American Proficiency Institute
1159 Business Park Drive, Traverse City, MI 49686

PROFICIENCY TESTING
PERFORMANCE EVALUATION

2017 Chemistry - Core - 3rd Event

Please check the reports carefully and notify API within 30 days of any corrections that must be made to your evaluation.

Customer Information

Heather Hall - Laboratory
Brown Clinic
506 1st Avenue NE
Watertown, SD 57201

API Customer Number: **26618** CLIA Number: **43D0407296**
These reports have also been prepared for:
COLA (0016466)

The American Proficiency Institute evaluation reports consist of three parts: Performance Summary, Comparative Evaluation, and Participant Data Summary. The Performance Summary and Comparative Evaluation are enclosed, and the Participant Data Summary is available on our website. Click on 'Participant Data Summaries' on the left side of the screen, choose a Test Event, and select an analyte and peer group to view the statistics.

Laboratories should review the Performance Summary and Comparative Evaluation thoroughly for failures or 'not graded' analytes. Laboratories are responsible for documenting and performing corrective action for failures and must perform a self-evaluation using statistics presented in the Participant Data Summary for samples that have not been graded.

PERFORMANCE REVIEW AND CORRECTIVE ACTION

After reviewing the evaluation reports, complete the information below and retain this form along with the enclosed reports for your records.

Reviewed by (Lab Director or designee): Ann Hess, MD Date: 10/10/17

Corrective action taken (if indicated):

100% acceptable on all analytes -
Negative bias on total protein compared to group -
positive bias on chloride compared to group
No ungraded or educational samples.
Heather Hall

Evaluation Published: 10/4/2017

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Performance Summary

2017 Chemistry - Core - 3rd Event

This is a summary of your proficiency testing performance for the last three test events. It is divided into sections according to specialty/sub-specialty. Unsuccessful long-term performance, where indicated, is based on unsatisfactory scores for two of three test events.

The scores for individual analytes are defined as the ratio of acceptable responses to the number of samples tested, expressed as a percentage. Unsatisfactory performance (denoted by ✓) is indicated for any analyte with less than 80%. Analytes that are scored for CMS are designated by (**).

CHEMISTRY *Endocrinology*	2017 1st	2017 2nd	2017 3rd	Long Term	Notes (2017 3rd)
Free Thyroxine **	100%	100%	100%		
HCG **	100%	100%	100%		
Thyroid Stimulating Hormone **	100%	100%	100%		

CHEMISTRY *Routine Chemistry*	2017 1st	2017 2nd	2017 3rd	Long Term	Notes (2017 3rd)
Albumin **	100%	100%	100%		
Alkaline Phosphatase **	100%	100%	100%		
ALT / SGPT **	100%	100%	100%		
AST / SGOT **	100%	100%	100%		
Bilirubin, Direct	100%	100%	100%		
Bilirubin, Total **	100%	100%	100%		
BNP (CM)	100%	100%	100%		
Calcium, Total **	100%	100%	100%		
Chloride **	100%	100%	100%		
Cholesterol, HDL **	100%	100%	100%		
Cholesterol, Total **	100%	100%	100%		
CO2	100%	100%	100%		
Creatine Kinase / CK **	100%	100%	100%		
Creatine Kinase, Isoenzyme **	100%	100%	100%		
Creatinine **	100%	100%	100%		
Glucose **	100%	100%	100%		
Glycated Hemoglobin	100%	100%	100%		
Iron, Total **	100%	100%	100%		
Magnesium **	100%	100%	100%		
Phosphorus	100%	100%	100%		
Potassium **	100%	100%	100%		
Sodium **	100%	100%	100%		
TIBC, measured	100%	100%	100%		
Total Protein **	100%	100%	100%		
Triglycerides **	100%	100%	100%		
Troponin I (CM)	100%	100%	100%		
Urea Nitrogen **	100%	100%	100%		
Uric Acid **	100%	100%	100%		

CHEMISTRY *Toxicology*	2017 1st	2017 2nd	2017 3rd	Long Term	Notes (2017 3rd)
Digoxin **	100%	100%	100%		

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Comparative Evaluation

2017 Chemistry - Core - 3rd Event

This report shows the result you reported, expected result, mean, SD (Standard Deviation), SDI (Standard Deviation Interval), and your grade for each sample tested. The SDI compares your laboratory's result to the comparison group's mean and is defined as follows:

$$SDI = \frac{\text{Reported Result - Comparison Group Mean}}{\text{Comparison Group Standard Deviation}}$$

Analytes that are scored for CMS are designated by (**).

CARDIAC MARKERS

Analyte / Method	Sample	Reported Result	Expected Result	Mean	SD	SDI	Grade
BNP (CM) (pg/mL) AlereBiositeTriage BNP Test	CM-11	1,290.0	932.2 - 2,034.6	1,483.44	183.72	-1.1	Acceptable
	CM-12	405.0	257.4 - 529.2	393.28	45.28	0.3	Acceptable
	CM-13	51.7	31.5 - 66.7	49.13	5.85	0.4	Acceptable
	CM-14	745.0	482.7 - 1,048.5	765.60	94.29	-0.2	Acceptable
	CM-15	2,340.0	1,534.8 - 3,838.2	2,686.49	383.89	-0.9	Acceptable
CK-MB (ng/mL) ** AlereBiositeTriageCardiac-EDTA	CM-11	24.7	10.6 - 33.5	22.05	3.80	0.7	Acceptable
	CM-12	6.9	3.7 - 11.2	7.45	1.25	-0.4	Acceptable
	CM-13	2.8	0.0 - 5.8	2.78	0.55	0.0	Acceptable
	CM-14	12.9	5.9 - 19.0	12.48	2.17	0.2	Acceptable
	CM-15	44.4	17.8 - 59.9	38.84	7.00	0.8	Acceptable
Troponin I (CM) (ng/mL) AlereBiositeTriageCardiac-EDTA	CM-11	4.35	1.26 - 8.32	4.790	1.176	-0.4	Acceptable
	CM-12	0.54	0.14 - 0.94	0.539	0.131	0.0	Acceptable
	CM-13	< 0.05	0.00 - 0.35	0.050	0.001		Acceptable
	CM-14	1.45	0.28 - 2.97	1.624	0.446	-0.4	Acceptable
	CM-15	11.20	4.05 - 17.88	10.966	2.302	0.1	Acceptable

CHEMISTRY

Analyte / Method	Sample	Reported Result	Expected Result	Mean	SD	SDI	Grade
Albumin (g/dL) ** Siemens Dimension / Siemens Dimension reagent	CH-11	2.7	2.5 - 3.1	2.78	0.07	-1.1	Acceptable
	CH-12	3.0	2.7 - 3.5	3.10	0.07	-1.4	Acceptable
	CH-13	2.1	1.8 - 2.4	2.10	0.06	0.0	Acceptable
	CH-14	1.9	1.7 - 2.2	1.93	0.06	-0.5	Acceptable
	CH-15	2.6	2.3 - 2.9	2.62	0.07	-0.3	Acceptable
Alkaline Phosphatase (U/L) ** Siemens Dimension / S Dimension ALPI (DF150)	CH-11	235	169 - 316	242.8	7.6	-1.0	Acceptable
	CH-12	302	216 - 402	309.0	8.8	-0.8	Acceptable
	CH-13	104	77 - 144	110.7	4.3	-1.6	Acceptable
	CH-14	71	52 - 99	75.5	3.4	-1.3	Acceptable
	CH-15	203	148 - 276	212.3	7.0	-1.3	Acceptable
ALT / SGPT (U/L) ** Siemens Dimension / S Dimension ALTI-new (DF143)	CH-11	192	154 - 232	192.8	3.6	-0.2	Acceptable
	CH-12	248	198 - 299	248.6	4.3	-0.1	Acceptable
	CH-13	80	63 - 95	79.1	2.1	0.4	Acceptable
	CH-14	49	40 - 61	50.2	1.8	-0.7	Acceptable
	CH-15	165	132 - 198	165.0	3.2	0.0	Acceptable
AST / SGOT (U/L) ** Siemens Dimension / Siemens Dimension reagent	CH-11	193	157 - 237	197.4	5.4	-0.8	Acceptable
	CH-12	251	205 - 309	257.0	6.8	-0.9	Acceptable
	CH-13	76	62 - 94	77.9	2.7	-0.7	Acceptable
	CH-14	45	38 - 58	47.6	2.2	-1.2	Acceptable
	CH-15	163	134 - 203	168.4	4.8	-1.1	Acceptable
Bilirubin, Direct (mg/dL) Siemens Dimension / Siemens Dimension reagent	CH-11	0.7	0.2 - 1.1	0.62	0.07	1.1	Acceptable
	CH-12	0.8	0.4 - 1.2	0.80	0.08	0.0	Acceptable
	CH-13	0.3	0.0 - 0.7	0.29	0.05	0.2	Acceptable
	CH-14	0.2	0.0 - 0.7	0.21	0.04	-0.2	Acceptable
	CH-15	0.5	0.1 - 1.0	0.53	0.07	-0.4	Acceptable

CHEMISTRY - continued

Analyte / Method	Sample	Reported Result	Expected Result	Mean	SD	SDI	Grade
Billirubin, Total (mg/dL) **	CH-11	3.1	2.3 - 3.5	2.90	0.17	1.2	Acceptable
Siemens Dimension / Siemens Dimension	CH-12	4.0	3.0 - 4.6	3.76	0.22	1.1	Acceptable
reagent	CH-13	1.3	0.8 - 1.7	1.22	0.10	0.8	Acceptable
	CH-14	0.9	0.4 - 1.3	0.82	0.08	1.0	Acceptable
	CH-15	2.6	1.9 - 3.0	2.48	0.15	0.8	Acceptable
Calcium, Total (mg/dL) **	CH-11	10.8	9.8 - 11.9	10.88	0.24	-0.3	Acceptable
Siemens Dimension / Siemens Dimension	CH-12	12.2	11.2 - 13.3	12.22	0.27	0.0	Acceptable
reagent	CH-13	8.3	7.2 - 9.3	8.26	0.19	0.2	Acceptable
	CH-14	7.7	6.6 - 8.7	7.61	0.18	0.5	Acceptable
	CH-15	10.2	9.2 - 11.3	10.24	0.23	-0.2	Acceptable
Chloride (mmol/L) **	CH-11	107	99 - 111	105.0	1.1	1.8	Acceptable
Siemens Dimensn QuikLYTE- EXL	CH-12	112	104 - 116	110.3	1.2	1.4	Acceptable
	CH-13	95	89 - 99	93.8	0.9	1.3	Acceptable
	CH-14	92	86 - 96	90.9	0.9	1.2	Acceptable
	CH-15	104	97 - 108	102.2	1.0	1.8	Acceptable
Cholesterol, HDL (mg/dL) **	CH-11	105	74 - 139	106.7	2.9	-0.6	Acceptable
Siemens Dimension / Siemens Dimension	CH-12	115	83 - 156	119.3	3.3	-1.3	Acceptable
AHDL DF48B	CH-13	81	56 - 105	80.7	2.3	0.1	Acceptable
	CH-14	71	52 - 97	74.3	2.2	-1.5	Acceptable
	CH-15	100	70 - 132	100.8	2.8	-0.3	Acceptable
Cholesterol, Total (mg/dL) **	CH-11	175	158 - 195	176.5	4.3	-0.3	Acceptable
Siemens Dimension / Siemens Dimension	CH-12	196	178 - 219	198.4	4.7	-0.5	Acceptable
reagent	CH-13	130	117 - 144	130.7	3.6	-0.2	Acceptable
	CH-14	120	107 - 132	119.1	3.4	0.3	Acceptable
	CH-15	164	148 - 182	164.8	4.3	-0.2	Acceptable
CO2 (mmol/L)	CH-11	28	23 - 34	28.5	1.8	-0.3	Acceptable
Siemens Dimension enzymatic	CH-12	34	26 - 39	32.4	1.9	0.8	Acceptable
	CH-13	21	14 - 25	19.5	1.6	0.9	Acceptable
	CH-14	19	12 - 22	17.2	1.5	1.2	Acceptable
	CH-15	28	20 - 32	26.0	1.8	1.1	Acceptable
Creatine Kinase / CK (U/L) **	CH-11	237	164 - 306	234.9	6.4	0.3	Acceptable
Siemens Dimension / Siemens Dimension	CH-12	307	212 - 396	304.1	8.2	0.4	Acceptable
CKI (DF38)	CH-13	94	64 - 120	92.1	2.8	0.7	Acceptable
	CH-14	57	38 - 73	55.5	2.2	0.7	Acceptable
	CH-15	198	139 - 260	199.3	5.4	-0.2	Acceptable
Creatinine (mg/dL) **	CH-11	3.37	2.89 - 3.92	3.403	0.079	-0.4	Acceptable
Siemens Dimension / Siemens Dimension	CH-12	4.35	3.66 - 4.96	4.313	0.096	0.4	Acceptable
CRE2	CH-13	1.61	1.29 - 1.90	1.591	0.054	0.4	Acceptable
	CH-14	1.13	0.84 - 1.45	1.143	0.045	-0.3	Acceptable
	CH-15	2.88	2.49 - 3.38	2.939	0.070	-0.8	Acceptable
Glucose (mg/dL) **	CH-11	188	171 - 210	190.4	3.5	-0.7	Acceptable
Siemens Dimension / Siemens Dimension	CH-12	231	210 - 258	233.9	4.3	-0.7	Acceptable
reagent	CH-13	101	91 - 112	101.8	2.1	-0.4	Acceptable
	CH-14	79	71 - 88	79.5	1.7	-0.3	Acceptable
	CH-15	164	151 - 186	168.5	3.2	-1.4	Acceptable
Iron, Total (ug/dL) **	CH-11	142	114 - 173	143.6	2.2	-0.7	Acceptable
Siemens Dimension / Siemens Dimension	CH-12	178	144 - 217	180.1	2.7	-0.8	Acceptable
reagent	CH-13	69	56 - 84	70.0	1.6	-0.6	Acceptable
	CH-14	49	40 - 62	51.1	1.4	-1.5	Acceptable
	CH-15	124	100 - 151	125.6	2.0	-0.8	Acceptable
Magnesium (mg/dL) **	CH-11	3.3	2.6 - 4.5	3.53	0.10	-2.3	Acceptable
Siemens Dimension / Siemens Dimension	CH-12	3.9	3.2 - 5.4	4.28	0.12	-3.2	Acceptable
reagent	CH-13	1.8	1.5 - 2.6	2.05	0.08	-3.1	Acceptable
	CH-14	1.5	1.2 - 2.1	1.67	0.08	-2.1	Acceptable
	CH-15	2.9	2.3 - 4.0	3.17	0.09	-3.0	Acceptable

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Comparative Evaluation
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CHEMISTRY - continued

Analyte / Method	Sample	Reported Result	Expected Result	Mean	SD	SDI	Grade
Phosphorus (mg/dL)	CH-11	4.0	3.8 - 4.3	4.04	0.09	-0.4	Acceptable
Siemens Dimension / S Dimension new	CH-12	4.6	4.5 - 5.0	4.74	0.09	-1.6	Acceptable
PHOS DF61A	CH-13	2.6	2.3 - 2.8	2.56	0.09	0.4	Acceptable
	CH-14	2.1	1.9 - 2.4	2.16	0.09	-0.7	Acceptable
	CH-15	3.6	3.5 - 3.9	3.68	0.09	-0.9	Acceptable
Potassium (mmol/L) **	CH-11	5.7	5.1 - 6.2	5.62	0.06	1.3	Acceptable
Siemens Dimensn QuikLYTE- EXL	CH-12	6.6	6.0 - 7.1	6.57	0.07	0.4	Acceptable
	CH-13	3.7	3.1 - 4.2	3.67	0.05	0.6	Acceptable
	CH-14	3.2	2.6 - 3.7	3.18	0.05	0.4	Acceptable
	CH-15	5.2	4.6 - 5.7	5.13	0.06	1.2	Acceptable
Sodium (mmol/L) **	CH-11	145	140 - 149	144.5	1.4	0.4	Acceptable
Siemens Dimensn QuikLYTE- EXL	CH-12	154	149 - 158	153.7	1.5	0.2	Acceptable
	CH-13	125	120 - 129	124.7	1.2	0.2	Acceptable
	CH-14	120	115 - 124	119.8	1.2	0.2	Acceptable
	CH-15	140	135 - 144	139.4	1.3	0.5	Acceptable
TIBC, measured (ug/dL)	CH-11	276	247 - 287	267.1	9.6	0.9	Acceptable
Siemens Dimension / Siemens Dimension	CH-12	332	303 - 345	324.2	10.2	0.8	Acceptable
IBCT DF84	CH-13	162	136 - 172	154.1	8.7	0.9	Acceptable
	CH-14	133	108 - 145	126.6	9.0	0.7	Acceptable
	CH-15	239	220 - 259	239.5	9.5	0.0	Acceptable
Total Protein (g/dL) **	CH-11	6.3	5.7 - 7.1	6.42	0.12	-1.0	Acceptable
Siemens Dimension / Siemens Dimension	CH-12	7.3	6.7 - 8.3	7.50	0.14	-1.4	Acceptable
reagent	CH-13	4.1	3.7 - 4.7	4.22	0.10	-1.2	Acceptable
	CH-14	3.6	3.3 - 4.1	3.67	0.09	-0.8	Acceptable
	CH-15	5.7	5.3 - 6.5	5.89	0.11	-1.7	Acceptable
Triglycerides (mg/dL) **	CH-11	103	79 - 132	105.5	2.2	-1.1	Acceptable
Siemens Dimension / Siemens Dimension	CH-12	125	95 - 160	127.8	2.3	-1.2	Acceptable
TGL	CH-13	57	44 - 74	59.0	2.2	-0.9	Acceptable
	CH-14	44	35 - 59	46.7	2.2	-1.2	Acceptable
	CH-15	93	70 - 118	94.3	2.3	-0.6	Acceptable
Urea Nitrogen / BUN (mg/dL) **	CH-11	29	28 - 34	30.8	1.1	-1.6	Acceptable
Siemens Dimension / Siemens Dimension	CH-12	38	35 - 43	38.7	1.3	-0.5	Acceptable
reagent	CH-13	13	12 - 17	14.7	0.8	-2.1	Acceptable
	CH-14	10	8 - 13	10.6	0.8	-0.7	Acceptable
	CH-15	25	24 - 30	26.7	1.0	-1.7	Acceptable
Uric Acid (mg/dL) **	CH-11	7.2	5.9 - 8.5	7.20	0.16	0.0	Acceptable
Siemens Dimension / Siemens Dimension	CH-12	9.1	7.4 - 10.5	8.96	0.20	0.7	Acceptable
reagent	CH-13	3.6	2.9 - 4.2	3.53	0.10	0.7	Acceptable
	CH-14	2.6	2.1 - 3.1	2.61	0.09	-0.1	Acceptable
	CH-15	6.3	5.2 - 7.4	6.28	0.14	0.1	Acceptable

CHEMISTRY (ENDOCRINOLOGY)

Analyte / Method	Sample	Reported Result	Expected Result	Mean	SD	SDI	Grade
Free Thyroxine (ng/dL) **	CH-11	2.9	2.5 - 3.4	2.92	0.13	-0.2	Acceptable
Siemens Dimension EXL / Siemens	CH-12	2.9	2.5 - 3.4	2.96	0.13	-0.5	Acceptable
Dimension reagent	CH-13	2.9	2.5 - 3.3	2.89	0.13	0.1	Acceptable
	CH-14	2.8	2.4 - 3.3	2.88	0.13	-0.6	Acceptable
	CH-15	2.9	2.5 - 3.3	2.89	0.13	0.1	Acceptable

CHEMISTRY (ENDOCRINOLOGY) - continued

Analyte / Method	Sample	Reported Result	Expected Result	Mean	SD	SDI	Grade
Thyroid Stimulating Hormone (uU/mL) **	CH-11	5.26	4.77 - 6.20	5.483	0.236	-0.9	Acceptable
Siemens Dimension EXL / Siemens	CH-12	6.42	5.80 - 7.52	6.664	0.285	-0.9	Acceptable
Dimension reagent	CH-13	2.65	2.52 - 3.25	2.886	0.120	-2.0	Acceptable
	CH-14	2.13	1.89 - 2.51	2.198	0.102	-0.7	Acceptable
	CH-15	4.66	4.20 - 5.52	4.860	0.217	-0.9	Acceptable

CHEMISTRY (TDM)

Analyte / Method	Sample	Reported Result	Expected Result	Mean	SD	SDI	Grade
Digoxin (ng/mL) **	CH-11	2.0	1.5 - 2.3	1.91	0.09	1.0	Acceptable
Siemens Dimension / Siemens Dimension	CH-12	2.3	1.8 - 2.8	2.28	0.11	0.2	Acceptable
reagent	CH-13	1.2	0.9 - 1.4	1.14	0.08	0.7	Acceptable
	CH-14	0.9	0.7 - 1.2	0.95	0.07	-0.7	Acceptable
	CH-15	1.8	1.3 - 2.1	1.73	0.09	0.8	Acceptable

GLYCOHEMOGLOBIN

Analyte / Method	Sample	Reported Result	Expected Result	Mean	SD	SDI	Grade
Glycated Hemoglobin (%)	GLY-11	9.1	7.2 - 10.9	9.02	0.25	0.3	Acceptable
Siemens Dimension / Siemens Dimension (HB1C)	GLY-12	11.4	9.1 - 13.8	11.45	0.32	-0.2	Acceptable

SERUM HCG

Analyte / Method	Sample	Reported Result	Expected Result	Grade
HCG (serum-qual) **	HCG-11	Negative	Negative	Acceptable
Quidel QuickVue OS HCG Combo	HCG-12	Positive	Positive	Acceptable
	HCG-13	Negative	Negative	Acceptable
	HCG-14	Positive	Positive	Acceptable
	HCG-15	Positive	Positive	Acceptable