					

Blood Gases - Sodium (mmol/L)

	Specimen CH-11				Specimen CH-12				
Method/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	3	-	-	-	107	3	-	-	-	130
	Specimen CH-13					**Specimen CH-14**				
All Methods	3	-	-	-	156	3	-	-	-	118
	Specimen CH-15									
All Methods	3	-	-	-	120					

CK-MB (IU/L)

	Specimen CK-11					Specimen CK-12				
Method/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	1	-	-	-	39.1	1	-	-	-	17.1

	Specimen CK-13					Specimen CK-14				
All Methods	1	-	-	-	34.8	1	-	-	-	31.7

	Specimen CK-15				
All Methods	1	-	-	-	0.9

Myoglobin (ng/mL)

	Specimen CK-11					Specimen CK-12				
Method/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	1	-	-	-	239.9	1	-	-	-	203.2

Troponin I

	Specimen CK-11					Specimen CK-12				
Method/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	1	-	-	-	0.4	1	-	-	-	1.7

Alpha-fetoprotein (ngmL)

	Specimen TM-11					Specimen TM-12				
Method	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	1	-	-	-	67	1	-	-	-	133

CA 125 (U/mL)

	Specimen TM-11					Specimen TM-12				
Method	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	1	-	-	-	45	1	-	-	-	70

CA 15-3 (U/mL)

	Specimen TM-11					Specimen TM-12				
Method	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	1	-	-	-	24	1	-	-	-	39

CA 19-9 (U/mL)

	Specimen TM-11					Specimen TM-12				
Method	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	1	-	-	-	37	1	-	-	-	54

CEA (ng/mL)

	Specimen TM-11					Specimen TM-12				
Method	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	1	-	-	-	10.8	1	-	-	-	19.3

Free PSA (ng/mL)

	Specimen TM-11					Specimen TM-12				
Method	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	1	-	-	-	9.7	1	-	-	-	10.0

PSA (ng/mL)

	Specimen TM-11					Specimen TM-12				
Method	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	1	-	-	-	6.8	1	-	-	-	13.4

CEA (ng/mL)

	Specimen SC-5					Specimen SC-6				
Method	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	1	-	-	-	8.3	1	-	-	-	16.8

Estradiol (pg/mL)

	Specimen SC-5					Specimen SC-6				
Method	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	3	-	-	-	430	3	-	-	-	727

FSH (mIU/mL)

	Specimen SC-5					Specimen SC-6				
Method	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	3	-	-	-	22.8	3	-	-	-	37.3

LH (mIU/mL)

	Specimen SC-5					Specimen SC-6				
Method	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	3	-	-	-	10.0	3	-	-	-	18.8

Progesterone (ng/mL)

	Specimen SC-5					Specimen SC-6				
Method	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	1	-	-	-	11.5	1	-	-	-	17.6

Prolactin (ng/mL)

	Specimen SC-5					Specimen SC-6				
Method	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Labs***	***Mean***	***SD***	***CV***	***Median***
All Methods	3	-	-	-	7.8	3	-	-	-	12.4

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