MEDICAL LABORATORY EVALUATION

PARTICIPANT SUMMARY

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Hematology, Coagulation,
Blood Bank, Urinalysis, PPM
2020 MLE-M1

ACP | Medical Laboratory Evaluation

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

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EVALUATION CRITERIA

The evaluation criteria used in the MLE Program is in accordance with the Clinical Laboratory Improvement Amendments of 1988 (CLIA '88) federal requirements for proficiency testing. The criteria are included below.

Qualitative

For qualitative procedures, evaluation is based on participant or referee consensus. If participant consensus is not reached, CMS requirements call for grading by referee consensus. A minimum percentage of participants or referee laboratories must receive a passing score or the challenge is not evaluated due to lack of consensus. These percentages are listed below.

ABO Group	95% Participant or 100% Referee Consensus
Antibody Identification	95% Consensus
Blood Cell Identification	80% Consensus
Compatibility Testing	95% Participant or 100% Referee Consensus
Creatinine (Semi-Quantitative)	80% Consensus
Crystal Identification	80% Consensus
Fecal Occult Blood	80% Consensus
KOH Skin Preparation	80% Consensus
Microalbumin (Semi-Quantitative)	80% Consensus
Provider-Performed Microscopy	80% Consensus
Rh Factor (D Type)	95% Participant or 100% Referee Consensus
Unexpected Antibody Detection	95% Consensus
Urine Dipstick	80% Consensus
Urine hCG	80% Consensus
Urine Sediment Identification	80% Consensus

Quantitative

For quantitative procedures, a mean and standard deviation (SD) are calculated for each peer group consisting of 10 or more laboratories except for Coagulation (CG Specimens) which consist of peer groups of 5 or more laboratories. 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 page 37 under the heading "Acceptable Ranges for Quantitative Results."

Activated Partial Thromboplastin Time	± 15%
Automated Differential	± 3 SD
Blood Lead	± 4 µg/dL or ± 10%*
Body Fluid - Red Cell Count	± 2 SD
Body Fluid - White Cell Count	± 2 SD
Creatinine, Urine (Quantitative)	± 17%
Fibrinogen	± 20%
Glucose, Whole Blood – HemoCue	± 12 mg/dL or ± 20%*
Hematocrit	± 6%
Hematocrit, Waived	± 6% or ± 2 SD*
Hemoglobin	± 7%
Hemoglobin, Waived	± 7% or ± 2 SD*
International Normalized Ratio (INR)	± 20%
Microalbumin (Quantitative)	± 30%
Platelet Count	± 25%
Prothrombin Time	± 15%
Red Blood Cell Count	± 6%
Reticulocyte Count	± 30% or ± 2 SD*
Sedimentation Rate	± 2 SD
Specific Gravity	± 0.010
White Blood Cell Count	± 15%

*Whichever is greater

HEMOCUE HEMATOLOGY–HEMOGLOBIN (g/dL)

	Specimen HQ-1						Specimen HQ-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	28	12.94	0.31	2.4	12.9	12.0 - 13.9	28	4.98	0.24	4.9	5.0	4.6 - 5.4
HemoCue 201/+	27	12.98	0.22	1.7	12.9	12.0 - 13.9	28	4.98	0.24	4.9	5.0	4.6 - 5.4

HEMOCUE HEMATOLOGY–GLUCOSE (mg/dL)

	Specimen HQ-1						Specimen HQ-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	27	111.5	5.0	4.5	111	89 - 134	27	48.5	5.4	11.2	49	36 - 61
All HemoCue Methods	26	111.3	5.0	4.5	111	89 - 134	26	48.6	5.5	11.4	49	36 - 61
HemoCue Glucose 201/+	26	111.3	5.0	4.5	111	89 - 134	26	48.6	5.5	11.4	49	36 - 61

SEDIMENTATION RATE (MM/HR)

	Specimen ES-1						Specimen ES-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	82	41.0	9.0	22.0	40	22 - 60	82	8.6	2.6	30.4	8	3 - 14
All Automated Methods	21	50.9	8.6	16.8	53	33 - 68	21	9.7	3.0	31.3	9	3 - 16
All Manual Methods	59	37.4	5.9	15.9	37	25 - 50	60	8.2	2.4	28.7	8	3 - 13
All Vital Diagnostics Methods	13	50.2	7.5	14.9	46	35 - 66	13	8.4	1.9	22.6	8	4 - 13
Westergren - diluted	53	37.9	6.7	17.6	37	24 - 52	53	8.1	2.3	28.3	8	3 - 13

SEDIMAT SEDIMENTATION RATE (MM/HR)

	Specimen MAT-1						Specimen MAT-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
Polymedco Sedimat 15	9	57.6	9.4	16.3	56	38 - 77	9	2.3	0.9	37.1	3	0 - 5

HEMATOLOGY W/ 5-PART DIFFERENTIAL–WHITE BLOOD CELL COUNT (x K/uL)

	Specimen CL-1						Specimen CL-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	13	19.23	1.09	5.7	19.4	16.3 - 22.2	13	2.90	0.54	18.5	3.2	2.4 - 3.4
All Abbott Cell-Dyn Instruments	11	19.70	0.66	3.3	19.6	16.7 - 22.7	11	3.17	0.06	1.8	3.2	2.6 - 3.7
Abbott Cell-Dyn Ruby	10	19.70	0.66	3.3	19.6	16.7 - 22.7	10	3.17	0.06	1.8	3.2	2.6 - 3.7
	Specimen CL-3						**Specimen CL-4**					
All Method	13	2.85	0.45	15.8	3.0	2.4 - 3.3	13	7.35	0.67	9.1	7.6	6.2 - 8.5
All Abbott Cell-Dyn Instruments	11	3.07	0.15	5.0	3.1	2.6 - 3.6	11	7.67	0.25	3.3	7.7	6.5 - 8.9
Abbott Cell-Dyn Ruby	10	3.07	0.15	5.0	3.1	2.6 - 3.6	10	7.67	0.25	3.3	7.7	6.5 - 8.9
	Specimen CL-5											
All Method	13	19.00	1.19	6.3	19.2	16.1 - 21.9						
All Abbott Cell-Dyn Instruments	11	19.53	0.65	3.3	19.5	16.6 - 22.5						
Abbott Cell-Dyn Ruby	10	19.53	0.65	3.3	19.5	16.6 - 22.5						

HEMATOLOGY W/ 5-PART DIFFERENTIAL–RED BLOOD CELL COUNT (x M/uL)

	Specimen CL-1						Specimen CL-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	13	5.128	0.221	4.3	5.10	4.81 - 5.44	13	2.193	0.045	2.1	2.21	2.06 - 2.33
All Abbott Cell-Dyn Instruments	11	5.197	0.210	4.0	5.21	4.88 - 5.51	11	2.213	0.021	0.9	2.22	2.08 - 2.35
Abbott Cell-Dyn Ruby	10	5.197	0.210	4.0	5.21	4.88 - 5.51	10	2.213	0.021	0.9	2.22	2.08 - 2.35
	Specimen CL-3						**Specimen CL-4**					
All Method	13	2.203	0.064	2.9	2.21	2.07 - 2.34	13	4.725	0.119	2.5	4.70	4.44 - 5.01
All Abbott Cell-Dyn Instruments	11	2.230	0.040	1.8	2.23	2.09 - 2.37	11	4.760	0.118	2.5	4.73	4.47 - 5.05
Abbott Cell-Dyn Ruby	10	2.230	0.040	1.8	2.23	2.09 - 2.37	10	4.760	0.118	2.5	4.73	4.47 - 5.05
	Specimen CL-5											
All Method	13	5.073	0.068	1.3	5.09	4.76 - 5.38						
All Abbott Cell-Dyn Instruments	11	5.103	0.035	0.7	5.10	4.79 - 5.41						
Abbott Cell-Dyn Ruby	10	5.103	0.035	0.7	5.10	4.79 - 5.41						

HEMATOLOGY W/ 5-PART DIFFERENTIAL–HEMOGLOBIN (g/dL)

	Specimen CL-1						Specimen CL-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	13	16.33	1.07	6.5	16.3	15.1 - 17.5	13	5.50	0.41	7.4	5.7	5.1 - 5.9
All Abbott Cell-Dyn Instruments	11	16.73	0.84	5.0	16.3	15.5 - 18.0	11	5.70	0.10	1.8	5.7	5.3 - 6.1
Abbott Cell-Dyn Ruby	10	16.73	0.84	5.0	16.3	15.5 - 18.0	10	5.70	0.10	1.8	5.7	5.3 - 6.1
	Specimen CL-3						**Specimen CL-4**					
All Method	13	5.43	0.42	7.7	5.6	5.0 - 5.9	13	12.93	0.63	4.9	13.2	12.0 - 13.9
All Abbott Cell-Dyn Instruments	11	5.63	0.06	1.0	5.6	5.2 - 6.1	11	13.23	0.15	1.2	13.2	12.3 - 14.2
Abbott Cell-Dyn Ruby	10	5.63	0.06	1.0	5.6	5.2 - 6.1	10	13.23	0.15	1.2	13.2	12.3 - 14.2
	Specimen CL- 5											
All Method	13	16.00	0.54	3.4	16.2	14.8 - 17.2						
All Abbott Cell-Dyn Instruments	11	16.27	0.12	0.7	16.2	15.1 - 17.5						
Abbott Cell-Dyn Ruby	10	16.27	0.12	0.7	16.2	15.1 - 17.5						

HEMATOLOGY W/ 5-PART DIFFERENTIAL–HEMATOCRIT (percent)

	Specimen CL-1						Specimen CL-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	13	46.20	2.44	5.3	46.8	43.4 - 49.0	13	16.05	0.44	2.8	16.1	15.0 - 17.1
All Abbott Cell-Dyn Instruments	11	45.53	2.50	5.5	45.6	42.8 - 48.3	11	15.90	0.40	2.5	15.9	14.9 - 16.9
Abbott Cell-Dyn Ruby	10	45.53	2.50	5.5	45.6	42.8 - 48.3	10	15.90	0.40	2.5	15.9	14.9 - 16.9
	Specimen CL-3						**Specimen CL-4**					
All Method	13	16.05	0.53	3.3	16.2	15.0 - 17.1	13	39.15	1.37	3.5	39.4	36.8 - 41.5
All Abbott Cell-Dyn Instruments	11	15.90	0.53	3.3	16.1	14.9 - 16.9	11	38.67	1.18	3.1	39.3	36.3 - 41.0
Abbott Cell-Dyn Ruby	10	15.90	0.53	3.3	16.1	14.9 - 16.9	10	38.67	1.18	3.1	39.3	36.3 - 41.0
	Specimen CL-5											
All Method	13	45.65	1.87	4.1	45.2	42.9 - 48.4						
All Abbott Cell-Dyn Instruments	11	44.77	0.76	1.7	45.1	42.0 - 47.5						
Abbott Cell-Dyn Ruby	10	44.77	0.76	1.7	45.1	42.0 - 47.5						

HEMATOLOGY W/ 5-PART DIFFERENTIAL–PLATELET COUNT (x K/uL)

	Specimen CL-1						Specimen CL-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	13	504.8	32.7	6.5	507	378 - 631	13	90.3	10.9	12.0	86	67 - 113
All Abbott Cell-Dyn Instruments	11	517.3	25.7	5.0	524	387 - 647	11	85.0	3.5	4.1	83	63 - 107
Abbott Cell-Dyn Ruby	10	517.3	25.7	5.0	524	387 - 647	10	85.0	3.5	4.1	83	63 - 107
	Specimen CL-3						**Specimen CL-4**					
All Method	13	86.3	10.7	12.4	83	64 - 108	13	266.3	6.2	2.3	266	199 - 333
All Abbott Cell-Dyn Instruments	11	81.0	2.6	3.3	82	60 - 102	11	263.7	4.2	1.6	265	197 - 330
Abbott Cell-Dyn Ruby	10	81.0	2.6	3.3	82	60 - 102	10	263.7	4.2	1.6	265	197 - 330
	Specimen CL-5											
All Method	13	495.3	10.7	2.2	498	371 - 620						
All Abbott Cell-Dyn Instruments	11	496.0	13.0	2.6	503	372 - 620						
Abbott Cell-Dyn Ruby	10	496.0	13.0	2.6	503	372 - 620						

HEMATOLOGY W/ 5-PART DIFFERENTIAL–NEUTROPHILS (percent)

	Specimen CL-1						Specimen CL-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	13	74.55	0.93	1.2	74.8	71.7 - 77.4	13	46.08	1.83	4.0	46.2	40.5 - 51.6
All Abbott Cell-Dyn Instruments	11	74.97	0.49	0.7	75.2	73.4 - 76.5	11	46.83	1.25	2.7	46.8	43.0 - 50.6
Abbott Cell-Dyn Ruby	10	74.97	0.49	0.7	75.2	73.4 - 76.5	10	46.83	1.25	2.7	46.8	43.0 - 50.6
	Specimen CL-3						**Specimen CL-4**					
All Method	13	44.43	1.41	3.2	44.4	40.2 - 48.7	13	61.45	0.82	1.3	61.4	58.9 - 64.0
All Abbott Cell-Dyn Instruments	11	44.97	1.10	2.4	44.9	41.6 - 48.3	11	61.70	0.79	1.3	62.0	59.3 - 64.1
Abbott Cell-Dyn Ruby	10	44.97	1.10	2.4	44.9	41.6 - 48.3	10	61.70	0.79	1.3	62.0	59.3 - 64.1
	Specimen CL-5											
All Method	13	74.50	0.90	1.2	74.5	71.8 - 77.2						
All Abbott Cell-Dyn Instruments	11	74.87	0.64	0.8	74.5	72.9 - 76.8						
Abbott Cell-Dyn Ruby	10	74.87	0.64	0.8	74.5	72.9 - 76.8						

HEMATOLOGY W/ 5-PART DIFFERENTIAL–LYMPHOCYTES (percent)

	Specimen CL-1						Specimen CL-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	13	14.50	2.24	15.5	15.4	7.7 - 21.3	13	36.35	5.44	15.0	38.5	20.0 - 52.7
All Abbott Cell-Dyn Instruments	11	15.60	0.53	3.4	15.8	14.0 - 17.2	11	39.03	1.07	2.7	38.8	35.8 - 42.3
Abbott Cell-Dyn Ruby	10	15.60	0.53	3.4	15.8	14.0 - 17.2	10	39.03	1.07	2.7	38.8	35.8 - 42.3
	Specimen CL-3						**Specimen CL-4**					
All Method	13	35.30	4.68	13.2	36.3	21.2 - 49.4	13	21.08	4.47	21.2	23.1	7.6 - 34.5
All Abbott Cell-Dyn Instruments	11	37.47	2.15	5.8	36.7	31.0 - 44.0	11	23.30	0.56	2.4	23.4	21.6 - 25.0
Abbott Cell-Dyn Ruby	10	37.47	2.15	5.8	36.7	31.0 - 44.0	10	23.30	0.56	2.4	23.4	21.6 - 25.0
	Specimen CL-5											
All Method	13	14.93	2.30	15.4	16.0	8.0 - 21.9						
All Abbott Cell-Dyn Instruments	11	16.07	0.32	2.0	16.2	15.1 - 17.1						
Abbott Cell-Dyn Ruby	10	16.07	0.32	2.0	16.2	15.1 - 17.1						

HEMATOLOGY W/ 5-PART DIFFERENTIAL–MONOCYTES (percent)

	Specimen CL-1						Specimen CL-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	13	6.20	3.50	56.4	4.7	0.0 - 16.7	13	12.10	7.07	58.4	9.1	0.0 - 33.3
All Abbott Cell-Dyn Instruments	11	4.47	0.55	12.3	4.2	2.8 - 6.2	11	8.60	1.18	13.7	8.3	5.0 - 12.2
Abbott Cell-Dyn Ruby	10	4.47	0.55	12.3	4.2	2.8 - 6.2	10	8.60	1.18	13.7	8.3	5.0 - 12.2
	Specimen CL-3						**Specimen CL-4**					
All Method	13	14.18	5.87	41.4	12.5	0.0 - 31.8	13	7.85	4.71	60.0	5.7	0.0 - 22.0
All Abbott Cell-Dyn Instruments	11	11.37	2.10	18.5	11.5	5.0 - 17.7	11	5.50	0.40	7.3	5.5	4.3 - 6.7
Abbott Cell-Dyn Ruby	10	11.37	2.10	18.5	11.5	5.0 - 17.7	10	5.50	0.40	7.3	5.5	4.3 - 6.7
	Specimen CL-5											
All Method	13	5.88	3.24	55.2	4.6	0.0 - 15.7						
All Abbott Cell-Dyn Instruments	11	4.27	0.49	11.6	4.5	2.7 - 5.8						
Abbott Cell-Dyn Ruby	10	4.27	0.49	11.6	4.5	2.7 - 5.8						

HEMATOLOGY W/ 5-PART DIFFERENTIAL–EOSINOPHILS (percent)

	Specimen CL-1						Specimen CL-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	13	4.30	0.59	13.8	4.2	2.5 - 6.1	13	5.13	0.34	6.6	5.1	4.1 - 6.2
All Abbott Cell-Dyn Instruments	11	4.47	0.60	13.5	4.4	2.6 - 6.3	11	5.17	0.40	7.8	5.1	3.9 - 6.4
Abbott Cell-Dyn Ruby	10	4.47	0.60	13.5	4.4	2.6 - 6.3	10	5.17	0.40	7.8	5.1	3.9 - 6.4
	Specimen CL-3						**Specimen CL-4**					
All Method	13	5.53	0.13	2.3	5.5	5.1 - 6.0	13	9.30	0.50	5.3	9.5	7.8 - 10.8
All Abbott Cell-Dyn Instruments	11	5.53	0.15	2.8	5.5	5.0 - 6.0	11	9.17	0.51	5.6	9.3	7.6 - 10.8
Abbott Cell-Dyn Ruby	10	5.53	0.15	2.8	5.5	5.0 - 6.0	10	9.17	0.51	5.6	9.3	7.6 - 10.8
	Specimen CL-5											
All Method	13	4.28	0.15	3.5	4.3	3.8 - 4.8						
All Abbott Cell-Dyn Instruments	11	4.33	0.12	2.7	4.4	3.9 - 4.7						
Abbott Cell-Dyn Ruby	10	4.33	0.12	2.7	4.4	3.9 - 4.7						

HEMATOLOGY W/ 5-PART DIFFERENTIAL–BASOPHILS (percent)

	Specimen CL-1						Specimen CL-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	13	0.45	0.13	28.7	0.5	0.0 - 0.9	13	0.38	0.15	40.0	0.4	0.0 - 0.9
All Abbott Cell-Dyn Instruments	11	0.50	0.10	20.0	0.5	0.2 - 0.8	11	0.40	0.17	43.3	0.5	0.0 - 1.0
Abbott Cell-Dyn Ruby	10	0.50	0.10	20.0	0.5	0.2 - 0.8	10	0.40	0.17	43.3	0.5	0.0 - 1.0
	Specimen CL-3						**Specimen CL-4**					
All Method	13	0.58	0.25	43.5	0.6	0.0 - 1.4	13	0.33	0.13	38.7	0.3	0.0 - 0.8
All Abbott Cell-Dyn Instruments	11	0.67	0.21	31.2	0.6	0.0 - 1.3	11	0.33	0.15	45.8	0.3	0.0 - 0.8
Abbott Cell-Dyn Ruby	10	0.67	0.21	31.2	0.6	0.0 - 1.3	10	0.33	0.15	45.8	0.3	0.0 - 0.8
	Specimen CL-5											
All Method	13	0.45	0.24	52.9	0.4	0.0 - 1.2						
All Abbott Cell-Dyn Instruments	11	0.50	0.26	52.9	0.4	0.0 - 1.3						
Abbott Cell-Dyn Ruby	10	0.50	0.26	52.9	0.4	0.0 - 1.3						

SYSMEX HEMATOLOGY W/ AUTOMATED DIFFERENTIAL–WHITE BLOOD CELL COUNT (x 10^9/L)

Specimen SYX-1

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	57	20.47	0.59	2.9	20.5	17.3 - 23.6
All Sysmex Instruments	55	20.45	0.58	2.9	20.5	17.3 - 23.6
Sysmex KX-21N & K-800, 1000, 4500	14	19.90	0.32	1.6	20.0	16.9 - 22.9
Sysmex pocH-100i	7	20.31	0.58	2.8	20.2	17.2 - 23.4
Sysmex XP-300	33	20.67	0.49	2.4	20.6	17.5 - 23.8

Specimen SYX-2

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	57	2.85	0.12	4.2	2.8	2.4 - 3.3
All Sysmex Instruments	55	2.85	0.12	4.2	2.8	2.4 - 3.3
Sysmex KX-21N & K-800, 1000, 4500	15	2.80	0.08	3.0	2.8	2.3 - 3.3
Sysmex pocH-100i	7	2.71	0.07	2.5	2.7	2.3 - 3.2
Sysmex XP-300	33	2.90	0.11	3.8	2.9	2.4 - 3.4

Specimen SYX-3

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	57	2.83	0.12	4.1	2.8	2.4 - 3.3
All Sysmex Instruments	55	2.83	0.12	4.1	2.8	2.4 - 3.3
Sysmex KX-21N & K-800, 1000, 4500	15	2.78	0.11	4.1	2.8	2.3 - 3.2
Sysmex pocH-100i	7	2.69	0.07	2.6	2.7	2.2 - 3.1
Sysmex XP-300	32	2.88	0.08	2.7	2.9	2.4 - 3.4

Specimen SYX-4

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	56	8.34	0.28	3.4	8.4	7.0 - 9.6
All Sysmex Instruments	54	8.33	0.28	3.3	8.4	7.0 - 9.6
Sysmex KX-21N & K-800, 1000, 4500	15	8.14	0.24	3.0	8.1	6.9 - 9.4
Sysmex pocH-100i	6	7.98	0.15	1.8	8.0	6.7 - 9.2
Sysmex XP-300	32	8.50	0.15	1.7	8.5	7.2 - 9.8

Specimen SYX-5

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	57	20.41	0.60	3.0	20.5	17.3 - 23.5
All Sysmex Instruments	55	20.39	0.61	3.0	20.4	17.3 - 23.5
Sysmex KX-21N & K-800, 1000, 4500	14	19.82	0.27	1.4	19.8	16.8 - 22.8
Sysmex pocH-100i	7	19.86	0.40	2.0	19.8	16.8 - 22.9
Sysmex XP-300	32	20.75	0.37	1.8	20.8	17.6 - 23.9

SYSMEX HEMATOLOGY W/ AUTOMATED DIFFERENTIAL–RED BLOOD CELL COUNT (x 10^{12}/L)

	Specimen SYX-1						Specimen SYX-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	54	5.667	0.069	1.2	5.67	5.32 - 6.01	55	2.563	0.033	1.3	2.56	2.40 - 2.72
All Sysmex Instruments	52	5.670	0.068	1.2	5.67	5.32 - 6.01	54	2.564	0.032	1.3	2.56	2.40 - 2.72
Sysmex KX-21N & K-800, 1000, 4500	15	5.667	0.047	0.8	5.66	5.32 - 6.01	15	2.551	0.025	1.0	2.56	2.39 - 2.71
Sysmex pocH-100i	7	5.877	0.146	2.5	5.83	5.52 - 6.23	7	2.610	0.058	2.2	2.62	2.45 - 2.77
Sysmex XP-300	33	5.658	0.069	1.2	5.67	5.31 - 6.00	33	2.563	0.028	1.1	2.56	2.40 - 2.72
	Specimen SYX-3						**Specimen SYX-4**					
All Method	55	2.563	0.031	1.2	2.56	2.40 - 2.72	54	4.066	0.053	1.3	4.07	3.82 - 4.32
All Sysmex Instruments	53	2.564	0.030	1.2	2.56	2.41 - 2.72	52	4.068	0.051	1.3	4.07	3.82 - 4.32
Sysmex KX-21N & K-800, 1000, 4500	15	2.551	0.028	1.1	2.55	2.39 - 2.71	15	4.058	0.042	1.0	4.06	3.81 - 4.31
Sysmex pocH-100i	7	2.586	0.085	3.3	2.60	2.43 - 2.75	6	4.195	0.097	2.3	4.20	3.94 - 4.45
Sysmex XP-300	33	2.565	0.029	1.1	2.57	2.41 - 2.72	33	4.063	0.043	1.1	4.07	3.81 - 4.31
	Specimen SYX-5											
All Method	56	5.674	0.073	1.3	5.67	5.33 - 6.02						
All Sysmex Instruments	54	5.676	0.072	1.3	5.67	5.33 - 6.02						
Sysmex KX-21N & K-800, 1000, 4500	15	5.671	0.063	1.1	5.67	5.33 - 6.02						
Sysmex pocH-100i	7	5.826	0.083	1.4	5.83	5.47 - 6.18						
Sysmex XP-300	33	5.656	0.058	1.0	5.66	5.31 - 6.00						

SYSMEX HEMATOLOGY W/ AUTOMATED DIFFERENTIAL–HEMOGLOBIN (g/dL)

Specimen SYX-1

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	56	18.18	0.27	1.5	18.1	16.9 - 19.5
All Sysmex Instruments	53	18.16	0.25	1.4	18.1	16.8 - 19.5
Sysmex KX-21N & K-800, 1000, 4500	15	18.15	0.17	0.9	18.1	16.8 - 19.5
Sysmex pocH-100i	7	18.61	0.73	3.9	18.5	17.3 - 20.0
Sysmex XP-300	33	18.14	0.25	1.4	18.1	16.8 - 19.5

Specimen SYX-2

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	57	6.34	0.12	1.9	6.3	5.8 - 6.8
All Sysmex Instruments	55	6.34	0.12	1.9	6.3	5.8 - 6.8
Sysmex KX-21N & K-800, 1000, 4500	15	6.35	0.11	1.7	6.4	5.9 - 6.8
Sysmex pocH-100i	7	6.33	0.13	2.0	6.3	5.8 - 6.8
Sysmex XP-300	33	6.33	0.12	2.0	6.3	5.8 - 6.8

Specimen SYX-3

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	57	6.32	0.12	1.9	6.3	5.8 - 6.8
All Sysmex Instruments	55	6.31	0.12	1.9	6.3	5.8 - 6.8
Sysmex KX-21N & K-800, 1000, 4500	15	6.33	0.12	1.9	6.3	5.8 - 6.8
Sysmex pocH-100i	7	6.31	0.17	2.7	6.3	5.8 - 6.8
Sysmex XP-300	33	6.31	0.11	1.8	6.3	5.8 - 6.8

Specimen SYX-4

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	56	12.03	0.15	1.3	12.0	11.1 - 12.9
All Sysmex Instruments	54	12.03	0.15	1.2	12.0	11.1 - 12.9
Sysmex KX-21N & K-800, 1000, 4500	15	12.01	0.11	0.9	12.0	11.1 - 12.9
Sysmex pocH-100i	6	11.98	0.17	1.4	12.0	11.1 - 12.9
Sysmex XP-300	33	12.04	0.16	1.3	12.1	11.1 - 12.9

Specimen SYX-5

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	57	18.16	0.19	1.1	18.1	16.8 - 19.5
All Sysmex Instruments	55	18.15	0.19	1.0	18.1	16.8 - 19.5
Sysmex KX-21N & K-800, 1000, 4500	15	18.19	0.12	0.7	18.2	16.9 - 19.5
Sysmex pocH-100i	7	18.21	0.23	1.2	18.3	16.9 - 19.5
Sysmex XP-300	33	18.12	0.20	1.1	18.1	16.8 - 19.4

SYSMEX HEMATOLOGY W/ AUTOMATED DIFFERENTIAL–HEMATOCRIT (percent)

	Specimen SYX-1						Specimen SYX-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	55	50.17	1.09	2.2	49.9	47.1 - 53.2	56	18.84	0.43	2.3	18.8	17.7 - 20.0
All Sysmex Instruments	54	50.22	1.20	2.4	49.9	47.2 - 53.3	54	18.83	0.43	2.3	18.8	17.6 - 20.0
Sysmex KX-21N & K-800, 1000, 4500	15	49.90	0.74	1.5	49.8	46.9 - 52.9	15	18.61	0.23	1.2	18.6	17.4 - 19.8
Sysmex pocH-100i	7	53.23	1.16	2.2	53.3	50.0 - 56.5	7	19.76	0.57	2.9	19.8	18.5 - 21.0
Sysmex XP-300	33	49.89	0.74	1.5	49.9	46.8 - 52.9	33	18.79	0.34	1.8	18.8	17.6 - 20.0
	Specimen SYX-3						**Specimen SYX-4**					
All Method	56	18.82	0.41	2.2	18.7	17.6 - 20.0	52	32.85	0.59	1.8	32.8	30.8 - 34.9
All Sysmex Instruments	54	18.81	0.41	2.2	18.7	17.6 - 20.0	50	32.84	0.59	1.8	32.8	30.8 - 34.9
Sysmex KX-21N & K-800, 1000, 4500	15	18.58	0.22	1.2	18.5	17.4 - 19.7	15	32.61	0.37	1.1	32.7	30.6 - 34.6
Sysmex pocH-100i	7	19.59	0.55	2.8	19.7	18.4 - 20.8	6	34.98	0.65	1.9	35.1	32.8 - 37.1
Sysmex XP-300	32	18.77	0.29	1.5	18.7	17.6 - 19.9	32	32.79	0.41	1.3	32.8	30.8 - 34.8
	Specimen SYX-5											
All Method	55	50.13	1.03	2.1	49.9	47.1 - 53.2						
All Sysmex Instruments	53	50.12	1.05	2.1	49.9	47.1 - 53.2						
Sysmex KX-21N & K-800, 1000, 4500	15	49.83	0.75	1.5	49.6	46.8 - 52.9						
Sysmex pocH-100i	7	52.71	0.58	1.1	52.6	49.5 - 55.9						
Sysmex XP-300	32	49.79	0.55	1.1	49.8	46.8 - 52.8						

SYSMEX HEMATOLOGY W/ AUTOMATED DIFFERENTIAL–PLATELET COUNT (x10^9/L)

	Specimen SYX-1						Specimen SYX-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	54	390.8	13.5	3.5	393	293 - 489	56	64.7	4.2	6.5	65	48 - 81
All Sysmex Instruments	52	390.4	13.4	3.4	393	292 - 489	54	64.7	4.1	6.4	65	48 - 81
Sysmex KX-21N & K-800, 1000, 4500	14	384.9	12.0	3.1	384	288 - 482	15	63.5	5.4	8.5	65	47 - 80
Sysmex pocH-100i	7	387.9	19.5	5.0	392	290 - 485	7	67.7	4.4	6.5	68	50 - 85
Sysmex XP-300	31	393.5	11.8	3.0	394	295 - 492	33	64.1	4.1	6.4	65	48 - 81

	Specimen SYX-3						Specimen SYX-4					
All Method	57	63.9	4.1	6.4	64	47 - 80	55	195.1	7.7	4.0	195	146 - 244
All Sysmex Instruments	54	64.0	3.6	5.6	64	47 - 80	53	195.0	7.9	4.0	195	146 - 244
Sysmex KX-21N & K-800, 1000, 4500	15	62.3	5.2	8.4	64	46 - 78	14	193.8	7.0	3.6	194	145 - 243
Sysmex pocH-100i	7	66.7	4.5	6.8	66	50 - 84	6	193.7	8.7	4.5	194	145 - 243
Sysmex XP-300	33	63.8	2.6	4.1	64	47 - 80	33	195.8	8.2	4.2	196	146 - 245

	Specimen SYX-5					
All Method	55	392.0	15.4	3.9	392	293 - 490
All Sysmex Instruments	53	391.8	15.6	4.0	392	293 - 490
Sysmex KX-21N & K-800, 1000, 4500	14	386.9	15.5	4.0	385	290 - 484
Sysmex pocH-100i	7	391.3	13.7	3.5	390	293 - 490
Sysmex XP-300	32	394.0	15.9	4.0	394	295 - 493

SYSMEX HEMATOLOGY W/ AUTOMATED DIFFERENTIAL–LYMPH W/SCR (percent)

	Specimen SYX-1						Specimen SYX-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	50	61.56	0.71	1.2	61.4	59.4 - 63.7	50	12.62	1.62	12.9	12.9	7.7 - 17.5
All Sysmex Instruments	48	61.55	0.72	1.2	61.4	59.3 - 63.8	48	12.56	1.63	13.0	12.8	7.6 - 17.5
Sysmex KX-21N & K-800, 1000, 4500	13	61.47	0.79	1.3	61.3	59.0 - 63.9	13	12.67	1.41	11.1	12.8	8.4 - 16.9
Sysmex pocH-100i	6	62.23	0.65	1.0	62.4	60.2 - 64.2	6	10.30	0.62	6.0	10.1	8.4 - 12.2
Sysmex XP-300	28	61.37	0.53	0.9	61.4	59.7 - 63.0	29	12.99	1.50	11.6	12.9	8.4 - 17.5

	Specimen SYX-3						Specimen SYX-4					
All Method	50	12.53	1.64	13.1	12.6	7.6 - 17.5	50	30.36	0.95	3.1	30.5	27.5 - 33.3
All Sysmex Instruments	48	12.44	1.59	12.8	12.5	7.6 - 17.3	48	30.36	0.96	3.2	30.5	27.4 - 33.3
Sysmex KX-21N & K-800, 1000, 4500	13	12.68	1.11	8.7	12.7	9.3 - 16.0	13	30.66	0.80	2.6	30.9	28.2 - 33.1
Sysmex pocH-100i	6	10.22	1.09	10.7	10.1	6.9 - 13.5	6	28.92	0.88	3.0	28.8	26.2 - 31.6
Sysmex XP-300	29	12.79	1.52	11.9	12.8	8.2 - 17.4	29	30.52	0.78	2.6	30.5	28.1 - 32.9

	Specimen SYX-5					
All Method	50	61.85	0.72	1.2	61.8	59.6 - 64.1
All Sysmex Instruments	48	61.83	0.73	1.2	61.7	59.6 - 64.1
Sysmex KX-21N & K-800, 1000, 4500	13	61.68	0.54	0.9	61.5	60.0 - 63.4
Sysmex pocH-100i	6	62.38	0.99	1.6	62.3	59.4 - 65.4
Sysmex XP-300	29	61.78	0.72	1.2	61.7	59.6 - 64.0

SYSMEX HEMATOLOGY W/ AUTOMATED DIFFERENTIAL–MONO/MIXED W/MCR (percent)

	Specimen SYX-1						Specimen SYX-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	50	13.28	0.92	6.9	13.5	10.5 - 16.1	49	18.69	1.33	7.1	18.7	14.7 - 22.7
All Sysmex Instruments	48	13.28	0.94	7.1	13.5	10.4 - 16.1	47	18.73	1.34	7.2	18.7	14.7 - 22.8
Sysmex KX-21N & K-800, 1000, 4500	13	13.48	0.73	5.4	13.5	11.3 - 15.7	13	18.99	1.01	5.3	19.2	15.9 - 22.1
Sysmex pocH-100i	6	11.62	0.38	3.3	11.5	10.4 - 12.8	6	16.87	0.80	4.7	16.6	14.4 - 19.3
Sysmex XP-300	29	13.53	0.74	5.4	13.7	11.3 - 15.8	28	19.01	1.27	6.7	18.9	15.2 - 22.9
	Specimen SYX-3						**Specimen SYX-4**					
All Method	48	18.78	1.46	7.8	18.7	14.3 - 23.2	50	16.55	1.01	6.1	16.5	13.5 - 19.6
All Sysmex Instruments	47	18.84	1.42	7.5	18.7	14.5 - 23.2	48	16.53	1.03	6.2	16.5	13.4 - 19.7
Sysmex KX-21N & K-800, 1000, 4500	13	19.04	1.15	6.1	18.7	15.5 - 22.5	13	16.34	0.57	3.5	16.3	14.6 - 18.1
Sysmex pocH-100i	6	17.42	1.76	10.1	17.6	12.1 - 22.7	6	15.23	0.87	5.7	15.2	12.6 - 17.9
Sysmex XP-300	28	19.05	1.33	7.0	18.9	15.0 - 23.1	29	16.89	0.99	5.9	17.1	13.9 - 19.9
	Specimen SYX-5											
All Method	50	13.08	0.89	6.8	13.2	10.4 - 15.8						
All Sysmex Instruments	48	13.10	0.90	6.9	13.2	10.3 - 15.9						
Sysmex KX-21N & K-800, 1000, 4500	13	13.25	0.78	5.9	13.3	10.8 - 15.7						
Sysmex pocH-100i	6	11.63	0.48	4.1	11.7	10.1 - 13.1						
Sysmex XP-300	29	13.33	0.73	5.5	13.4	11.1 - 15.6						

SYSMEX HEMATOLOGY W/ AUTOMATED DIFFERENTIAL–NEUT W/LCR (percent)

	Specimen SYX-1						Specimen SYX-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	49	25.21	0.62	2.5	25.2	23.3 - 27.1	49	68.74	2.02	2.9	68.3	62.6 - 74.8
All Sysmex Instruments	47	25.22	0.62	2.5	25.2	23.3 - 27.1	47	68.76	2.06	3.0	68.3	62.5 - 75.0
Sysmex KX-21N & K-800, 1000, 4500	13	25.05	0.44	1.7	25.1	23.7 - 26.4	13	68.35	1.05	1.5	68.3	65.2 - 71.5
Sysmex pocH-100i	6	26.12	0.39	1.5	26.1	24.9 - 27.3	6	72.83	0.98	1.3	72.7	69.9 - 75.8
Sysmex XP-300	28	25.10	0.58	2.3	25.2	23.3 - 26.9	28	68.08	1.51	2.2	68.0	63.5 - 72.7
	Specimen SYX-3						**Specimen SYX-4**					
All Method	49	68.56	1.98	2.9	68.2	62.6 - 74.6	49	53.04	1.50	2.8	52.9	48.5 - 57.6
All Sysmex Instruments	48	68.56	2.00	2.9	68.2	62.5 - 74.6	47	53.07	1.52	2.9	52.9	48.4 - 57.7
Sysmex KX-21N & K-800, 1000, 4500	13	68.28	1.06	1.6	68.0	65.0 - 71.5	13	52.98	1.05	2.0	52.9	49.8 - 56.2
Sysmex pocH-100i	6	72.10	1.58	2.2	72.6	67.3 - 76.9	6	55.85	0.83	1.5	55.8	53.3 - 58.4
Sysmex XP-300	29	67.96	1.65	2.4	68.0	63.0 - 72.9	28	52.51	1.14	2.2	52.7	49.0 - 56.0
	Specimen SYX-5											
All Method	49	25.06	0.73	2.9	25.0	22.8 - 27.3						
All Sysmex Instruments	47	25.06	0.75	3.0	25.0	22.8 - 27.4						
Sysmex KX-21N & K-800, 1000, 4500	13	25.06	0.72	2.9	25.1	22.9 - 27.3						
Sysmex pocH-100i	6	25.87	0.71	2.8	25.8	23.7 - 28.1						
Sysmex XP-300	28	24.89	0.67	2.7	25.0	22.8 - 27.0						

BASIC HEMATOLOGY W/ 3-PART DIFFERENTIAL–WHITE BLOOD CELL COUNT (x 10^9/L)

	Specimen HD-1						Specimen HD-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	378	20.37	0.68	3.3	20.4	17.3 - 23.5	381	2.14	0.16	7.5	2.1	1.8 - 2.5
All Abbott Cell-Dyn Instruments	94	19.99	0.98	4.9	19.8	16.9 - 23.0	94	2.20	0.13	5.7	2.2	1.8 - 2.6
All ABX Instruments	59	20.24	0.55	2.7	20.2	17.2 - 23.3	59	2.09	0.07	3.4	2.1	1.7 - 2.5
All Boule (CDS) Instruments	114	20.60	0.46	2.2	20.6	17.5 - 23.7	113	1.98	0.09	4.3	2.0	1.6 - 2.3
All COULTER Instruments	104	20.60	0.55	2.7	20.6	17.5 - 23.7	103	2.28	0.12	5.2	2.3	1.9 - 2.7
Abbott Cell-Dyn 1800	22	20.46	0.78	3.8	20.4	17.3 - 23.6	22	2.12	0.14	6.8	2.1	1.8 - 2.5
Abbott Cell-Dyn Emerald	63	19.55	0.62	3.2	19.5	16.6 - 22.5	63	2.20	0.09	4.2	2.2	1.8 - 2.6
Boule (CDS) Medonic M series	112	20.61	0.46	2.2	20.6	17.5 - 23.7	111	1.98	0.08	4.2	2.0	1.6 - 2.3
COULTER AcT diff/diff 2	100	20.57	0.53	2.6	20.6	17.4 - 23.7	99	2.28	0.12	5.1	2.3	1.9 - 2.7
Horiba ABX Micros/45/60	59	20.24	0.55	2.7	20.2	17.2 - 23.3	59	2.09	0.07	3.4	2.1	1.7 - 2.5

	Specimen HD-3						Specimen HD-4					
All Method	383	2.10	0.15	7.4	2.1	1.7 - 2.5	376	7.87	0.28	3.6	7.9	6.6 - 9.1
All Abbott Cell-Dyn Instruments	96	2.16	0.14	6.3	2.2	1.8 - 2.5	95	7.97	0.42	5.3	7.9	6.7 - 9.2
All ABX Instruments	58	2.09	0.09	4.1	2.1	1.7 - 2.5	60	7.85	0.22	2.8	7.8	6.6 - 9.1
All Boule (CDS) Instruments	115	1.95	0.09	4.5	1.9	1.6 - 2.3	113	7.72	0.23	3.0	7.7	6.5 - 8.9
All COULTER Instruments	104	2.23	0.11	4.8	2.2	1.8 - 2.6	103	7.99	0.19	2.4	8.0	6.7 - 9.2
Abbott Cell-Dyn 1800	23	2.03	0.13	6.2	2.0	1.7 - 2.4	22	7.85	0.40	5.0	7.9	6.6 - 9.1
Abbott Cell-Dyn Emerald	63	2.18	0.09	4.3	2.2	1.8 - 2.6	64	7.91	0.35	4.4	7.9	6.7 - 9.1
Boule (CDS) Medonic M series	111	1.94	0.08	4.0	1.9	1.6 - 2.3	111	7.71	0.23	3.0	7.7	6.5 - 8.9
COULTER AcT diff/diff 2	100	2.23	0.11	4.7	2.2	1.8 - 2.6	99	7.98	0.19	2.4	8.0	6.7 - 9.2
Horiba ABX Micros/45/60	58	2.09	0.09	4.1	2.1	1.7 - 2.5	60	7.85	0.22	2.8	7.8	6.6 - 9.1

BASIC HEMATOLOGY W/ 3-PART DIFFERENTIAL–WHITE BLOOD CELL COUNT (x 10^9/L) cont'd

Specimen HD-5

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	380	20.36	0.69	3.4	20.4	17.3 - 23.5
All Abbott Cell-Dyn Instruments	95	19.95	0.96	4.8	19.8	16.9 - 23.0
All ABX Instruments	60	20.19	0.62	3.1	20.2	17.1 - 23.3
All Boule (CDS) Instruments	114	20.50	0.47	2.3	20.6	17.4 - 23.6
All COULTER Instruments	104	20.67	0.48	2.3	20.7	17.5 - 23.8
Abbott Cell-Dyn 1800	23	20.15	0.92	4.6	20.3	17.1 - 23.2
Abbott Cell-Dyn Emerald	63	19.61	0.61	3.1	19.6	16.6 - 22.6
Boule (CDS) Medonic M series	112	20.50	0.47	2.3	20.6	17.4 - 23.6
COULTER AcT diff/diff 2	99	20.63	0.45	2.2	20.7	17.5 - 23.8
Horiba ABX Micros/45/60	60	20.19	0.62	3.1	20.2	17.1 - 23.3

BASIC HEMATOLOGY W/ 3-PART DIFFERENTIAL–RED BLOOD CELL COUNT (x 10^{12}/L)

	Specimen HD-1						Specimen HD-2					
Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	378	5.617	0.149	2.7	5.62	5.28 - 5.96	381	2.401	0.060	2.5	2.40	2.25 - 2.55
All Abbott Cell-Dyn Instruments	93	5.508	0.135	2.4	5.51	5.17 - 5.84	95	2.415	0.068	2.8	2.41	2.27 - 2.57
All ABX Instruments	58	5.607	0.121	2.2	5.59	5.27 - 5.95	59	2.358	0.055	2.3	2.35	2.21 - 2.50
All Boule (CDS) Instruments	112	5.722	0.088	1.5	5.74	5.37 - 6.07	115	2.383	0.033	1.4	2.38	2.24 - 2.53
All COULTER Instruments	103	5.612	0.143	2.6	5.61	5.27 - 5.95	103	2.434	0.060	2.5	2.43	2.28 - 2.59
Abbott Cell-Dyn 1800	21	5.490	0.113	2.1	5.51	5.16 - 5.82	22	2.453	0.055	2.2	2.46	2.30 - 2.61
Abbott Cell-Dyn Emerald	63	5.498	0.142	2.6	5.50	5.16 - 5.83	64	2.400	0.066	2.7	2.40	2.25 - 2.55
Boule (CDS) Medonic M series	109	5.726	0.085	1.5	5.74	5.38 - 6.07	111	2.381	0.031	1.3	2.38	2.23 - 2.53
COULTER AcT diff/diff 2	99	5.613	0.146	2.6	5.62	5.27 - 5.95	99	2.437	0.059	2.4	2.44	2.29 - 2.59
Horiba ABX Micros/45/60	58	5.607	0.121	2.2	5.59	5.27 - 5.95	59	2.358	0.055	2.3	2.35	2.21 - 2.50

BASIC HEMATOLOGY W/ 3-PART DIFFERENTIAL–RED BLOOD CELL COUNT (x 10^{12}/L) cont'd

	Specimen HD-3						Specimen HD-4					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	380	2.403	0.062	2.6	2.39	2.25 - 2.55	378	4.640	0.109	2.4	4.65	4.36 - 4.92
All Abbott Cell-Dyn Instruments	95	2.421	0.071	2.9	2.41	2.27 - 2.57	93	4.611	0.143	3.1	4.61	4.33 - 4.89
All ABX Instruments	59	2.365	0.051	2.2	2.36	2.22 - 2.51	60	4.614	0.097	2.1	4.62	4.33 - 4.90
All Boule (CDS) Instruments	114	2.387	0.038	1.6	2.38	2.24 - 2.54	112	4.657	0.071	1.5	4.66	4.37 - 4.94
All COULTER Instruments	103	2.429	0.066	2.7	2.43	2.28 - 2.58	101	4.676	0.100	2.1	4.67	4.39 - 4.96
Abbott Cell-Dyn 1800	23	2.477	0.073	3.0	2.48	2.32 - 2.63	22	4.617	0.099	2.2	4.61	4.33 - 4.90
Abbott Cell-Dyn Emerald	62	2.394	0.054	2.3	2.39	2.25 - 2.54	62	4.591	0.156	3.4	4.59	4.31 - 4.87
Boule (CDS) Medonic M series	110	2.384	0.035	1.5	2.38	2.24 - 2.53	109	4.657	0.071	1.5	4.66	4.37 - 4.94
COULTER AcT diff/diff 2	99	2.431	0.065	2.7	2.43	2.28 - 2.58	97	4.677	0.102	2.2	4.67	4.39 - 4.96
Horiba ABX Micros/45/60	59	2.365	0.051	2.2	2.36	2.22 - 2.51	60	4.614	0.097	2.1	4.62	4.33 - 4.90

	Specimen HD-5					
All Method	381	5.616	0.147	2.6	5.63	5.27 - 5.96
All Abbott Cell-Dyn Instruments	93	5.507	0.141	2.6	5.49	5.17 - 5.84
All ABX Instruments	60	5.568	0.124	2.2	5.57	5.23 - 5.91
All Boule (CDS) Instruments	112	5.717	0.078	1.4	5.72	5.37 - 6.07
All COULTER Instruments	103	5.633	0.141	2.5	5.65	5.29 - 5.98
Abbott Cell-Dyn 1800	23	5.467	0.126	2.3	5.44	5.13 - 5.80
Abbott Cell-Dyn Emerald	62	5.507	0.147	2.7	5.49	5.17 - 5.84
Boule (CDS) Medonic M series	109	5.721	0.076	1.3	5.72	5.37 - 6.07
COULTER AcT diff/diff 2	99	5.634	0.143	2.5	5.65	5.29 - 5.98
Horiba ABX Micros/45/60	60	5.568	0.124	2.2	5.57	5.23 - 5.91

BASIC HEMATOLOGY W/ 3-PART DIFFERENTIAL–HEMOGLOBIN (g/dL)

	Specimen HD-1						Specimen HD-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	381	18.15	0.40	2.2	18.2	16.8 - 19.5	382	6.08	0.14	2.3	6.1	5.6 - 6.6
All Abbott Cell-Dyn Instruments	95	18.15	0.41	2.2	18.2	16.8 - 19.5	95	6.07	0.18	3.0	6.1	5.6 - 6.5
All ABX Instruments	59	18.08	0.32	1.8	18.1	16.8 - 19.4	60	6.07	0.12	1.9	6.1	5.6 - 6.5
All Boule (CDS) Instruments	112	18.32	0.28	1.6	18.4	17.0 - 19.7	111	6.12	0.08	1.4	6.1	5.6 - 6.6
All COULTER Instruments	102	17.99	0.42	2.3	18.0	16.7 - 19.3	102	6.03	0.13	2.1	6.0	5.6 - 6.5
Abbott Cell-Dyn 1800	22	18.32	0.48	2.6	18.5	17.0 - 19.7	22	6.21	0.18	2.8	6.2	5.7 - 6.7
Abbott Cell-Dyn Emerald	64	18.10	0.37	2.0	18.1	16.8 - 19.4	64	6.00	0.14	2.4	6.0	5.5 - 6.5
Boule (CDS) Medonic M series	109	18.34	0.26	1.4	18.4	17.0 - 19.7	110	6.12	0.08	1.4	6.1	5.6 - 6.6
COULTER AcT diff/diff 2	99	17.96	0.44	2.5	18.0	16.7 - 19.3	98	6.03	0.12	2.0	6.0	5.6 - 6.5
Horiba ABX Micros/45/60	59	18.08	0.32	1.8	18.1	16.8 - 19.4	60	6.07	0.12	1.9	6.1	5.6 - 6.5

	Specimen HD-3						Specimen HD-4					
All Method	383	6.08	0.15	2.5	6.1	5.6 - 6.6	381	13.41	0.25	1.9	13.4	12.4 - 14.4
All Abbott Cell-Dyn Instruments	96	6.08	0.22	3.7	6.1	5.6 - 6.6	94	13.43	0.30	2.2	13.4	12.4 - 14.4
All ABX Instruments	59	6.10	0.10	1.7	6.1	5.6 - 6.6	58	13.44	0.18	1.4	13.4	12.5 - 14.4
All Boule (CDS) Instruments	114	6.13	0.10	1.6	6.1	5.7 - 6.6	110	13.43	0.17	1.3	13.4	12.4 - 14.4
All COULTER Instruments	102	6.02	0.13	2.1	6.0	5.6 - 6.5	101	13.34	0.23	1.7	13.3	12.4 - 14.3
Abbott Cell-Dyn 1800	23	6.26	0.19	3.1	6.3	5.8 - 6.7	21	13.58	0.32	2.3	13.6	12.6 - 14.6
Abbott Cell-Dyn Emerald	63	5.97	0.15	2.5	6.0	5.5 - 6.4	64	13.36	0.27	2.0	13.4	12.4 - 14.3
Boule (CDS) Medonic M series	112	6.13	0.10	1.6	6.1	5.7 - 6.6	108	13.44	0.17	1.3	13.4	12.4 - 14.4
COULTER AcT diff/diff 2	98	6.03	0.13	2.1	6.0	5.6 - 6.5	97	13.34	0.23	1.7	13.4	12.4 - 14.3
Horiba ABX Micros/45/60	59	6.10	0.10	1.7	6.1	5.6 - 6.6	58	13.44	0.18	1.4	13.4	12.5 - 14.4

BASIC HEMATOLOGY W/ 3-PART DIFFERENTIAL–HEMOGLOBIN (g/dL) cont'd

Specimen HD-5

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	382	18.19	0.35	1.9	18.2	16.9 - 19.5
All Abbott Cell-Dyn Instruments	95	18.20	0.33	1.8	18.2	16.9 - 19.5
All ABX Instruments	59	18.07	0.32	1.8	18.1	16.8 - 19.4
All Boule (CDS) Instruments	113	18.32	0.29	1.6	18.3	17.0 - 19.7
All COULTER Instruments	103	18.11	0.37	2.0	18.1	16.8 - 19.4
Abbott Cell-Dyn 1800	23	18.30	0.32	1.8	18.3	17.0 - 19.6
Abbott Cell-Dyn Emerald	64	18.15	0.33	1.8	18.2	16.8 - 19.5
Boule (CDS) Medonic M series	112	18.32	0.29	1.6	18.3	17.0 - 19.7
COULTER AcT diff/diff 2	99	18.10	0.37	2.1	18.1	16.8 - 19.4
Horiba ABX Micros/45/60	59	18.07	0.32	1.8	18.1	16.8 - 19.4

BASIC HEMATOLOGY W/ 3-PART DIFFERENTIAL–HEMATOCRIT (percent)

	Specimen HD-1						**Specimen HD-2**					
Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	377	51.55	1.71	3.3	51.5	48.4 - 54.7	384	17.33	1.01	5.8	17.2	16.2 - 18.4
All Abbott Cell-Dyn Instruments	94	53.11	1.31	2.5	53.2	49.9 - 56.3	94	18.44	0.57	3.1	18.5	17.3 - 19.6
All ABX Instruments	58	49.64	1.18	2.4	49.5	46.6 - 52.7	60	16.26	0.42	2.6	16.2	15.2 - 17.3
All Boule (CDS) Instruments	112	51.45	1.18	2.3	51.5	48.3 - 54.6	113	16.49	0.31	1.9	16.5	15.5 - 17.5
All COULTER Instruments	104	51.39	1.38	2.7	51.3	48.3 - 54.5	104	17.81	0.47	2.6	17.8	16.7 - 18.9
Abbott Cell-Dyn 1800	22	53.07	1.27	2.4	53.2	49.8 - 56.3	22	18.41	0.56	3.0	18.5	17.3 - 19.6
Abbott Cell-Dyn Emerald	63	53.30	1.27	2.4	53.3	50.1 - 56.6	62	18.61	0.42	2.3	18.6	17.4 - 19.8
Boule (CDS) Medonic M series	109	51.55	1.04	2.0	51.6	48.4 - 54.7	111	16.50	0.31	1.9	16.5	15.5 - 17.5
COULTER AcT diff/diff 2	100	51.40	1.40	2.7	51.3	48.3 - 54.5	100	17.83	0.47	2.6	17.8	16.7 - 18.9
Horiba ABX Micros/45/60	58	49.64	1.18	2.4	49.5	46.6 - 52.7	60	16.26	0.42	2.6	16.2	15.2 - 17.3

BASIC HEMATOLOGY W/ 3-PART DIFFERENTIAL–HEMATOCRIT (percent) cont'd

	Specimen HD-3						Specimen HD-4					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	383	17.29	0.99	5.7	17.2	16.2 - 18.4	379	38.06	1.58	4.1	37.9	35.7 - 40.4
All Abbott Cell-Dyn Instruments	95	18.44	0.53	2.9	18.5	17.3 - 19.6	94	39.91	1.21	3.0	39.9	37.5 - 42.4
All ABX Instruments	59	16.30	0.38	2.4	16.2	15.3 - 17.3	60	36.78	0.82	2.2	36.8	34.5 - 39.0
All Boule (CDS) Instruments	113	16.45	0.32	2.0	16.4	15.4 - 17.5	113	36.83	0.89	2.4	37.0	34.6 - 39.1
All COULTER Instruments	105	17.71	0.50	2.8	17.7	16.6 - 18.8	105	38.52	1.04	2.7	38.5	36.2 - 40.9
Abbott Cell-Dyn 1800	23	18.54	0.48	2.6	18.4	17.4 - 19.7	22	39.83	0.87	2.2	39.9	37.4 - 42.3
Abbott Cell-Dyn Emerald	63	18.52	0.47	2.5	18.5	17.4 - 19.7	62	39.99	1.24	3.1	40.0	37.5 - 42.4
Boule (CDS) Medonic M series	111	16.45	0.32	2.0	16.4	15.4 - 17.5	111	36.86	0.87	2.4	37.0	34.6 - 39.1
COULTER AcT diff/diff 2	101	17.73	0.50	2.8	17.7	16.6 - 18.8	101	38.51	1.06	2.7	38.5	36.2 - 40.9
Horiba ABX Micros/45/60	59	16.30	0.38	2.4	16.2	15.3 - 17.3	60	36.78	0.82	2.2	36.8	34.5 - 39.0

	Specimen HD-5					
All Method	380	51.62	1.76	3.4	51.8	48.5 - 54.8
All Abbott Cell-Dyn Instruments	93	53.14	1.36	2.6	52.9	49.9 - 56.4
All ABX Instruments	60	49.47	1.18	2.4	49.4	46.4 - 52.5
All Boule (CDS) Instruments	114	51.52	1.28	2.5	51.8	48.4 - 54.7
All COULTER Instruments	103	51.69	1.28	2.5	51.7	48.5 - 54.8
Abbott Cell-Dyn 1800	23	52.78	1.25	2.4	52.7	49.6 - 56.0
Abbott Cell-Dyn Emerald	62	53.45	1.33	2.5	53.4	50.2 - 56.7
Boule (CDS) Medonic M series	111	51.62	1.14	2.2	51.9	48.5 - 54.8
COULTER AcT diff/diff 2	99	51.69	1.30	2.5	51.7	48.5 - 54.8
Horiba ABX Micros/45/60	60	49.47	1.18	2.4	49.4	46.4 - 52.5

BASIC HEMATOLOGY W/ 3-PART DIFFERENTIAL–PLATELET COUNT (x 10^9/L)

	Specimen HD-1						Specimen HD-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	381	515.2	33.8	6.6	513	386 - 645	379	67.5	8.2	12.1	67	50 - 85
All Abbott Cell-Dyn Instruments	94	525.2	38.7	7.4	525	393 - 657	94	71.1	10.4	14.7	69	53 - 89
All ABX Instruments	60	506.5	24.6	4.9	509	379 - 634	60	72.8	7.2	9.8	72	54 - 91
All Boule (CDS) Instruments	115	488.9	20.8	4.3	490	366 - 612	114	60.7	4.7	7.7	61	45 - 76
All COULTER Instruments	103	544.3	20.0	3.7	546	408 - 681	104	69.4	5.6	8.0	69	52 - 87
Abbott Cell-Dyn 1800	22	559.6	35.6	6.4	551	419 - 700	21	67.5	6.4	9.5	66	50 - 85
Abbott Cell-Dyn Emerald	64	511.6	32.4	6.3	509	383 - 640	64	73.4	11.4	15.5	74	55 - 92
Boule (CDS) Medonic M series	113	488.5	20.7	4.2	489	366 - 611	112	60.7	4.6	7.6	61	45 - 76
COULTER AcT diff/diff 2	100	544.1	20.2	3.7	546	408 - 681	100	69.4	5.6	8.0	69	52 - 87
Horiba ABX Micros/45/60	60	506.5	24.6	4.9	509	379 - 634	60	72.8	7.2	9.8	72	54 - 91

	Specimen HD-3						Specimen HD-4					
All Method	377	66.1	7.6	11.5	65	49 - 83	383	267.2	17.7	6.6	267	200 - 335
All Abbott Cell-Dyn Instruments	93	68.7	10.0	14.6	66	51 - 86	95	274.7	19.2	7.0	272	206 - 344
All ABX Instruments	57	72.1	5.2	7.3	72	54 - 91	59	269.3	11.1	4.1	269	201 - 337
All Boule (CDS) Instruments	114	59.9	4.1	6.8	60	44 - 75	115	251.5	12.2	4.9	253	188 - 315
All COULTER Instruments	104	67.5	5.2	7.7	68	50 - 85	104	277.4	11.9	4.3	277	208 - 347
Abbott Cell-Dyn 1800	22	65.2	5.2	7.9	65	48 - 82	22	276.1	17.2	6.2	275	207 - 346
Abbott Cell-Dyn Emerald	62	70.7	11.9	16.8	69	53 - 89	64	274.1	19.8	7.2	272	205 - 343
Boule (CDS) Medonic M series	112	59.9	4.0	6.7	60	44 - 75	112	251.3	11.4	4.5	253	188 - 315
COULTER AcT diff/diff 2	100	67.6	5.2	7.7	68	50 - 85	100	277.6	11.8	4.3	277	208 - 347
Horiba ABX Micros/45/60	57	72.1	5.2	7.3	72	54 - 91	59	269.3	11.1	4.1	269	201 - 337

BASIC HEMATOLOGY W/ 3-PART DIFFERENTIAL–PLATELET COUNT (x 10^9/L) cont'd

Specimen HD-5

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	383	515.6	34.6	6.7	514	386 - 645
All Abbott Cell-Dyn Instruments	96	526.4	39.5	7.5	524	394 - 659
All ABX Instruments	60	509.1	19.3	3.8	506	381 - 637
All Boule (CDS) Instruments	115	487.5	22.8	4.7	489	365 - 610
All COULTER Instruments	104	543.4	23.2	4.3	543	407 - 680
Abbott Cell-Dyn 1800	23	560.0	35.5	6.3	563	420 - 701
Abbott Cell-Dyn Emerald	64	512.8	32.8	6.4	516	384 - 642
Boule (CDS) Medonic M series	113	486.8	22.5	4.6	488	365 - 609
COULTER AcT diff/diff 2	101	542.9	23.3	4.3	543	407 - 679
Horiba ABX Micros/45/60	60	509.1	19.3	3.8	506	381 - 637

BASIC HEMATOLOGY W/ 3-PART DIFFERENTIAL–LYMPHOCYTES (percent)

	Specimen HD-1						Specimen HD-2					
Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	373	12.72	1.47	11.6	12.6	8.2 - 17.2	370	55.53	5.42	9.8	57.3	39.2 - 71.8
All Abbott Cell-Dyn Instruments	93	12.50	1.31	10.4	12.6	8.5 - 16.5	94	51.97	2.92	5.6	52.5	43.2 - 60.8
All ABX Instruments	57	11.43	1.07	9.4	11.1	8.2 - 14.7	56	46.22	4.78	10.3	45.8	31.8 - 60.6
All Boule (CDS) Instruments	110	11.86	0.69	5.8	11.8	9.8 - 14.0	110	58.54	1.96	3.3	58.6	52.6 - 64.5
All COULTER Instruments	100	14.44	0.38	2.6	14.4	13.3 - 15.6	100	59.69	1.53	2.6	59.7	55.1 - 64.3
Abbott Cell-Dyn 1700	10	11.69	0.41	3.5	11.9	10.4 - 13.0	10	51.97	2.51	4.8	51.4	44.4 - 59.6
Abbott Cell-Dyn 1800	21	10.81	0.47	4.4	10.6	9.3 - 12.3	21	48.28	2.08	4.3	47.9	42.0 - 54.6
Abbott Cell-Dyn Emerald	60	13.11	0.79	6.0	12.9	10.7 - 15.5	62	53.09	1.90	3.6	53.0	47.3 - 58.9
Boule (CDS) Medonic M series	110	11.86	0.69	5.8	11.8	9.8 - 14.0	110	58.54	1.96	3.3	58.6	52.6 - 64.5
COULTER AcT diff/diff 2	98	14.43	0.37	2.6	14.4	13.3 - 15.6	98	59.66	1.49	2.5	59.7	55.1 - 64.2
Horiba ABX Micros/45/60	57	11.43	1.07	9.4	11.1	8.2 - 14.7	56	46.22	4.78	10.3	45.8	31.8 - 60.6

BASIC HEMATOLOGY W/ 3-PART DIFFERENTIAL–LYMPHOCYTES (percent) cont'd

	Specimen HD-3						Specimen HD-4					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	374	55.86	5.47	9.8	58.0	39.4 - 72.3	371	29.46	2.85	9.7	29.6	20.9 - 38.1
All Abbott Cell-Dyn Instruments	95	52.24	2.95	5.6	52.6	43.4 - 61.1	93	28.14	2.17	7.7	28.4	21.6 - 34.7
All ABX Instruments	57	47.06	4.72	10.0	46.5	32.9 - 61.3	57	24.99	2.53	10.1	24.6	17.4 - 32.6
All Boule (CDS) Instruments	111	59.22	1.93	3.3	59.2	53.4 - 65.1	110	29.74	1.19	4.0	29.7	26.1 - 33.4
All COULTER Instruments	99	59.99	1.39	2.3	60.1	55.8 - 64.2	98	32.28	0.75	2.3	32.4	30.0 - 34.6
Abbott Cell-Dyn 1700	10	52.71	1.61	3.1	53.0	47.8 - 57.6	10	28.05	1.07	3.8	28.4	24.8 - 31.3
Abbott Cell-Dyn 1800	22	48.26	1.77	3.7	48.3	42.9 - 53.6	21	25.39	2.05	8.1	24.9	19.2 - 31.6
Abbott Cell-Dyn Emerald	63	53.56	2.08	3.9	53.6	47.3 - 59.8	60	28.91	1.05	3.6	28.8	25.7 - 32.1
Boule (CDS) Medonic M series	111	59.22	1.93	3.3	59.2	53.4 - 65.1	110	29.74	1.19	4.0	29.7	26.1 - 33.4
COULTER AcT diff/diff 2	97	59.96	1.38	2.3	60.0	55.8 - 64.2	96	32.28	0.74	2.3	32.4	30.0 - 34.6
Horiba ABX Micros/45/60	57	47.06	4.72	10.0	46.5	32.9 - 61.3	57	24.99	2.53	10.1	24.6	17.4 - 32.6

	Specimen HD-5					
All Method	371	12.72	1.48	11.7	12.6	8.2 - 17.2
All Abbott Cell-Dyn Instruments	91	12.58	1.35	10.7	12.7	8.5 - 16.7
All ABX Instruments	57	11.38	1.08	9.5	11.1	8.1 - 14.7
All Boule (CDS) Instruments	109	11.84	0.74	6.2	11.8	9.6 - 14.1
All COULTER Instruments	99	14.44	0.35	2.4	14.5	13.4 - 15.5
Abbott Cell-Dyn 1700	10	11.94	0.29	2.4	12.0	11.0 - 12.9
Abbott Cell-Dyn 1800	21	10.76	0.44	4.1	10.8	9.4 - 12.1
Abbott Cell-Dyn Emerald	60	13.35	1.04	7.8	13.1	10.2 - 16.5
Boule (CDS) Medonic M series	109	11.84	0.74	6.2	11.8	9.6 - 14.1
COULTER AcT diff/diff 2	98	14.44	0.35	2.4	14.5	13.3 - 15.5
Horiba ABX Micros/45/60	57	11.38	1.08	9.5	11.1	8.1 - 14.7

BASIC HEMATOLOGY W/ 3-PART DIFFERENTIAL–MONO/MID/MIXED/MCR (percent)

	Specimen HD-1						Specimen HD-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	373	4.66	2.11	45.4	3.6	0.0 - 11.1	371	10.65	4.02	37.8	10.1	0.0 - 22.8
All Abbott Cell-Dyn Instruments	95	3.40	1.38	40.6	2.6	0.0 - 7.6	95	11.91	2.47	20.7	11.6	4.5 - 19.4
All ABX Instruments	57	3.51	0.44	12.5	3.5	2.1 - 4.9	56	17.59	3.28	18.6	18.1	7.7 - 27.5
All Boule (CDS) Instruments	107	7.49	0.89	11.8	7.5	4.8 - 10.2	109	9.99	2.25	22.5	10.2	3.2 - 16.8
All COULTER Instruments	99	3.33	0.42	12.5	3.3	2.0 - 4.6	99	6.74	1.06	15.8	6.7	3.5 - 10.0
Abbott Cell-Dyn 1700	10	4.51	0.39	8.6	4.5	3.3 - 5.7	10	11.82	1.52	12.8	12.0	7.2 - 16.4
Abbott Cell-Dyn 1800	22	5.52	0.62	11.2	5.5	3.6 - 7.4	22	15.25	1.99	13.1	15.8	9.2 - 21.3
Abbott Cell-Dyn Emerald	63	2.48	0.31	12.5	2.4	1.5 - 3.5	62	10.68	1.38	12.9	10.4	6.5 - 14.9
Boule (CDS) Medonic M series	107	7.49	0.89	11.8	7.5	4.8 - 10.2	109	9.99	2.25	22.5	10.2	3.2 - 16.8
COULTER AcT diff/diff 2	96	3.35	0.39	11.7	3.3	2.1 - 4.6	97	6.77	1.05	15.5	6.7	3.6 - 10.0
Horiba ABX Micros/45/60	57	3.51	0.44	12.5	3.5	2.1 - 4.9	56	17.59	3.28	18.6	18.1	7.7 - 27.5

	Specimen HD-3						Specimen HD-4					
All Method	373	10.45	4.05	38.8	9.7	0.0 - 22.7	373	7.47	2.34	31.3	7.4	0.4 - 14.5
All Abbott Cell-Dyn Instruments	95	12.00	2.74	22.8	11.2	3.7 - 20.3	94	6.82	2.03	29.8	6.1	0.7 - 13.0
All ABX Instruments	57	17.26	2.97	17.2	17.7	8.3 - 26.2	57	8.46	1.45	17.2	8.6	4.1 - 12.9
All Boule (CDS) Instruments	109	9.52	1.90	20.0	9.7	3.8 - 15.3	107	9.80	0.94	9.6	9.9	6.9 - 12.7
All COULTER Instruments	100	6.53	1.06	16.2	6.6	3.3 - 9.7	98	4.95	0.61	12.4	4.9	3.1 - 6.8
Abbott Cell-Dyn 1700	10	11.60	1.15	10.0	11.4	8.1 - 15.1	10	7.66	0.37	4.8	7.7	6.5 - 8.8
Abbott Cell-Dyn 1800	22	16.16	1.63	10.1	16.3	11.2 - 21.1	20	10.30	0.58	5.6	10.3	8.5 - 12.1
Abbott Cell-Dyn Emerald	62	10.54	1.35	12.8	10.2	6.5 - 14.6	62	5.55	0.66	11.9	5.4	3.5 - 7.6
Boule (CDS) Medonic M series	109	9.52	1.90	20.0	9.7	3.8 - 15.3	107	9.80	0.94	9.6	9.9	6.9 - 12.7
COULTER AcT diff/diff 2	98	6.56	1.05	16.0	6.6	3.4 - 9.8	96	4.97	0.61	12.2	4.9	3.1 - 6.8
Horiba ABX Micros/45/60	57	17.26	2.97	17.2	17.7	8.3 - 26.2	57	8.46	1.45	17.2	8.6	4.1 - 12.9

BASIC HEMATOLOGY W/ 3-PART DIFFERENTIAL–MONO/MID/MIXED/MCR (percent) cont'd

Specimen HD-5

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	374	4.71	2.17	46.1	3.7	0.0 - 11.3
All Abbott Cell-Dyn Instruments	95	3.41	1.34	39.4	2.7	0.0 - 7.5
All ABX Instruments	57	3.48	0.44	12.6	3.5	2.1 - 4.8
All Boule (CDS) Instruments	110	7.57	1.05	13.9	7.6	4.4 - 10.8
All COULTER Instruments	99	3.36	0.39	11.5	3.4	2.2 - 4.6
Abbott Cell-Dyn 1700	10	4.44	0.28	6.2	4.4	3.6 - 5.3
Abbott Cell-Dyn 1800	21	5.60	0.37	6.6	5.6	4.4 - 6.7
Abbott Cell-Dyn Emerald	63	2.52	0.31	12.4	2.4	1.5 - 3.5
Boule (CDS) Medonic M series	110	7.57	1.05	13.9	7.6	4.4 - 10.8
COULTER AcT diff/diff 2	97	3.37	0.38	11.4	3.4	2.2 - 4.6
Horiba ABX Micros/45/60	57	3.48	0.44	12.6	3.5	2.1 - 4.8

BASIC HEMATOLOGY W/ 3-PART DIFFERENTIAL–GRANULOCYTES/NEUT (percent)

	Specimen HD-1						Specimen HD-2					
Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	372	82.63	1.98	2.4	82.5	76.6 - 88.6	373	33.87	2.86	8.4	34.0	25.3 - 42.5
All Abbott Cell-Dyn Instruments	91	84.18	0.91	1.1	84.3	81.4 - 87.0	93	36.18	1.39	3.8	36.3	32.0 - 40.4
All ABX Instruments	56	85.09	0.86	1.0	85.2	82.5 - 87.7	57	36.06	2.60	7.2	35.8	28.2 - 43.9
All Boule (CDS) Instruments	111	80.67	1.30	1.6	80.7	76.7 - 84.6	108	31.26	2.16	6.9	30.9	24.7 - 37.8
All COULTER Instruments	100	82.22	0.48	0.6	82.3	80.7 - 83.7	101	33.55	1.34	4.0	33.6	29.5 - 37.6
Abbott Cell-Dyn 1700	10	83.76	0.77	0.9	83.7	81.4 - 86.1	10	36.25	1.66	4.6	36.2	31.2 - 41.3
Abbott Cell-Dyn 1800	21	83.58	0.71	0.9	83.9	81.4 - 85.8	21	36.23	1.26	3.5	35.9	32.4 - 40.1
Abbott Cell-Dyn Emerald	60	84.46	0.87	1.0	84.8	81.8 - 87.1	62	36.15	1.40	3.9	36.3	31.9 - 40.4
Boule (CDS) Medonic M series	111	80.67	1.30	1.6	80.7	76.7 - 84.6	108	31.26	2.16	6.9	30.9	24.7 - 37.8
COULTER AcT diff/diff 2	98	82.23	0.48	0.6	82.3	80.7 - 83.7	99	33.55	1.33	4.0	33.6	29.5 - 37.6
Horiba ABX Micros/45/60	56	85.09	0.86	1.0	85.2	82.5 - 87.7	57	36.06	2.60	7.2	35.8	28.2 - 43.9

BASIC HEMATOLOGY W/ 3-PART DIFFERENTIAL–GRANULOCYTES/NEUT (percent) cont'd

	Specimen HD-3						Specimen HD-4					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	375	33.70	2.71	8.0	34.0	25.5 - 41.9	374	63.14	2.70	4.3	63.0	55.0 - 71.3
All Abbott Cell-Dyn Instruments	94	35.78	1.34	3.8	35.7	31.7 - 39.9	90	65.24	1.33	2.0	65.4	61.2 - 69.3
All ABX Instruments	57	35.69	2.44	6.8	36.1	28.3 - 43.1	57	66.52	1.56	2.3	66.5	61.8 - 71.3
All Boule (CDS) Instruments	108	31.10	1.90	6.1	30.7	25.4 - 36.8	110	60.41	1.38	2.3	60.3	56.2 - 64.6
All COULTER Instruments	100	33.44	1.21	3.6	33.5	29.8 - 37.1	101	62.71	0.86	1.4	62.7	60.1 - 65.3
Abbott Cell-Dyn 1700	10	35.72	1.66	4.7	36.0	30.7 - 40.8	10	64.34	1.17	1.8	64.2	60.8 - 67.9
Abbott Cell-Dyn 1800	22	35.37	0.89	2.5	35.4	32.7 - 38.1	21	64.51	1.79	2.8	64.9	59.1 - 69.9
Abbott Cell-Dyn Emerald	62	35.94	1.41	3.9	36.0	31.7 - 40.2	60	65.55	1.24	1.9	65.6	61.8 - 69.3
Boule (CDS) Medonic M series	108	31.10	1.90	6.1	30.7	25.4 - 36.8	110	60.41	1.38	2.3	60.3	56.2 - 64.6
COULTER AcT diff/diff 2	98	33.44	1.22	3.6	33.5	29.7 - 37.1	99	62.69	0.86	1.4	62.7	60.1 - 65.3
Horiba ABX Micros/45/60	57	35.69	2.44	6.8	36.1	28.3 - 43.1	57	66.52	1.56	2.3	66.5	61.8 - 71.3

	Specimen HD-5					
All Method	372	82.57	2.02	2.4	82.4	76.5 - 88.7
All Abbott Cell-Dyn Instruments	91	84.01	1.03	1.2	84.2	80.9 - 87.1
All ABX Instruments	57	85.15	0.84	1.0	85.3	82.6 - 87.7
All Boule (CDS) Instruments	110	80.52	1.34	1.7	80.5	76.4 - 84.6
All COULTER Instruments	100	82.20	0.48	0.6	82.1	80.7 - 83.7
Abbott Cell-Dyn 1700	10	83.66	0.54	0.6	83.9	82.0 - 85.3
Abbott Cell-Dyn 1800	22	83.54	0.79	0.9	83.6	81.1 - 85.9
Abbott Cell-Dyn Emerald	59	84.24	1.10	1.3	84.5	80.9 - 87.6
Boule (CDS) Medonic M series	110	80.52	1.34	1.7	80.5	76.4 - 84.6
COULTER AcT diff/diff 2	99	82.20	0.49	0.6	82.1	80.7 - 83.7
Horiba ABX Micros/45/60	57	85.15	0.84	1.0	85.3	82.6 - 87.7

HEMATOLOGY W/ 5-PART DIFFERENTIAL–WHITE BLOOD CELL COUNT (x 10^9/L)

	Specimen DIF-1						Specimen DIF-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	12	21.17	0.61	2.9	21.0	17.9 - 24.4	12	4.09	0.17	4.1	4.1	3.4 - 4.8
All COULTER Instruments	12	21.17	0.61	2.9	21.0	17.9 - 24.4	12	4.09	0.17	4.1	4.1	3.4 - 4.8
COULTER UniCel DxH 600	10	21.22	0.57	2.7	21.0	18.0 - 24.5	10	4.10	0.12	3.0	4.1	3.4 - 4.8
	Specimen DIF-3						**Specimen DIF-4**					
All Method	12	4.13	0.14	3.4	4.1	3.5 - 4.8	12	7.99	0.37	4.6	8.0	6.7 - 9.2
All COULTER Instruments	12	4.13	0.14	3.4	4.1	3.5 - 4.8	12	7.99	0.37	4.6	8.0	6.7 - 9.2
COULTER UniCel DxH 600	10	4.10	0.10	2.4	4.1	3.4 - 4.8	10	8.20	0.20	2.4	8.3	6.9 - 9.5
	Specimen DIF-5											
All Method	12	20.97	0.51	2.4	21.0	17.8 - 24.2						
All COULTER Instruments	12	20.97	0.51	2.4	21.0	17.8 - 24.2						
COULTER UniCel DxH 600	10	21.10	0.26	1.3	21.0	17.9 - 24.3						

HEMATOLOGY W/ 5-PART DIFFERENTIAL–RED BLOOD CELL COUNT (x 10^{12}/L)

	Specimen DIF-1						Specimen DIF-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	12	5.422	0.107	2.0	5.42	5.09 - 5.75	12	2.561	0.047	1.8	2.54	2.40 - 2.72
All COULTER Instruments	12	5.422	0.107	2.0	5.42	5.09 - 5.75	12	2.561	0.047	1.8	2.54	2.40 - 2.72
COULTER UniCel DxH 600	10	5.362	0.075	1.4	5.41	5.04 - 5.69	10	2.528	0.016	0.6	2.54	2.37 - 2.68
	Specimen DIF-3						**Specimen DIF-4**					
All Method	12	2.564	0.053	2.0	2.56	2.41 - 2.72	12	4.314	0.063	1.5	4.31	4.05 - 4.58
All COULTER Instruments	12	2.564	0.053	2.0	2.56	2.41 - 2.72	12	4.314	0.063	1.5	4.31	4.05 - 4.58
COULTER UniCel DxH 600	10	2.542	0.019	0.8	2.54	2.38 - 2.70	10	4.282	0.047	1.1	4.26	4.02 - 4.54
	Specimen DIF-5											
All Method	12	5.386	0.119	2.2	5.42	5.06 - 5.71						
All COULTER Instruments	12	5.386	0.119	2.2	5.42	5.06 - 5.71						
COULTER UniCel DxH 600	10	5.302	0.093	1.7	5.31	4.98 - 5.63						

HEMATOLOGY W/ 5-PART DIFFERENTIAL–HEMOGLOBIN (g/dL)

	Specimen DIF-1						Specimen DIF-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	12	17.15	0.29	1.7	17.1	15.9 - 18.4	12	5.94	0.27	4.6	6.1	5.5 - 6.4
All COULTER Instruments	12	17.15	0.29	1.7	17.1	15.9 - 18.4	12	5.94	0.27	4.6	6.1	5.5 - 6.4
COULTER UniCel DxH 600	10	17.06	0.33	1.9	17.0	15.8 - 18.3	10	6.02	0.08	1.4	6.0	5.5 - 6.5
	Specimen DIF-3						**Specimen DIF-4**					
All Method	12	5.93	0.24	4.0	6.0	5.5 - 6.4	12	12.20	0.27	2.3	12.2	11.3 - 13.1
All COULTER Instruments	12	5.93	0.24	4.0	6.0	5.5 - 6.4	12	12.20	0.27	2.3	12.2	11.3 - 13.1
COULTER UniCel DxH 600	10	6.00	0.07	1.2	6.0	5.5 - 6.5	10	12.28	0.11	0.9	12.2	11.4 - 13.2
	Specimen DIF-5											
All Method	12	17.09	0.22	1.3	17.1	15.8 - 18.3						
All COULTER Instruments	12	17.09	0.22	1.3	17.1	15.8 - 18.3						
COULTER UniCel DxH 600	10	16.98	0.22	1.3	16.9	15.7 - 18.2						

HEMATOLOGY W/ 5-PART DIFFERENTIAL–HEMATOCRIT (percent)

	Specimen DIF-1						Specimen DIF-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	12	54.83	1.12	2.0	55.3	51.5 - 58.2	12	20.07	0.40	2.0	20.1	18.8 - 21.3
All COULTER Instruments	12	54.83	1.12	2.0	55.3	51.5 - 58.2	12	20.07	0.40	2.0	20.1	18.8 - 21.3
COULTER UniCel DxH 600	10	55.16	0.66	1.2	55.4	51.8 - 58.5	10	20.16	0.11	0.6	20.2	18.9 - 21.4
	Specimen DIF-3						**Specimen DIF-4**					
All Method	12	20.20	0.53	2.6	20.4	18.9 - 21.5	12	39.12	0.95	2.4	39.2	36.7 - 41.5
All COULTER Instruments	12	20.20	0.53	2.6	20.4	18.9 - 21.5	12	39.12	0.95	2.4	39.2	36.7 - 41.5
COULTER UniCel DxH 600	10	20.42	0.19	0.9	20.4	19.1 - 21.7	10	39.56	0.47	1.2	39.4	37.1 - 42.0
	Specimen DIF-5											
All Method	12	54.63	0.66	1.2	54.7	51.3 - 58.0						
All COULTER Instruments	12	54.63	0.66	1.2	54.7	51.3 - 58.0						
COULTER UniCel DxH 600	10	54.50	0.75	1.4	54.6	51.2 - 57.8						

HEMATOLOGY W/ 5-PART DIFFERENTIAL–PLATELET COUNT (x 10^9/L)

Instrument	Specimen DIF-1 Labs	Mean	SD	CV	Median	Range	Specimen DIF-2 Labs	Mean	SD	CV	Median	Range
All Method	12	463.3	23.6	5.1	451	347 - 580	12	80.0	3.7	4.6	80	60 - 100
All COULTER Instruments	12	463.3	23.6	5.1	451	347 - 580	12	80.0	3.7	4.6	80	60 - 100
COULTER UniCel DxH 600	10	449.8	2.2	0.5	451	337 - 563	10	77.8	2.3	2.9	78	58 - 98

Instrument	Specimen DIF-3 Labs	Mean	SD	CV	Median	Range	Specimen DIF-4 Labs	Mean	SD	CV	Median	Range
All Method	12	80.5	5.1	6.4	78	60 - 101	12	266.7	12.6	4.7	262	200 - 334
All COULTER Instruments	12	80.5	5.1	6.4	78	60 - 101	12	266.7	12.6	4.7	262	200 - 334
COULTER UniCel DxH 600	10	77.6	0.9	1.2	77	58 - 97	10	261.0	6.1	2.3	258	195 - 327

Instrument	Specimen DIF-5 Labs	Mean	SD	CV	Median	Range
All Method	12	466.5	26.9	5.8	460	349 - 584
All COULTER Instruments	12	466.5	26.9	5.8	460	349 - 584
COULTER UniCel DxH 600	10	453.2	12.4	2.7	449	339 - 567

HEMATOLOGY W/ 5-PART DIFFERENTIAL–NEUTROPHILS (percent)

Instrument	Specimen DIF-1 Labs	Mean	SD	CV	Median	Range	Specimen DIF-2 Labs	Mean	SD	CV	Median	Range
All Method	12	67.98	1.16	1.7	68.3	64.4 - 71.5	12	50.84	1.50	3.0	51.4	46.3 - 55.4
All COULTER Instruments	12	67.98	1.16	1.7	68.3	64.4 - 71.5	12	50.84	1.50	3.0	51.4	46.3 - 55.4
COULTER UniCel DxH 600	10	68.60	0.63	0.9	68.7	66.7 - 70.5	10	51.46	0.59	1.1	51.4	49.7 - 53.3

Instrument	Specimen DIF-3 Labs	Mean	SD	CV	Median	Range	Specimen DIF-4 Labs	Mean	SD	CV	Median	Range
All Method	12	50.58	1.32	2.6	50.6	46.6 - 54.6	12	48.99	1.09	2.2	48.9	45.7 - 52.3
All COULTER Instruments	12	50.58	1.32	2.6	50.6	46.6 - 54.6	12	48.99	1.09	2.2	48.9	45.7 - 52.3
COULTER UniCel DxH 600	10	51.28	0.74	1.4	51.5	49.0 - 53.6	10	49.50	0.78	1.6	49.9	47.1 - 51.9

Instrument	Specimen DIF-5 Labs	Mean	SD	CV	Median	Range
All Method	12	67.93	2.01	3.0	68.3	61.8 - 74.0
All COULTER Instruments	12	67.93	2.01	3.0	68.3	61.8 - 74.0
COULTER UniCel DxH 600	10	68.96	0.91	1.3	68.5	66.2 - 71.7

HEMATOLOGY W/ 5-PART DIFFERENTIAL– LYMPHOCYTES (percent)

	Specimen DIF-1						Specimen DIF-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	12	21.06	1.66	7.9	20.5	16.0 - 26.1	12	37.00	3.61	9.8	36.3	26.1 - 47.9
All COULTER Instruments	12	21.06	1.66	7.9	20.5	16.0 - 26.1	12	37.00	3.61	9.8	36.3	26.1 - 47.9
COULTER UniCel DxH 600	10	20.12	0.44	2.2	20.1	18.7 - 21.5	10	35.74	1.67	4.7	35.9	30.7 - 40.8
	Specimen DIF-3						**Specimen DIF-4**					
All Method	12	37.28	2.78	7.5	37.2	28.9 - 45.7	12	33.15	2.12	6.4	32.5	26.8 - 39.5
All COULTER Instruments	12	37.28	2.78	7.5	37.2	28.9 - 45.7	12	33.15	2.12	6.4	32.5	26.8 - 39.5
COULTER UniCel DxH 600	10	35.64	1.50	4.2	35.2	31.1 - 40.2	10	31.90	0.65	2.0	31.9	29.9 - 33.9
	Specimen DIF-5											
All Method	12	21.29	2.21	10.4	20.3	14.6 - 28.0						
All COULTER Instruments	12	21.29	2.21	10.4	20.3	14.6 - 28.0						
COULTER UniCel DxH 600	10	20.12	0.68	3.4	20.1	18.0 - 22.2						

HEMATOLOGY W/ 5-PART DIFFERENTIAL– MONOCYTES (percent)

	Specimen DIF-1						Specimen DIF-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	12	5.99	0.79	13.1	6.2	3.6 - 8.4	12	5.23	1.81	34.6	5.3	0.0 - 10.7
All COULTER Instruments	12	5.99	0.79	13.1	6.2	3.6 - 8.4	12	5.23	1.81	34.6	5.3	0.0 - 10.7
COULTER UniCel DxH 600	10	6.38	0.45	7.1	6.2	5.0 - 7.8	10	5.66	1.21	21.4	5.9	2.0 - 9.4
	Specimen DIF-3						**Specimen DIF-4**					
All Method	12	5.13	1.40	27.4	5.4	0.9 - 9.4	12	5.60	1.28	22.9	6.2	1.7 - 9.5
All COULTER Instruments	12	5.13	1.40	27.4	5.4	0.9 - 9.4	12	5.60	1.28	22.9	6.2	1.7 - 9.5
COULTER UniCel DxH 600	10	5.98	0.60	10.1	6.3	4.1 - 7.8	10	6.44	0.27	4.2	6.5	5.6 - 7.3
	Specimen DIF-5											
All Method	12	6.05	0.66	10.9	6.2	4.0 - 8.1						
All COULTER Instruments	12	6.05	0.66	10.9	6.2	4.0 - 8.1						
COULTER UniCel DxH 600	10	6.32	0.45	7.1	6.3	4.9 - 7.7						

HEMATOLOGY W/ 5-PART DIFFERENTIAL– EOSINOPHILS (percent)

	Specimen DIF-1						Specimen DIF-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	12	4.71	0.21	4.5	4.7	4.0 - 5.4	12	6.91	0.66	9.5	7.1	4.9 - 8.9
All COULTER Instruments	12	4.71	0.21	4.5	4.7	4.0 - 5.4	12	6.91	0.66	9.5	7.1	4.9 - 8.9
COULTER UniCel DxH 600	10	4.78	0.24	5.0	4.8	4.0 - 5.5	10	7.14	0.47	6.6	7.3	5.7 - 8.6
	Specimen DIF-3						**Specimen DIF-4**					
All Method	12	6.99	0.35	5.0	6.9	5.9 - 8.1	12	12.18	0.57	4.7	12.1	10.4 - 13.9
All COULTER Instruments	12	6.99	0.35	5.0	6.9	5.9 - 8.1	12	12.18	0.57	4.7	12.1	10.4 - 13.9
COULTER UniCel DxH 600	10	7.10	0.41	5.7	6.9	5.8 - 8.4	10	12.16	0.50	4.1	12.2	10.6 - 13.7
	Specimen DIF-5											
All Method	12	4.50	0.47	10.4	4.6	3.1 - 5.9						
All COULTER Instruments	12	4.50	0.47	10.4	4.6	3.1 - 5.9						
COULTER UniCel DxH 600	10	4.50	0.60	13.3	4.8	2.7 - 6.3						

HEMATOLOGY W/ 5-PART DIFFERENTIAL– BASOPHILS (percent)

	Specimen DIF-1						Specimen DIF-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	12	0.26	0.28	105.7	0.2	0.0 - 1.1	12	0.03	0.05	185.2	0.0	0.0 - 0.2
All COULTER Instruments	12	0.26	0.28	105.7	0.2	0.0 - 1.1	12	0.03	0.05	185.2	0.0	0.0 - 0.2
COULTER UniCel DxH 600	10	0.12	0.08	69.7	0.1	0.0 - 0.4	10	0.00	0.01	0.0	0.0	0.0 - 0.1
	Specimen DIF-3						**Specimen DIF-4**					
All Method	12	0.04	0.07	198.4	0.0	0.0 - 0.3	12	0.09	0.16	187.7	0.0	0.0 - 0.6
All COULTER Instruments	12	0.04	0.07	198.4	0.0	0.0 - 0.3	12	0.09	0.16	187.7	0.0	0.0 - 0.6
COULTER UniCel DxH 600	10	0.00	0.01	0.0	0.0	0.0 - 0.1	10	0.00	0.01	0.0	0.0	0.0 - 0.1
	Specimen DIF-5											
All Method	12	0.24	0.26	107.8	0.1	0.0 - 1.1						
All COULTER Instruments	12	0.24	0.26	107.8	0.1	0.0 - 1.1						
COULTER UniCel DxH 600	10	0.10	0.01	0.0	0.1	0.0 - 0.2						

BLOOD LEAD (µg/dL)

	Specimen LED-1						Specimen LED-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	19	5.15	0.73	14.2	5.3	1.1 - 9.2	19	36.11	2.33	6.5	36.1	32.1 - 40.2
All Magellan Diagnostics Methods	19	5.15	0.73	14.2	5.3	1.1 - 9.2	19	36.11	2.33	6.5	36.1	32.1 - 40.2
Magellan Diagnostics LeadCare II	19	5.15	0.73	14.2	5.3	1.1 - 9.2	19	36.11	2.33	6.5	36.1	32.1 - 40.2

	Specimen LED-3						Specimen LED-4					
	Labs	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	-	-	-	-	-	-	-	-	-	-	-	-
All Magellan Diagnostics Methods	-	-	-	-	-	-	-	-	-	-	-	-

	Specimen LED-5					
All Method	-	-	-	-	-	-
All Magellan Diagnostics Methods	-	-	-	-	-	-

RETICULOCYTE COUNT (percent)

	Specimen RT-1						Specimen RT-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	23	3.27	0.91	27.7	2.9	1.4 - 5.1	23	1.04	0.20	19.0	1.0	0.6 - 1.5
All Automated Methods	13	2.78	0.45	16.3	2.7	1.8 - 3.7	13	0.96	0.10	10.9	1.0	0.6 - 1.3
All Manual Methods	10	3.91	0.96	24.7	4.2	1.9 - 5.9	10	1.14	0.25	21.6	1.2	0.6 - 1.7

HEMATOLOGY W/ 5-PART DIFFERENTIAL–WHITE BLOOD CELL COUNT (x 10^9/L)

	Specimen BCX-1						Specimen BCX-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	93	29.11	0.84	2.9	29.1	24.7 - 33.5	94	2.78	0.10	3.5	2.8	2.3 - 3.2
All ABX Instruments	88	29.07	0.90	3.1	29.1	24.7 - 33.5	88	2.78	0.10	3.6	2.8	2.3 - 3.2
All COULTER Instruments	6	29.27	0.78	2.7	29.4	24.8 - 33.7	6	2.75	0.05	2.0	2.8	2.3 - 3.2
ABX Pentra 60C+	77	29.13	0.91	3.1	29.2	24.7 - 33.5	77	2.77	0.10	3.4	2.8	2.3 - 3.2
ABX Pentra 80 / XL 80	10	28.66	0.67	2.4	28.9	24.3 - 33.0	10	2.85	0.12	4.1	2.8	2.4 - 3.3
COULTER AcT 5diff	6	29.27	0.78	2.7	29.4	24.8 - 33.7	6	2.75	0.05	2.0	2.8	2.3 - 3.2
	Specimen BCX-3						**Specimen BCX-4**					
All Method	92	6.97	0.18	2.6	6.9	5.9 - 8.1	92	7.83	0.20	2.6	7.8	6.6 - 9.1
All ABX Instruments	87	6.97	0.18	2.6	6.9	5.9 - 8.1	86	7.83	0.20	2.6	7.8	6.6 - 9.1
All COULTER Instruments	6	6.83	0.34	5.0	6.9	5.8 - 7.9	6	7.82	0.25	3.2	7.9	6.6 - 9.0
ABX Pentra 60C+	76	6.96	0.18	2.5	6.9	5.9 - 8.1	75	7.82	0.20	2.6	7.8	6.6 - 9.0
ABX Pentra 80 / XL 80	10	7.06	0.21	3.0	7.2	6.0 - 8.2	10	7.88	0.18	2.3	7.9	6.6 - 9.1
COULTER AcT 5diff	6	6.83	0.34	5.0	6.9	5.8 - 7.9	6	7.82	0.25	3.2	7.9	6.6 - 9.0
	Specimen BCX-5											
All Method	91	18.26	0.52	2.8	18.3	15.5 - 21.1						
All ABX Instruments	85	18.26	0.53	2.9	18.2	15.5 - 21.0						
All COULTER Instruments	6	18.30	0.41	2.3	18.4	15.5 - 21.1						
ABX Pentra 60C+	75	18.26	0.54	2.9	18.2	15.5 - 21.1						
ABX Pentra 80 / XL 80	10	17.15	3.39	19.7	18.3	14.5 - 19.8						
COULTER AcT 5diff	6	18.30	0.41	2.3	18.4	15.5 - 21.1						

HEMATOLOGY W/ 5-PART DIFFERENTIAL–RED BLOOD CELL COUNT (x 10^{12}/L)

	Specimen BCX-1						Specimen BCX-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	93	3.046	0.053	1.7	3.04	2.86 - 3.23	92	2.404	0.047	1.9	2.41	2.25 - 2.55
All ABX Instruments	88	3.046	0.054	1.8	3.05	2.86 - 3.23	87	2.406	0.045	1.9	2.41	2.26 - 2.56
All COULTER Instruments	6	3.088	0.122	3.9	3.05	2.90 - 3.28	6	2.410	0.123	5.1	2.39	2.26 - 2.56
ABX Pentra 60C+	77	3.054	0.052	1.7	3.05	2.87 - 3.24	76	2.415	0.040	1.7	2.42	2.26 - 2.56
ABX Pentra 80 / XL 80	10	2.993	0.039	1.3	2.99	2.81 - 3.18	10	2.344	0.030	1.3	2.35	2.20 - 2.49
COULTER AcT 5diff	6	3.088	0.122	3.9	3.05	2.90 - 3.28	6	2.410	0.123	5.1	2.39	2.26 - 2.56

	Specimen BCX-3						Specimen BCX-4					
All Method	92	3.857	0.066	1.7	3.86	3.62 - 4.09	92	4.649	0.069	1.5	4.66	4.36 - 4.93
All ABX Instruments	87	3.857	0.067	1.7	3.86	3.62 - 4.09	86	4.647	0.070	1.5	4.66	4.36 - 4.93
All COULTER Instruments	6	3.945	0.221	5.6	3.87	3.70 - 4.19	6	4.670	0.063	1.3	4.69	4.38 - 4.96
ABX Pentra 60C+	76	3.865	0.063	1.6	3.87	3.63 - 4.10	76	4.650	0.070	1.5	4.66	4.37 - 4.93
ABX Pentra 80 / XL 80	10	3.803	0.080	2.1	3.79	3.57 - 4.04	10	4.654	0.112	2.4	4.65	4.37 - 4.94
COULTER AcT 5diff	6	3.945	0.221	5.6	3.87	3.70 - 4.19	6	4.670	0.063	1.3	4.69	4.38 - 4.96

	Specimen BCX-5					
All Method	92	4.979	0.079	1.6	4.99	4.67 - 5.28
All ABX Instruments	86	4.977	0.076	1.5	4.99	4.67 - 5.28
All COULTER Instruments	6	4.998	0.126	2.5	4.97	4.69 - 5.30
ABX Pentra 60C+	76	4.989	0.077	1.5	4.99	4.68 - 5.29
ABX Pentra 80 / XL 80	10	4.922	0.077	1.6	4.93	4.62 - 5.22
COULTER AcT 5diff	6	4.998	0.126	2.5	4.97	4.69 - 5.30

HEMATOLOGY W/ 5-PART DIFFERENTIAL–HEMOGLOBIN (g/dL)

	Specimen BCX-1						Specimen BCX-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	93	7.84	0.10	1.2	7.8	7.2 - 8.4	92	6.20	0.08	1.3	6.2	5.7 - 6.7
All ABX Instruments	88	7.84	0.10	1.2	7.8	7.2 - 8.4	87	6.19	0.08	1.3	6.2	5.7 - 6.7
All COULTER Instruments	6	8.05	0.37	4.6	7.9	7.4 - 8.7	6	6.38	0.26	4.0	6.3	5.9 - 6.9
ABX Pentra 60C+	77	7.85	0.09	1.2	7.8	7.3 - 8.5	76	6.20	0.07	1.2	6.2	5.7 - 6.7
ABX Pentra 80 / XL 80	10	7.77	0.11	1.4	7.8	7.2 - 8.4	10	6.10	0.09	1.5	6.1	5.6 - 6.6
COULTER AcT 5diff	6	8.05	0.37	4.6	7.9	7.4 - 8.7	6	6.38	0.26	4.0	6.3	5.9 - 6.9

	Specimen BCX-3						Specimen BCX-4					
All Method	92	12.50	0.15	1.2	12.5	11.6 - 13.4	93	13.18	0.15	1.1	13.2	12.2 - 14.2
All ABX Instruments	87	12.51	0.15	1.2	12.5	11.6 - 13.4	87	13.18	0.15	1.1	13.2	12.2 - 14.2
All COULTER Instruments	6	12.78	0.75	5.9	12.5	11.8 - 13.7	6	13.20	0.18	1.4	13.2	12.2 - 14.2
ABX Pentra 60C+	75	12.53	0.13	1.1	12.5	11.6 - 13.5	76	13.19	0.14	1.1	13.2	12.2 - 14.2
ABX Pentra 80 / XL 80	10	12.42	0.18	1.4	12.4	11.5 - 13.3	10	13.10	0.21	1.6	13.1	12.1 - 14.1
COULTER AcT 5diff	6	12.78	0.75	5.9	12.5	11.8 - 13.7	6	13.20	0.18	1.4	13.2	12.2 - 14.2

	Specimen BCX-5					
All Method	90	16.24	0.18	1.1	16.2	15.1 - 17.4
All ABX Instruments	85	16.25	0.17	1.1	16.2	15.1 - 17.4
All COULTER Instruments	6	16.23	0.56	3.5	16.1	15.0 - 17.4
ABX Pentra 60C+	75	16.27	0.16	1.0	16.3	15.1 - 17.5
ABX Pentra 80 / XL 80	10	15.85	0.93	5.9	16.2	14.7 - 17.0
COULTER AcT 5diff	6	16.23	0.56	3.5	16.1	15.0 - 17.4

HEMATOLOGY W/ 5-PART DIFFERENTIAL–HEMATOCRIT (percent)

	Specimen BCX-1						Specimen BCX-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	93	23.16	0.45	1.9	23.1	21.7 - 24.6	93	17.92	0.32	1.8	17.9	16.8 - 19.0
All ABX Instruments	88	23.17	0.45	2.0	23.1	21.7 - 24.6	88	17.94	0.31	1.7	17.9	16.8 - 19.1
All COULTER Instruments	6	23.38	1.04	4.4	22.9	21.9 - 24.8	6	17.90	0.92	5.1	17.7	16.8 - 19.0
ABX Pentra 60C+	77	23.15	0.45	2.0	23.1	21.7 - 24.6	77	17.92	0.31	1.7	17.9	16.8 - 19.0
ABX Pentra 80 / XL 80	10	23.41	0.36	1.5	23.3	22.0 - 24.9	10	18.14	0.24	1.3	18.2	17.0 - 19.3
COULTER AcT 5diff	6	23.38	1.04	4.4	22.9	21.9 - 24.8	6	17.90	0.92	5.1	17.7	16.8 - 19.0

	Specimen BCX-3						Specimen BCX-4					
All Method	92	35.10	0.62	1.8	35.1	32.9 - 37.3	92	37.51	0.62	1.6	37.5	35.2 - 39.8
All ABX Instruments	87	35.12	0.63	1.8	35.1	33.0 - 37.3	86	37.52	0.63	1.7	37.6	35.2 - 39.8
All COULTER Instruments	6	35.60	2.12	6.0	34.9	33.4 - 37.8	6	37.40	0.49	1.3	37.4	35.1 - 39.7
ABX Pentra 60C+	76	35.12	0.63	1.8	35.1	33.0 - 37.3	76	37.50	0.64	1.7	37.6	35.2 - 39.8
ABX Pentra 80 / XL 80	10	35.23	0.63	1.8	35.1	33.1 - 37.4	10	37.86	0.81	2.1	37.9	35.5 - 40.2
COULTER AcT 5diff	6	35.60	2.12	6.0	34.9	33.4 - 37.8	6	37.40	0.49	1.3	37.4	35.1 - 39.7

	Specimen BCX-5					
All Method	91	45.58	0.81	1.8	45.5	42.8 - 48.4
All ABX Instruments	85	45.59	0.77	1.7	45.5	42.8 - 48.4
All COULTER Instruments	6	45.40	1.34	2.9	45.0	42.6 - 48.2
ABX Pentra 60C+	75	45.66	0.76	1.7	45.6	42.9 - 48.4
ABX Pentra 80 / XL 80	10	44.56	2.12	4.7	45.2	41.8 - 47.3
COULTER AcT 5diff	6	45.40	1.34	2.9	45.0	42.6 - 48.2

HEMATOLOGY W/ 5-PART DIFFERENTIAL–PLATELET COUNT (x 10^9/L)

	Specimen BCX-1						Specimen BCX-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	94	409.8	13.3	3.2	409	307 - 513	94	74.0	4.1	5.6	74	55 - 93
All ABX Instruments	88	410.2	13.1	3.2	410	307 - 513	88	74.0	4.2	5.7	74	55 - 93
All COULTER Instruments	6	404.0	15.6	3.9	408	303 - 505	6	74.0	3.5	4.7	74	55 - 93
ABX Pentra 60C+	77	410.4	13.3	3.2	410	307 - 514	77	74.3	4.1	5.6	74	55 - 93
ABX Pentra 80 / XL 80	10	408.7	12.6	3.1	409	306 - 511	10	72.6	4.3	6.0	75	54 - 91
COULTER AcT 5diff	6	404.0	15.6	3.9	408	303 - 505	6	74.0	3.5	4.7	74	55 - 93
	Specimen BCX-3						**Specimen BCX-4**					
All Method	92	296.0	10.2	3.4	296	222 - 370	90	238.5	8.3	3.5	240	178 - 299
All ABX Instruments	87	296.3	10.4	3.5	296	222 - 371	85	238.4	8.3	3.5	240	178 - 298
All COULTER Instruments	6	257.2	81.5	31.7	289	192 - 322	6	213.3	65.3	30.6	235	159 - 267
ABX Pentra 60C+	76	296.1	9.9	3.3	296	222 - 371	74	238.2	8.1	3.4	240	178 - 298
ABX Pentra 80 / XL 80	10	298.2	14.3	4.8	300	223 - 373	10	238.9	10.6	4.4	242	179 - 299
COULTER AcT 5diff	6	257.2	81.5	31.7	289	192 - 322	6	213.3	65.3	30.6	235	159 - 267
	Specimen BCX-5											
All Method	90	492.3	15.6	3.2	493	369 - 616						
All ABX Instruments	86	492.4	15.9	3.2	493	369 - 616						
All COULTER Instruments	6	415.8	160.1	38.5	484	311 - 520						
ABX Pentra 60C+	76	491.5	16.1	3.3	492	368 - 615						
ABX Pentra 80 / XL 80	10	472.8	80.5	17.0	493	354 - 591						
COULTER AcT 5diff	6	415.8	160.1	38.5	484	311 - 520						

HEMATOLOGY W/ 5-PART DIFFERENTIAL–NEUTROPHILS (percent)

	Specimen BCX-1						Specimen BCX-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	92	71.58	4.00	5.6	72.5	59.5 - 83.6	89	59.28	2.71	4.6	59.1	51.1 - 67.5
All ABX Instruments	85	72.41	2.84	3.9	72.7	63.8 - 81.0	84	59.43	2.57	4.3	59.1	51.7 - 67.2
All COULTER Instruments	6	60.85	2.91	4.8	61.9	52.1 - 69.6	6	55.17	5.54	10.0	57.3	38.5 - 71.8
ABX Pentra 60C+	76	72.99	2.22	3.0	73.2	66.3 - 79.7	77	59.52	2.47	4.1	59.2	52.1 - 67.0
ABX Pentra 80 / XL 80	10	65.59	3.03	4.6	65.6	56.5 - 74.7	10	53.46	5.43	10.2	54.7	37.1 - 69.8
COULTER AcT 5diff	6	60.85	2.91	4.8	61.9	52.1 - 69.6	6	55.17	5.54	10.0	57.3	38.5 - 71.8

	Specimen BCX-3						Specimen BCX-4					
All Method	93	55.83	3.74	6.7	56.5	44.6 - 67.1	94	56.58	4.27	7.6	56.5	43.7 - 69.4
All ABX Instruments	87	55.79	3.72	6.7	56.5	44.6 - 67.0	88	56.66	4.28	7.6	56.5	43.8 - 69.6
All COULTER Instruments	6	56.38	4.29	7.6	56.4	43.5 - 69.3	6	55.33	4.29	7.8	56.4	42.4 - 68.3
ABX Pentra 60C+	77	56.26	3.41	6.1	56.6	46.0 - 66.5	76	57.10	3.69	6.5	56.7	46.0 - 68.2
ABX Pentra 80 / XL 80	9	52.14	4.44	8.5	51.0	38.8 - 65.5	10	51.89	4.38	8.4	52.0	38.7 - 65.1
COULTER AcT 5diff	6	56.38	4.29	7.6	56.4	43.5 - 69.3	6	55.33	4.29	7.8	56.4	42.4 - 68.3

	Specimen BCX-5					
All Method	91	72.28	4.23	5.9	73.1	59.5 - 85.0
All ABX Instruments	84	73.11	3.18	4.3	73.4	63.5 - 82.7
All COULTER Instruments	6	61.25	4.47	7.3	62.3	47.8 - 74.7
ABX Pentra 60C+	76	73.63	2.52	3.4	73.7	66.0 - 81.2
ABX Pentra 80 / XL 80	10	64.88	5.45	8.4	64.0	48.5 - 81.3
COULTER AcT 5diff	6	61.25	4.47	7.3	62.3	47.8 - 74.7

HEMATOLOGY W/ 5-PART DIFFERENTIAL–LYMPHOCYTES (percent)

	Specimen BCX-1						Specimen BCX-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	92	22.26	2.96	13.3	21.9	13.3 - 31.2	92	26.33	3.41	13.0	26.0	16.0 - 36.6
All ABX Instruments	86	22.47	2.84	12.7	22.1	13.9 - 31.0	86	26.54	3.25	12.2	26.2	16.7 - 36.3
All COULTER Instruments	6	19.33	3.39	17.5	18.0	9.1 - 29.5	6	23.32	4.59	19.7	22.0	9.5 - 37.1
ABX Pentra 60C+	77	21.89	2.21	10.1	21.8	15.2 - 28.6	77	26.20	2.83	10.8	25.9	17.6 - 34.8
ABX Pentra 80 / XL 80	10	29.24	2.87	9.8	29.2	20.6 - 37.9	10	32.90	5.73	17.4	32.3	15.7 - 50.1
COULTER AcT 5diff	6	19.33	3.39	17.5	18.0	9.1 - 29.5	6	23.32	4.59	19.7	22.0	9.5 - 37.1

	Specimen BCX-3						Specimen BCX-4					
All Method	93	36.33	3.63	10.0	36.1	25.4 - 47.3	94	35.24	4.45	12.6	35.6	21.9 - 48.6
All ABX Instruments	87	36.61	3.47	9.5	36.2	26.2 - 47.1	88	35.52	4.33	12.2	35.8	22.5 - 48.5
All COULTER Instruments	6	32.23	3.67	11.4	32.8	21.2 - 43.3	6	31.12	4.51	14.5	29.8	17.5 - 44.7
ABX Pentra 60C+	76	36.02	2.97	8.2	36.0	27.1 - 45.0	77	34.82	3.82	11.0	35.4	23.3 - 46.3
ABX Pentra 80 / XL 80	9	40.23	4.11	10.2	39.2	27.9 - 52.6	10	41.14	4.18	10.2	42.7	28.5 - 53.7
COULTER AcT 5diff	6	32.23	3.67	11.4	32.8	21.2 - 43.3	6	31.12	4.51	14.5	29.8	17.5 - 44.7

	Specimen BCX-5					
All Method	90	22.40	3.54	15.8	22.3	11.7 - 33.1
All ABX Instruments	85	22.74	3.33	14.7	22.5	12.7 - 32.8
All COULTER Instruments	5	16.60	1.27	7.7	16.6	12.7 - 20.5
ABX Pentra 60C+	76	22.08	2.44	11.0	22.2	14.7 - 29.4
ABX Pentra 80 / XL 80	9	29.82	4.33	14.5	31.8	16.8 - 42.9
COULTER AcT 5diff	5	16.60	1.27	7.7	16.6	12.7 - 20.5

HEMATOLOGY W/ 5-PART DIFFERENTIAL–MONOCYTES (percent)

	Specimen BCX-1						Specimen BCX-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	91	1.36	0.36	26.2	1.3	0.2 - 2.5	93	0.80	0.48	60.0	0.6	0.0 - 2.3
All ABX Instruments	84	1.38	0.33	23.8	1.3	0.3 - 2.4	87	0.81	0.48	59.2	0.7	0.0 - 2.3
All COULTER Instruments	6	1.28	0.46	36.0	1.1	0.0 - 2.7	6	0.62	0.47	76.3	0.6	0.0 - 2.1
ABX Pentra 60C+	75	1.40	0.33	23.7	1.4	0.4 - 2.4	77	0.84	0.47	55.8	0.8	0.0 - 2.3
ABX Pentra 80 / XL 80	10	1.44	0.68	47.5	1.3	0.0 - 3.5	10	0.74	0.82	111.3	0.3	0.0 - 3.3
COULTER AcT 5diff	6	1.28	0.46	36.0	1.1	0.0 - 2.7	6	0.62	0.47	76.3	0.6	0.0 - 2.1
	Specimen BCX-3						**Specimen BCX-4**					
All Method	94	2.22	0.87	39.3	2.2	0.0 - 4.9	92	1.42	0.51	35.9	1.5	0.0 - 3.0
All ABX Instruments	88	2.26	0.86	38.1	2.3	0.0 - 4.9	86	1.43	0.51	35.4	1.5	0.0 - 3.0
All COULTER Instruments	6	1.62	0.88	54.4	1.6	0.0 - 4.3	6	1.23	0.54	44.0	1.0	0.0 - 2.9
ABX Pentra 60C+	77	2.28	0.86	37.8	2.2	0.0 - 4.9	75	1.49	0.47	31.3	1.5	0.0 - 2.9
ABX Pentra 80 / XL 80	10	2.04	0.87	42.7	2.2	0.0 - 4.7	10	1.01	0.63	62.7	0.9	0.0 - 3.0
COULTER AcT 5diff	6	1.62	0.88	54.4	1.6	0.0 - 4.3	6	1.23	0.54	44.0	1.0	0.0 - 2.9
	Specimen BCX-5											
All Method	90	1.24	0.35	27.8	1.2	0.2 - 2.3						
All ABX Instruments	84	1.23	0.34	27.6	1.2	0.2 - 2.3						
All COULTER Instruments	6	1.38	0.44	31.5	1.5	0.0 - 2.7						
ABX Pentra 60C+	74	1.27	0.33	26.3	1.2	0.2 - 2.3						
ABX Pentra 80 / XL 80	10	1.10	0.58	52.8	0.9	0.0 - 2.9						
COULTER AcT 5diff	6	1.38	0.44	31.5	1.5	0.0 - 2.7						

HEMATOLOGY W/ 5-PART DIFFERENTIAL– EOSINOPHILS (percent)

	Specimen BCX-1						Specimen BCX-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	93	3.04	0.41	13.4	3.0	1.8 - 4.3	91	12.87	2.23	17.4	12.8	6.1 - 19.6
All ABX Instruments	88	3.03	0.39	13.0	3.0	1.8 - 4.3	86	13.05	2.10	16.1	13.0	6.7 - 19.4
All COULTER Instruments	6	3.38	0.84	24.8	3.3	0.8 - 6.0	5	9.64	2.27	23.6	9.4	2.8 - 16.5
ABX Pentra 60C+	77	3.03	0.40	13.1	3.0	1.8 - 4.3	76	13.04	1.98	15.2	13.0	7.1 - 19.0
ABX Pentra 80 / XL 80	10	3.01	0.38	12.5	3.0	1.8 - 4.2	9	13.09	3.15	24.0	12.0	3.6 - 22.6
COULTER AcT 5diff	6	3.38	0.84	24.8	3.3	0.8 - 6.0	5	9.64	2.27	23.6	9.4	2.8 - 16.5
	Specimen BCX-3						**Specimen BCX-4**					
All Method	90	4.97	1.38	27.7	4.9	0.8 - 9.2	91	6.05	1.19	19.7	6.0	2.4 - 9.7
All ABX Instruments	85	5.06	1.35	26.7	5.0	1.0 - 9.2	86	6.03	1.17	19.4	6.1	2.5 - 9.6
All COULTER Instruments	5	3.52	1.08	30.8	2.9	0.2 - 6.8	5	6.32	1.63	25.7	5.6	1.4 - 11.3
ABX Pentra 60C+	75	5.00	1.30	26.1	5.0	1.0 - 9.0	76	6.09	1.17	19.2	6.2	2.5 - 9.6
ABX Pentra 80 / XL 80	9	5.49	1.79	32.6	4.8	0.1 - 10.9	9	5.43	1.11	20.5	5.6	2.0 - 8.8
COULTER AcT 5diff	5	3.52	1.08	30.8	2.9	0.2 - 6.8	5	6.32	1.63	25.7	5.6	1.4 - 11.3
	Specimen BCX-5											
All Method	91	2.22	0.39	17.5	2.2	1.0 - 3.4						
All ABX Instruments	87	2.20	0.39	17.5	2.2	1.0 - 3.4						
All COULTER Instruments	5	2.76	0.48	17.5	2.5	1.3 - 4.3						
ABX Pentra 60C+	77	2.19	0.40	18.1	2.2	0.9 - 3.4						
ABX Pentra 80 / XL 80	9	2.28	0.29	12.8	2.3	1.4 - 3.2						
COULTER AcT 5diff	5	2.76	0.48	17.5	2.5	1.3 - 4.3						

HEMATOLOGY W/ 5-PART DIFFERENTIAL– BASOPHILS (percent)

	Specimen BCX-1						Specimen BCX-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	88	0.75	0.05	6.7	0.8	0.5 - 0.9	88	0.46	0.05	10.6	0.5	0.3 - 0.7
All ABX Instruments	88	0.75	0.05	6.7	0.7	0.5 - 0.9	88	0.46	0.05	10.6	0.5	0.3 - 0.7
All COULTER Instruments	6	15.15	0.69	4.5	15.0	13.0 - 17.3	6	9.93	0.77	7.8	9.8	7.6 - 12.3
ABX Pentra 60C+	77	0.75	0.05	6.7	0.8	0.5 - 1.0	77	0.46	0.05	10.6	0.5	0.3 - 0.7
ABX Pentra 80 / XL 80	10	0.72	0.04	5.9	0.7	0.5 - 0.9	10	0.46	0.05	11.2	0.5	0.3 - 0.7
COULTER AcT 5diff	6	15.15	0.69	4.5	15.0	13.0 - 17.3	6	9.93	0.77	7.8	9.8	7.6 - 12.3

	Specimen BCX-3						Specimen BCX-4					
All Method	87	0.22	0.04	18.2	0.2	0.0 - 0.4	87	0.34	0.05	14.5	0.3	0.1 - 0.5
All ABX Instruments	87	0.22	0.04	18.2	0.2	0.0 - 0.4	87	0.34	0.05	14.5	0.3	0.1 - 0.5
All COULTER Instruments	6	4.65	0.25	5.4	4.7	3.8 - 5.5	6	6.83	0.56	8.2	6.8	5.1 - 8.6
ABX Pentra 60C+	76	0.22	0.04	18.9	0.2	0.0 - 0.4	76	0.34	0.05	14.5	0.3	0.1 - 0.5
ABX Pentra 80 / XL 80	10	0.20	0.01	0.0	0.2	0.1 - 0.3	10	0.32	0.04	13.2	0.3	0.1 - 0.5
COULTER AcT 5diff	6	4.65	0.25	5.4	4.7	3.8 - 5.5	6	6.83	0.56	8.2	6.8	5.1 - 8.6

	Specimen BCX-5					
All Method	81	0.80	0.01	0.0	0.8	0.7 - 0.9
All ABX Instruments	81	0.80	0.01	0.0	0.8	0.7 - 0.9
All COULTER Instruments	6	15.92	0.43	2.7	16.0	14.6 - 17.2
ABX Pentra 60C+	73	0.80	0.01	0.0	0.8	0.7 - 0.9
ABX Pentra 80 / XL 80	10	0.75	0.13	16.9	0.8	0.3 - 1.2
COULTER AcT 5diff	6	15.92	0.43	2.7	16.0	14.6 - 17.2

HEMATOLOGY W/ 5 or 6-PART DIFFERENTIAL–WHITE BLOOD CELL COUNT (x 10^9/L)

Specimen MX-1

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	110	19.52	0.57	2.9	19.6	16.5 - 22.5
All Sysmex XE/XT Instruments	5	19.10	0.85	4.4	19.1	16.2 - 22.0
All Sysmex XN/XS Instruments	108	19.53	0.57	2.9	19.6	16.5 - 22.5
Sysmex XN-1000	16	19.91	0.33	1.6	20.0	16.9 - 22.9
Sysmex XN-330	5	18.87	0.40	2.1	18.8	16.0 - 21.7
Sysmex XN-430	32	19.39	0.56	2.9	19.3	16.4 - 22.3
Sysmex XN-450	9	19.29	0.34	1.7	19.2	16.3 - 22.2
Sysmex XN-550	18	19.37	0.61	3.1	19.6	16.4 - 22.3
Sysmex XS-1000i	28	19.74	0.53	2.7	19.7	16.7 - 22.8

Specimen MX-2

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	109	3.42	0.37	10.7	3.3	2.9 - 4.0
All Sysmex XE/XT Instruments	5	3.70	0.14	3.8	3.7	3.1 - 4.3
All Sysmex XN/XS Instruments	107	3.42	0.37	10.8	3.3	2.9 - 4.0
Sysmex XN-1000	16	3.68	0.08	2.0	3.7	3.1 - 4.3
Sysmex XN-330	5	2.93	0.12	3.9	3.0	2.4 - 3.4
Sysmex XN-430	31	3.16	0.22	7.1	3.1	2.6 - 3.7
Sysmex XN-450	8	3.14	0.13	4.2	3.1	2.6 - 3.7
Sysmex XN-550	18	3.16	0.25	8.1	3.1	2.6 - 3.7
Sysmex XS-1000i	27	3.84	0.09	2.4	3.9	3.2 - 4.5

Specimen MX-3

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	110	3.41	0.38	11.2	3.3	2.8 - 4.0
All Sysmex XE/XT Instruments	5	3.70	0.01	0.0	3.7	3.1 - 4.3
All Sysmex XN/XS Instruments	108	3.41	0.38	11.3	3.3	2.8 - 4.0
Sysmex XN-1000	16	3.67	0.11	3.1	3.7	3.1 - 4.3
Sysmex XN-330	5	3.03	0.15	5.0	3.0	2.5 - 3.5
Sysmex XN-430	32	3.18	0.25	8.0	3.1	2.7 - 3.7
Sysmex XN-450	9	3.11	0.13	4.1	3.1	2.6 - 3.6
Sysmex XN-550	17	3.09	0.15	4.8	3.1	2.6 - 3.6
Sysmex XS-1000i	26	3.86	0.09	2.3	3.9	3.2 - 4.5

Specimen MX-4

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	110	6.72	0.52	7.7	6.5	5.7 - 7.8
All Sysmex XE/XT Instruments	5	7.15	0.35	4.9	7.2	6.0 - 8.3
All Sysmex XN/XS Instruments	108	6.71	0.52	7.7	6.5	5.7 - 7.8
Sysmex XN-1000	16	7.22	0.12	1.7	7.2	6.1 - 8.4
Sysmex XN-330	5	6.37	0.15	2.4	6.4	5.4 - 7.4
Sysmex XN-430	32	6.51	0.37	5.7	6.4	5.5 - 7.5
Sysmex XN-450	9	6.36	0.15	2.4	6.3	5.4 - 7.4
Sysmex XN-550	18	6.47	0.39	6.1	6.4	5.5 - 7.5
Sysmex XS-1000i	28	6.95	0.65	9.4	6.7	5.9 - 8.0

Specimen MX-5

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	109	19.49	0.49	2.5	19.5	16.5 - 22.5
All Sysmex XE/XT Instruments	5	19.25	0.64	3.3	19.3	16.3 - 22.2
All Sysmex XN/XS Instruments	107	19.49	0.49	2.5	19.5	16.5 - 22.5
Sysmex XN-1000	16	19.79	0.39	2.0	19.8	16.8 - 22.8
Sysmex XN-330	5	19.23	0.70	3.7	19.3	16.3 - 22.2
Sysmex XN-430	32	19.39	0.47	2.4	19.5	16.4 - 22.4
Sysmex XN-450	9	19.39	0.36	1.8	19.4	16.4 - 22.3
Sysmex XN-550	18	19.29	0.51	2.7	19.3	16.3 - 22.2
Sysmex XS-1000i	28	19.70	0.59	3.0	19.7	16.7 - 22.7

HEMATOLOGY W/ 5 or 6-PART DIFFERENTIAL–RED BLOOD CELL COUNT (x 10^{12}/L)

Specimen MX-1

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	107	5.593	0.054	1.0	5.59	5.25 - 5.93
All Sysmex XE/XT Instruments	5	5.605	0.092	1.6	5.61	5.26 - 5.95
All Sysmex XN/XS Instruments	105	5.593	0.054	1.0	5.59	5.25 - 5.93
Sysmex XN-1000	15	5.614	0.035	0.6	5.63	5.27 - 5.96
Sysmex XN-330	5	5.547	0.081	1.5	5.56	5.21 - 5.88
Sysmex XN-430	31	5.624	0.058	1.0	5.63	5.28 - 5.97
Sysmex XN-450	9	5.578	0.042	0.7	5.56	5.24 - 5.92
Sysmex XN-550	18	5.598	0.055	1.0	5.61	5.26 - 5.94
Sysmex XS-1000i	28	5.560	0.048	0.9	5.55	5.22 - 5.90

Specimen MX-2

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	109	2.394	0.035	1.5	2.39	2.25 - 2.54
All Sysmex XE/XT Instruments	5	2.490	0.042	1.7	2.49	2.34 - 2.64
All Sysmex XN/XS Instruments	108	2.393	0.035	1.4	2.39	2.24 - 2.54
Sysmex XN-1000	16	2.408	0.025	1.0	2.40	2.26 - 2.56
Sysmex XN-330	5	2.367	0.032	1.4	2.38	2.22 - 2.51
Sysmex XN-430	31	2.384	0.029	1.2	2.38	2.24 - 2.53
Sysmex XN-450	9	2.358	0.027	1.2	2.36	2.21 - 2.50
Sysmex XN-550	18	2.379	0.030	1.3	2.39	2.23 - 2.53
Sysmex XS-1000i	28	2.414	0.031	1.3	2.41	2.26 - 2.56

Specimen MX-3

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	107	2.395	0.033	1.4	2.39	2.25 - 2.54
All Sysmex XE/XT Instruments	5	2.480	0.028	1.1	2.48	2.33 - 2.63
All Sysmex XN/XS Instruments	106	2.394	0.032	1.3	2.39	2.25 - 2.54
Sysmex XN-1000	15	2.401	0.015	0.6	2.40	2.25 - 2.55
Sysmex XN-330	5	2.393	0.035	1.5	2.39	2.24 - 2.54
Sysmex XN-430	32	2.387	0.032	1.3	2.38	2.24 - 2.54
Sysmex XN-450	9	2.361	0.024	1.0	2.36	2.21 - 2.51
Sysmex XN-550	18	2.388	0.028	1.2	2.38	2.24 - 2.54
Sysmex XS-1000i	27	2.417	0.031	1.3	2.42	2.27 - 2.57

Specimen MX-4

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	108	4.736	0.045	1.0	4.74	4.45 - 5.02
All Sysmex XE/XT Instruments	5	4.775	0.035	0.7	4.78	4.48 - 5.07
All Sysmex XN/XS Instruments	106	4.735	0.045	1.0	4.74	4.45 - 5.02
Sysmex XN-1000	16	4.761	0.027	0.6	4.77	4.47 - 5.05
Sysmex XN-330	5	4.680	0.104	2.2	4.74	4.39 - 4.97
Sysmex XN-430	30	4.732	0.034	0.7	4.73	4.44 - 5.02
Sysmex XN-450	9	4.720	0.057	1.2	4.74	4.43 - 5.01
Sysmex XN-550	18	4.733	0.048	1.0	4.73	4.44 - 5.02
Sysmex XS-1000i	28	4.725	0.052	1.1	4.73	4.44 - 5.01

Specimen MX-5

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	108	5.600	0.056	1.0	5.60	5.26 - 5.94
All Sysmex XE/XT Instruments	5	5.575	0.078	1.4	5.58	5.24 - 5.91
All Sysmex XN/XS Instruments	106	5.600	0.055	1.0	5.60	5.26 - 5.94
Sysmex XN-1000	15	5.605	0.049	0.9	5.60	5.26 - 5.95
Sysmex XN-330	5	5.577	0.081	1.4	5.59	5.24 - 5.92
Sysmex XN-430	30	5.619	0.038	0.7	5.63	5.28 - 5.96
Sysmex XN-450	9	5.589	0.048	0.9	5.59	5.25 - 5.93
Sysmex XN-550	18	5.607	0.061	1.1	5.60	5.27 - 5.95
Sysmex XS-1000i	28	5.570	0.054	1.0	5.56	5.23 - 5.91

HEMATOLOGY W/ 5 or 6-PART DIFFERENTIAL–HEMOGLOBIN (g/dL)

Specimen MX-1

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	108	17.23	0.15	0.9	17.2	16.0 - 18.5
All Sysmex XE/XT Instruments	5	17.15	0.07	0.4	17.2	15.9 - 18.4
All Sysmex XN/XS Instruments	106	17.23	0.15	0.9	17.2	16.0 - 18.5
Sysmex XN-1000	15	17.28	0.15	0.9	17.3	16.0 - 18.5
Sysmex XN-330	5	16.90	0.17	1.0	17.0	15.7 - 18.1
Sysmex XN-430	31	17.23	0.11	0.6	17.2	16.0 - 18.5
Sysmex XN-450	9	17.08	0.08	0.5	17.1	15.8 - 18.3
Sysmex XN-550	18	17.21	0.14	0.8	17.3	16.0 - 18.5
Sysmex XS-1000i	28	17.29	0.17	1.0	17.3	16.0 - 18.5

Specimen MX-2

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	110	5.77	0.08	1.3	5.8	5.3 - 6.2
All Sysmex XE/XT Instruments	5	5.85	0.07	1.2	5.9	5.4 - 6.3
All Sysmex XN/XS Instruments	108	5.77	0.08	1.3	5.8	5.3 - 6.2
Sysmex XN-1000	16	5.81	0.09	1.5	5.8	5.4 - 6.3
Sysmex XN-330	5	5.67	0.06	1.0	5.7	5.2 - 6.1
Sysmex XN-430	31	5.80	0.05	0.9	5.8	5.3 - 6.3
Sysmex XN-450	9	5.73	0.05	0.9	5.7	5.3 - 6.2
Sysmex XN-550	18	5.80	0.06	1.0	5.8	5.3 - 6.3
Sysmex XS-1000i	28	5.73	0.08	1.3	5.7	5.3 - 6.2

Specimen MX-3

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	107	5.75	0.08	1.3	5.7	5.3 - 6.2
All Sysmex XE/XT Instruments	5	5.80	0.14	2.4	5.8	5.3 - 6.3
All Sysmex XN/XS Instruments	105	5.75	0.08	1.3	5.7	5.3 - 6.2
Sysmex XN-1000	15	5.77	0.07	1.2	5.8	5.3 - 6.2
Sysmex XN-330	5	5.67	0.06	1.0	5.7	5.2 - 6.1
Sysmex XN-430	32	5.76	0.06	1.1	5.8	5.3 - 6.2
Sysmex XN-450	9	5.69	0.03	0.6	5.7	5.2 - 6.1
Sysmex XN-550	18	5.78	0.08	1.4	5.8	5.3 - 6.2
Sysmex XS-1000i	27	5.71	0.09	1.5	5.7	5.3 - 6.2

Specimen MX-4

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	109	13.25	0.13	1.0	13.3	12.3 - 14.2
All Sysmex XE/XT Instruments	5	13.30	0.01	0.0	13.3	12.3 - 14.3
All Sysmex XN/XS Instruments	107	13.25	0.13	1.0	13.2	12.3 - 14.2
Sysmex XN-1000	16	13.33	0.12	0.9	13.4	12.3 - 14.3
Sysmex XN-330	5	13.03	0.21	1.6	13.1	12.1 - 14.0
Sysmex XN-430	32	13.26	0.10	0.8	13.3	12.3 - 14.2
Sysmex XN-450	9	13.18	0.04	0.3	13.2	12.2 - 14.2
Sysmex XN-550	18	13.27	0.14	1.0	13.3	12.3 - 14.2
Sysmex XS-1000i	28	13.21	0.14	1.1	13.2	12.2 - 14.2

Specimen MX-5

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	108	17.26	0.14	0.8	17.3	16.0 - 18.5
All Sysmex XE/XT Instruments	5	17.10	0.14	0.8	17.1	15.9 - 18.3
All Sysmex XN/XS Instruments	106	17.27	0.14	0.8	17.3	16.0 - 18.5
Sysmex XN-1000	15	17.29	0.15	0.9	17.3	16.0 - 18.6
Sysmex XN-330	5	17.10	0.10	0.6	17.1	15.9 - 18.3
Sysmex XN-430	31	17.26	0.11	0.6	17.3	16.0 - 18.5
Sysmex XN-450	9	17.18	0.08	0.5	17.2	15.9 - 18.4
Sysmex XN-550	18	17.27	0.13	0.7	17.3	16.0 - 18.5
Sysmex XS-1000i	28	17.30	0.18	1.0	17.3	16.0 - 18.6

HEMATOLOGY W/ 5 or 6-PART DIFFERENTIAL – HEMATOCRIT (percent)

Specimen MX-1

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	109	52.44	0.86	1.6	52.4	49.2 - 55.6
All Sysmex XE/XT Instruments	5	53.20	1.98	3.7	53.2	50.0 - 56.4
All Sysmex XN/XS Instruments	107	52.42	0.84	1.6	52.4	49.2 - 55.6
Sysmex XN-1000	15	52.22	0.55	1.1	52.0	49.0 - 55.4
Sysmex XN-330	5	51.97	0.95	1.8	52.3	48.8 - 55.1
Sysmex XN-430	32	52.41	0.90	1.7	52.6	49.2 - 55.6
Sysmex XN-450	9	52.03	0.68	1.3	52.0	48.9 - 55.2
Sysmex XN-550	18	52.11	0.86	1.7	52.0	48.9 - 55.3
Sysmex XS-1000i	28	52.96	0.75	1.4	52.9	49.7 - 56.2

Specimen MX-2

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	109	18.04	0.37	2.0	18.0	16.9 - 19.2
All Sysmex XE/XT Instruments	5	18.90	0.85	4.5	18.9	17.7 - 20.1
All Sysmex XN/XS Instruments	108	18.04	0.37	2.0	18.0	16.9 - 19.2
Sysmex XN-1000	16	17.98	0.26	1.4	18.0	16.8 - 19.1
Sysmex XN-330	5	17.93	0.31	1.7	18.0	16.8 - 19.1
Sysmex XN-430	31	17.91	0.27	1.5	17.9	16.8 - 19.0
Sysmex XN-450	9	17.78	0.29	1.7	17.8	16.7 - 18.9
Sysmex XN-550	18	17.84	0.33	1.9	17.9	16.7 - 19.0
Sysmex XS-1000i	28	18.38	0.27	1.5	18.4	17.2 - 19.5

Specimen MX-3

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	107	18.04	0.36	2.0	18.0	16.9 - 19.2
All Sysmex XE/XT Instruments	5	18.85	0.78	4.1	18.9	17.7 - 20.0
All Sysmex XN/XS Instruments	106	18.04	0.36	2.0	18.0	16.9 - 19.2
Sysmex XN-1000	15	17.92	0.20	1.1	17.9	16.8 - 19.0
Sysmex XN-330	5	18.17	0.47	2.6	18.0	17.0 - 19.3
Sysmex XN-430	32	17.95	0.30	1.7	18.0	16.8 - 19.1
Sysmex XN-450	9	17.79	0.28	1.6	17.8	16.7 - 18.9
Sysmex XN-550	18	17.90	0.27	1.5	17.9	16.8 - 19.0
Sysmex XS-1000i	27	18.40	0.32	1.7	18.4	17.2 - 19.6

Specimen MX-4

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	110	40.27	0.63	1.6	40.2	37.8 - 42.7
All Sysmex XE/XT Instruments	5	41.00	1.13	2.8	41.0	38.5 - 43.5
All Sysmex XN/XS Instruments	108	40.26	0.62	1.5	40.2	37.8 - 42.7
Sysmex XN-1000	16	40.29	0.48	1.2	40.2	37.8 - 42.8
Sysmex XN-330	5	40.10	0.98	2.5	40.4	37.6 - 42.6
Sysmex XN-430	31	40.10	0.44	1.1	40.1	37.6 - 42.6
Sysmex XN-450	9	40.12	0.67	1.7	40.2	37.7 - 42.6
Sysmex XN-550	18	40.08	0.57	1.4	40.1	37.6 - 42.5
Sysmex XS-1000i	28	40.51	0.73	1.8	40.6	38.0 - 43.0

Specimen MX-5

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	109	52.62	0.85	1.6	52.6	49.4 - 55.8
All Sysmex XE/XT Instruments	5	53.25	2.47	4.6	53.3	50.0 - 56.5
All Sysmex XN/XS Instruments	107	52.61	0.82	1.6	52.6	49.4 - 55.8
Sysmex XN-1000	15	52.24	0.57	1.1	52.2	49.1 - 55.4
Sysmex XN-330	5	52.60	1.10	2.1	52.6	49.4 - 55.8
Sysmex XN-430	32	52.53	0.76	1.5	52.6	49.3 - 55.7
Sysmex XN-450	9	52.39	0.68	1.3	52.6	49.2 - 55.6
Sysmex XN-550	18	52.36	0.83	1.6	52.2	49.2 - 55.6
Sysmex XS-1000i	28	53.13	0.86	1.6	53.2	49.9 - 56.4

HEMATOLOGY W/ 5 or 6-PART DIFFERENTIAL–PLATELET COUNT (x 10^9/L)

Specimen MX-1

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	110	449.3	18.0	4.0	450	336 - 562
All Sysmex XE/XT Instruments	5	424.5	29.0	6.8	425	318 - 531
All Sysmex XN/XS Instruments	108	449.8	17.7	3.9	450	337 - 563
Sysmex XN-1000	16	460.7	12.0	2.6	464	345 - 576
Sysmex XN-330	5	444.3	9.6	2.2	446	333 - 556
Sysmex XN-430	32	454.4	17.1	3.8	454	340 - 569
Sysmex XN-450	9	454.8	17.1	3.8	449	341 - 569
Sysmex XN-550	18	456.3	15.1	3.3	460	342 - 571
Sysmex XS-1000i	28	432.7	11.8	2.7	432	324 - 541

Specimen MX-2

Labs	*Mean*	*SD*	*CV*	*Median*	*Range*
110	61.0	5.5	9.1	60	45 - 77
5	61.5	10.6	17.2	62	46 - 77
108	61.0	5.5	9.0	60	45 - 77
16	58.4	5.0	8.6	60	43 - 74
5	58.3	8.4	14.4	54	43 - 73
31	58.7	2.4	4.1	58	44 - 74
9	59.3	4.1	6.9	58	44 - 75
18	58.9	3.2	5.4	58	44 - 74
28	67.3	3.6	5.4	67	50 - 85

Specimen MX-3

All Method	110	60.5	5.8	9.6	60	45 - 76
All Sysmex XE/XT Instruments	5	62.0	11.3	18.2	62	46 - 78
All Sysmex XN/XS Instruments	108	60.5	5.8	9.6	60	45 - 76
Sysmex XN-1000	16	56.7	3.5	6.2	57	42 - 71
Sysmex XN-330	5	53.7	3.8	7.1	52	40 - 68
Sysmex XN-430	32	59.3	4.3	7.2	59	44 - 75
Sysmex XN-450	9	58.6	3.2	5.5	57	43 - 74
Sysmex XN-550	18	58.1	4.0	7.0	59	43 - 73
Sysmex XS-1000i	28	67.3	4.2	6.3	69	50 - 85

Specimen MX-4

108	221.9	6.4	2.9	222	166 - 278
5	218.5	26.2	12.0	219	163 - 274
107	221.8	6.2	2.8	222	166 - 278
16	224.4	5.3	2.4	225	168 - 281
5	219.7	1.2	0.5	219	164 - 275
31	221.1	6.8	3.1	222	165 - 277
9	226.1	8.9	3.9	224	169 - 283
17	222.9	3.5	1.6	223	167 - 279
28	220.1	5.2	2.4	220	165 - 276

Specimen MX-5

All Method	108	447.3	19.7	4.4	448	335 - 560
All Sysmex XE/XT Instruments	5	430.0	48.1	11.2	430	322 - 538
All Sysmex XN/XS Instruments	106	447.6	19.1	4.3	448	335 - 560
Sysmex XN-1000	15	451.5	13.5	3.0	453	338 - 565
Sysmex XN-330	5	456.0	20.7	4.5	459	342 - 570
Sysmex XN-430	32	450.9	19.0	4.2	454	338 - 564
Sysmex XN-450	9	458.2	26.9	5.9	465	343 - 573
Sysmex XN-550	18	454.2	12.5	2.8	455	340 - 568
Sysmex XS-1000i	28	430.3	18.0	4.2	435	322 - 538

HEMATOLOGY W/ 5 or 6-PART DIFFERENTIAL – NEUTROPHILS (percent)

Specimen MX-1

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	98	56.81	1.97	3.5	56.6	50.9 - 62.8
All Sysmex XE/XT Instruments	5	62.85	2.62	4.2	62.9	55.0 - 70.7
All Sysmex XN/XS Instruments	97	56.77	1.93	3.4	56.5	50.9 - 62.6
Sysmex XN-1000	14	60.35	0.77	1.3	60.5	58.0 - 62.7
Sysmex XN-330	5	57.75	0.92	1.6	57.8	54.9 - 60.6
Sysmex XN-430	28	56.24	1.16	2.1	56.3	52.7 - 59.8
Sysmex XN-450	9	56.40	0.99	1.8	56.4	53.4 - 59.4
Sysmex XN-550	16	56.16	1.03	1.8	56.4	53.0 - 59.3
Sysmex XS-1000i	25	55.54	1.09	2.0	55.3	52.2 - 58.9

Specimen MX-2

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	100	59.28	2.37	4.0	58.8	52.1 - 66.4
All Sysmex XE/XT Instruments	5	64.60	1.27	2.0	64.6	60.7 - 68.5
All Sysmex XN/XS Instruments	98	59.17	2.26	3.8	58.7	52.3 - 66.0
Sysmex XN-1000	14	62.51	1.09	1.7	62.0	59.2 - 65.8
Sysmex XN-330	5	56.37	2.48	4.4	56.8	48.9 - 63.9
Sysmex XN-430	29	58.22	1.48	2.5	58.3	53.7 - 62.7
Sysmex XN-450	9	57.98	1.10	1.9	57.8	54.6 - 61.3
Sysmex XN-550	16	57.41	1.03	1.8	57.3	54.3 - 60.6
Sysmex XS-1000i	25	60.26	1.70	2.8	60.3	55.1 - 65.4

Specimen MX-3

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	100	59.22	2.40	4.1	58.9	52.0 - 66.5
All Sysmex XE/XT Instruments	5	64.30	0.57	0.9	64.3	62.6 - 66.0
All Sysmex XN/XS Instruments	98	59.11	2.31	3.9	58.8	52.1 - 66.1
Sysmex XN-1000	14	62.10	0.91	1.5	62.1	59.3 - 64.9
Sysmex XN-330	5	58.80	1.73	3.0	59.7	53.5 - 64.1
Sysmex XN-430	29	57.89	1.76	3.0	58.0	52.5 - 63.2
Sysmex XN-450	9	57.86	0.89	1.5	57.5	55.1 - 60.6
Sysmex XN-550	16	57.61	1.36	2.4	57.7	53.5 - 61.7
Sysmex XS-1000i	24	60.70	1.49	2.5	60.9	56.2 - 65.2

Specimen MX-4

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	98	47.18	1.87	4.0	47.0	41.5 - 52.9
All Sysmex XE/XT Instruments	5	54.00	3.11	5.8	54.0	44.6 - 63.4
All Sysmex XN/XS Instruments	97	47.14	1.82	3.9	46.9	41.6 - 52.7
Sysmex XN-1000	14	50.50	0.58	1.1	50.6	48.7 - 52.3
Sysmex XN-330	5	46.93	0.64	1.4	47.3	45.0 - 48.9
Sysmex XN-430	27	46.57	0.58	1.2	46.5	44.8 - 48.4
Sysmex XN-450	9	47.16	0.75	1.6	47.4	44.9 - 49.5
Sysmex XN-550	16	46.49	1.23	2.6	46.5	42.7 - 50.2
Sysmex XS-1000i	25	46.10	1.68	3.6	46.3	41.0 - 51.2

Specimen MX-5

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	100	56.84	2.09	3.7	56.2	50.5 - 63.1
All Sysmex XE/XT Instruments	5	62.05	1.06	1.7	62.1	58.8 - 65.3
All Sysmex XN/XS Instruments	98	56.73	1.96	3.5	56.2	50.8 - 62.7
Sysmex XN-1000	14	60.42	0.87	1.4	60.5	57.8 - 63.1
Sysmex XN-330	5	55.73	0.21	0.4	55.8	55.1 - 56.4
Sysmex XN-430	28	56.38	1.07	1.9	56.5	53.1 - 59.6
Sysmex XN-450	9	56.10	1.06	1.9	55.9	52.9 - 59.3
Sysmex XN-550	16	56.07	1.15	2.0	56.1	52.6 - 59.6
Sysmex XS-1000i	25	55.50	0.92	1.7	55.5	52.7 - 58.3

HEMATOLOGY W/ 5 or 6-PART DIFFERENTIAL – LYMPHOCYTES (percent)

	Specimen MX-1						Specimen MX-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	97	19.50	0.84	4.3	19.5	16.9 - 22.1	100	15.98	2.01	12.6	16.4	9.9 - 22.0
All Sysmex XE/XT Instruments	5	20.90	3.25	15.6	20.9	11.1 - 30.7	5	19.20	0.85	4.4	19.2	16.6 - 21.8
All Sysmex XN/XS Instruments	96	19.51	0.84	4.3	19.5	16.9 - 22.1	98	15.91	1.97	12.4	16.3	10.0 - 21.9
Sysmex XN-1000	14	18.18	0.76	4.2	18.5	15.8 - 20.5	14	15.39	0.78	5.1	15.5	13.0 - 17.8
Sysmex XN-330	5	18.67	0.32	1.7	18.8	17.7 - 19.7	5	18.00	1.80	10.0	17.5	12.5 - 23.5
Sysmex XN-430	28	19.62	0.75	3.8	19.4	17.3 - 21.9	28	16.83	1.32	7.8	17.0	12.8 - 20.8
Sysmex XN-450	9	19.20	0.75	3.9	19.0	16.9 - 21.5	9	17.02	1.09	6.4	16.9	13.7 - 20.4
Sysmex XN-550	16	19.59	0.49	2.5	19.7	18.1 - 21.1	16	17.29	0.81	4.7	17.2	14.8 - 19.8
Sysmex XS-1000i	25	20.18	0.62	3.1	20.1	18.3 - 22.1	25	13.76	1.81	13.1	13.4	8.3 - 19.2

	Specimen MX-3						Specimen MX-4					
All Method	100	15.88	2.33	14.7	16.4	8.8 - 22.9	99	31.54	1.85	5.9	31.8	25.9 - 37.1
All Sysmex XE/XT Instruments	5	19.30	0.57	2.9	19.3	17.6 - 21.0	5	30.25	5.02	16.6	30.3	15.1 - 45.4
All Sysmex XN/XS Instruments	98	15.81	2.30	14.6	16.3	8.9 - 22.8	97	31.57	1.79	5.7	31.8	26.2 - 37.0
Sysmex XN-1000	14	15.26	0.92	6.1	15.4	12.4 - 18.1	14	28.46	0.61	2.2	28.4	26.6 - 30.4
Sysmex XN-330	5	16.67	0.55	3.3	16.7	15.0 - 18.4	5	32.50	0.70	2.2	32.8	30.4 - 34.6
Sysmex XN-430	28	16.81	1.48	8.8	16.9	12.3 - 21.3	28	31.95	0.70	2.2	32.0	29.8 - 34.1
Sysmex XN-450	9	16.92	0.85	5.0	17.0	14.3 - 19.5	9	31.90	0.86	2.7	32.0	29.3 - 34.5
Sysmex XN-550	16	17.48	1.28	7.3	17.6	13.6 - 21.4	16	32.28	0.98	3.0	32.4	29.3 - 35.3
Sysmex XS-1000i	24	13.10	1.66	12.7	13.0	8.1 - 18.1						

	Specimen MX-5					
All Method	97	19.41	0.85	4.4	19.5	16.8 - 22.0
All Sysmex XE/XT Instruments	5	22.15	1.20	5.4	22.2	18.5 - 25.8
All Sysmex XN/XS Instruments	95	19.41	0.79	4.1	19.5	17.0 - 21.8
Sysmex XN-1000	14	17.86	0.97	5.4	18.0	14.9 - 20.8
Sysmex XN-330	5	19.77	0.29	1.5	19.6	18.9 - 20.7
Sysmex XN-430	28	19.38	0.65	3.3	19.4	17.4 - 21.4
Sysmex XN-450	9	19.40	0.83	4.3	19.8	16.9 - 21.9
Sysmex XN-550	16	19.59	0.62	3.2	19.8	17.7 - 21.5
Sysmex XS-1000i						

HEMATOLOGY W/ 5 or 6-PART DIFFERENTIAL – MONOCYTES (percent)

Specimen MX-1

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	100	0.90	0.38	42.1	0.8	0.0 - 2.1
All Sysmex XE/XT Instruments	5	1.50	0.57	37.7	1.5	0.0 - 3.2
All Sysmex XN/XS Instruments	98	0.88	0.37	41.5	0.8	0.0 - 2.0
Sysmex XN-1000	14	1.65	0.15	9.1	1.6	1.1 - 2.2
Sysmex XN-330	5	0.53	0.06	10.8	0.5	0.3 - 0.8
Sysmex XN-350	5	0.60	0.14	23.6	0.6	0.1 - 1.1
Sysmex XN-430	28	0.65	0.13	20.0	0.7	0.2 - 1.1
Sysmex XN-450	9	0.81	0.18	21.7	0.8	0.2 - 1.4
Sysmex XN-550	16	0.70	0.13	18.1	0.7	0.3 - 1.1
Sysmex XS-1000i	25	0.90	0.13	14.1	0.9	0.5 - 1.3

Specimen MX-2

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	96	0.78	0.36	45.5	0.7	0.0 - 1.9
All Sysmex XE/XT Instruments	5	1.65	0.49	30.0	1.7	0.1 - 3.2
All Sysmex XN/XS Instruments	93	0.75	0.31	41.5	0.7	0.0 - 1.7
Sysmex XN-1000	14	1.69	0.47	27.7	1.6	0.2 - 3.1
Sysmex XN-330	5	0.53	0.21	39.0	0.6	0.0 - 1.2
Sysmex XN-350	5	0.45	0.21	47.1	0.5	0.0 - 1.1
Sysmex XN-430	28	0.56	0.17	30.7	0.6	0.0 - 1.1
Sysmex XN-450	9	0.74	0.19	26.1	0.6	0.1 - 1.4
Sysmex XN-550	16	0.68	0.15	22.0	0.7	0.2 - 1.2
Sysmex XS-1000i	25	0.80	0.22	27.2	0.8	0.1 - 1.5

Specimen MX-3

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	98	0.84	0.46	54.1	0.7	0.0 - 2.3
All Sysmex XE/XT Instruments	5	1.10	0.01	0.0	1.1	1.0 - 1.2
All Sysmex XN/XS Instruments	96	0.84	0.46	54.8	0.7	0.0 - 2.3
Sysmex XN-1000	14	1.81	0.35	19.3	1.9	0.7 - 2.9
Sysmex XN-330	5	0.43	0.23	53.3	0.3	0.0 - 1.2
Sysmex XN-350	5	0.45	0.21	47.1	0.5	0.0 - 1.1
Sysmex XN-430	27	0.54	0.21	38.6	0.6	0.0 - 1.2
Sysmex XN-450	9	0.83	0.16	19.0	0.9	0.3 - 1.4
Sysmex XN-550	16	0.73	0.24	32.3	0.7	0.0 - 1.5
Sysmex XS-1000i	25	0.79	0.24	29.8	0.8	0.0 - 1.6

Specimen MX-4

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	100	2.01	0.76	37.8	1.8	0.0 - 4.3
All Sysmex XE/XT Instruments	5	2.75	1.20	43.7	2.8	0.0 - 6.4
All Sysmex XN/XS Instruments	98	1.99	0.75	37.6	1.7	0.0 - 4.3
Sysmex XN-1000	14	3.41	0.36	10.5	3.5	2.3 - 4.5
Sysmex XN-330	5	1.40	0.20	14.3	1.4	0.8 - 2.0
Sysmex XN-350	5	1.55	0.07	4.6	1.6	1.3 - 1.8
Sysmex XN-430	27	1.64	0.31	19.2	1.6	0.6 - 2.6
Sysmex XN-450	9	1.80	0.50	27.9	1.8	0.2 - 3.4
Sysmex XN-550	16	1.69	0.31	18.5	1.7	0.7 - 2.7
Sysmex XS-1000i	23	1.69	0.20	11.9	1.7	1.0 - 2.3

Specimen MX-5

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	100	0.92	0.40	43.2	0.8	0.0 - 2.2
All Sysmex XE/XT Instruments	5	1.55	0.21	13.7	1.6	0.9 - 2.2
All Sysmex XN/XS Instruments	98	0.90	0.39	43.0	0.8	0.0 - 2.1
Sysmex XN-1000	14	1.69	0.17	10.0	1.7	1.1 - 2.2
Sysmex XN-330	5	0.60	0.10	16.7	0.6	0.3 - 0.9
Sysmex XN-350	5	0.65	0.07	10.9	0.7	0.4 - 0.9
Sysmex XN-430	27	0.65	0.11	16.8	0.6	0.3 - 1.0
Sysmex XN-450	9	0.76	0.15	20.0	0.7	0.3 - 1.3
Sysmex XN-550	16	0.67	0.11	16.1	0.7	0.3 - 1.0
Sysmex XS-1000i	25	0.94	0.14	15.4	0.9	0.5 - 1.4

HEMATOLOGY W/ 5 or 6-PART DIFFERENTIAL – EOSINOPHILS (percent)

	Specimen MX-1						Specimen MX-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	100	14.74	0.69	4.7	14.8	12.6 - 16.9	99	15.77	0.59	3.8	15.8	13.9 - 17.6
All Sysmex XE/XT Instruments	5	14.75	0.07	0.5	14.8	14.5 - 15.0	5	14.55	0.07	0.5	14.6	14.3 - 14.8
All Sysmex XN/XS Instruments	98	14.74	0.70	4.7	14.8	12.6 - 16.9	97	15.79	0.57	3.6	15.8	14.0 - 17.6
Sysmex XN-1000	14	15.15	0.59	3.9	15.3	13.3 - 17.0	14	15.79	0.40	2.6	15.7	14.5 - 17.1
Sysmex XN-330	5	14.30	0.20	1.4	14.3	13.7 - 14.9	5	15.77	0.32	2.0	15.9	14.8 - 16.8
Sysmex XN-430	29	14.96	0.68	4.5	14.9	12.9 - 17.0	29	15.66	0.80	5.1	15.8	13.2 - 18.1
Sysmex XN-450	9	15.04	0.51	3.4	15.3	13.5 - 16.6	9	15.52	0.63	4.1	15.8	13.6 - 17.5
Sysmex XN-550	16	14.89	0.42	2.8	14.9	13.6 - 16.2	16	15.92	0.45	2.8	16.1	14.5 - 17.3
Sysmex XS-1000i	25	14.10	0.62	4.4	14.0	12.2 - 16.0	25	15.90	0.55	3.5	15.8	14.2 - 17.6

	Specimen MX-3						Specimen MX-4					
All Method	100	15.85	0.58	3.7	15.9	14.1 - 17.7	99	12.53	0.62	5.0	12.7	10.6 - 14.4
All Sysmex XE/XT Instruments	5	15.30	0.01	0.0	15.3	15.2 - 15.4	5	13.00	0.71	5.4	13.0	10.8 - 15.2
All Sysmex XN/XS Instruments	98	15.87	0.58	3.7	15.9	14.1 - 17.7	97	12.52	0.62	5.0	12.7	10.6 - 14.4
Sysmex XN-1000	14	16.13	0.50	3.1	16.2	14.6 - 17.7	14	12.85	0.33	2.5	12.9	11.8 - 13.9
Sysmex XN-330	5	15.07	0.31	2.0	15.0	14.1 - 16.0	5	12.57	0.61	4.9	12.7	10.7 - 14.4
Sysmex XN-430	29	15.95	0.62	3.9	16.0	14.0 - 17.9	28	12.65	0.58	4.6	12.8	10.9 - 14.4
Sysmex XN-450	9	15.60	0.44	2.8	15.6	14.2 - 17.0	9	12.30	0.58	4.7	12.3	10.5 - 14.1
Sysmex XN-550	16	15.66	0.50	3.2	15.7	14.1 - 17.2	16	12.41	0.68	5.5	12.6	10.3 - 14.5
Sysmex XS-1000i	25	15.95	0.61	3.8	16.0	14.1 - 17.8	25	12.33	0.69	5.6	12.3	10.2 - 14.5

	Specimen MX-5					
All Method	100	14.88	0.65	4.3	14.9	12.9 - 16.9
All Sysmex XE/XT Instruments	5	14.25	0.07	0.5	14.3	14.0 - 14.5
All Sysmex XN/XS Instruments	98	14.90	0.65	4.3	14.9	12.9 - 16.9
Sysmex XN-1000	14	15.28	0.48	3.1	15.2	13.8 - 16.8
Sysmex XN-330	5	15.27	0.57	3.7	15.1	13.5 - 17.0
Sysmex XN-430	29	14.98	0.61	4.0	14.8	13.1 - 16.8
Sysmex XN-450	9	15.23	0.65	4.3	15.2	13.2 - 17.2
Sysmex XN-550	16	15.01	0.66	4.4	15.0	13.0 - 17.0
Sysmex XS-1000i	25	14.35	0.47	3.3	14.4	12.9 - 15.8

HEMATOLOGY W/ 5 or 6-PART DIFFERENTIAL – BASOPHILS (percent)

	Specimen MX-1						Specimen MX-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	58	8.61	0.68	7.9	8.4	6.5 - 10.7	58	8.87	0.73	8.2	8.7	6.6 - 11.1
All Sysmex XE/XT Instruments	5	83.05	2.47	3.0	83.1	75.6 - 90.5	5	84.05	0.78	0.9	84.1	81.7 - 86.4
All Sysmex XN/XS Instruments	98	8.19	1.69	20.7	8.4	3.1 - 13.3	98	8.33	1.74	20.9	8.7	3.1 - 13.6
Sysmex XN-1000	14	4.67	0.17	3.6	4.6	4.1 - 5.2	14	4.61	0.19	4.0	4.6	4.0 - 5.2
Sysmex XN-330	5	8.73	0.46	5.3	9.0	7.3 - 10.2	5	9.33	0.83	8.9	9.6	6.8 - 11.9
Sysmex XN-430	29	8.57	0.64	7.5	8.5	6.6 - 10.6	29	8.91	0.64	7.2	8.7	6.9 - 10.9
Sysmex XN-450	9	8.54	0.62	7.3	8.3	6.6 - 10.5	9	8.73	0.89	10.1	8.4	6.0 - 11.4
Sysmex XN-550	16	8.66	0.82	9.5	8.5	6.1 - 11.2	16	8.71	0.73	8.3	8.7	6.5 - 10.9
Sysmex XS-1000i	25	9.32	1.00	10.7	9.5	6.3 - 12.4	25	9.30	0.79	8.4	9.3	6.9 - 11.7

	Specimen MX-3						Specimen MX-4					
All Method	58	8.82	0.77	8.7	8.7	6.5 - 11.2	58	7.00	0.58	8.2	7.0	5.2 - 8.8
All Sysmex XE/XT Instruments	5	85.00	0.01	0.0	85.0	84.9 - 85.1	5	70.40	1.84	2.6	70.4	64.8 - 76.0
All Sysmex XN/XS Instruments	98	8.35	1.74	20.8	8.7	3.1 - 13.6	98	6.80	1.04	15.3	7.0	3.6 - 10.0
Sysmex XN-1000	14	4.70	0.21	4.4	4.7	4.0 - 5.4	14	4.77	0.15	3.1	4.8	4.3 - 5.3
Sysmex XN-330	5	9.03	1.31	14.4	8.9	5.1 - 13.0	5	6.60	0.30	4.5	6.6	5.7 - 7.5
Sysmex XN-430	29	8.95	0.89	9.9	8.8	6.2 - 11.7	29	7.08	0.53	7.4	7.0	5.5 - 8.7
Sysmex XN-450	9	8.79	0.38	4.3	8.6	7.6 - 10.0	9	6.84	0.68	9.9	6.4	4.8 - 8.9
Sysmex XN-550	16	8.53	0.56	6.6	8.5	6.8 - 10.3	16	7.06	0.64	9.1	7.1	5.1 - 9.0
Sysmex XS-1000i	25	9.43	0.84	8.9	9.4	6.8 - 12.0	25	7.53	0.61	8.1	7.7	5.6 - 9.4

	Specimen MX-5					
All Method	58	8.61	0.68	7.9	8.5	6.5 - 10.7
All Sysmex XE/XT Instruments	5	82.75	1.63	2.0	82.8	77.8 - 87.7
All Sysmex XN/XS Instruments	98	8.20	1.65	20.1	8.5	3.2 - 13.2
Sysmex XN-1000	14	4.74	0.14	2.9	4.8	4.3 - 5.2
Sysmex XN-330	5	8.63	0.65	7.5	8.6	6.6 - 10.6
Sysmex XN-430	29	8.62	0.71	8.2	8.4	6.4 - 10.8
Sysmex XN-450	9	8.51	0.52	6.1	8.6	6.9 - 10.1
Sysmex XN-550	16	8.66	0.75	8.7	8.6	6.4 - 11.0
Sysmex XS-1000i	25	9.33	0.82	8.8	9.3	6.8 - 11.8

HEMATOLOGY W/ 5 or 6-PART DIFFERENTIAL – Immature Granulocytes (percent)

	Specimen MX-1						Specimen MX-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	70	15.33	0.72	4.7	15.2	13.1 - 17.5	70	15.96	0.86	5.4	15.7	13.3 - 18.6
All Sysmex XN/XS Instruments	70	15.33	0.72	4.7	15.2	13.1 - 17.5	70	15.96	0.86	5.4	15.7	13.3 - 18.6
Sysmex XN-1000	13	15.12	0.49	3.3	15.1	13.6 - 16.6	13	15.94	0.77	4.9	15.7	13.6 - 18.3
Sysmex XN-330	5	16.70	0.20	1.2	16.7	16.1 - 17.3	5	16.20	0.95	5.9	16.1	13.3 - 19.1
Sysmex XN-430	29	15.38	0.67	4.4	15.3	13.3 - 17.4	29	16.03	0.99	6.2	15.9	13.0 - 19.1
Sysmex XN-450	9	15.36	0.79	5.1	15.2	12.9 - 17.8	9	16.02	0.90	5.6	15.6	13.3 - 18.8
Sysmex XN-550	14	15.22	0.78	5.1	15.1	12.8 - 17.6	14	15.76	0.74	4.7	15.6	13.5 - 18.0

	Specimen MX-3						Specimen MX-4					
All Method	70	16.03	0.96	6.0	16.2	13.1 - 19.0	69	12.79	0.70	5.5	12.6	10.6 - 14.9
All Sysmex XN/XS Instruments	70	16.03	0.96	6.0	16.2	13.1 - 19.0	69	12.79	0.70	5.5	12.6	10.6 - 14.9
Sysmex XN-1000	13	15.79	1.02	6.5	15.4	12.7 - 18.9	13	12.88	0.65	5.1	12.8	10.9 - 14.9
Sysmex XN-330	5	16.23	0.76	4.7	16.4	13.9 - 18.6	5	13.00	0.52	4.0	13.3	11.4 - 14.6
Sysmex XN-430	29	16.33	0.90	5.5	16.5	13.6 - 19.1	29	12.84	0.92	7.1	12.7	10.0 - 15.6
Sysmex XN-450	9	15.90	0.98	6.2	15.6	12.9 - 18.9	9	12.78	0.72	5.6	12.6	10.6 - 15.0
Sysmex XN-550	14	15.87	0.91	5.7	15.8	13.1 - 18.7	14	12.81	0.72	5.6	12.9	10.6 - 15.0

	Specimen MX-5					
All Method	69	15.33	0.73	4.8	15.3	13.1 - 17.6
All Sysmex XN/XS Instruments	69	15.33	0.73	4.8	15.3	13.1 - 17.6
Sysmex XN-1000	13	14.98	0.49	3.2	15.0	13.5 - 16.5
Sysmex XN-330	5	15.27	0.72	4.7	14.9	13.0 - 17.5
Sysmex XN-430	29	15.55	0.87	5.6	15.4	12.9 - 18.2
Sysmex XN-450	9	15.56	0.84	5.4	15.4	13.0 - 18.1
Sysmex XN-550	14	15.41	0.73	4.7	15.5	13.2 - 17.6

2020 M1
Specimens BC-1 through BC-6

CASE HISTORY:

A 13-year-old female presented to her pediatrician with a sore throat, malaise, and fever. For the past week she has been feeling fatigued, nauseated, and had difficulty drinking fluids. Upon examination, she had enlarged cervical lymph nodes, mild splenomegaly, and hepatomegaly. A rapid strep test was negative. A CBC was performed, and significant results appear below:

Test	Results	Reference Range
WBC	15.0 x 10^9/L	4.5 – 11.5 x 10^9/L
RBC	5.0 x 10^{12}/L	4.2 - 5.4 x 10^{12}/L
HGB	14.0 g/dL	12 - 15 g/dL
HCT	40 %	35 - 49 %
PLT	440 x 10^9/L	150 - 450 x 10^9/L
MCV	80 fL	80 - 94 fL
MCH	28 pg	26 - 32 pg
MCHC	35 %	32 - 36 %
RDW	19 %	11 - 15 %

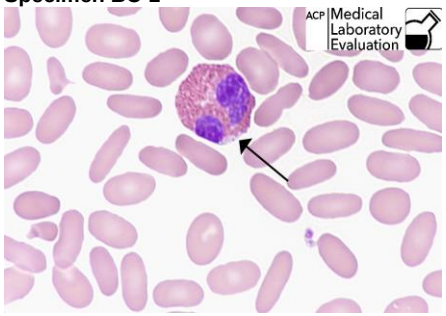
This patient was diagnosed with infectious mononucleosis, and incidentally found to have common hereditary elliptocytosis.

Infectious mononucleosis (IM or "mono") is an acute viral illness caused by Epstein-Barr virus (EBV) infection. Mono is most common in patients between 17 and 25 years of age. The virus is transmitted orally, thus another nickname for IM is "the kissing disease." The virus primarily infects lymphocytes and epithelial cells of the pharynx and cervical lymph nodes. The onset of IM is generally abrupt, with symptoms including sore throat, dysphagia, nausea, headache, myalgia, lymphadenopathy, fever, malaise, and excessive fatigue that can last for weeks. The name of IM, or "mono" is a historical term and misnomer, as it is now known that the classical large mononuclear cells observed are reactive lymphocytes and not monocytes.

The technologist reviewing the blood smear noted the presence of many ovalocytes/elliptocytes, leading to the incidental diagnosis of hereditary elliptocytosis. Hereditary elliptocytosis (HE) and its related variants are caused by genetic mutations that affect the multiprotein complex responsible for elasticity and durability of red blood cells. Most HE patients are asymptomatic, and the diagnosis is usually made incidentally. Common hereditary elliptocytosis may be associated with mild hemolytic anemia. Moderate to severe hemolysis occasionally occurs, which can be cured by removal of the spleen. The percentage of elliptocytes seen in the blood does not correlate with the degree of hemolysis.

BLOOD CELL IDENTIFICATION

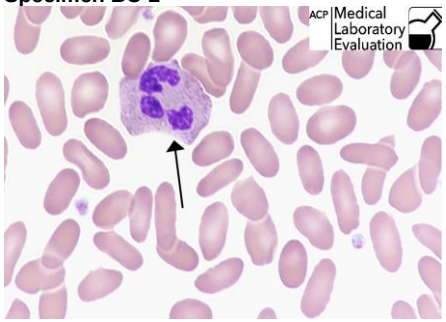
Specimen BC-1



Identification	Labs	Percent	Performance
Eosinophil, any stage	152	99.35%	Acceptable

The arrow in this photograph points to an **eosinophil**. These cells are easily identified by their characteristic red-orange color, which comes from the dye eosin. The cytoplasm of an eosinophil is filled with large round red-orange granules, which surround the nucleus but do not obscure it. To view another photo of an "eo", see 2018 M3 Specimen BC-13.

Specimen BC-2



Identification	Labs	Percent	Performance
Neutrophil – segmented or band	150	98.04%	Acceptable

The arrow in this photograph points to a **segmented neutrophil.** The cytoplasm of this normal cell contains fine, violet-pink granules. The nucleus of the cell is divided into less than six segments, or lobes, which are connected by a thin filament of chromatin. This filament connecting the segments must be visible in order to classify the cell as segmented. To view another photo of a normal "seg," see 2019 M1 Specimen BC-5.

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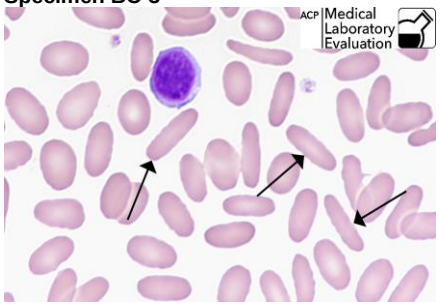
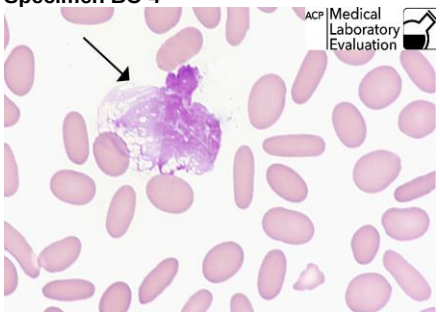
Specimen BC-3



Identification	Labs	Percent	Performance
Ovalocyte	152	99.35%	Acceptable

The arrows in this photograph point to **ovalocytes (elliptocytes).** These are elongated red blood cells. In addition to the hereditary type of elliptocytosis, there are many acquired disorders that cause elliptical RBC forms to appear in the peripheral blood smear. These include iron deficiency, sickle cell and other anemias, thalassemia, myelofibrosis, myelodysplastic syndrome, and pyruvate kinase deficiency. To view another photo of ovalocytes/elliptocytes, see 2012 M3 Specimen BC-16.

Specimen BC-4

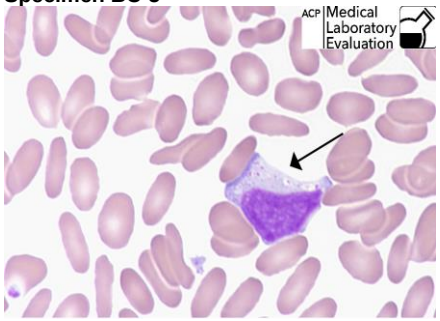


Identification	Labs	Percent	Performance
Basket cell/smudge cell	133	86.93%	Acceptable
Immature/abnormal cell – refer	19	12.42%	Acceptable

The arrow in this photograph points to a **smudge cell.** Smudge cells, also called basket cells, are the remains of ruptured white blood cells. They are often seen in disease states that make cell walls fragile, such as infectious mononucleosis or CLL. Smudge cells occasionally appear as artifacts when too much pressure is applied during slide preparation. To view another smudge/basket cell, see 2015 M1 Specimen BC-5.

BLOOD CELL IDENTIFICATION

Specimen BC-5



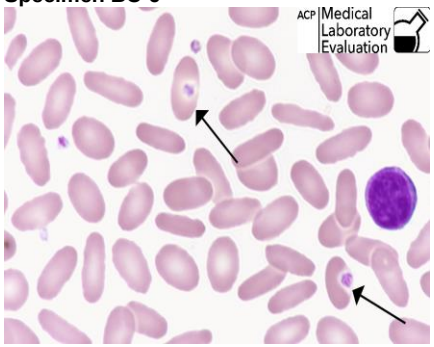
Identification	Labs	Percent	Performance
Lymphocyte, reactive	106	69.74%	Acceptable
Immature/abnormal cell – refer	40	26.32%	Acceptable

The arrow in this photograph points to a **reactive lymphocyte**. Reactive lymphocytes appear in a wide variety of forms, sizes and shapes. The cytoplasm is light blue, with a deeper blue color at the extreme border. This characteristic feature is called peripheral basophilia. The cytoplasmic edge of the reactive lymph tends to flow around adjacent red blood cells. The nucleus is large, and elongated or stretched, with coarse chromatin. These lymphocytes respond to immune stimuli in the body. Other reactive changes in lymphocyte morphology include low N:C ratio and the possible presence of nucleoli. Some participants incorrectly identified this cell as a monocyte. Monocytes tend to have folded nuclei and grayer, finely granular cytoplasm without the dark blue edges.

To view another photo of a reactive lymphocyte, see 2019 M2 Specimen BC-8. To view a monocyte, see 2019 M1 Specimen BC-1.

BLOOD CELL IDENTIFICATION

Specimen BC-6



Identification	Labs	Percent	Performance
Erythrocyte w/overlay platelet	95	62.91%	Not graded – Educational Challenge
Platelet, normal	45	29.80%	
Immature/abnormal cell – refer	7	4.64%	
Pappenheimer body	1	0.66%	
Howell-Jolly body	1	0.66%	
Erythrocyte, normal	1	0.66%	
Ovalocyte	1	0.66%	

The arrows in this educational challenge point to **red blood cells with overlying platelets**. A platelet lying on top of a RBC is a blood smear artifact that can be confused with a malaria parasite. If this were an actual slide on your microscope, you could focus up and down and see that the platelet is in a different plane of focus from the RBC underneath. If the object were within the cell, both the inclusion and the cell would be in focus at the same time. These objects can be identified as platelets by comparing the morphology of the questionable platelets to the normal platelets in the field. To view another photo of a RBC with overlying platelet, see 2011 M3 Specimen BC-18.

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BLOOD BANK

ABO GROUP

Specimen	Results	Labs	Percent	Performance
BB-1	Group A	5	100%	Acceptable
BB-2	Group B	5	100%	Acceptable
BB-3	Group O	5	100%	Acceptable
BB-4	Group O	5	100%	Acceptable
BB-5	Group A	5	100%	Acceptable

RH FACTOR (D TYPE)

Specimen	Results	Labs	Percent	Performance
BB-1	Rh Positive	14	87.50%	Acceptable
	Rh Negative	2	12.50%	
BB-2	Rh Positive	16	100%	Acceptable
BB-3	Rh Negative	15	93.75%	Acceptable
	Rh Positive	1	6.25%	
BB-4	Rh Positive	15	93.75%	Acceptable
	Rh Negative	1	6.25%	
BB-5	Rh Negative	15	93.75%	Acceptable
	Rh Positive	1	6.25%	

Rh Factor was graded by 100% referee consensus for all samples.

UNEXPECTED ANTIBODY DETECTION

Specimen	Results	Labs	Percent	Performance
AB-1	Unexpected antibody detected	5	100%	Acceptable
AB-2	No unexpected antibody detected	5	100%	Acceptable
AB-3	Unexpected antibody detected	5	100%	Acceptable
AB-4	No unexpected antibody detected	5	100%	Acceptable
AB-5	No unexpected antibody detected	5	100%	Acceptable

BLOOD BANK

ANTIBODY IDENTIFICATION

Specimen	Results	Labs	Percent	Performance
AB-1	Anti-E	1	100%	Acceptable
AB-2	No antibody detected	1	100%	Acceptable
AB-3	Anti-D	1	100%	Acceptable
AB-4	No antibody detected	1	100%	Acceptable
AB-5	No antibody detected	1	100%	Acceptable

COMPATIBILITY TESTING

Specimen	Results	Labs	Percent	Performance
AB-1	Compatible	5	100%	Acceptable
AB-2	Compatible	5	100%	Acceptable
AB-3	Not Compatible	5	100%	Acceptable
AB-4	Compatible	5	100%	Acceptable
AB-5	Compatible	5	100%	Acceptable

PROTHROMBIN TIME (seconds)

Reagent/Instrument	Specimen CG-1 Labs	Mean	SD	CV	Median	Range	Specimen CG-2 Labs	Mean	SD	CV	Median	Range
All Method	20	33.14	4.03	12.2	32.3	28.1 - 38.2	21	10.82	0.94	8.7	10.6	9.2 - 12.5
Dade Innovin												
Dade Behring BFT II	5	34.78	2.53	7.3	35.8	29.5 - 40.0	5	10.00	0.42	4.2	9.9	8.5 - 11.5
Sysmex CA-500/600 series	11	32.15	1.02	3.2	32.1	27.3 - 37.0	12	10.60	0.30	2.9	10.6	9.0 - 12.2
All Coagulation Instruments	16	32.85	1.83	5.6	32.3	27.9 - 37.8	17	10.44	0.41	3.9	10.4	8.8 - 12.1
HemosIL RecombiPlasTin 2G												
IL ACL, all models	5	42.15	2.33	5.5	42.2	35.8 - 48.5	5	11.85	0.21	1.8	11.9	10.0 - 13.7

Reagent/Instrument	Specimen CG-3 Labs	Mean	SD	CV	Median	Range	Specimen CG-4 Labs	Mean	SD	CV	Median	Range
All Method	21	22.61	2.20	9.7	22.0	19.2 - 26.1	20	11.13	0.62	5.6	11.0	9.4 - 12.8
Dade Innovin												
Dade Behring BFT II	5	23.53	2.33	9.9	23.8	19.9 - 27.1	5	10.55	0.55	5.2	10.5	8.9 - 12.2
Sysmex CA-500/600 series	12	21.83	0.77	3.5	21.9	18.5 - 25.1	12	11.10	0.26	2.3	11.0	9.4 - 12.8
All Coagulation Instruments	17	22.25	1.40	6.3	22.0	18.9 - 25.6	17	10.94	0.41	3.8	11.0	9.2 - 12.6
HemosIL RecombiPlasTin 2G												
IL ACL, all models	5	27.70	1.13	4.1	27.7	23.5 - 31.9	5	11.90	0.14	1.2	11.9	10.1 - 13.7

Reagent/Instrument	Specimen CG-5 Labs	Mean	SD	CV	Median	Range
All Method	20	14.33	1.11	7.8	14.0	12.1 - 16.5
Dade Innovin						
Dade Behring BFT II	5	14.03	1.15	8.2	14.2	11.9 - 16.2
Sysmex CA-500/600 series	11	13.89	0.28	2.0	13.8	11.8 - 16.0
All Coagulation Instruments	16	13.88	0.59	4.3	13.8	11.7 - 16.0
HemosIL RecombiPlasTin 2G						
IL ACL, all models	5	16.05	1.34	8.4	16.1	13.6 - 18.5

PROTHROMBIN TIME–INTERNATIONAL NORMALIZED RATIO (INR)

	Specimen CG-1						Specimen CG-2					
Reagent/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	20	3.44	0.36	10.5	3.4	2.7 - 4.2	21	1.06	0.05	4.8	1.1	0.8 - 1.3
Dade Innovin												
Dade Behring BFT II	5	3.35	0.17	5.2	3.4	2.6 - 4.1	5	1.10	0.01	0.0	1.1	0.8 - 1.4
Sysmex CA-500/600 series	12	3.11	0.54	17.3	3.2	2.4 - 3.8	12	1.05	0.05	5.0	1.1	0.8 - 1.3
All Coagulation Instruments	16	3.29	0.18	5.6	3.3	2.6 - 4.0	17	1.06	0.05	4.8	1.1	0.8 - 1.3
HemosIL RecombiPlasTin 2G												
IL ACL, all models	5	3.95	0.21	5.4	4.0	3.1 - 4.8	5	1.05	0.07	6.7	1.1	0.8 - 1.3

	Specimen CG-3						Specimen CG-4					
All Method	21	2.29	0.18	8.0	2.3	1.8 - 2.8	21	1.10	0.06	5.3	1.1	0.8 - 1.4
Dade Innovin												
Dade Behring BFT II	5	2.35	0.21	8.9	2.4	1.8 - 2.9	5	1.15	0.06	5.0	1.2	0.9 - 1.4
Sysmex CA-500/600 series	12	2.19	0.12	5.7	2.2	1.7 - 2.7	12	1.10	0.06	5.5	1.1	0.8 - 1.4
All Coagulation Instruments	17	2.24	0.15	6.9	2.2	1.7 - 2.7	17	1.11	0.06	5.4	1.1	0.8 - 1.4
HemosIL RecombiPlasTin 2G												
IL ACL, all models	5	2.55	0.07	2.8	2.6	2.0 - 3.1	5	1.05	0.07	6.7	1.1	0.8 - 1.3

	Specimen CG-5					
All Method	20	1.43	0.10	7.2	1.4	1.1 - 1.8
Dade Innovin						
Dade Behring BFT II	5	1.50	0.08	5.4	1.5	1.2 - 1.8
Sysmex CA-500/600 series	11	1.37	0.05	3.4	1.4	1.0 - 1.7
All Coagulation Instruments	16	1.40	0.08	5.8	1.4	1.1 - 1.7
HemosIL RecombiPlasTin 2G						
IL ACL, all models	5	1.45	0.07	4.9	1.5	1.1 - 1.8

ACTIVATED PARTIAL THROMBOPLASTIN (seconds)

	Specimen CG-1						Specimen CG-2					
Reagent/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	17	43.8	5.0	11.4	44	37 - 51	17	25.1	1.6	6.4	25	21 - 29
Dade Actin FSL												
Sysmex CA-500/600 series	6	42.2	5.0	11.9	44	35 - 49	6	24.0	0.6	2.6	24	20 - 28
Hemoliance SynthASil												
IL ACL, all models	5	50.0	0.1	0.0	50	42 - 58	5	27.5	0.7	2.6	28	23 - 32
HemosIL APTT-SP												
IL ACL, all models	5	42.5	0.7	1.7	43	36 - 49	5	26.0	0.1	0.0	26	22 - 30

	Specimen CG-3						Specimen CG-4					
All Method	17	37.1	1.4	3.9	37	31 - 43	17	29.2	6.3	21.6	26	24 - 34
Dade Actin FSL												
Sysmex CA-500/600 series	6	36.7	0.5	1.4	37	31 - 43	6	25.2	0.4	1.6	25	21 - 29
Hemoliance SynthASil												
IL ACL, all models	5	39.5	0.7	1.8	40	33 - 46	5	40.5	0.7	1.7	41	34 - 47
HemosIL APTT-SP												
IL ACL, all models	5	36.0	1.4	3.9	36	30 - 42	5	30.0	1.4	4.7	30	25 - 35

	Specimen CG-5					
All Method	17	34.2	5.7	16.7	33	29 - 40
Dade Actin FSL						
Sysmex CA-500/600 series	6	31.7	6.1	19.1	29	26 - 37
Hemoliance SynthASil						
IL ACL, all models	5	37.5	0.7	1.9	38	31 - 44
HemosIL APTT-SP						
IL ACL, all models	5	38.5	3.5	9.2	39	32 - 45

Fibrinogen (mg/dL)

One participant reported Fibrinogen. The vendor assay values on a Sysmex CA-540 for specimens CG-1 through CG-5 are: 197 mg/dL, 220 mg/dL, 194 mg/dL, 350 mg/dL, and 105 mg/dL, respectively.

COAGUCHEK XS PLUS PROTHROMBIN TIME (seconds)

	Specimen XS-1						Specimen XS-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	15	14.05	0.49	3.5	14.0	11.9 - 16.2	14	25.29	0.73	2.9	25.2	21.4 - 29.1
All Roche CoaguChek XS Plus Instruments	13	14.01	0.41	2.9	14.0	11.9 - 16.2	13	25.34	0.74	2.9	25.2	21.5 - 29.2
Roche CoaguChek XS Plus - Waived	8	13.99	0.45	3.2	14.0	11.8 - 16.1	8	25.13	0.73	2.9	25.2	21.3 - 28.9
Roche CoaguChek XS Plus	5	14.04	0.36	2.6	14.0	11.9 - 16.2	5	25.68	0.69	2.7	25.8	21.8 - 29.6
	Specimen XS-3						**Specimen XS-4**					
All Method	5	13.90	0.41	2.9	13.9	11.8 - 16.0	5	36.20	1.59	4.4	35.9	30.7 - 41.7
All Roche CoaguChek XS Plus Instruments	3	-	-	-	14.2	11.9 - 16.2	3	-	-	-	36.5	31.0 - 42.0
Roche CoaguChek XS Plus - Waived	1	-	-	-	13.6	11.8 - 16.0	1	-	-	-	34.7	30.7 - 41.7
Roche CoaguChek XS Plus	2	-	-	-	14.3	11.8 - 16.0	2	-	-	-	37.4	30.7 - 41.7
	Specimen XS-5											
All Method	5	25.35	1.04	4.1	25.5	21.5 - 29.2						
All Roche CoaguChek XS Plus Instruments	3	-	-	-	26.1	21.6 - 29.4						
Roche CoaguChek XS Plus - Waived	1	-	-	-	24.1	21.5 - 29.2						
Roche CoaguChek XS Plus	2	-	-	-	26.2	21.5 - 29.2						

COAGUCHEK XS PLUS PROTHROMBIN TIME–INTERNATIONAL NORMALIZED RATIO (INR)

	Specimen XS-1						Specimen XS-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	30	1.17	0.04	3.8	1.2	0.9 - 1.5	27	2.10	0.08	3.7	2.1	1.6 - 2.6
All Roche CoaguChek XS Plus Instruments	28	1.18	0.04	3.8	1.2	0.9 - 1.5	26	2.10	0.08	3.8	2.1	1.6 - 2.6
Roche CoaguChek XS Plus - Waived	23	1.17	0.04	3.8	1.2	0.9 - 1.5	21	2.09	0.07	3.5	2.1	1.6 - 2.6
Roche CoaguChek XS Plus	5	1.18	0.04	3.8	1.2	0.9 - 1.5	5	2.16	0.09	4.1	2.2	1.7 - 2.6
	Specimen XS-3						**Specimen XS-4**					
All Method	11	1.17	0.05	4.2	1.2	0.9 - 1.5	11	2.96	0.13	4.3	2.9	2.3 - 3.6
All Roche CoaguChek XS Plus Instruments	6	1.18	0.04	3.5	1.2	0.9 - 1.5	6	2.97	0.14	4.6	3.0	2.3 - 3.6
Roche CoaguChek XS Plus - Waived	5	1.18	0.05	4.3	1.2	0.9 - 1.5	5	2.90	0.08	2.8	2.9	2.3 - 3.5
Roche CoaguChek XS Plus	2	-	-	-	1.2	0.9 - 1.5	2	-	-	-	3.1	2.3 - 3.6
	Specimen XS-5											
All Method	11	2.10	0.08	3.9	2.1	1.6 - 2.6						
All Roche CoaguChek XS Plus Instruments	6	2.10	0.09	4.3	2.1	1.6 - 2.6						
Roche CoaguChek XS Plus - Waived	5	2.05	0.06	2.8	2.1	1.6 - 2.5						
Roche CoaguChek XS Plus	2	-	-	-	2.2	1.6 - 2.6						

COAGUCHECK XS - INTERNATIONAL NORMALIZED RATIO (INR)

	Specimen INX-1						Specimen INX-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
Roche CoaguChek XS	94	1.17	0.05	4.1	1.2	0.9 - 1.5	89	2.98	0.08	2.7	3.0	2.3 - 3.6

i-Stat PROTHROMBIN TIME (seconds)

	Specimen PTI-1					Specimen PTI-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
i-Stat Prothrombin Time	5	15.63	1.95	12.5	15.4	13.2 - 18.0	5	27.35	0.98	3.6	27.4	23.2 - 31.5
	Specimen PTI-3						**Specimen PTI-4**					
i-Stat Prothrombin Time	5	27.88	2.62	9.4	26.6	23.6 - 32.1	5	15.33	1.36	8.9	15.5	13.0 - 17.7
	Specimen PTI-5											
i-Stat Prothrombin Time	5	14.73	0.78	5.3	15.0	12.5 - 17.0						

i-Stat PROTHROMBIN TIME - INTERNATIONAL NORMALIZED RATIO (INR)

	Specimen PTI-1					Specimen PTI-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
i-Stat Prothrombin Time	5	1.30	0.18	14.0	1.3	1.0 - 1.6	5	2.38	0.10	4.0	2.4	1.9 - 2.9
	Specimen PTI-3						**Specimen PTI-4**					
i-Stat Prothrombin Time	5	2.43	0.25	10.3	2.3	1.9 - 3.0	5	1.28	0.13	9.9	1.3	1.0 - 1.6
	Specimen PTI-5											
i-Stat Prothrombin Time	5	1.25	0.10	8.0	1.3	1.0 - 1.5						

FLUID CELL COUNT – WHITE BLOOD CELL COUNT (µL)

	Specimen BF-1						Specimen BF-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	1	-	-	-	344	Not graded	1	-	-	-	8	Not graded

FLUID CELL COUNT – RED BLOOD CELL COUNT (µL)

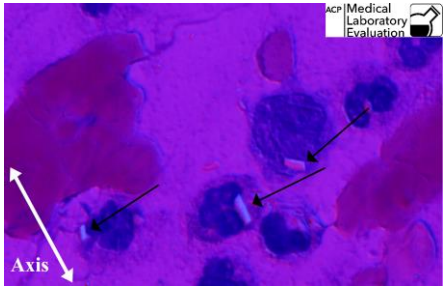
	Specimen BF-1						Specimen BF-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	1	-	-	-	1160	Not graded	1	-	-	-	0	Not graded

2020 M1
FLUID CRYSTAL IDENTIFICATION
Specimens FC-1 and FC-2

Crystals can generally be classified as either optically isotropic or anisotropic. Isotropic solids refract light rays equally in all directions throughout the crystalline structure, regardless of the crystal's orientation to the light source. In contrast, anisotropic crystals interact with light in a manner that is dependent upon the alignment of the crystal. Anisotropic crystals have internal structure that will cause a ray of light to split into two rays, each traveling in a different direction. A light beam hitting the crystal from one direction or angle will react differently than a beam hitting the crystal at a different angle. This property of splitting light is called **birefringence** or double refraction.

Microscopic examination of synovial fluid for crystals is an important diagnostic test in the evaluation of arthritis. Some crystals can be identified in a wet mount by their shape or morphology alone. Others have similar shapes and need specialized techniques for identification. Using compensated polarized light helps us to identify crystals based on the optical differences described above. Adding a red compensator filter separates the microscope's light rays into slow-moving and fast-moving vibrations or waves. The compensator is marked with an arrow indicating the direction of the slow vibration. The "axis" in the photos below indicates the direction of the slow wave. The color produced by a crystal aligned with the slow-vibration ray of light can be used to identify the crystal. This difference in color is due to the molecular structure inside the crystal, which either allows the light to pass through unchanged, or impedes the light. A **negatively** birefringent crystal such as MSU will appear yellow when aligned with the axis and blue when perpendicular to the axis. Conversely, a **positively** birefringent crystal such as CPPD will appear blue when aligned with the axis and yellow when perpendicular. Examples of both types appear in the photos below.

Specimen FC-1

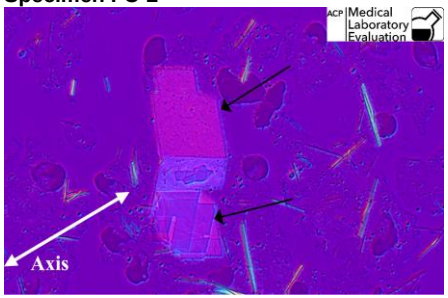


Identification	Labs	Percent	Performance
CPPD crystals	5	100%	Acceptable

The arrows in this photograph point to **calcium pyrophosphate dihydrate (CPPD) crystals**. Calcium pyrophosphate crystals cause calcium pyrophosphate disease, a condition commonly called pseudogout. CPPD crystals are usually rhomboidal or rod-shaped, but are occasionally needle-shaped. These crystals demonstrate **positive birefringence**, because they are blue in color when aligned with (parallel to) the compensator filter/axis. Crystals that are not aligned parallel to the axis are pink-red. The presence of a large number of white blood cells in this fluid specimen indicates acute inflammation. To view another photo of CPPD crystals, see 2019 M2 Specimen FC-3.

2020 M1
FLUID CRYSTAL IDENTIFICATION

Specimen FC-2



Identification	Labs	Percent	Performance
Cholseterol crystals	5	100%	Acceptable

The arrows in this photograph point to **cholesterol crystals**. They usually appear in this characteristic form as large, flat rectangular plates with notched corners, which makes them easy to identify in any preparation. Cholesterol crystals may be seen in chronic effusions from patients with osteoarthritis or rheumatoid arthritis. They are associated with chronic inflammatory conditions, but are considered to be a nonspecific finding. The long, thin crystals in surrounding field are monosodium urate (MSU). To view a photo of cholesterol crystals under normal, brightfield illumination, see 2019 M1 Specimen FC-1. To view another photo of cholesterol under polarized, red compensated light, see 2019 M3 Specimen FC-6.

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MICROALBUMIN, DIPSTICK

Specimen UM-1

Participant Results

Method	Labs	Negative	10 mg/L	20 mg/L	30 mg/L	50 mg/L	80 mg/L	100 mg/L	150 mg/L	+ (4 - 8 mg/dL)	++ (>8 mg/dL)
ALL METHODS	28	-	1	-	3	1	22	-	1	-	-
Consult Diagnostics Urine Analyzer	2	-	-	-	-	-	1	-	1	-	-
Roche Micral - 1 minute	1	-	-	-	-	1	-	-	-	-	-
Siemens Clinitek Microalbumin	24	-	1	-	3	-	20	-	-	-	-
Uriscan Optima	1	-	-	-	-	-	1	-	-	-	-

CREATININE, DIPSTICK

Specimen UM-1

Participant Results

Method	Labs	Negative	10 mg/dL	30 mg/dL	50 mg/dL	100 mg/dL	200 mg/dL	300 mg/dL
ALL METHODS	28	-	-	-	6	12	9	1
Consult Diagnostics Urine Analyzer	1	-	-	-	-	1	-	-
Siemens Clinitek Microalbumin	25	-	-	-	6	11	7	1
Siemens Multistix Pro	2	-	-	-	-	-	2	-

MICROALBUMIN, QUANTITATIVE (mg/L)

Specimen UM-1

Method	Labs	Mean	SD	CV	Median	Range
All Method	39	94.02	6.69	7.1	92.6	65.8 - 122.3
Beckman AU	12	89.77	2.01	2.2	90.0	62.8 - 116.7

CREATININE, URINE (mg/dL)

Specimen UM-1

Method	Labs	Mean	SD	CV	Median	Range
All Method	37	66.85	5.82	8.7	67.0	55.4 - 78.3
Beckman AU	11	60.25	3.14	5.2	60.5	50.0 - 70.5

WAIVED HEMATOLOGY–HEMOGLOBIN (g/dL)

	Specimen HD-1						Specimen HD-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	83	17.23	0.68	3.9	17.3	15.8 - 18.6	88	6.17	0.18	3.0	6.2	5.7 - 6.7
All Stanbio Methods	20	17.43	0.84	4.8	17.9	15.7 - 19.2	21	6.16	0.33	5.3	6.3	5.5 - 6.9
Alere (Stanbio) HemoPoint H2	20	17.43	0.84	4.8	17.9	15.7 - 19.2	21	6.16	0.33	5.3	6.3	5.5 - 6.9
HemoCue 201/+	63	17.16	0.62	3.6	17.2	15.9 - 18.4	67	6.15	0.14	2.2	6.2	5.7 - 6.6

WAIVED HEMATOLOGY–HEMATOCRIT (percent)

	Specimen HD-1						Specimen HD-2					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	10	47.63	10.86	22.8	52.8	25.9 - 69.4	10	19.31	9.69	50.2	18.6	0.0 - 38.7

KOH SKIN PREPARATION

Specimen	***Identification***	***Labs***	***Percent***	***Performance***
K-1	Yeast/fungal elements present	57	66.28%	Acceptable
	Yeast/fungal elements absent	29	33.72%	

Organism present in specimen K-1: *Aspergillus niger*. This challenge was graded by 100% referee consensus.

K-2	Yeast/fungal elements present	80	91.95%	Acceptable
	Yeast/fungal elements absent	7	8.05%	

Organism present in specimen K-2: *Trichophyton mentagrophytes.*

URINALYSIS DIPSTICK–SPECIFIC GRAVITY

Specimen UA-1

Method	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	633	1.0129	0.0046	0.5	1.015	1.002 - 1.023
All Refractive Index Methods	7	1.0239	0.0063	0.6	1.027	1.013 - 1.034
All Roche Methods	13	1.0112	0.0041	0.4	1.010	1.001 - 1.022
All Siemens Methods	381	1.0154	0.0023	0.2	1.015	1.005 - 1.026
Consult Diagnostics Urine Analyzer	7	1.0100	0.0029	0.3	1.010	1.000 - 1.020
Diagnostic Test Group Clarity Urocheck 120	9	1.0106	0.0016	0.2	1.010	1.000 - 1.021
Henry Schein Urispec / Urispec Plus	21	1.0121	0.0030	0.3	1.010	1.002 - 1.023
McKesson 10SG Reagent Strips	6	1.0075	0.0027	0.3	1.008	0.997 - 1.018
McKesson 120 Urine Analyzer	25	1.0116	0.0025	0.2	1.010	1.001 - 1.022
Other Dipstick Method	6	1.0083	0.0026	0.3	1.010	0.998 - 1.019
Roche Chemstrips	28	1.0050	0.0036	0.4	1.005	0.995 - 1.015
Roche Urisys	10	1.0105	0.0037	0.4	1.010	1.000 - 1.021
Siemens Clinitek 50	9	1.0094	0.0030	0.3	1.010	0.999 - 1.020
Siemens Clinitek Advantus	14	1.0104	0.0024	0.2	1.010	1.000 - 1.021
Siemens Clinitek Status / Status+	356	1.0157	0.0019	0.2	1.015	1.005 - 1.026
Siemens Reagent Strips	96	1.0077	0.0045	0.4	1.005	0.997 - 1.018

URINALYSIS DIPSTICK–pH

Specimen UA-1

Participant Results

Method	***Labs***	***≤3.5***	***4.0***	***4.5***	***5.0***	***5.5***	***6.0***	***6.5***	***7.0***	***7.5***	***8.0***	***8.5***	***≥9.0***
ALL METHODS	642	-	-	1	1	-	2	1	2	15	208	407	5
BTNX Rapid Response U120/U500	1	-	-	-	-	-	-	-	-	-	1	-	-
Consult Diagnostics Reagent Strips	4	-	-	-	-	-	-	-	-	1	2	-	1
Consult Diagnostics Urine Analyzer	8	-	-	-	-	-	-	-	-	1	5	2	-
CTMI CT-120 Urine Analyzer	2	-	-	-	-	-	-	-	-	-	2	-	-
Diagnostic Test Group Clarity Urocheck	4	-	-	-	-	-	-	-	-	-	4	-	-
Diagnostic Test Group Clarity Urocheck 120	9	-	-	-	-	-	-	-	-	-	9	-	-
Germaine Labs AimStrip Urine Analyzer	2	-	-	-	-	-	-	-	-	-	2	-	-
Henry Schein One Step Plus	1	-	-	-	-	-	-	-	-	-	1	-	-
Henry Schein Urispec / Urispec Plus	21	-	-	-	-	-	-	-	-	-	21	-	-
Iris Ichem VELOCITY Urine Chemistry System	1	-	-	-	-	-	-	-	-	-	1	-	-
McKesson 10SG Reagent Strips	6	-	-	-	-	-	1	-	-	1	4	-	-
McKesson 120 Urine Analyzer	25	-	-	-	-	-	-	-	-	-	22	3	-
Medline 120 Urine Analyzer	4	-	-	-	-	-	-	-	-	-	2	2	-
Medline Urinalysis Reagent Strips	1	-	-	-	-	-	-	-	-	-	1	-	-
NDC Pro Advantage	1	-	-	-	-	-	-	-	-	-	1	-	-
Other Dipstick Method	6	-	-	-	-	-	-	-	-	-	5	-	1
Roche Chemstrips	34	-	-	-	1	-	-	-	1	-	31	-	1
Roche cobas u 411	1	-	-	-	-	-	-	-	-	-	1	-	-
Roche Criterion Analyzer	2	-	-	-	-	-	-	-	-	-	2	-	-
Roche Urisys	10	-	-	-	-	-	-	-	-	-	10	-	-
Siemens Clinitek 50	9	-	-	-	-	-	-	-	-	2	5	2	-
Siemens Clinitek 500	2	-	-	-	-	-	-	-	-	-	2	-	-
Siemens Clinitek Advantus	15	-	-	-	-	-	-	-	-	-	8	7	-
Siemens Clinitek Atlas	1	-	-	-	-	-	-	-	-	-	1	-	-
Siemens Clinitek Status / Status+	360	-	-	1	-	-	1	-	-	5	5	348	-
Siemens Multistix Pro	1	-	-	-	-	-	-	-	-	-	1	-	-
Siemens Reagent Strips	101	-	-	-	-	-	-	1	1	4	54	40	1
Uriscan Optima	2	-	-	-	-	-	-	-	-	1	1	-	-
UriScan Reagent Strips	2	-	-	-	-	-	-	-	-	-	2	-	-

URINALYSIS DIPSTICK–PROTEIN QUALITATIVE

Specimen UA-1

		Participant Results											
Method	***Labs***	***Negative***	***Trace***	***(1+)***	***(2+)***	***(3+)***	***(4+)***	***10 - 20 mg/dL***	***30 - 70 mg/dL***	***75 mg/dL***	***100 - 200 mg/dL***	***≥300 - 600 mg/dL***	***>600 or ≥1000 mg/dL***
ALL METHODS	649	613	26	1	1	-	-	6	2	-	-	-	-
BTNX Rapid Response U120/U500	1	1	-	-	-	-	-	-	-	-	-	-	-
Consult Diagnostics Reagent Strips	4	2	1	1	-	-	-	-	-	-	-	-	-
Consult Diagnostics Urine Analyzer	8	8	-	-	-	-	-	-	-	-	-	-	-
CTMI CT-120 Urine Analyzer	2	2	-	-	-	-	-	-	-	-	-	-	-
Diagnostic Test Group Clarity Urocheck	4	3	-	-	-	-	-	1	-	-	-	-	-
Diagnostic Test Group Clarity Urocheck 120	9	9	-	-	-	-	-	-	-	-	-	-	-
Germaine Labs AimStrip Urine Analyzer	2	2	-	-	-	-	-	-	-	-	-	-	-
Henry Schein One Step Plus	1	1	-	-	-	-	-	-	-	-	-	-	-
Henry Schein Urispec / Urispec Plus	21	19	-	-	-	-	-	-	2	-	-	-	-
Iris Ichem VELOCITY Urine Chemistry System	1	1	-	-	-	-	-	-	-	-	-	-	-
McKesson 10SG Reagent Strips	6	4	2	-	-	-	-	-	-	-	-	-	-
McKesson 120 Urine Analyzer	25	24	1	-	-	-	-	-	-	-	-	-	-
Medline 120 Urine Analyzer	4	4	-	-	-	-	-	-	-	-	-	-	-
Medline Urinalysis Reagent Strips	1	-	1	-	-	-	-	-	-	-	-	-	-
NDC Pro Advantage	1	1	-	-	-	-	-	-	-	-	-	-	-
Other Dipstick Method	6	-	3	-	-	-	-	3	-	-	-	-	-
Roche Chemstrips	38	36	2	-	-	-	-	-	-	-	-	-	-
Roche cobas u 411	1	1	-	-	-	-	-	-	-	-	-	-	-
Roche Criterion Analyzer	2	2	-	-	-	-	-	-	-	-	-	-	-

URINALYSIS DIPSTICK–PROTEIN QUALITATIVE (cont'd)

Specimen UA-1

		Participant Results											
Method	***Labs***	***Negative***	***Trace***	***(1+)***	***(2+)***	***(3+)***	***(4+)***	***10 - 20 mg/dL***	***30 - 70 mg/dL***	***75 mg/dL***	***100 - 200 mg/dL***	***≥300 - 600 mg/dL***	***>600 or ≥1000 mg/dL***
Roche Urisys	10	10	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek 50	9	9	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek 500	2	2	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek Advantus	15	15	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek Atlas	1	1	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek Status / Status+	358	352	6	-	-	-	-	-	-	-	-	-	-
Siemens Multistix Pro	1	1	-	-	-	-	-	-	-	-	-	-	-
Siemens Reagent Strips	103	94	8	-	1	-	-	-	-	-	-	-	-
Siemens Uristix	2	1	1	-	-	-	-	-	-	-	-	-	-
Uriscan Optima	2	2	-	-	-	-	-	-	-	-	-	-	-
UriScan Reagent Strips	2	2	-	-	-	-	-	-	-	-	-	-	-

URINALYSIS DIPSTICK–GLUCOSE

Specimen UA-1

Method	Labs	Participant Results: Negative or Normal	Trace	(1+)	(2+)	(3+)	(4+)	30 - 100 mg/dL	150 - 300 mg/dL	500 mg/dL	>500 or ≥1000 or ≥2000 mg/dL
ALL METHODS	650	11	1	5	98	64	8	5	8	265	185
BioScan Reagent Strips	1	-	-	-	-	-	-	-	-	-	1
BTNX Rapid Response U120/U500	1	-	-	-	1	-	-	-	-	-	-
Consult Diagnostics Reagent Strips	4	-	-	-	1	2	-	-	-	-	1
Consult Diagnostics Urine Analyzer	8	1	-	-	-	4	-	-	-	1	2
CTMI CT-120 Urine Analyzer	2	-	-	-	-	-	-	-	-	2	-
Diagnostic Test Group Clarity Urocheck	4	-	-	-	1	3	-	-	-	-	-
Diagnostic Test Group Clarity Urocheck 120	9	-	-	-	2	7	-	-	-	-	-
Germaine Labs AimStrip Urine Analyzer	2	-	-	-	1	-	-	-	-	1	-
Henry Schein One Step Plus	1	-	-	-	-	-	-	-	-	-	1
Henry Schein Urispec / Urispec Plus	21	-	-	-	-	-	-	-	1	3	17
Iris Ichem VELOCITY Urine Chemistry System	1	-	-	-	-	1	-	-	-	-	-
McKesson 10SG Reagent Strips	6	-	-	-	1	1	1	-	-	1	2
McKesson 120 Urine Analyzer	25	-	-	-	3	18	-	-	-	3	1
Medline 120 Urine Analyzer	4	1	-	-	-	2	-	-	-	-	1
Medline Urinalysis Reagent Strips	1	-	-	-	-	-	1	-	-	-	-
NDC Pro Advantage	1	-	-	-	1	-	-	-	-	-	-
Other Dipstick Method	6	-	-	-	-	-	1	-	1	3	1
Roche Chemstrips	37	-	-	-	-	-	1	1	1	2	32
Roche cobas u 411	1	-	-	-	-	-	-	-	-	-	1
Roche Criterion Analyzer	2	-	-	-	-	1	-	-	-	-	1
Roche Urisys	10	-	-	-	-	2	-	-	-	-	8
Siemens Clinitek 50	9	-	-	1	-	1	-	-	-	-	7
Siemens Clinitek 500	2	-	-	-	1	-	-	-	-	-	1
Siemens Clinitek Advantus	15	-	1	-	1	7	-	-	-	-	6
Siemens Clinitek Atlas	1	-	-	-	-	-	-	-	-	1	-
Siemens Clinitek Status / Status+	359	8	-	1	71	12	-	2	4	230	31
Siemens Multistix Pro	1	-	-	-	1	-	-	-	-	-	-
Siemens Reagent Strips	102	1	-	3	12	3	1	1	1	13	67
Siemens Uristix	2	-	-	-	-	-	1	-	-	1	-
Uriscan Optima	2	-	-	-	-	-	1	-	-	-	1
UriScan Reagent Strips	2	-	-	-	-	-	1	-	-	-	1

URINALYSIS DIPSTICK–KETONES

Specimen UA-1

		Participant Results													
Method	***Labs***	***Negative***	***Trace***	***Small***	***Moderate***	***Large***	***(1+)***	***(2+)***	***(3+)***	***(4+)***	***5 - 10 mg/dL***	***15 - 25 mg/dL***	***40 - 60 mg/dL***	***80 - 100 mg/dL***	***≥150 mg/dL***
ALL METHODS	639	635	1	1	-	1	-	-	-	-	1	-	-	-	-
BTNX Rapid Response U120/U500	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Consult Diagnostics Reagent Strips	4	3	-	-	-	-	-	-	-	-	1	-	-	-	-
Consult Diagnostics Urine Analyzer	8	8	-	-	-	-	-	-	-	-	-	-	-	-	-
CTMI CT-120 Urine Analyzer	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Diagnostic Test Group Clarity Urocheck	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Diagnostic Test Group Clarity Urocheck 120	8	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Germaine Labs AimStrip Urine Analyzer	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Henry Schein One Step Plus	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Henry Schein Urispec / Urispec Plus	21	21	-	-	-	-	-	-	-	-	-	-	-	-	-
Iris Ichem VELOCITY Urine Chemistry System	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
McKesson 10SG Reagent Strips	6	5	1	-	-	-	-	-	-	-	-	-	-	-	-
McKesson 120 Urine Analyzer	25	25	-	-	-	-	-	-	-	-	-	-	-	-	-
Medline 120 Urine Analyzer	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Medline Urinalysis Reagent Strips	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
NDC Pro Advantage	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Dipstick Method	6	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Roche Chemstrips	34	34	-	-	-	-	-	-	-	-	-	-	-	-	-
Roche cobas u 411	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Roche Criterion Analyzer	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Roche Urisys	10	10	-	-	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek 50	9	9	-	-	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek 500	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek Advantus	15	15	-	-	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek Atlas	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek Status / Status+	360	360	-	-	-	-	-	-	-	-	-	-	-	-	-
Siemens Multistix Pro	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Siemens Reagent Strips	100	98	-	1	-	1	-	-	-	-	-	-	-	-	-
Uriscan Optima	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-
UriScan Reagent Strips	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-

URINALYSIS DIPSTICK–BILIRUBIN

Specimen UA-1

		Participant Results											
Method	***Labs***	***Negative***	***Trace***	***Small***	***Moderate***	***Large***	***(1+)***	***(2+)***	***(3+)***	***(4+)***	***0.5 - 1.0 mg/dL***	***2.0 - 4.0 mg/dL***	***6.0 - 10.0 mg/dL***	***>10.0 mg/dL***
ALL METHODS	622	618	-	1	1	2	-	-	-	-	-	-	-	-
BTNX Rapid Response U120/U500	1	1	-	-	-	-	-	-	-	-	-	-	-	-
Consult Diagnostics Reagent Strips	4	4	-	-	-	-	-	-	-	-	-	-	-	-
Consult Diagnostics Urine Analyzer	8	8	-	-	-	-	-	-	-	-	-	-	-	-
CTMI CT-120 Urine Analyzer	2	2	-	-	-	-	-	-	-	-	-	-	-	-
Diagnostic Test Group Clarity Urocheck	4	4	-	-	-	-	-	-	-	-	-	-	-	-
Diagnostic Test Group Clarity Urocheck 120	9	9	-	-	-	-	-	-	-	-	-	-	-	-
Germaine Labs AimStrip Urine Analyzer	2	2	-	-	-	-	-	-	-	-	-	-	-	-
Henry Schein One Step Plus	1	1	-	-	-	-	-	-	-	-	-	-	-	-
Henry Schein Urispec / Urispec Plus	21	21	-	-	-	-	-	-	-	-	-	-	-	-
Iris Ichem VELOCITY Urine Chemistry System	1	1	-	-	-	-	-	-	-	-	-	-	-	-
McKesson 10SG Reagent Strips	6	6	-	-	-	-	-	-	-	-	-	-	-	-
McKesson 120 Urine Analyzer	24	24	-	-	-	-	-	-	-	-	-	-	-	-
Medline 120 Urine Analyzer	5	5	-	-	-	-	-	-	-	-	-	-	-	-
Medline Urinalysis Reagent Strips	1	1	-	-	-	-	-	-	-	-	-	-	-	-
NDC Pro Advantage	1	1	-	-	-	-	-	-	-	-	-	-	-	-
Other Dipstick Method	3	3	-	-	-	-	-	-	-	-	-	-	-	-
Roche Chemstrips	32	32	-	-	-	-	-	-	-	-	-	-	-	-
Roche cobas u 411	1	1	-	-	-	-	-	-	-	-	-	-	-	-
Roche Criterion Analyzer	1	1	-	-	-	-	-	-	-	-	-	-	-	-
Roche Urisys	10	10	-	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek 50	9	9	-	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek 500	2	2	-	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek Advantus	14	14	-	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek Atlas	1	1	-	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek Status / Status+	355	354	-	-	-	1	-	-	-	-	-	-	-	-
Siemens Multistix Pro	1	1	-	-	-	-	-	-	-	-	-	-	-	-
Siemens Reagent Strips	95	92	-	1	1	1	-	-	-	-	-	-	-	-
Uriscan Optima	2	2	-	-	-	-	-	-	-	-	-	-	-	-
UriScan Reagent Strips	1	1	-	-	-	-	-	-	-	-	-	-	-	-

URINALYSIS DIPSTICK–UROBILINOGEN

Specimen UA-1

Participant Results

Method	***Labs***	***Normal or 0.0 - 0.2 mg/dL or <3.2 µmol/L***	***1.0 or <2.0 mg/dL or 16 or 17 µmol/L***	***2.0/3.0 mg/dL or 34 or 35 µmol/L***	***4.0 or 4.0/6.0 mg/dL or 70 µmol/L***	***≥8.0 or ≥12.0 mg/dL or ≥140 or 200 µmol/L***
ALL METHODS	617	613	-	4	-	-
BTNX Rapid Response U120/U500	1	1	-	-	-	-
Consult Diagnostics Reagent Strips	4	3	-	1	-	-
Consult Diagnostics Urine Analyzer	8	8	-	-	-	-
CTMI CT-120 Urine Analyzer	3	3	-	-	-	-
Diagnostic Test Group Clarity Urocheck	4	4	-	-	-	-
Diagnostic Test Group Clarity Urocheck 120	8	8	-	-	-	-
Germaine Labs AimStrip Urine Analyzer	2	2	-	-	-	-
Henry Schein One Step Plus	1	1	-	-	-	-
Henry Schein Urispec / Urispec Plus	21	21	-	-	-	-
McKesson 10SG Reagent Strips	6	6	-	-	-	-
McKesson 120 Urine Analyzer	23	21	-	2	-	-
Medline 120 Urine Analyzer	4	4	-	-	-	-
Medline Urinalysis Reagent Strips	1	1	-	-	-	-
NDC Pro Advantage	1	1	-	-	-	-
Other Dipstick Method	3	3	-	-	-	-
Roche Chemstrips	30	30	-	-	-	-
Roche cobas u 411	1	1	-	-	-	-
Roche Criterion Analyzer	2	2	-	-	-	-
Roche Urisys	10	10	-	-	-	-
Siemens Clinitek 50	9	9	-	-	-	-
Siemens Clinitek 500	2	2	-	-	-	-
Siemens Clinitek Advantus	13	13	-	-	-	-
Siemens Clinitek Atlas	1	1	-	-	-	-
Siemens Clinitek Status / Status+	353	353	-	-	-	-
Siemens Multistix Pro	1	1	-	-	-	-
Siemens Reagent Strips	96	95	-	1	-	-
Uriscan Optima	2	2	-	-	-	-
UriScan Reagent Strips	1	1	-	-	-	-

URINALYSIS DIPSTICK–BLOOD/HEMOGLOBIN

Specimen UA-1

Participant Results

Method	*Labs*	*Negative*	*Trace*	*Small*	*Moderate*	*Large*	*(1+)*	*(2+)*	*(3+)*	*(4+)*	*(5+)*	*5 - 25 Ery/µL*	*50 - 100 Ery/µL*	*200 - 250 Ery/µL*	*±0.03 mg/dL*	*0.06 - 0.10 mg/dL*	*0.2 - 0.5 mg/dL*	*≥ 1.0 mg/dL*
ALL METHODS	642	633	6	-	-	1	-	-	-	-	-	1	-	-	-	-	1	-
BTNX Rapid Response U120/U500	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Consult Diagnostics Reagent Strips	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Consult Diagnostics Urine Analyzer	8	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CTMI CT-120 Urine Analyzer	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diagnostic Test Group Clarity Urocheck	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diagnostic Test Group Clarity Urocheck 120	8	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Germaine Labs AimStrip Urine Analyzer	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Henry Schein One Step Plus	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Henry Schein Urispec / Urispec Plus	21	20	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Iris Ichem VELOCITY Urine Chemistry System	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
McKesson 10SG Reagent Strips	6	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
McKesson 120 Urine Analyzer	23	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Medline 120 Urine Analyzer	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Medline Urinalysis Reagent Strips	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NDC Pro Advantage	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Dipstick Method	6	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Roche Chemstrips	37	37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Roche cobas u 411	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Roche Criterion Analyzer	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Roche Urisys	10	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek 50	9	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek 500	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek Advantus	15	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek Atlas	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek Status / Status+	359	354	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Siemens Multistix Pro	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Siemens Reagent Strips	100	97	1	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-
Uriscan Optima	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
UriScan Reagent Strips	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

URINALYSIS DIPSTICK–LEUKOCYTE ESTERASE

Specimen UA-1

		Participant Results										
Method	***Labs***	***Negative***	***Trace***	***Small***	***Moderate***	***Large***	***(1+)***	***(2+)***	***(3+)***	***(4+)***	***15 or 25 µL***	***75 or 100 µL***	***250 or 500 µL***
ALL METHODS	645	645	-	-	-	-	-	-	-	-	-	-	-
BTNX Rapid Response U120/U500	1	1	-	-	-	-	-	-	-	-	-	-	-
Consult Diagnostics Reagent Strips	4	4	-	-	-	-	-	-	-	-	-	-	-
Consult Diagnostics Urine Analyzer	8	8	-	-	-	-	-	-	-	-	-	-	-
CTMI CT-120 Urine Analyzer	3	3	-	-	-	-	-	-	-	-	-	-	-
Diagnostic Test Group Clarity Urocheck	4	4	-	-	-	-	-	-	-	-	-	-	-
Diagnostic Test Group Clarity Urocheck 120	8	8	-	-	-	-	-	-	-	-	-	-	-
Germaine Labs AimStrip Urine Analyzer	2	2	-	-	-	-	-	-	-	-	-	-	-
Henry Schein One Step Plus	1	1	-	-	-	-	-	-	-	-	-	-	-
Henry Schein Urispec / Urispec Plus	21	21	-	-	-	-	-	-	-	-	-	-	-
Iris Ichem VELOCITY Urine Chemistry System	1	1	-	-	-	-	-	-	-	-	-	-	-
McKesson 10SG Reagent Strips	6	6	-	-	-	-	-	-	-	-	-	-	-
McKesson 120 Urine Analyzer	24	24	-	-	-	-	-	-	-	-	-	-	-
Medline 120 Urine Analyzer	4	4	-	-	-	-	-	-	-	-	-	-	-
Medline Urinalysis Reagent Strips	1	1	-	-	-	-	-	-	-	-	-	-	-
NDC Pro Advantage	1	1	-	-	-	-	-	-	-	-	-	-	-
Other Dipstick Method	6	6	-	-	-	-	-	-	-	-	-	-	-
Roche Chemstrips	38	38	-	-	-	-	-	-	-	-	-	-	-
Roche cobas u 411	1	1	-	-	-	-	-	-	-	-	-	-	-
Roche Criterion Analyzer	2	2	-	-	-	-	-	-	-	-	-	-	-
Roche Urisys	10	10	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek 50	9	9	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek 500	2	2	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek Advantus	15	15	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek Atlas	1	1	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek Status / Status+	360	360	-	-	-	-	-	-	-	-	-	-	-
Siemens Multistix Pro	1	1	-	-	-	-	-	-	-	-	-	-	-
Siemens Reagent Strips	99	99	-	-	-	-	-	-	-	-	-	-	-
Siemens Uristix	1	1	-	-	-	-	-	-	-	-	-	-	-
Uriscan Optima	2	2	-	-	-	-	-	-	-	-	-	-	-
UriScan Reagent Strips	2	2	-	-	-	-	-	-	-	-	-	-	-

URINALYSIS DIPSTICK–NITRITE

Specimen UA-1

		Participant Results	
Method	***Labs***	***Negative***	***Positive***
ALL METHODS	644	642	2
BTNX Rapid Response U120/U500	1	1	-
Consult Diagnostics Reagent Strips	4	4	-
Consult Diagnostics Urine Analyzer	8	8	-
CTMI CT-120 Urine Analyzer	3	3	-
Diagnostic Test Group Clarity Urocheck	4	4	-
Diagnostic Test Group Clarity Urocheck 120	8	8	-
Germaine Labs AimStrip Urine Analyzer	2	2	-
Henry Schein One Step Plus	2	2	-
Henry Schein Urispec / Urispec Plus	20	20	-
Iris Ichem VELOCITY Urine Chemistry System	1	1	-
McKesson 10SG Reagent Strips	6	6	-
McKesson 120 Urine Analyzer	23	23	-
Medline 120 Urine Analyzer	5	5	-
Medline Urinalysis Reagent Strips	1	1	-
NDC Pro Advantage	1	1	-
Other Dipstick Method	6	6	-
Roche Chemstrips	38	37	1
Roche cobas u 411	1	1	-
Roche Criterion Analyzer	2	2	-
Roche Urisys	10	9	1
Siemens Clinitek 50	9	9	-
Siemens Clinitek 500	2	2	-
Siemens Clinitek Advantus	15	15	-
Siemens Clinitek Atlas	1	1	-
Siemens Clinitek Status / Status+	358	358	-
Siemens Multistix Pro	1	1	-
Siemens Reagent Strips	100	100	-
Siemens Uristix	1	1	-
Uriscan Optima	2	2	-
UriScan Reagent Strips	2	2	-

URINALYSIS –MICROALBUMIN (dipstick only)

Specimen UA-1

		Participant Results								
Method	***Labs***	***Negative***	***10 mg/L***	***20 mg/L***	***30 mg/L***	***50 mg/L***	***80 mg/L***	***100 mg/L***	***150 mg/L***	***+ (4 - 8 mg/dL)***	***++ (>8 mg/dL)***
ALL METHODS	50	5	39	1	2	1	1	-	-	-	1
Roche Micral - 1 minute	3	1	-	1	-	1	-	-	-	-	-
Siemens Clinitek Microalbumin	42	2	37	-	1	-	1	-	-	-	1
Siemens Clinitek Status / Status+	3	1	2	-	-	-	-	-	-	-	-
Siemens Reagent Strips	1	1	-	-	-	-	-	-	-	-	-

URINALYSIS –URINE hCG

Specimen UA-1

		Participant Results	
Method	***Labs***	***Positive***	***Negative***
ALL METHODS	373	1	372
Alere Acceava hCG-Urine	1	-	1
Alere Clearview hCG Cassette	2	-	2
Alere Clearview hCG Combo II	1	-	1
Alere hCG Combo Cassette	8	-	8
Alfa Scientific Instant View	6	-	6
Beckman Coulter ICON 20 hCG	3	-	3
Beckman Coulter ICON 25 hCG	19	-	19
Beckman Coulter ICON II	2	-	2
BTNX Rapid Response hCG	1	-	1
Cardinal Health SP Brand combo	20	-	20
Cardinal Hlth SPBrand-cassette	4	-	4
Clarity Diagnostics hCG strip/cassette	13	-	13
CONSULT diagnostics hCG Cassette	45	-	45
CONSULT diagnostics hCG Combo	9	-	9
CONSULT diagnostics hCG Dipstick	24	-	24
Germaine Laboratories AimStep Pregnancy	1	-	1
Henry Schein One Step	42	-	42
Henry Schein One Step Plus	17	-	17
Jant Pharmacal Accutest	3	-	3
McKesson hCG Combo Cassette	4	-	4
McKesson hCG Urine Cassette	9	-	9
Medline hCG Combo Test Cassette	4	-	4
Medline hCG Test Cassette	5	-	5
Moore Medical hCG Urine	1	-	1
NDC Pro Advantage	1	-	1
PEP (Lab Supply) HCG	1	-	1
Quidel QuickVue One-Step Combo	15	-	15
Quidel QuickVue One-Step Urine	28	-	28
Quidel QuickVue+ One-Step Combo	30	1	29
Quidel RapidVue	1	-	1
Quidel Sofia hCG	2	-	2
Sekisui OSOM - Urine Test	1	-	1
Sekisui OSOM Card Pregnancy	5	-	5
Sekisui OSOM hCG Combo Test	3	-	3
Siemens Clinitek Status / Status+	11	-	11
Stanbio QuPID	9	-	9
Stanbio QuPID Plus	1	-	1
Stanbio TRUE hCG	7	-	7
Sure-Vue hCG - 25mIU	1	-	1
Sure-Vue hCG-STAT	5	-	5

FECAL OCCULT BLOOD

	Specimen OC-1			Specimen OC-2		
Method	***Labs***	***Positive***	***Negative***	***Labs***	***Positive***	***Negative***
ALL METHODS	253	250	3	253	3	250
Alere Clearview iFOBT Complete	1	1	-	1	-	1
Beckman Coulter Hemoccult ICT	35	35	-	35	-	35
Guaiac (slide) Test	142	140	2	142	2	140
Hemosure IFOB	27	27	-	27	-	27
Other Immunochemical FOB kit	27	27	-	27	1	26
Polymedco OC Auto Micro 80	4	3	1	4	-	4
Polymedco OC-Light iFOB	9	9	-	9	-	9
Quidel QuickVue iFOB	2	2	-	2	-	2

2020 M1
Urine Sediment Identification
SPECIMENS US-1 AND US-2

CASE HISTORY:

A 50 year old male with a history of type 1 diabetes and hypertension presented to his internist. The patient takes medication for his blood pressure and uses insulin injections for his diabetes, but recently had some concerning hypoglycemic events. A routine urinalysis was performed, and the results appear below.

Color = Straw
Appearance = Clear

Dipstick results:

Specific gravity = 1.025
pH = 5.0
Protein = 30 mg/dL (1+)
Glucose = 250 mg/dL
Ketones = 15 mg/dL (Small)
Bilirubin = Negative
Urobilinogen = Normal/0.2 mg/dL
Blood = Negative
Leukocyte Esterase = Negative
Nitrite = Negative

This patient was diagnosed with poorly controlled diabetes mellitus and retrograde ejaculation. Men with diabetes mellitus are at higher risk for erectile dysfunction and retrograde ejaculation (RE). In RE, semen is emitted into the urinary bladder rather than out of the body through the urethra. Other risk factors for ejaculation disorders that have been associated with the presence of at least one sperm in urinary sediment include history of pelvic surgery for colon cancer, history of transurethral resection of the prostate (TURP), and the use of alpha-1 blockers or selective serotonin reuptake inhibitors (SSRIs).

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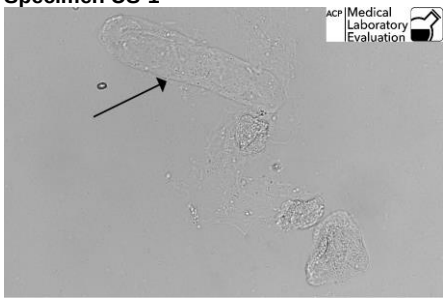
Urine Sediment Identification

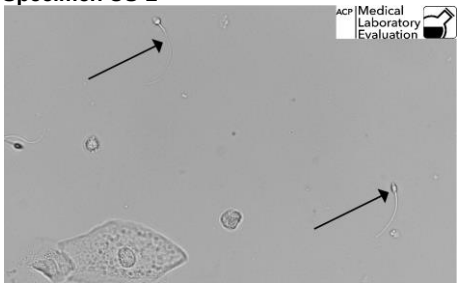
Specimen US-1



Identification	Labs	Percent	Performance
Hyaline cast	347	88.97%	Acceptable
Waxy cast	20	5.13%	
Granular cast	17	4.36%	
Cellular (RTE) cast	4	1.03%	

The arrow in this photo points to a **hyaline cast**. Hyaline casts are the most commonly seen casts in the urine. They are colorless and smooth, with a finely wrinkled surface and no granules. The sides are parallel and the ends are blunt and rounded. Hyaline casts are normal, and frequently seen in the urine sediment of healthy people in small numbers. They may be increased after strenuous exercise or in renal disease. Sometimes hyaline casts are confused with waxy or finely granular casts. Waxy casts appear more broad and square, with cracks and blunt ends. Granular casts appear to contain a lot of debris. To view another hyaline cast, see 2018 M2 Specimen US-3. To view a photo of a waxy cast, see 2019 M1 Specimen US-1. To view a granular cast, see 2017 M2 Specimen US-4. *Technical tip:* Hyaline casts have a low refractive index, which makes them hard to see if the microscope's illumination is not set correctly. Use subdued lighting to examine urine sediment, with the sub-stage condenser raised all the way up, and the condenser iris diaphragm approximately 70% closed / 30% open. Do not lower the condenser to decrease brightness. This reduces the resolution and sharpness of the image, which could cause you to miss important elements like casts.

Specimen US-2



Identification	Labs	Percent	Performance
Spermatozoa	389	99.49%	Acceptable
Yeast/fungi	1	0.26%	

The arrows in this photograph point to spermatozoa. Spermatozoa have oval bodies and long, thin, filamentous tails. Sperm may be found in the urine of both men and women after coitus, as a specimen contaminant. In one study, nearly 2% of all male urinary sediment samples examined in daily clinical practice contained at least one sperm. Some labs choose not to report the presence of sperm in urine at all; however, the laboratory often does not receive sufficient information about the patient to determine the significance of such findings. There is considerable overlap between the factors associated with ejaculatory disorders and those that are associated with the presence of sperm in urinary sediment. Additionally, if the specimen were from a child or patient that is incapacitated mentally or physically, the presence of sperm could indicate sexual abuse, and this would be important information for the clinician to be aware of. To view another photo of spermatozoa, see 2016 M2 Specimen US-3.

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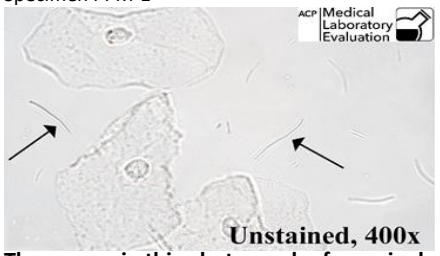
PROVIDER-PERFORMED MICROSCOPY (PPM)

Wet Mount Preparation

Specimen PPM-1

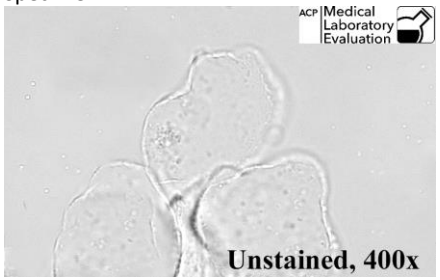


Identification	Labs	Percent	Performance
Bacteria	265	61.34%	Acceptable
Fiber/fecal contamination	93	21.53%	
Identification unknown – refer	29	6.71%	
Yeast/fungi	22	5.09%	
Mucus strands	17	3.94%	

The arrows in this photograph of a vaginal wet mount point to bacteria. These long filamentous rods are most likely Lactobacillus species. A variety of bacteria, including lactobacilli and streptococci, make up the normal vaginal flora. Although they may resemble the tails of sperm, these should not be confused with spermatozoa, as they do not have any heads. To view another photo of bacteria in a wet mount, see 2018 M2 Specimen PPM-7. To view a photo of sperm in a wet mount, see 2018 M1 Specimen PPM-1. This sample was graded by 91% referee consensus.

KOH PREPARATION

Specimen PPM-2



Identification	Labs	Percent	Performance
Yeast/fungal elements absent	376	93.53%	Acceptable
Yeast/fungal elements present	26	6.47%	

Yeast and fungal elements are absent in this photograph of a vaginal KOH prep. To view a photo of yeast in a KOH prep, see 2019 M1 Specimen PPM-2.

PROVIDER-PERFORMED MICROSCOPY (PPM)

SCABIES DETECTION

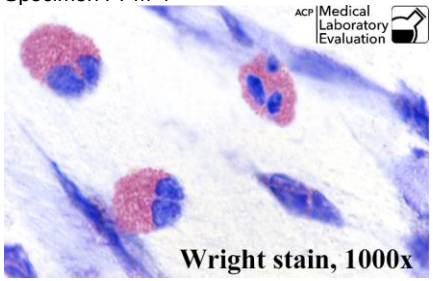
Specimen PPM-3

Identification	Labs	Percent	Performance
Scabies present	148	99.33%	Acceptable
Scabies absent	1	0.67%	

A scabies mite is present in this photograph of a skin scrapings preparation. The mites burrow into the skin and produce an itchy pimple-like (papular) rash. The diagnosis of scabies is often made only by the patient history and examination of the skin. Identification of the mite, its burrows, eggs, or feces (called scybala) confirms the clinical suspicion of scabies. Scabies can be difficult to find by laboratory testing, though, because mites are often few in number. The scabies mite, or human itch mite (Sarcoptes scabiei), is usually spread by prolonged direct personal contact with an infested person. It can also be spread indirectly by prolonged contact with infested clothing or bedding. There may be only 10-15 mites on the entire body of an infested person who is otherwise healthy, so a negative test does not rule out the diagnosis.
To view another photo of a scabies mite, see 2019 M2 Specimen PPM-8.

NASAL SMEAR

Specimen PPM-4



Identification	Labs	Percent	Performance
Eosinophils present	86	98.85%	Acceptable
Eosinophils absent	1	1.15%	

Eosinophils are present in this photograph of Wright-stained nasal mucus. The orange color comes from the dye eosin, which is a component of Wright stain. This unique red-orange color makes “Eos” easy to spot and identify. To view another photo of eosinophils in a nasal smear, see 2018 M2 Specimen PPM-10.

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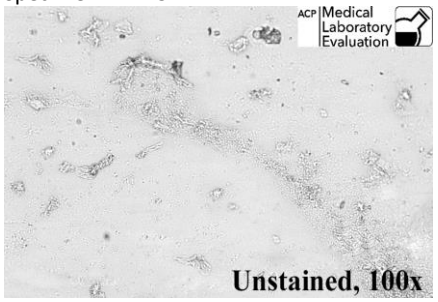
PROVIDER-PERFORMED MICROSCOPY (PPM)

PINWORM PREPARATION

Specimen PPM-5

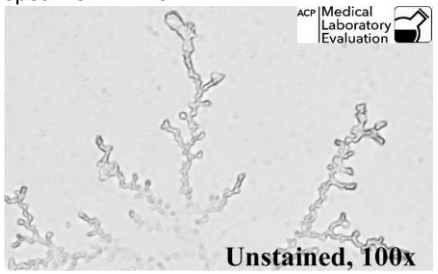


Identification	Labs	Percent	Performance
Pinworms/eggs absent	171	97.16%	Acceptable
Pinworms/eggs present	5	2.84%	

Pinworm eggs are absent in this photograph of a perianal pinworm preparation. To view a photo of pinworm eggs, see 2019 M1 Specimen PPM-5.

FERN TEST

Specimen PPM-6



Identification	Labs	Percent	Performance
Ferning present	137	95.14%	Acceptable
Ferming absent	7	4.86%	

Ferning is present in this photograph of air-dried vaginal secretions. The fern test is used to test for ruptured membranes. Amniotic fluid crystallizes when dried on a microscope slide to form a pattern resembling a fern leaf, unlike normal vaginal secretions or urine, which do not crystallize. Ferning indicates leakage of amniotic fluid. To view another photo of ferning, see 2018 M1 Specimen PPM-6.

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Medical Laboratory Evaluation
25 Massachusetts Ave NW Ste 700
Washington, DC 20001-7401
800-338-2746 • 202-261-4500 • Fax: 202-835-0440