MEDICAL LABORATORY EVALUATION

PARTICIPANT SUMMARY

2 • 0 • 1 • 6

Hematology, Coagulation,
Blood Bank, Urinalysis, PPM
2016 MLE-M2

ACP Medical Laboratory Evaluation

Total Commitment to Education and Service
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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
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 QBC Hematology and 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%
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%
Whole Blood Glucose – HemoCue	± 12 mg/dL or ± 20%*

*Whichever is greater

HEMOCUE HEMATOLOGY–HEMOGLOBIN (g/dL)

	Specimen HQ-3						Specimen HQ-4					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
HemoCue	34	13.14	0.31	2.4	13.1	12.2 - 14.1	36	4.96	0.28	5.7	5.0	4.6 - 5.4

HEMOCUE HEMATOLOGY–GLUCOSE (mg/dL)

	Specimen HQ-3						Specimen HQ-4					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	30	106.9	7.1	6.6	107	85 - 129	30	44.2	5.8	13.1	44	32 - 57
All HemoCue Methods	29	107.1	7.1	6.6	107	85 - 129	29	44.4	5.7	13.0	44	32 - 57
HemoCue Glucose 201/+	29	107.1	7.1	6.6	107	85 - 129	29	44.4	5.7	13.0	44	32 - 57

SEDIMENTATION RATE (MM/HR)

	Specimen ES-3						Specimen ES-4					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	155	49.5	13.1	26.5	49	23 - 76	153	10.5	3.1	29.4	10	4 - 17
All HiChem Methods	11	76.1	10.8	14.2	74	54 - 98	11	9.8	4.0	40.7	9	1 - 18
All Vital Diagnostics Methods	20	55.7	6.9	12.3	55	41 - 70	20	11.3	2.4	21.4	12	6 - 17
HiChem Mini-Ves	10	77.1	10.8	14.0	74	55 - 99	10	9.7	4.2	43.2	9	1 - 19
Polymedco Sedimat	11	44.9	8.0	17.9	45	28 - 61	11	7.5	3.2	42.9	9	1 - 15
Streck ESR-Auto Plus	10	65.3	5.1	7.8	67	55 - 76	10	15.2	1.5	9.7	15	12 - 19
Vital Diagnostics Excyte M/10	18	55.0	6.1	11.2	55	42 - 68	18	11.3	2.5	22.3	12	6 - 17
Westergren - diluted	83	44.4	8.5	19.2	45	27 - 62	82	10.0	2.3	22.4	10	5 - 15

SEDIMAT SEDIMENTATION RATE (MM/HR)

	Specimen MAT-3						Specimen MAT-4					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
Polymedco Sedimat 15	11	65.3	5.8	8.9	67	53 - 77	11	2.0	0.6	31.6	2	0 - 4

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

	Specimen CL-6						Specimen CL-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	16	8.06	0.23	2.8	8.1	6.8 - 9.3	16	3.23	0.18	5.5	3.2	2.7 - 3.8
All Abbott Cell-Dyn Instruments	15	8.07	0.23	2.9	8.1	6.8 - 9.3	15	3.23	0.18	5.7	3.2	2.7 - 3.8
Abbott Cell-Dyn Ruby	11	8.08	0.20	2.5	8.1	6.8 - 9.3	11	3.25	0.21	6.4	3.2	2.7 - 3.8
	Specimen CL-8						**Specimen CL-9**					
All Method	16	8.08	0.26	3.2	8.1	6.8 - 9.3	16	3.29	0.17	5.1	3.3	2.7 - 3.8
All Abbott Cell-Dyn Instruments	15	8.07	0.27	3.3	8.1	6.8 - 9.3	15	3.30	0.17	5.2	3.3	2.8 - 3.8
Abbott Cell-Dyn Ruby	11	8.06	0.30	3.7	8.1	6.8 - 9.3	11	3.32	0.19	5.7	3.3	2.8 - 3.9
	Specimen CL-10											
All Method	16	25.44	0.80	3.2	25.4	21.6 - 29.3						
All Abbott Cell-Dyn Instruments	15	25.33	0.69	2.7	25.3	21.5 - 29.2						
Abbott Cell-Dyn Ruby	11	25.57	0.63	2.5	25.7	21.7 - 29.5						

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

	Specimen CL-6						Specimen CL-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	16	4.546	0.081	1.8	4.54	4.27 - 4.82	16	2.115	0.042	2.0	2.11	1.98 - 2.25
All Abbott Cell-Dyn Instruments	15	4.551	0.080	1.8	4.55	4.27 - 4.83	15	2.113	0.042	2.0	2.11	1.98 - 2.24
Abbott Cell-Dyn Ruby	11	4.565	0.068	1.5	4.56	4.29 - 4.84	11	2.116	0.047	2.2	2.11	1.98 - 2.25
	Specimen CL-8						**Specimen CL-9**					
All Method	16	4.499	0.051	1.1	4.49	4.22 - 4.77	16	2.118	0.042	2.0	2.12	1.99 - 2.25
All Abbott Cell-Dyn Instruments	15	4.500	0.053	1.2	4.49	4.23 - 4.77	15	2.121	0.042	2.0	2.12	1.99 - 2.25
Abbott Cell-Dyn Ruby	11	4.508	0.055	1.2	4.50	4.23 - 4.78	11	2.115	0.047	2.2	2.12	1.98 - 2.25
	Specimen CL-10											
All Method	16	6.412	0.091	1.4	6.43	6.02 - 6.80						
All Abbott Cell-Dyn Instruments	15	6.419	0.090	1.4	6.43	6.03 - 6.81						
Abbott Cell-Dyn Ruby	11	6.441	0.059	0.9	6.43	6.05 - 6.83						

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

	Specimen CL-6						Specimen CL-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	16	13.22	0.28	2.1	13.3	12.2 - 14.2	16	5.45	0.14	2.5	5.5	5.0 - 5.9
All Abbott Cell-Dyn Instruments	15	13.23	0.28	2.1	13.3	12.3 - 14.2	15	5.44	0.14	2.5	5.4	5.0 - 5.9
Abbott Cell-Dyn Ruby	11	13.22	0.29	2.2	13.3	12.2 - 14.2	11	5.41	0.13	2.4	5.4	5.0 - 5.8
	Specimen CL-8						**Specimen CL-9**					
All Method	16	13.11	0.20	1.5	13.1	12.1 - 14.1	16	5.45	0.13	2.4	5.5	5.0 - 5.9
All Abbott Cell-Dyn Instruments	15	13.11	0.20	1.5	13.1	12.1 - 14.1	15	5.45	0.14	2.5	5.5	5.0 - 5.9
Abbott Cell-Dyn Ruby	11	13.08	0.20	1.5	13.1	12.1 - 14.0	11	5.42	0.14	2.6	5.4	5.0 - 5.8
	Specimen CL-10											
All Method	16	19.31	0.34	1.7	19.3	17.9 - 20.7						
All Abbott Cell-Dyn Instruments	15	19.32	0.35	1.8	19.3	17.9 - 20.7						
Abbott Cell-Dyn Ruby	11	19.35	0.30	1.6	19.3	17.9 - 20.7						

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

	Specimen CL-6						Specimen CL-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	16	37.03	1.54	4.2	36.9	34.8 - 39.3	15	15.46	0.49	3.1	15.5	14.5 - 16.4
All Abbott Cell-Dyn Instruments	15	36.73	1.04	2.8	36.8	34.5 - 39.0	15	15.46	0.49	3.1	15.5	14.5 - 16.4
Abbott Cell-Dyn Ruby	11	36.74	1.03	2.8	36.9	34.5 - 39.0	11	15.44	0.56	3.7	15.5	14.5 - 16.4
	Specimen CL-8						**Specimen CL-9**					
All Method	15	36.31	0.89	2.4	36.2	34.1 - 38.5	16	15.69	0.72	4.6	15.7	14.7 - 16.7
All Abbott Cell-Dyn Instruments	15	36.31	0.89	2.4	36.2	34.1 - 38.5	15	15.57	0.56	3.6	15.6	14.6 - 16.6
Abbott Cell-Dyn Ruby	11	36.25	1.01	2.8	36.2	34.0 - 38.5	11	15.44	0.58	3.8	15.6	14.5 - 16.4
	Specimen CL-10											
All Method	15	52.88	1.36	2.6	53.2	49.7 - 56.1						
All Abbott Cell-Dyn Instruments	15	52.88	1.36	2.6	53.2	49.7 - 56.1						
Abbott Cell-Dyn Ruby	11	52.95	1.38	2.6	53.2	49.7 - 56.2						

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

	Specimen CL-6						Specimen CL-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	16	276.4	15.8	5.7	282	207 - 346	16	86.7	10.4	12.0	85	65 - 109
All Abbott Cell-Dyn Instruments	15	279.0	12.2	4.4	282	209 - 349	15	86.2	10.6	12.2	84	64 - 108
Abbott Cell-Dyn Ruby	11	280.3	9.0	3.2	282	210 - 351	11	85.1	5.3	6.3	84	63 - 107
	Specimen CL-8						**Specimen CL-9**					
All Method	16	269.7	19.3	7.2	271	202 - 338	16	84.7	9.3	11.0	83	63 - 106
All Abbott Cell-Dyn Instruments	15	273.0	14.6	5.3	271	204 - 342	15	84.1	9.4	11.1	83	63 - 106
Abbott Cell-Dyn Ruby	11	275.5	8.9	3.2	275	206 - 345	11	83.0	5.4	6.5	82	62 - 104
	Specimen CL-10											
All Method	15	515.9	22.0	4.3	521	386 - 645						
All Abbott Cell-Dyn Instruments	15	515.9	22.0	4.3	521	386 - 645						
Abbott Cell-Dyn Ruby	11	523.2	14.3	2.7	523	392 - 654						

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

	Specimen CL-6						Specimen CL-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	16	61.64	1.37	2.2	61.8	57.5 - 65.8	16	50.85	1.36	2.7	50.7	46.7 - 55.0
All Abbott Cell-Dyn Instruments	15	61.46	1.21	2.0	61.8	57.8 - 65.2	15	50.75	1.34	2.6	50.5	46.7 - 54.8
Abbott Cell-Dyn Ruby	11	61.68	0.82	1.3	61.8	59.2 - 64.2	11	51.05	1.34	2.6	50.9	47.0 - 55.1
	Specimen CL-8						**Specimen CL-9**					
All Method	15	61.77	1.01	1.6	61.7	58.7 - 64.9	16	51.32	2.06	4.0	51.5	45.1 - 57.5
All Abbott Cell-Dyn Instruments	14	61.61	0.83	1.3	61.7	59.1 - 64.2	15	51.18	2.05	4.0	51.4	45.0 - 57.4
Abbott Cell-Dyn Ruby	11	61.48	0.84	1.4	61.6	58.9 - 64.1	11	51.67	1.82	3.5	51.5	46.2 - 57.2
	Specimen CL-10											
All Method	16	74.68	1.12	1.5	74.9	71.3 - 78.1						
All Abbott Cell-Dyn Instruments	15	74.71	1.15	1.5	74.9	71.2 - 78.2						
Abbott Cell-Dyn Ruby	11	74.85	0.79	1.1	74.8	72.4 - 77.3						

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

Instrument	Specimen CL-6 Labs	Mean	SD	CV	Median	Range	Specimen CL-7 Labs	Mean	SD	CV	Median	Range
All Method	15	27.91	0.73	2.6	28.0	25.7 - 30.2	16	38.71	1.87	4.8	39.2	33.0 - 44.4
All Abbott Cell-Dyn Instruments	14	28.00	0.68	2.4	28.0	25.9 - 30.1	15	38.81	1.89	4.9	39.4	33.1 - 44.5
Abbott Cell-Dyn Ruby	11	28.01	0.72	2.6	28.0	25.8 - 30.2	11	38.23	1.88	4.9	38.5	32.5 - 43.9

Instrument	Specimen CL-8 Labs	Mean	SD	CV	Median	Range	Specimen CL-9 Labs	Mean	SD	CV	Median	Range
All Method	15	27.85	1.22	4.4	28.0	24.1 - 31.6	16	37.54	2.07	5.5	37.7	31.3 - 43.8
All Abbott Cell-Dyn Instruments	14	27.99	1.14	4.1	28.2	24.5 - 31.5	15	37.65	2.09	5.6	37.7	31.3 - 44.0
Abbott Cell-Dyn Ruby	11	28.35	0.98	3.5	28.5	25.3 - 31.3	11	37.48	2.32	6.2	37.7	30.5 - 44.5

Instrument	Specimen CL-10 Labs	Mean	SD	CV	Median	Range
All Method	15	18.25	0.84	4.6	18.2	15.7 - 20.8
All Abbott Cell-Dyn Instruments	14	18.26	0.87	4.7	18.4	15.6 - 20.9
Abbott Cell-Dyn Ruby	11	18.30	0.84	4.6	18.6	15.7 - 20.9

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

Instrument	Specimen CL-6 Labs	Mean	SD	CV	Median	Range	Specimen CL-7 Labs	Mean	SD	CV	Median	Range
All Method	15	6.51	0.27	4.2	6.5	5.6 - 7.4	15	6.68	1.47	22.1	6.2	2.2 - 11.2
All Abbott Cell-Dyn Instruments	14	6.54	0.24	3.7	6.6	5.8 - 7.3	14	6.67	1.53	22.9	6.1	2.0 - 11.3
Abbott Cell-Dyn Ruby	10	6.58	0.20	3.1	6.6	5.9 - 7.2	10	7.04	1.68	23.9	6.6	2.0 - 12.1

Instrument	Specimen CL-8 Labs	Mean	SD	CV	Median	Range	Specimen CL-9 Labs	Mean	SD	CV	Median	Range
All Method	16	6.54	0.67	10.3	6.4	4.5 - 8.6	16	7.32	1.18	16.1	7.0	3.7 - 10.9
All Abbott Cell-Dyn Instruments	15	6.53	0.69	10.6	6.4	4.4 - 8.7	15	7.34	1.21	16.5	7.0	3.6 - 11.0
Abbott Cell-Dyn Ruby	11	6.35	0.49	7.7	6.4	4.8 - 7.9	11	7.25	1.29	17.8	7.0	3.3 - 11.2

Instrument	Specimen CL-10 Labs	Mean	SD	CV	Median	Range
All Method	16	4.45	0.65	14.7	4.6	2.4 - 6.5
All Abbott Cell-Dyn Instruments	15	4.41	0.66	14.9	4.6	2.4 - 6.4
Abbott Cell-Dyn Ruby	11	4.57	0.26	5.6	4.6	3.8 - 5.4

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

	Specimen CL-6						Specimen CL-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	15	3.67	0.32	8.7	3.6	2.7 - 4.7	15	3.33	0.31	9.4	3.4	2.3 - 4.3
All Abbott Cell-Dyn Instruments	15	3.67	0.32	8.7	3.6	2.7 - 4.7	15	3.33	0.31	9.4	3.4	2.3 - 4.3
Abbott Cell-Dyn Ruby	11	3.71	0.32	8.7	3.7	2.7 - 4.7	11	3.40	0.28	8.3	3.4	2.5 - 4.3
	Specimen CL-8						**Specimen CL-9**					
All Method	15	3.79	0.28	7.3	3.7	2.9 - 4.7	16	3.24	0.55	17.0	3.3	1.5 - 4.9
All Abbott Cell-Dyn Instruments	15	3.79	0.28	7.3	3.7	2.9 - 4.7	15	3.35	0.34	10.3	3.3	2.3 - 4.4
Abbott Cell-Dyn Ruby	11	3.83	0.31	8.0	3.7	2.9 - 4.8	11	3.35	0.38	11.2	3.3	2.2 - 4.5
	Specimen CL-10											
All Method	16	1.89	0.13	6.9	1.9	1.4 - 2.3						
All Abbott Cell-Dyn Instruments	15	1.89	0.14	7.2	1.9	1.4 - 2.3						
Abbott Cell-Dyn Ruby	11	1.90	0.12	6.2	1.9	1.5 - 2.3						

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

	Specimen CL-6						Specimen CL-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	14	0.04	0.09	218.8	0.0	0.0 - 0.4	16	0.48	0.77	161.2	0.2	0.0 - 2.8
All Abbott Cell-Dyn Instruments	14	0.04	0.09	218.8	0.0	0.0 - 0.4	13	0.15	0.11	77.1	0.1	0.0 - 0.5
Abbott Cell-Dyn Ruby	11	0.07	0.21	289.0	0.0	0.0 - 0.8	11	0.25	0.30	124.1	0.2	0.0 - 1.2
	Specimen CL-8						**Specimen CL-9**					
All Method	15	0.11	0.15	139.4	0.0	0.0 - 0.6	14	0.21	0.20	95.6	0.1	0.0 - 0.9
All Abbott Cell-Dyn Instruments	15	0.11	0.15	139.4	0.0	0.0 - 0.6	14	0.21	0.20	95.6	0.1	0.0 - 0.9
Abbott Cell-Dyn Ruby	11	0.05	0.09	171.3	0.0	0.0 - 0.4	11	0.21	0.21	101.4	0.1	0.0 - 0.9
	Specimen CL-10											
All Method	16	0.37	0.19	51.2	0.4	0.0 - 1.0						
All Abbott Cell-Dyn Instruments	15	0.34	0.15	45.6	0.4	0.0 - 0.9						
Abbott Cell-Dyn Ruby	11	0.37	0.11	29.6	0.4	0.0 - 0.8						

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

	Specimen SYX-6						Specimen SYX-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	78	8.31	0.23	2.7	8.3	7.0 - 9.6	76	2.66	0.10	3.9	2.7	2.2 - 3.1
All Sysmex Instruments	78	8.31	0.23	2.7	8.3	7.0 - 9.6	76	2.66	0.10	3.9	2.7	2.2 - 3.1
Sysmex KX-21N & K-800, 1000, 4500	43	8.26	0.16	1.9	8.2	7.0 - 9.5	41	2.65	0.08	3.1	2.7	2.2 - 3.1
Sysmex pocH-100i	16	8.21	0.24	2.9	8.2	6.9 - 9.5	16	2.63	0.11	4.3	2.6	2.2 - 3.1
Sysmex XP-300	19	8.52	0.23	2.7	8.5	7.2 - 9.8	19	2.70	0.13	4.8	2.7	2.2 - 3.2
	Specimen SYX-8						**Specimen SYX-9**					
All Method	77	8.30	0.22	2.6	8.3	7.0 - 9.6	76	2.67	0.10	3.9	2.7	2.2 - 3.1
All Sysmex Instruments	77	8.30	0.22	2.6	8.3	7.0 - 9.6	76	2.67	0.10	3.9	2.7	2.2 - 3.1
Sysmex KX-21N & K-800, 1000, 4500	43	8.28	0.15	1.8	8.3	7.0 - 9.6	42	2.66	0.09	3.5	2.7	2.2 - 3.1
Sysmex pocH-100i	16	8.18	0.26	3.1	8.2	6.9 - 9.5	16	2.61	0.07	2.8	2.6	2.2 - 3.1
Sysmex XP-300	19	8.49	0.28	3.3	8.5	7.2 - 9.8	18	2.75	0.11	4.0	2.8	2.3 - 3.2
	Specimen SYX-10											
All Method	78	21.63	0.58	2.7	21.6	18.3 - 24.9						
All Sysmex Instruments	78	21.63	0.58	2.7	21.6	18.3 - 24.9						
Sysmex KX-21N & K-800, 1000, 4500	43	21.61	0.44	2.0	21.6	18.3 - 24.9						
Sysmex pocH-100i	16	21.39	0.76	3.5	21.3	18.1 - 24.6						
Sysmex XP-300	19	21.87	0.63	2.9	21.9	18.5 - 25.2						

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

	Specimen SYX-6						Specimen SYX-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	77	4.182	0.066	1.6	4.18	3.93 - 4.44	77	2.493	0.032	1.3	2.49	2.34 - 2.65
All Sysmex Instruments	77	4.182	0.066	1.6	4.18	3.93 - 4.44	77	2.493	0.032	1.3	2.49	2.34 - 2.65
Sysmex KX-21N & K-800, 1000, 4500	43	4.185	0.056	1.3	4.18	3.93 - 4.44	42	2.493	0.031	1.2	2.49	2.34 - 2.65
Sysmex pocH-100i	15	4.209	0.101	2.4	4.24	3.95 - 4.47	16	2.503	0.042	1.7	2.51	2.35 - 2.66
Sysmex XP-300	19	4.155	0.043	1.0	4.16	3.90 - 4.41	19	2.484	0.021	0.8	2.49	2.33 - 2.64
	Specimen SYX-8						**Specimen SYX-9**					
All Method	77	4.182	0.054	1.3	4.19	3.93 - 4.44	75	2.489	0.028	1.1	2.49	2.33 - 2.64
All Sysmex Instruments	77	4.182	0.054	1.3	4.19	3.93 - 4.44	75	2.489	0.028	1.1	2.49	2.33 - 2.64
Sysmex KX-21N & K-800, 1000, 4500	42	4.180	0.043	1.0	4.19	3.92 - 4.44	42	2.492	0.026	1.0	2.50	2.34 - 2.65
Sysmex pocH-100i	16	4.203	0.086	2.0	4.21	3.95 - 4.46	16	2.491	0.052	2.1	2.50	2.34 - 2.65
Sysmex XP-300	19	4.169	0.037	0.9	4.18	3.91 - 4.42	18	2.486	0.021	0.9	2.49	2.33 - 2.64
	Specimen SYX-10											
All Method	77	6.014	0.073	1.2	6.02	5.65 - 6.38						
All Sysmex Instruments	77	6.014	0.073	1.2	6.02	5.65 - 6.38						
Sysmex KX-21N & K-800, 1000, 4500	43	6.027	0.057	1.0	6.03	5.66 - 6.39						
Sysmex pocH-100i	16	6.028	0.131	2.2	6.05	5.66 - 6.39						
Sysmex XP-300	19	5.955	0.053	0.9	5.95	5.59 - 6.32						

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

	Specimen SYX-6						Specimen SYX-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	77	12.16	0.19	1.6	12.2	11.3 - 13.1	78	6.24	0.14	2.2	6.2	5.8 - 6.7
All Sysmex Instruments	77	12.16	0.19	1.6	12.2	11.3 - 13.1	78	6.24	0.14	2.2	6.2	5.8 - 6.7
Sysmex KX-21N & K-800, 1000, 4500	43	12.19	0.18	1.5	12.2	11.3 - 13.1	43	6.28	0.14	2.2	6.3	5.8 - 6.8
Sysmex pocH-100i	16	12.17	0.31	2.6	12.2	11.3 - 13.1	16	6.21	0.15	2.3	6.2	5.7 - 6.7
Sysmex XP-300	19	12.12	0.19	1.6	12.1	11.2 - 13.0	19	6.17	0.10	1.6	6.2	5.7 - 6.7
	Specimen SYX-8						**Specimen SYX-9**					
All Method	78	12.14	0.20	1.6	12.2	11.2 - 13.0	75	6.23	0.14	2.2	6.2	5.7 - 6.7
All Sysmex Instruments	78	12.14	0.20	1.6	12.2	11.2 - 13.0	75	6.23	0.14	2.2	6.2	5.7 - 6.7
Sysmex KX-21N & K-800, 1000, 4500	43	12.21	0.16	1.3	12.2	11.3 - 13.1	43	6.29	0.16	2.5	6.3	5.8 - 6.8
Sysmex pocH-100i	16	12.01	0.24	2.0	11.9	11.1 - 12.9	16	6.19	0.11	1.9	6.2	5.7 - 6.7
Sysmex XP-300	19	12.11	0.18	1.5	12.2	11.2 - 13.0	17	6.18	0.11	1.9	6.2	5.7 - 6.7
	Specimen SYX-10											
All Method	78	19.13	0.27	1.4	19.1	17.7 - 20.5						
All Sysmex Instruments	78	19.13	0.27	1.4	19.1	17.7 - 20.5						
Sysmex KX-21N & K-800, 1000, 4500	43	19.23	0.22	1.1	19.2	17.8 - 20.6						
Sysmex pocH-100i	16	18.97	0.33	1.7	18.9	17.6 - 20.3						
Sysmex XP-300	19	19.02	0.24	1.3	19.0	17.6 - 20.4						

SYSMEX HEMATOLOGY W/ AUTOMATED DIFFERENTIAL–HEMATOCRIT (percent)

	Specimen SYX-6						Specimen SYX-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	77	32.49	0.81	2.5	32.3	30.5 - 34.5	76	17.24	0.39	2.2	17.2	16.2 - 18.3
All Sysmex Instruments	77	32.49	0.81	2.5	32.3	30.5 - 34.5	76	17.24	0.39	2.2	17.2	16.2 - 18.3
Sysmex KX-21N & K-800, 1000, 4500	42	32.18	0.43	1.3	32.2	30.2 - 34.2	43	17.08	0.25	1.5	17.1	16.0 - 18.2
Sysmex pocH-100i	16	33.84	0.96	2.9	33.8	31.8 - 35.9	16	17.95	0.44	2.5	18.0	16.8 - 19.1
Sysmex XP-300	19	32.17	0.46	1.4	32.2	30.2 - 34.1	19	17.16	0.25	1.4	17.1	16.1 - 18.2
	Specimen SYX-8						**Specimen SYX-9**					
All Method	76	32.38	0.69	2.1	32.2	30.4 - 34.4	76	17.25	0.39	2.3	17.2	16.2 - 18.3
All Sysmex Instruments	76	32.38	0.69	2.1	32.2	30.4 - 34.4	76	17.25	0.39	2.3	17.2	16.2 - 18.3
Sysmex KX-21N & K-800, 1000, 4500	43	32.12	0.39	1.2	32.2	30.1 - 34.1	43	17.08	0.24	1.4	17.0	16.0 - 18.2
Sysmex pocH-100i	16	33.67	0.71	2.1	33.7	31.6 - 35.7	16	17.85	0.43	2.4	17.9	16.7 - 19.0
Sysmex XP-300	19	32.16	0.47	1.5	32.0	30.2 - 34.1	18	17.19	0.24	1.4	17.2	16.1 - 18.3
	Specimen SYX-10											
All Method	77	51.23	0.89	1.7	51.3	48.1 - 54.4						
All Sysmex Instruments	77	51.23	0.89	1.7	51.3	48.1 - 54.4						
Sysmex KX-21N & K-800, 1000, 4500	43	51.13	0.71	1.4	51.3	48.0 - 54.2						
Sysmex pocH-100i	16	52.40	0.95	1.8	52.4	49.2 - 55.6						
Sysmex XP-300	19	50.65	0.56	1.1	50.6	47.6 - 53.7						

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

	Specimen SYX-6						Specimen SYX-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	76	192.6	7.7	4.0	193	144 - 241	77	62.7	3.7	6.0	63	47 - 79
All Sysmex Instruments	76	192.6	7.7	4.0	193	144 - 241	77	62.7	3.7	6.0	63	47 - 79
Sysmex KX-21N & K-800, 1000, 4500	42	193.6	7.1	3.6	195	145 - 242	43	62.9	3.8	6.1	63	47 - 79
Sysmex pocH-100i	16	184.0	10.2	5.6	186	138 - 230	16	61.2	3.7	6.0	61	45 - 77
Sysmex XP-300	19	195.8	6.3	3.2	196	146 - 245	19	64.5	4.6	7.2	63	48 - 81
	Specimen SYX-8						**Specimen SYX-9**					
All Method	77	191.4	9.4	4.9	192	143 - 240	78	62.0	4.5	7.3	62	46 - 78
All Sysmex Instruments	77	191.4	9.4	4.9	192	143 - 240	78	62.0	4.5	7.3	62	46 - 78
Sysmex KX-21N & K-800, 1000, 4500	42	193.4	7.8	4.0	194	145 - 242	43	62.4	4.5	7.2	63	46 - 79
Sysmex pocH-100i	16	181.8	9.0	4.9	182	136 - 228	16	61.3	3.3	5.3	61	45 - 77
Sysmex XP-300	19	195.0	8.1	4.1	195	146 - 244	19	61.5	5.5	8.9	61	46 - 77
	Specimen SYX-10											
All Method	76	398.2	19.0	4.8	402	298 - 498						
All Sysmex Instruments	76	398.2	19.0	4.8	402	298 - 498						
Sysmex KX-21N & K-800, 1000, 4500	43	401.7	15.9	3.9	404	301 - 503						
Sysmex pocH-100i	16	365.9	22.1	6.0	368	274 - 458						
Sysmex XP-300	19	409.2	11.8	2.9	409	306 - 512						

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

	Specimen SYX-6						Specimen SYX-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	70	29.95	0.98	3.3	30.1	27.0 - 32.9	71	12.13	1.35	11.1	12.2	8.0 - 16.2
All Sysmex Instruments	70	29.95	0.98	3.3	30.1	27.0 - 32.9	71	12.13	1.35	11.1	12.2	8.0 - 16.2
Sysmex KX-21N & K-800, 1000, 4500	41	30.33	0.76	2.5	30.4	28.0 - 32.7	41	12.58	1.04	8.3	12.5	9.4 - 15.8
Sysmex pocH-100i	14	29.37	1.09	3.7	29.3	26.1 - 32.7	14	10.58	0.99	9.4	10.5	7.5 - 13.6
Sysmex XP-300	15	29.43	0.96	3.3	29.3	26.5 - 32.4	16	12.34	1.38	11.2	12.0	8.2 - 16.5
	Specimen SYX-8						**Specimen SYX-9**					
All Method	71	29.89	0.99	3.3	29.9	26.9 - 32.9	71	12.05	1.33	11.0	12.0	8.0 - 16.1
All Sysmex Instruments	71	29.89	0.99	3.3	29.9	26.9 - 32.9	71	12.05	1.33	11.0	12.0	8.0 - 16.1
Sysmex KX-21N & K-800, 1000, 4500	41	30.33	0.73	2.4	30.5	28.1 - 32.6	41	12.41	1.15	9.3	12.7	8.9 - 15.9
Sysmex pocH-100i	14	29.14	0.93	3.2	29.4	26.3 - 32.0	14	10.52	0.70	6.6	10.4	8.4 - 12.7
Sysmex XP-300	16	29.42	1.06	3.6	29.6	26.2 - 32.6	16	12.44	1.25	10.0	12.9	8.7 - 16.2
	Specimen SYX-10											
All Method	69	60.37	0.73	1.2	60.4	58.1 - 62.6						
All Sysmex Instruments	69	60.37	0.73	1.2	60.4	58.1 - 62.6						
Sysmex KX-21N & K-800, 1000, 4500	40	60.44	0.65	1.1	60.5	58.4 - 62.4						
Sysmex pocH-100i	14	60.79	0.90	1.5	60.6	58.0 - 63.6						
Sysmex XP-300	16	59.98	0.81	1.4	60.2	57.5 - 62.5						

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

	Specimen SYX-6						Specimen SYX-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	68	17.74	0.92	5.2	17.8	14.9 - 20.6	69	17.29	1.32	7.6	17.2	13.3 - 21.3
All Sysmex Instruments	68	17.74	0.92	5.2	17.8	14.9 - 20.6	69	17.29	1.32	7.6	17.2	13.3 - 21.3
Sysmex KX-21N & K-800, 1000, 4500	41	17.93	0.77	4.3	17.9	15.6 - 20.3	41	17.63	1.19	6.8	17.6	14.0 - 21.3
Sysmex pocH-100i	14	16.51	0.86	5.2	16.6	13.9 - 19.1	14	15.76	1.28	8.1	15.8	11.9 - 19.7
Sysmex XP-300	14	18.19	0.75	4.1	18.0	15.9 - 20.5	15	17.49	1.23	7.0	17.1	13.8 - 21.2
	Specimen SYX-8						**Specimen SYX-9**					
All Method	70	17.68	0.99	5.6	17.8	14.7 - 20.7	69	17.26	1.48	8.6	17.3	12.8 - 21.7
All Sysmex Instruments	70	17.68	0.99	5.6	17.8	14.7 - 20.7	69	17.26	1.48	8.6	17.3	12.8 - 21.7
Sysmex KX-21N & K-800, 1000, 4500	41	17.90	0.77	4.3	17.9	15.6 - 20.3	40	17.37	1.46	8.4	17.4	12.9 - 21.8
Sysmex pocH-100i	14	16.61	0.84	5.0	16.5	14.1 - 19.2	14	16.59	1.47	8.9	16.7	12.1 - 21.1
Sysmex XP-300	15	18.07	1.02	5.6	18.0	15.0 - 21.2	15	17.57	1.44	8.2	17.8	13.2 - 22.0
	Specimen SYX-10											
All Method	70	12.41	0.96	7.7	12.6	9.5 - 15.3						
All Sysmex Instruments	70	12.41	0.96	7.7	12.6	9.5 - 15.3						
Sysmex KX-21N & K-800, 1000, 4500	40	12.66	0.63	5.0	12.6	10.7 - 14.6						
Sysmex pocH-100i	14	11.11	0.65	5.9	11.1	9.1 - 13.1						
Sysmex XP-300	15	12.80	0.65	5.1	12.8	10.8 - 14.8						

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

	Specimen SYX-6						Specimen SYX-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	69	52.34	1.28	2.5	52.2	48.4 - 56.2	70	70.65	2.13	3.0	70.4	64.2 - 77.1
All Sysmex Instruments	69	52.34	1.28	2.5	52.2	48.4 - 56.2	70	70.65	2.13	3.0	70.4	64.2 - 77.1
Sysmex KX-21N & K-800, 1000, 4500	41	51.74	0.91	1.8	51.7	49.0 - 54.5	41	69.79	1.42	2.0	69.6	65.5 - 74.1
Sysmex pocH-100i	14	54.12	0.93	1.7	54.2	51.3 - 57.0	14	73.66	1.65	2.2	74.1	68.6 - 78.7
Sysmex XP-300	14	52.30	0.81	1.6	52.5	49.8 - 54.8	15	70.17	1.61	2.3	70.5	65.3 - 75.0
	Specimen SYX-8						**Specimen SYX-9**					
All Method	70	52.43	1.39	2.6	52.3	48.2 - 56.6	68	70.77	1.80	2.5	70.5	65.3 - 76.2
All Sysmex Instruments	70	52.43	1.39	2.6	52.3	48.2 - 56.6	68	70.77	1.80	2.5	70.5	65.3 - 76.2
Sysmex KX-21N & K-800, 1000, 4500	41	51.77	0.93	1.8	51.6	48.9 - 54.6	40	70.17	1.41	2.0	70.2	65.9 - 74.5
Sysmex pocH-100i	14	54.25	1.13	2.1	53.9	50.8 - 57.7	14	73.02	1.72	2.4	73.0	67.8 - 78.2
Sysmex XP-300	15	52.51	1.12	2.1	52.7	49.1 - 55.9	14	70.26	0.98	1.4	70.4	67.3 - 73.3
	Specimen SYX-10											
All Method	70	27.24	0.89	3.3	27.2	24.5 - 30.0						
All Sysmex Instruments	70	27.24	0.89	3.3	27.2	24.5 - 30.0						
Sysmex KX-21N & K-800, 1000, 4500	41	26.97	0.75	2.8	27.0	24.7 - 29.3						
Sysmex pocH-100i	14	28.10	0.91	3.2	28.4	25.3 - 30.9						
Sysmex XP-300	15	27.17	0.76	2.8	27.1	24.8 - 29.5						

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

	Specimen HD-6						Specimen HD-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	628	8.30	0.38	4.6	8.3	7.0 - 9.6	626	2.01	0.14	7.2	2.0	1.7 - 2.4
All Abbott Cell-Dyn Instruments	203	8.20	0.40	4.9	8.1	6.9 - 9.5	199	2.02	0.11	5.3	2.0	1.7 - 2.4
All ABX Instruments	93	8.11	0.24	2.9	8.1	6.8 - 9.4	93	1.94	0.07	3.5	1.9	1.6 - 2.3
All Boule (CDS) Instruments	115	8.11	0.33	4.1	8.1	6.8 - 9.4	112	1.85	0.10	5.4	1.8	1.5 - 2.2
All COULTER Instruments	198	8.58	0.24	2.8	8.6	7.2 - 9.9	199	2.13	0.11	5.0	2.1	1.8 - 2.5
All Danam/Drew Scientific Instruments	11	8.30	0.21	2.5	8.4	7.0 - 9.6	11	2.05	0.08	4.0	2.1	1.7 - 2.4
Abbott Cell-Dyn 1700	22	8.67	0.36	4.2	8.8	7.3 - 10.0	22	2.14	0.12	5.5	2.2	1.8 - 2.5
Abbott Cell-Dyn 1800	70	8.32	0.28	3.4	8.3	7.0 - 9.6	72	2.00	0.09	4.4	2.0	1.7 - 2.3
Abbott Cell-Dyn Emerald	105	7.98	0.30	3.8	8.0	6.7 - 9.2	105	2.02	0.10	5.1	2.0	1.7 - 2.4
ABX Diagnostics Micros/45/60	93	8.11	0.24	2.9	8.1	6.8 - 9.4	93	1.94	0.07	3.5	1.9	1.6 - 2.3
Boule (CDS) Medonic M series	107	8.07	0.28	3.5	8.1	6.8 - 9.3	105	1.84	0.09	4.9	1.8	1.5 - 2.2
COULTER AcT diff/diff 2	189	8.57	0.24	2.8	8.6	7.2 - 9.9	189	2.13	0.11	5.0	2.1	1.8 - 2.5
Drew Scientific D3	11	8.30	0.21	2.5	8.4	7.0 - 9.6	11	2.05	0.08	4.0	2.1	1.7 - 2.4
	Specimen HD-8						**Specimen HD-9**					
All Method	624	8.28	0.38	4.5	8.3	7.0 - 9.6	628	2.02	0.15	7.7	2.0	1.7 - 2.4
All Abbott Cell-Dyn Instruments	203	8.17	0.40	4.9	8.1	6.9 - 9.4	200	2.02	0.12	5.8	2.0	1.7 - 2.4
All ABX Instruments	94	8.06	0.19	2.3	8.0	6.8 - 9.3	94	1.94	0.07	3.8	1.9	1.6 - 2.3
All Boule (CDS) Instruments	113	8.13	0.29	3.6	8.1	6.9 - 9.4	111	1.85	0.10	5.2	1.8	1.5 - 2.2
All COULTER Instruments	197	8.60	0.20	2.3	8.6	7.3 - 9.9	199	2.13	0.11	5.0	2.1	1.8 - 2.5
All Danam/Drew Scientific Instruments	11	8.19	0.30	3.7	8.3	6.9 - 9.5	11	2.08	0.15	7.4	2.1	1.7 - 2.4
Abbott Cell-Dyn 1700	22	8.58	0.41	4.8	8.7	7.2 - 9.9	22	2.17	0.12	5.3	2.2	1.8 - 2.5
Abbott Cell-Dyn 1800	72	8.28	0.31	3.8	8.3	7.0 - 9.6	71	1.99	0.08	4.3	2.0	1.6 - 2.3
Abbott Cell-Dyn Emerald	106	7.97	0.33	4.1	8.0	6.7 - 9.2	106	2.00	0.11	5.5	2.0	1.7 - 2.4
ABX Diagnostics Micros/45/60	94	8.06	0.19	2.3	8.0	6.8 - 9.3	94	1.94	0.07	3.8	1.9	1.6 - 2.3
Boule (CDS) Medonic M series	106	8.10	0.27	3.3	8.1	6.8 - 9.4	104	1.84	0.09	5.0	1.8	1.5 - 2.2
COULTER AcT diff/diff 2	187	8.60	0.20	2.3	8.6	7.3 - 9.9	189	2.13	0.11	5.0	2.1	1.8 - 2.5
Drew Scientific D3	11	8.19	0.30	3.7	8.3	6.9 - 9.5	11	2.08	0.15	7.4	2.1	1.7 - 2.4

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

Specimen HD-10

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	622	21.45	0.98	4.6	21.5	18.2 - 24.7
All Abbott Cell-Dyn Instruments	203	20.81	1.09	5.2	20.7	17.6 - 24.0
All ABX Instruments	94	21.03	0.46	2.2	21.0	17.8 - 24.2
All Boule (CDS) Instruments	110	21.53	0.59	2.8	21.5	18.2 - 24.8
All COULTER Instruments	196	22.30	0.49	2.2	22.3	18.9 - 25.7
All Danam/Drew Scientific Instruments	11	20.89	0.51	2.4	21.0	17.7 - 24.1
Abbott Cell-Dyn 1700	22	21.92	1.18	5.4	21.9	18.6 - 25.3
Abbott Cell-Dyn 1800	72	21.59	0.71	3.3	21.6	18.3 - 24.9
Abbott Cell-Dyn Emerald	106	20.06	0.61	3.0	20.0	17.0 - 23.1
ABX Diagnostics Micros/45/60	94	21.03	0.46	2.2	21.0	17.8 - 24.2
Boule (CDS) Medonic M series	102	21.46	0.53	2.5	21.5	18.2 - 24.7
COULTER AcT diff/diff 2	186	22.28	0.48	2.2	22.3	18.9 - 25.7
Drew Scientific D3	11	20.89	0.51	2.4	21.0	17.7 - 24.1

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

	Specimen HD-6						Specimen HD-7					
Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	619	4.563	0.168	3.7	4.57	4.28 - 4.84	624	2.396	0.100	4.2	2.39	2.25 - 2.54
All Abbott Cell-Dyn Instruments	205	4.440	0.203	4.6	4.46	4.17 - 4.71	205	2.371	0.129	5.4	2.36	2.22 - 2.52
All ABX Instruments	94	4.562	0.102	2.2	4.56	4.28 - 4.84	94	2.356	0.048	2.0	2.36	2.21 - 2.50
All Boule (CDS) Instruments	110	4.566	0.074	1.6	4.56	4.29 - 4.85	112	2.356	0.041	1.7	2.35	2.21 - 2.50
All COULTER Instruments	198	4.681	0.129	2.8	4.69	4.39 - 4.97	198	2.466	0.067	2.7	2.47	2.31 - 2.62
All Danam/Drew Scientific Instruments	11	4.520	0.100	2.2	4.53	4.24 - 4.80	11	2.386	0.057	2.4	2.39	2.24 - 2.53
Abbott Cell-Dyn 1700	22	4.590	0.107	2.3	4.59	4.31 - 4.87	22	2.450	0.048	2.0	2.46	2.30 - 2.60
Abbott Cell-Dyn 1800	70	4.590	0.091	2.0	4.60	4.31 - 4.87	70	2.501	0.062	2.5	2.51	2.35 - 2.66
Abbott Cell-Dyn Emerald	109	4.299	0.160	3.7	4.29	4.04 - 4.56	109	2.272	0.075	3.3	2.29	2.13 - 2.41
ABX Diagnostics Micros/45/60	94	4.562	0.102	2.2	4.56	4.28 - 4.84	94	2.356	0.048	2.0	2.36	2.21 - 2.50
Boule (CDS) Medonic M series	104	4.560	0.078	1.7	4.56	4.28 - 4.84	105	2.353	0.040	1.7	2.35	2.21 - 2.50
COULTER AcT diff/diff 2	188	4.685	0.127	2.7	4.69	4.40 - 4.97	188	2.470	0.065	2.6	2.47	2.32 - 2.62
Drew Scientific D3	11	4.520	0.100	2.2	4.53	4.24 - 4.80	11	2.386	0.057	2.4	2.39	2.24 - 2.53

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

	Specimen HD-8						Specimen HD-9					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	618	4.559	0.164	3.6	4.58	4.28 - 4.84	620	2.398	0.095	3.9	2.39	2.25 - 2.55
All Abbott Cell-Dyn Instruments	205	4.425	0.186	4.2	4.44	4.15 - 4.70	205	2.376	0.126	5.3	2.37	2.23 - 2.52
All ABX Instruments	94	4.557	0.090	2.0	4.55	4.28 - 4.84	92	2.351	0.052	2.2	2.35	2.20 - 2.50
All Boule (CDS) Instruments	110	4.553	0.064	1.4	4.55	4.27 - 4.83	111	2.354	0.039	1.7	2.35	2.21 - 2.50
All COULTER Instruments	197	4.691	0.108	2.3	4.68	4.40 - 4.98	198	2.460	0.065	2.6	2.46	2.31 - 2.61
All Danam/Drew Scientific Instruments	11	4.519	0.112	2.5	4.56	4.24 - 4.80	11	2.404	0.070	2.9	2.41	2.25 - 2.55
Abbott Cell-Dyn 1700	22	4.560	0.079	1.7	4.56	4.28 - 4.84	22	2.446	0.059	2.4	2.44	2.29 - 2.60
Abbott Cell-Dyn 1800	72	4.571	0.113	2.5	4.60	4.29 - 4.85	69	2.493	0.063	2.5	2.50	2.34 - 2.65
Abbott Cell-Dyn Emerald	109	4.297	0.142	3.3	4.30	4.03 - 4.56	107	2.284	0.074	3.2	2.28	2.14 - 2.43
ABX Diagnostics Micros/45/60	94	4.557	0.090	2.0	4.55	4.28 - 4.84	92	2.351	0.052	2.2	2.35	2.20 - 2.50
Boule (CDS) Medonic M series	103	4.550	0.064	1.4	4.54	4.27 - 4.83	104	2.353	0.040	1.7	2.35	2.21 - 2.50
COULTER AcT diff/diff 2	187	4.694	0.108	2.3	4.68	4.41 - 4.98	187	2.462	0.060	2.4	2.46	2.31 - 2.62
Drew Scientific D3	11	4.519	0.112	2.5	4.56	4.24 - 4.80	11	2.404	0.070	2.9	2.41	2.25 - 2.55

	Specimen HD-10					
All Method	617	6.014	0.227	3.8	6.06	5.65 - 6.38
All Abbott Cell-Dyn Instruments	203	5.768	0.220	3.8	5.78	5.42 - 6.12
All ABX Instruments	94	6.034	0.126	2.1	6.03	5.67 - 6.40
All Boule (CDS) Instruments	111	6.117	0.089	1.5	6.13	5.75 - 6.49
All COULTER Instruments	196	6.167	0.137	2.2	6.18	5.79 - 6.54
All Danam/Drew Scientific Instruments	11	5.958	0.127	2.1	5.97	5.60 - 6.32
Abbott Cell-Dyn 1700	21	5.990	0.150	2.5	6.03	5.63 - 6.35
Abbott Cell-Dyn 1800	70	5.877	0.122	2.1	5.89	5.52 - 6.24
Abbott Cell-Dyn Emerald	108	5.655	0.200	3.5	5.67	5.31 - 6.00
ABX Diagnostics Micros/45/60	94	6.034	0.126	2.1	6.03	5.67 - 6.40
Boule (CDS) Medonic M series	104	6.121	0.090	1.5	6.13	5.75 - 6.49
COULTER AcT diff/diff 2	186	6.172	0.134	2.2	6.18	5.80 - 6.55
Drew Scientific D3	11	5.958	0.127	2.1	5.97	5.60 - 6.32

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

	Specimen HD-6						Specimen HD-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	620	13.22	0.27	2.1	13.2	12.2 - 14.2	627	6.07	0.17	2.8	6.1	5.6 - 6.5
All Abbott Cell-Dyn Instruments	202	13.25	0.28	2.1	13.3	12.3 - 14.2	205	6.11	0.21	3.4	6.1	5.6 - 6.6
All ABX Instruments	93	13.29	0.26	2.0	13.3	12.3 - 14.3	94	6.09	0.13	2.1	6.1	5.6 - 6.6
All Boule (CDS) Instruments	110	13.23	0.21	1.6	13.2	12.3 - 14.2	111	6.09	0.09	1.5	6.1	5.6 - 6.6
All COULTER Instruments	199	13.12	0.28	2.2	13.2	12.2 - 14.1	197	6.00	0.15	2.5	6.0	5.5 - 6.5
All Danam/Drew Scientific Instruments	11	13.43	0.21	1.6	13.4	12.4 - 14.4	11	6.25	0.21	3.4	6.3	5.8 - 6.7
Abbott Cell-Dyn 1700	22	13.38	0.31	2.3	13.4	12.4 - 14.4	22	6.35	0.16	2.5	6.4	5.9 - 6.8
Abbott Cell-Dyn 1800	70	13.27	0.24	1.8	13.3	12.3 - 14.3	70	6.21	0.14	2.2	6.2	5.7 - 6.7
Abbott Cell-Dyn Emerald	109	13.21	0.31	2.3	13.2	12.2 - 14.2	109	6.00	0.17	2.8	6.0	5.5 - 6.5
ABX Diagnostics Micros/45/60	93	13.29	0.26	2.0	13.3	12.3 - 14.3	94	6.09	0.13	2.1	6.1	5.6 - 6.6
Boule (CDS) Medonic M series	103	13.23	0.21	1.6	13.2	12.3 - 14.2	104	6.10	0.09	1.5	6.1	5.6 - 6.6
COULTER AcT diff/diff 2	189	13.12	0.29	2.2	13.2	12.2 - 14.1	186	6.01	0.14	2.3	6.0	5.5 - 6.5
Drew Scientific D3	11	13.43	0.21	1.6	13.4	12.4 - 14.4	11	6.25	0.21	3.4	6.3	5.8 - 6.7

	Specimen HD-8						Specimen HD-9					
All Method	626	13.25	0.25	1.9	13.2	12.3 - 14.2	627	6.08	0.18	2.9	6.1	5.6 - 6.6
All Abbott Cell-Dyn Instruments	205	13.27	0.26	1.9	13.3	12.3 - 14.2	204	6.13	0.20	3.3	6.1	5.6 - 6.6
All ABX Instruments	95	13.30	0.24	1.8	13.3	12.3 - 14.3	93	6.09	0.14	2.2	6.1	5.6 - 6.6
All Boule (CDS) Instruments	111	13.24	0.18	1.4	13.2	12.3 - 14.2	109	6.08	0.10	1.6	6.1	5.6 - 6.6
All COULTER Instruments	198	13.20	0.26	2.0	13.2	12.2 - 14.2	198	6.01	0.15	2.5	6.0	5.5 - 6.5
All Danam/Drew Scientific Instruments	11	13.51	0.32	2.4	13.4	12.5 - 14.5	11	6.33	0.16	2.6	6.4	5.8 - 6.8
Abbott Cell-Dyn 1700	22	13.35	0.25	1.9	13.4	12.4 - 14.3	22	6.36	0.14	2.2	6.3	5.9 - 6.9
Abbott Cell-Dyn 1800	72	13.33	0.24	1.8	13.3	12.3 - 14.3	70	6.23	0.16	2.6	6.2	5.7 - 6.7
Abbott Cell-Dyn Emerald	109	13.21	0.26	1.9	13.2	12.2 - 14.2	108	6.01	0.14	2.4	6.0	5.5 - 6.5
ABX Diagnostics Micros/45/60	95	13.30	0.24	1.8	13.3	12.3 - 14.3	93	6.09	0.14	2.2	6.1	5.6 - 6.6
Boule (CDS) Medonic M series	104	13.24	0.18	1.4	13.2	12.3 - 14.2	102	6.09	0.10	1.6	6.1	5.6 - 6.6
COULTER AcT diff/diff 2	188	13.19	0.26	2.0	13.2	12.2 - 14.2	189	6.01	0.14	2.4	6.0	5.5 - 6.5
Drew Scientific D3	11	13.51	0.32	2.4	13.4	12.5 - 14.5	11	6.33	0.16	2.6	6.4	5.8 - 6.8

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

Specimen HD-10

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	629	19.30	0.37	1.9	19.3	17.9 - 20.7
All Abbott Cell-Dyn Instruments	205	19.37	0.37	1.9	19.4	18.0 - 20.8
All ABX Instruments	95	19.25	0.37	1.9	19.3	17.9 - 20.7
All Boule (CDS) Instruments	114	19.36	0.34	1.8	19.4	18.0 - 20.8
All COULTER Instruments	199	19.24	0.35	1.8	19.3	17.8 - 20.6
All Danam/Drew Scientific Instruments	11	19.44	0.46	2.3	19.4	18.0 - 20.8
Abbott Cell-Dyn 1700	22	19.29	0.44	2.3	19.2	17.9 - 20.7
Abbott Cell-Dyn 1800	72	19.43	0.39	2.0	19.5	18.0 - 20.8
Abbott Cell-Dyn Emerald	109	19.35	0.35	1.8	19.3	17.9 - 20.8
ABX Diagnostics Micros/45/60	95	19.25	0.37	1.9	19.3	17.9 - 20.7
Boule (CDS) Medonic M series	106	19.40	0.31	1.6	19.4	18.0 - 20.8
COULTER AcT diff/diff 2	189	19.24	0.35	1.8	19.3	17.8 - 20.6
Drew Scientific D3	11	19.44	0.46	2.3	19.4	18.0 - 20.8

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

	Specimen HD-6						**Specimen HD-7**					
Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	626	37.86	1.58	4.2	37.9	35.5 - 40.2	626	17.69	0.98	5.5	17.9	16.6 - 18.8
All Abbott Cell-Dyn Instruments	206	38.61	1.48	3.8	38.7	36.2 - 41.0	205	18.26	0.72	3.9	18.3	17.1 - 19.4
All ABX Instruments	95	36.41	0.88	2.4	36.4	34.2 - 38.6	95	16.42	0.37	2.2	16.4	15.4 - 17.5
All Boule (CDS) Instruments	113	36.46	0.97	2.7	36.5	34.2 - 38.7	113	16.69	0.42	2.5	16.7	15.6 - 17.7
All COULTER Instruments	198	38.64	1.10	2.9	38.6	36.3 - 41.0	198	18.22	0.52	2.9	18.2	17.1 - 19.4
All Danam/Drew Scientific Instruments	11	38.31	0.74	1.9	38.4	36.0 - 40.7	11	18.24	0.37	2.0	18.3	17.1 - 19.4
Abbott Cell-Dyn 1700	22	38.00	0.94	2.5	37.7	35.7 - 40.3	22	17.92	0.45	2.5	17.9	16.8 - 19.0
Abbott Cell-Dyn 1800	72	39.69	1.03	2.6	39.7	37.3 - 42.1	71	18.86	0.56	3.0	18.9	17.7 - 20.0
Abbott Cell-Dyn Emerald	109	37.99	1.38	3.6	38.1	35.7 - 40.3	109	17.96	0.59	3.3	18.0	16.8 - 19.1
ABX Diagnostics Micros/45/60	95	36.41	0.88	2.4	36.4	34.2 - 38.6	95	16.42	0.37	2.2	16.4	15.4 - 17.5
Boule (CDS) Medonic M series	106	36.51	0.96	2.6	36.5	34.3 - 38.8	106	16.70	0.43	2.6	16.7	15.7 - 17.8
COULTER AcT diff/diff 2	187	38.65	1.10	2.8	38.6	36.3 - 41.0	187	18.25	0.50	2.8	18.2	17.1 - 19.4
Drew Scientific D3	11	38.31	0.74	1.9	38.4	36.0 - 40.7	11	18.24	0.37	2.0	18.3	17.1 - 19.4

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

	Specimen HD-8						Specimen HD-9					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	622	37.80	1.51	4.0	37.9	35.5 - 40.1	622	17.68	0.96	5.5	17.8	16.6 - 18.8
All Abbott Cell-Dyn Instruments	205	38.40	1.34	3.5	38.5	36.0 - 40.8	201	18.29	0.65	3.6	18.3	17.1 - 19.4
All ABX Instruments	93	36.32	0.73	2.0	36.3	34.1 - 38.5	93	16.37	0.41	2.5	16.4	15.3 - 17.4
All Boule (CDS) Instruments	112	36.27	0.80	2.2	36.2	34.0 - 38.5	112	16.74	0.38	2.2	16.7	15.7 - 17.8
All COULTER Instruments	197	38.70	0.95	2.4	38.6	36.3 - 41.1	199	18.17	0.54	2.9	18.2	17.0 - 19.3
All Danam/Drew Scientific Instruments	11	38.37	0.80	2.1	38.3	36.0 - 40.7	11	18.35	0.45	2.4	18.4	17.2 - 19.5
Abbott Cell-Dyn 1700	22	37.82	0.77	2.0	38.0	35.5 - 40.1	22	17.88	0.49	2.8	17.8	16.8 - 19.0
Abbott Cell-Dyn 1800	71	39.34	1.05	2.7	39.5	36.9 - 41.7	70	18.78	0.56	3.0	18.9	17.6 - 20.0
Abbott Cell-Dyn Emerald	109	37.92	1.26	3.3	38.1	35.6 - 40.2	106	18.07	0.55	3.0	18.2	16.9 - 19.2
ABX Diagnostics Micros/45/60	93	36.32	0.73	2.0	36.3	34.1 - 38.5	93	16.37	0.41	2.5	16.4	15.3 - 17.4
Boule (CDS) Medonic M series	106	36.34	0.83	2.3	36.3	34.1 - 38.6	105	16.76	0.38	2.2	16.7	15.7 - 17.8
COULTER AcT diff/diff 2	187	38.73	0.98	2.5	38.6	36.4 - 41.1	188	18.20	0.53	2.9	18.2	17.1 - 19.3
Drew Scientific D3	11	38.37	0.80	2.1	38.3	36.0 - 40.7	11	18.35	0.45	2.4	18.4	17.2 - 19.5

	Specimen HD-10					
All Method	620	55.53	1.74	3.1	55.6	52.1 - 58.9
All Abbott Cell-Dyn Instruments	203	55.65	1.79	3.2	55.9	52.3 - 59.0
All ABX Instruments	93	53.67	1.15	2.1	53.7	50.4 - 56.9
All Boule (CDS) Instruments	112	55.47	1.40	2.5	55.6	52.1 - 58.8
All COULTER Instruments	197	56.26	1.39	2.5	56.3	52.8 - 59.7
All Danam/Drew Scientific Instruments	11	55.89	1.18	2.1	56.0	52.5 - 59.3
Abbott Cell-Dyn 1700	22	54.88	1.61	2.9	55.2	51.5 - 58.2
Abbott Cell-Dyn 1800	70	56.46	1.45	2.6	56.6	53.0 - 59.9
Abbott Cell-Dyn Emerald	108	55.31	1.84	3.3	55.4	51.9 - 58.7
ABX Diagnostics Micros/45/60	93	53.67	1.15	2.1	53.7	50.4 - 56.9
Boule (CDS) Medonic M series	105	55.66	1.21	2.2	55.6	52.3 - 59.0
COULTER AcT diff/diff 2	186	56.28	1.37	2.4	56.3	52.9 - 59.7
Drew Scientific D3	11	55.89	1.18	2.1	56.0	52.5 - 59.3

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

	Specimen HD-6						Specimen HD-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	626	256.9	18.2	7.1	257	192 - 322	618	62.8	7.6	12.1	62	47 - 79
All Abbott Cell-Dyn Instruments	205	262.1	20.0	7.6	263	196 - 328	203	63.5	9.0	14.2	62	47 - 80
All ABX Instruments	95	270.1	11.7	4.3	270	202 - 338	94	70.3	5.1	7.3	70	52 - 88
All Boule (CDS) Instruments	114	239.2	12.4	5.2	239	179 - 300	112	56.9	4.7	8.2	56	42 - 72
All COULTER Instruments	200	255.3	13.6	5.3	255	191 - 320	199	62.0	5.0	8.1	62	46 - 78
All Danam/Drew Scientific Instruments	11	267.5	12.1	4.5	272	200 - 335	11	75.6	10.8	14.3	74	56 - 95
Abbott Cell-Dyn 1700	22	271.2	17.9	6.6	270	203 - 340	22	61.0	5.5	9.0	61	45 - 77
Abbott Cell-Dyn 1800	71	268.9	14.7	5.5	269	201 - 337	71	63.1	4.8	7.7	62	47 - 79
Abbott Cell-Dyn Emerald	110	255.4	21.2	8.3	255	191 - 320	107	64.1	11.2	17.5	63	48 - 81
ABX Diagnostics Micros/45/60	95	270.1	11.7	4.3	270	202 - 338	94	70.3	5.1	7.3	70	52 - 88
Boule (CDS) Medonic M series	107	238.7	12.2	5.1	238	178 - 299	105	57.0	4.7	8.3	56	42 - 72
COULTER AcT diff/diff 2	190	255.8	13.4	5.3	255	191 - 320	189	62.1	5.0	8.1	62	46 - 78
Drew Scientific D3	11	267.5	12.1	4.5	272	200 - 335	11	75.6	10.8	14.3	74	56 - 95
	Specimen HD-8						**Specimen HD-9**					
All Method	622	257.4	17.7	6.9	258	193 - 322	615	63.1	7.6	12.0	62	47 - 79
All Abbott Cell-Dyn Instruments	204	262.7	19.5	7.4	263	197 - 329	198	62.8	8.7	13.9	62	47 - 79
All ABX Instruments	93	268.4	9.5	3.5	268	201 - 336	94	70.8	5.1	7.2	71	53 - 89
All Boule (CDS) Instruments	114	239.4	13.4	5.6	239	179 - 300	111	57.3	4.7	8.1	57	42 - 72
All COULTER Instruments	198	256.8	13.2	5.1	256	192 - 321	198	62.6	4.8	7.7	62	46 - 79
All Danam/Drew Scientific Instruments	11	272.4	14.2	5.2	272	204 - 341	11	72.6	11.3	15.6	72	54 - 91
Abbott Cell-Dyn 1700	22	269.5	16.8	6.2	270	202 - 337	22	61.0	5.5	9.0	61	45 - 77
Abbott Cell-Dyn 1800	71	267.9	14.7	5.5	265	200 - 335	72	62.6	5.7	9.1	62	46 - 79
Abbott Cell-Dyn Emerald	109	256.7	21.3	8.3	255	192 - 321	103	63.5	11.1	17.5	62	47 - 80
ABX Diagnostics Micros/45/60	93	268.4	9.5	3.5	268	201 - 336	94	70.8	5.1	7.2	71	53 - 89
Boule (CDS) Medonic M series	106	238.3	12.7	5.3	238	178 - 298	104	57.4	4.8	8.3	57	43 - 72
COULTER AcT diff/diff 2	188	257.2	13.1	5.1	256	192 - 322	188	62.7	4.8	7.6	62	46 - 79
Drew Scientific D3	11	272.4	14.2	5.2	272	204 - 341	11	72.6	11.3	15.6	72	54 - 91

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

Specimen HD-10

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	623	518.1	37.6	7.3	516	388 - 648
All Abbott Cell-Dyn Instruments	206	531.6	52.5	9.9	529	398 - 665
All ABX Instruments	95	514.9	20.5	4.0	514	386 - 644
All Boule (CDS) Instruments	111	485.2	18.2	3.8	484	363 - 607
All COULTER Instruments	197	524.7	21.1	4.0	525	393 - 656
All Danam/Drew Scientific Instruments	11	530.5	16.3	3.1	524	397 - 664
Abbott Cell-Dyn 1700	22	573.5	44.8	7.8	576	430 - 717
Abbott Cell-Dyn 1800	70	571.6	28.4	5.0	573	428 - 715
Abbott Cell-Dyn Emerald	110	495.9	36.7	7.4	497	371 - 620
ABX Diagnostics Micros/45/60	95	514.9	20.5	4.0	514	386 - 644
Boule (CDS) Medonic M series	104	485.5	18.4	3.8	485	364 - 607
COULTER AcT diff/diff 2	189	524.8	21.2	4.0	526	393 - 656
Drew Scientific D3	11	530.5	16.3	3.1	524	397 - 664

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

	Specimen HD-6						Specimen HD-7					
Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	599	27.79	3.27	11.8	28.8	17.9 - 37.6	600	54.25	6.91	12.7	55.6	33.5 - 75.0
All Abbott Cell-Dyn Instruments	190	25.44	1.85	7.3	25.8	19.8 - 31.0	193	49.91	3.54	7.1	50.5	39.2 - 60.6
All ABX Instruments	92	23.60	2.12	9.0	23.5	17.2 - 30.0	93	44.23	4.22	9.5	43.5	31.5 - 56.9
All Boule (CDS) Instruments	110	30.03	1.00	3.3	30.1	27.0 - 33.1	108	59.13	2.24	3.8	59.2	52.4 - 65.9
All COULTER Instruments	186	30.84	0.73	2.4	30.9	28.6 - 33.1	188	60.70	1.57	2.6	60.8	55.9 - 65.5
All Danam/Drew Scientific Instruments	10	27.69	1.03	3.7	28.0	24.5 - 30.8	10	55.33	1.75	3.2	55.2	50.0 - 60.6
Abbott Cell-Dyn 1700	22	26.10	1.08	4.1	26.1	22.8 - 29.4	22	50.83	2.85	5.6	51.1	42.2 - 59.4
Abbott Cell-Dyn 1800	66	23.46	1.00	4.3	23.3	20.4 - 26.5	67	46.34	2.23	4.8	45.9	39.6 - 53.1
Abbott Cell-Dyn Emerald	98	26.49	1.11	4.2	26.5	23.1 - 29.9	101	51.88	2.12	4.1	52.0	45.5 - 58.3
ABX Diagnostics Micros/45/60	92	23.60	2.12	9.0	23.5	17.2 - 30.0	93	44.23	4.22	9.5	43.5	31.5 - 56.9
Boule (CDS) Medonic M series	101	29.85	0.81	2.7	29.9	27.4 - 32.3	101	58.99	2.23	3.8	59.1	52.3 - 65.7
COULTER AcT diff/diff 2	182	30.83	0.72	2.3	30.9	28.6 - 33.1	184	60.67	1.57	2.6	60.8	55.9 - 65.4
Drew Scientific D3	10	27.69	1.03	3.7	28.0	24.5 - 30.8	10	55.33	1.75	3.2	55.2	50.0 - 60.6

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

	Specimen HD-8						Specimen HD-9					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	600	27.82	3.26	11.7	28.6	18.0 - 37.7	597	54.27	6.98	12.9	56.3	33.3 - 75.3
All Abbott Cell-Dyn Instruments	192	25.55	1.93	7.5	25.9	19.7 - 31.4	193	50.13	3.58	7.1	50.7	39.3 - 60.9
All ABX Instruments	93	23.71	2.09	8.8	23.5	17.4 - 30.0	92	43.73	4.14	9.5	43.2	31.3 - 56.2
All Boule (CDS) Instruments	110	29.93	1.21	4.0	29.7	26.2 - 33.6	107	59.17	1.97	3.3	59.4	53.2 - 65.1
All COULTER Instruments	188	30.85	0.86	2.8	30.9	28.2 - 33.5	189	60.58	1.58	2.6	60.7	55.8 - 65.4
All Danam/Drew Scientific Instruments	10	27.24	0.88	3.2	27.4	24.6 - 29.9	10	55.59	2.24	4.0	55.7	48.8 - 62.4
Abbott Cell-Dyn 1700	22	26.39	1.46	5.5	26.4	21.9 - 30.8	22	50.74	3.37	6.6	51.0	40.6 - 60.9
Abbott Cell-Dyn 1800	67	23.59	1.17	5.0	23.5	20.0 - 27.2	67	46.59	2.51	5.4	46.1	39.0 - 54.2
Abbott Cell-Dyn Emerald	101	26.63	1.30	4.9	26.6	22.7 - 30.6	101	52.20	1.96	3.8	52.1	46.3 - 58.1
ABX Diagnostics Micros/45/60	93	23.71	2.09	8.8	23.5	17.4 - 30.0	92	43.73	4.14	9.5	43.2	31.3 - 56.2
Boule (CDS) Medonic M series	102	29.72	0.98	3.3	29.7	26.7 - 32.7	101	59.01	1.91	3.2	59.1	53.2 - 64.8
COULTER AcT diff/diff 2	184	30.86	0.85	2.8	30.9	28.2 - 33.5	185	60.55	1.57	2.6	60.7	55.8 - 65.3
Drew Scientific D3	10	27.24	0.88	3.2	27.4	24.6 - 29.9	10	55.59	2.24	4.0	55.7	48.8 - 62.4

	Specimen HD-10					
All Method	594	13.37	1.50	11.2	13.8	8.8 - 17.9
All Abbott Cell-Dyn Instruments	190	12.48	1.47	11.8	12.7	8.0 - 16.9
All ABX Instruments	92	11.88	1.04	8.8	11.8	8.7 - 15.1
All Boule (CDS) Instruments	109	14.57	0.84	5.8	14.4	12.0 - 17.1
All COULTER Instruments	186	14.32	0.46	3.2	14.3	12.9 - 15.7
All Danam/Drew Scientific Instruments	10	13.09	0.40	3.0	13.2	11.9 - 14.3
Abbott Cell-Dyn 1700	20	11.97	0.64	5.3	12.0	10.0 - 13.9
Abbott Cell-Dyn 1800	66	10.90	0.49	4.5	11.0	9.4 - 12.4
Abbott Cell-Dyn Emerald	99	13.55	0.90	6.6	13.4	10.8 - 16.3
ABX Diagnostics Micros/45/60	92	11.88	1.04	8.8	11.8	8.7 - 15.1
Boule (CDS) Medonic M series	102	14.49	0.81	5.6	14.4	12.0 - 17.0
COULTER AcT diff/diff 2	181	14.33	0.44	3.0	14.4	13.0 - 15.7
Drew Scientific D3	10	13.09	0.40	3.0	13.2	11.9 - 14.3

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

	Specimen HD-6						Specimen HD-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	595	7.95	1.74	21.9	7.4	2.7 - 13.2	596	11.92	4.83	40.5	11.2	0.0 - 26.5
All Abbott Cell-Dyn Instruments	189	8.51	2.23	26.2	7.6	1.8 - 15.3	190	14.88	3.38	22.7	14.0	4.7 - 25.1
All ABX Instruments	92	8.59	0.83	9.7	8.6	6.1 - 11.1	90	18.41	2.30	12.5	18.5	11.5 - 25.4
All Boule (CDS) Instruments	110	8.93	1.08	12.1	9.0	5.6 - 12.2	111	10.31	2.12	20.6	10.3	3.9 - 16.7
All COULTER Instruments	192	6.63	0.67	10.1	6.7	4.6 - 8.7	192	7.03	1.20	17.1	7.0	3.4 - 10.7
All Danam/Drew Scientific Instruments	10	6.19	0.38	6.1	6.1	5.0 - 7.4	10	10.54	1.22	11.6	10.2	6.8 - 14.3
Abbott Cell-Dyn 1700	22	9.15	0.51	5.6	9.1	7.6 - 10.7	22	14.35	1.36	9.5	14.2	10.2 - 18.5
Abbott Cell-Dyn 1800	65	11.26	0.61	5.4	11.2	9.4 - 13.1	65	18.93	1.46	7.7	18.9	14.5 - 23.4
Abbott Cell-Dyn Emerald	98	6.59	0.58	8.8	6.4	4.8 - 8.4	98	12.46	1.34	10.7	12.2	8.4 - 16.5
ABX Diagnostics Micros/45/60	92	8.59	0.83	9.7	8.6	6.1 - 11.1	90	18.41	2.30	12.5	18.5	11.5 - 25.4
Boule (CDS) Medonic M series	103	8.86	1.03	11.7	9.0	5.7 - 12.0	104	10.27	2.09	20.4	10.2	3.9 - 16.6
COULTER AcT diff/diff 2	186	6.65	0.65	9.7	6.7	4.7 - 8.6	184	7.04	1.14	16.3	7.0	3.6 - 10.5
Drew Scientific D3	10	6.19	0.38	6.1	6.1	5.0 - 7.4	10	10.54	1.22	11.6	10.2	6.8 - 14.3

	Specimen HD-8						Specimen HD-9					
All Method	595	7.92	1.70	21.4	7.5	2.8 - 13.1	594	11.92	4.78	40.1	11.2	0.0 - 26.3
All Abbott Cell-Dyn Instruments	190	8.46	2.18	25.8	7.6	1.9 - 15.1	190	14.66	3.25	22.2	13.8	4.9 - 24.5
All ABX Instruments	92	8.72	0.84	9.7	8.7	6.1 - 11.3	90	18.65	2.39	12.8	19.0	11.4 - 25.9
All Boule (CDS) Instruments	110	8.78	0.97	11.1	8.8	5.8 - 11.8	109	10.39	1.82	17.5	10.3	4.9 - 15.9
All COULTER Instruments	191	6.63	0.67	10.1	6.6	4.6 - 8.7	192	7.13	1.20	16.9	7.0	3.5 - 10.8
All Danam/Drew Scientific Instruments	10	6.42	0.43	6.7	6.6	5.1 - 7.8	10	10.64	1.31	12.3	10.4	6.7 - 14.6
Abbott Cell-Dyn 1700	22	9.14	0.62	6.7	9.3	7.2 - 11.0	22	14.46	1.80	12.5	14.5	9.0 - 19.9
Abbott Cell-Dyn 1800	65	11.16	0.57	5.1	11.1	9.4 - 12.9	65	18.46	1.43	7.8	18.7	14.1 - 22.8
Abbott Cell-Dyn Emerald	100	6.60	0.58	8.7	6.5	4.8 - 8.4	99	12.38	1.40	11.3	12.1	8.1 - 16.6
ABX Diagnostics Micros/45/60	92	8.72	0.84	9.7	8.7	6.1 - 11.3	90	18.65	2.39	12.8	19.0	11.4 - 25.9
Boule (CDS) Medonic M series	103	8.71	0.95	10.9	8.8	5.8 - 11.6	102	10.41	1.83	17.6	10.2	4.9 - 15.9
COULTER AcT diff/diff 2	185	6.65	0.65	9.8	6.6	4.6 - 8.7	185	7.16	1.18	16.5	7.0	3.6 - 10.8
Drew Scientific D3	10	6.42	0.43	6.7	6.6	5.1 - 7.8	10	10.64	1.31	12.3	10.4	6.7 - 14.6

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

Specimen HD-10

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	593	5.02	1.40	27.9	5.2	0.8 - 9.3
All Abbott Cell-Dyn Instruments	190	4.68	1.77	37.9	3.5	0.0 - 10.0
All ABX Instruments	91	3.76	0.22	5.9	3.8	3.0 - 4.5
All Boule (CDS) Instruments	109	6.53	0.80	12.3	6.5	4.1 - 9.0
All COULTER Instruments	190	5.21	0.39	7.5	5.2	4.0 - 6.4
All Danam/Drew Scientific Instruments	10	3.33	0.15	4.5	3.3	2.8 - 3.8
Abbott Cell-Dyn 1700	22	5.76	0.41	7.0	5.7	4.5 - 7.0
Abbott Cell-Dyn 1800	65	6.79	0.40	5.9	6.8	5.6 - 8.0
Abbott Cell-Dyn Emerald	100	3.08	0.21	6.9	3.0	2.4 - 3.8
ABX Diagnostics Micros/45/60	91	3.76	0.22	5.9	3.8	3.0 - 4.5
Boule (CDS) Medonic M series	102	6.43	0.71	11.1	6.4	4.2 - 8.6
COULTER AcT diff/diff 2	185	5.21	0.39	7.4	5.2	4.0 - 6.4
Drew Scientific D3	10	3.33	0.15	4.5	3.3	2.8 - 3.8

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

	Specimen HD-6						**Specimen HD-7**					
Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	597	64.24	2.78	4.3	63.9	55.9 - 72.6	596	33.77	3.01	8.9	33.7	24.7 - 42.8
All Abbott Cell-Dyn Instruments	190	66.05	1.38	2.1	66.1	61.9 - 70.2	193	35.16	1.60	4.5	35.3	30.3 - 40.0
All ABX Instruments	92	67.72	1.67	2.5	67.9	62.6 - 72.8	92	37.42	2.34	6.2	37.9	30.4 - 44.5
All Boule (CDS) Instruments	109	61.01	1.62	2.7	61.0	56.1 - 65.9	110	30.62	3.11	10.1	30.4	21.2 - 40.0
All COULTER Instruments	190	62.56	0.90	1.4	62.5	59.8 - 65.3	191	32.29	1.41	4.4	32.1	28.0 - 36.6
All Danam/Drew Scientific Instruments	10	66.12	0.78	1.2	66.0	63.7 - 68.5	10	34.13	1.36	4.0	34.1	30.0 - 38.3
Abbott Cell-Dyn 1700	22	64.76	1.11	1.7	64.8	61.4 - 68.1	22	34.81	1.88	5.4	35.1	29.1 - 40.5
Abbott Cell-Dyn 1800	66	65.28	0.91	1.4	65.3	62.5 - 68.1	67	34.70	1.36	3.9	34.7	30.6 - 38.8
Abbott Cell-Dyn Emerald	97	66.96	0.90	1.3	67.0	64.2 - 69.7	101	35.59	1.46	4.1	35.6	31.2 - 40.0
ABX Diagnostics Micros/45/60	92	67.72	1.67	2.5	67.9	62.6 - 72.8	92	37.42	2.34	6.2	37.9	30.4 - 44.5
Boule (CDS) Medonic M series	102	61.20	1.47	2.4	61.1	56.7 - 65.7	103	30.81	3.01	9.8	30.5	21.7 - 39.9
COULTER AcT diff/diff 2	183	62.54	0.89	1.4	62.4	59.8 - 65.3	183	32.24	1.37	4.3	32.1	28.1 - 36.4
Drew Scientific D3	10	66.12	0.78	1.2	66.0	63.7 - 68.5	10	34.13	1.36	4.0	34.1	30.0 - 38.3

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

	Specimen HD-8						Specimen HD-9					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	598	64.23	2.74	4.3	63.9	56.0 - 72.5	593	33.74	3.03	9.0	33.6	24.6 - 42.9
All Abbott Cell-Dyn Instruments	190	66.01	1.44	2.2	66.2	61.6 - 70.4	189	35.13	1.61	4.6	35.1	30.2 - 40.0
All ABX Instruments	91	67.66	1.43	2.1	67.9	63.3 - 72.0	91	37.61	2.15	5.7	38.0	31.1 - 44.1
All Boule (CDS) Instruments	109	61.30	1.62	2.6	61.5	56.4 - 66.2	109	30.43	2.87	9.4	30.3	21.8 - 39.1
All COULTER Instruments	190	62.52	1.06	1.7	62.5	59.3 - 65.8	191	32.30	1.38	4.3	32.3	28.1 - 36.5
All Danam/Drew Scientific Instruments	10	66.34	0.64	1.0	66.3	64.4 - 68.3	10	33.77	1.21	3.6	34.0	30.1 - 37.4
Abbott Cell-Dyn 1700	22	64.53	1.59	2.5	64.5	59.7 - 69.3	22	34.74	1.91	5.5	34.8	29.0 - 40.5
Abbott Cell-Dyn 1800	65	65.36	0.96	1.5	65.3	62.4 - 68.3	67	34.93	1.90	5.5	35.1	29.2 - 40.7
Abbott Cell-Dyn Emerald	100	66.77	1.18	1.8	66.9	63.2 - 70.4	101	35.24	1.51	4.3	35.4	30.7 - 39.8
ABX Diagnostics Micros/45/60	91	67.66	1.43	2.1	67.9	63.3 - 72.0	91	37.61	2.15	5.7	38.0	31.1 - 44.1
Boule (CDS) Medonic M series	102	61.54	1.37	2.2	61.6	57.4 - 65.7	102	30.64	2.76	9.0	30.5	22.3 - 39.0
COULTER AcT diff/diff 2	183	62.48	1.03	1.6	62.5	59.3 - 65.6	184	32.28	1.38	4.3	32.3	28.1 - 36.5
Drew Scientific D3	10	66.34	0.64	1.0	66.3	64.4 - 68.3	10	33.77	1.21	3.6	34.0	30.1 - 37.4

	Specimen HD-10					
All Method	592	81.58	2.11	2.6	81.2	75.2 - 88.0
All Abbott Cell-Dyn Instruments	188	82.84	1.04	1.3	83.0	79.7 - 86.0
All ABX Instruments	89	84.36	1.12	1.3	84.7	81.0 - 87.8
All Boule (CDS) Instruments	108	78.97	1.21	1.5	79.2	75.3 - 82.7
All COULTER Instruments	191	80.49	0.62	0.8	80.4	78.6 - 82.4
All Danam/Drew Scientific Instruments	10	83.58	0.46	0.6	83.5	82.1 - 85.0
Abbott Cell-Dyn 1700	21	82.18	1.10	1.3	82.5	78.8 - 85.5
Abbott Cell-Dyn 1800	67	82.26	0.73	0.9	82.4	80.0 - 84.5
Abbott Cell-Dyn Emerald	99	83.33	1.00	1.2	83.6	80.3 - 86.4
ABX Diagnostics Micros/45/60	89	84.36	1.12	1.3	84.7	81.0 - 87.8
Boule (CDS) Medonic M series	101	79.15	1.02	1.3	79.3	76.1 - 82.3
COULTER AcT diff/diff 2	182	80.44	0.55	0.7	80.4	78.7 - 82.1
Drew Scientific D3	10	83.58	0.46	0.6	83.5	82.1 - 85.0

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

	Specimen DIF-6						Specimen DIF-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	16	9.98	0.21	2.1	10.0	8.4 - 11.5	16	3.84	0.16	4.2	3.9	3.2 - 4.5
All COULTER Instruments	16	9.98	0.21	2.1	10.0	8.4 - 11.5	16	3.84	0.16	4.2	3.9	3.2 - 4.5
COULTER UniCel DxH 600	10	10.03	0.20	2.0	10.0	8.5 - 11.6	10	3.73	0.12	3.2	3.8	3.1 - 4.3
	Specimen DIF-8						**Specimen DIF-9**					
All Method	16	10.02	0.26	2.6	10.1	8.5 - 11.6	16	3.84	0.22	5.9	3.8	3.2 - 4.5
All COULTER Instruments	16	10.02	0.26	2.6	10.1	8.5 - 11.6	16	3.84	0.22	5.9	3.8	3.2 - 4.5
COULTER UniCel DxH 600	10	10.12	0.23	2.3	10.2	8.5 - 11.7	10	3.75	0.10	2.8	3.8	3.1 - 4.4
	Specimen DIF-10											
All Method	16	26.21	0.60	2.3	26.4	22.2 - 30.2						
All COULTER Instruments	16	26.21	0.60	2.3	26.4	22.2 - 30.2						
COULTER UniCel DxH 600	10	26.17	0.67	2.6	26.2	22.2 - 30.1						

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

	Specimen DIF-6						Specimen DIF-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	16	4.208	0.060	1.4	4.20	3.95 - 4.46	16	2.553	0.063	2.5	2.55	2.39 - 2.71
All COULTER Instruments	16	4.208	0.060	1.4	4.20	3.95 - 4.46	16	2.553	0.063	2.5	2.55	2.39 - 2.71
COULTER UniCel DxH 600	10	4.197	0.050	1.2	4.19	3.94 - 4.45	10	2.510	0.025	1.0	2.52	2.35 - 2.67
	Specimen DIF-8						**Specimen DIF-9**					
All Method	16	4.190	0.076	1.8	4.18	3.93 - 4.45	16	2.543	0.057	2.3	2.53	2.39 - 2.70
All COULTER Instruments	16	4.190	0.076	1.8	4.18	3.93 - 4.45	16	2.543	0.057	2.3	2.53	2.39 - 2.70
COULTER UniCel DxH 600	10	4.165	0.047	1.1	4.18	3.91 - 4.42	10	2.503	0.030	1.2	2.51	2.35 - 2.66
	Specimen DIF-10											
All Method	16	6.412	0.148	2.3	6.36	6.02 - 6.80						
All COULTER Instruments	16	6.412	0.148	2.3	6.36	6.02 - 6.80						
COULTER UniCel DxH 600	10	6.372	0.077	1.2	6.34	5.98 - 6.76						

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

	Specimen DIF-6						Specimen DIF-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	16	11.96	0.13	1.1	12.0	11.1 - 12.8	16	6.37	0.11	1.8	6.3	5.9 - 6.9
All COULTER Instruments	16	11.96	0.13	1.1	12.0	11.1 - 12.8	16	6.37	0.11	1.8	6.3	5.9 - 6.9
COULTER UniCel DxH 600	10	11.97	0.05	0.4	12.0	11.1 - 12.9	10	6.28	0.04	0.6	6.3	5.8 - 6.8
	Specimen DIF-8						**Specimen DIF-9**					
All Method	16	11.91	0.17	1.4	11.9	11.0 - 12.8	16	6.40	0.13	2.0	6.4	5.9 - 6.9
All COULTER Instruments	16	11.91	0.17	1.4	11.9	11.0 - 12.8	16	6.40	0.13	2.0	6.4	5.9 - 6.9
COULTER UniCel DxH 600	10	11.87	0.05	0.4	11.9	11.0 - 12.7	10	6.32	0.08	1.2	6.3	5.8 - 6.8
	Specimen DIF-10											
All Method	16	18.98	0.32	1.7	18.9	17.6 - 20.4						
All COULTER Instruments	16	18.98	0.32	1.7	18.9	17.6 - 20.4						
COULTER UniCel DxH 600	10	18.85	0.18	0.9	18.8	17.5 - 20.2						

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

	Specimen DIF-6						Specimen DIF-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	16	37.93	0.84	2.2	38.1	35.6 - 40.3	16	20.39	0.51	2.5	20.4	19.1 - 21.7
All COULTER Instruments	16	37.93	0.84	2.2	38.1	35.6 - 40.3	16	20.39	0.51	2.5	20.4	19.1 - 21.7
COULTER UniCel DxH 600	10	38.43	0.48	1.2	38.5	36.1 - 40.8	10	20.47	0.22	1.1	20.6	19.2 - 21.7
	Specimen DIF-8						**Specimen DIF-9**					
All Method	16	37.80	0.88	2.3	38.0	35.5 - 40.1	16	20.34	0.48	2.4	20.4	19.1 - 21.6
All COULTER Instruments	16	37.80	0.88	2.3	38.0	35.5 - 40.1	16	20.34	0.48	2.4	20.4	19.1 - 21.6
COULTER UniCel DxH 600	10	38.18	0.44	1.1	38.3	35.8 - 40.5	10	20.43	0.22	1.1	20.5	19.2 - 21.7
	Specimen DIF-10											
All Method	16	61.77	1.49	2.4	61.7	58.0 - 65.5						
All COULTER Instruments	16	61.77	1.49	2.4	61.7	58.0 - 65.5						
COULTER UniCel DxH 600	10	62.12	0.91	1.5	61.7	58.3 - 65.9						

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

	Specimen DIF-6						Specimen DIF-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	16	237.4	8.4	3.5	238	178 - 297	16	77.8	3.1	4.0	79	58 - 98
All COULTER Instruments	16	237.4	8.4	3.5	238	178 - 297	16	77.8	3.1	4.0	79	58 - 98
COULTER UniCel DxH 600	10	232.7	3.1	1.4	233	174 - 291	10	75.0	2.6	3.5	75	56 - 94

	Specimen DIF-8						Specimen DIF-9					
All Method	16	239.9	6.9	2.9	241	179 - 300	16	78.3	4.3	5.5	78	58 - 98
All COULTER Instruments	16	239.9	6.9	2.9	241	179 - 300	16	78.3	4.3	5.5	78	58 - 98
COULTER UniCel DxH 600	10	237.5	5.8	2.4	238	178 - 297	10	74.8	1.5	2.0	75	56 - 94

	Specimen DIF-10					
All Method	16	484.6	21.8	4.5	483	363 - 606
All COULTER Instruments	16	484.6	21.8	4.5	483	363 - 606
COULTER UniCel DxH 600	10	483.7	9.0	1.9	479	362 - 605

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

	Specimen DIF-6						Specimen DIF-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	16	58.26	2.76	4.7	58.5	49.9 - 66.6	16	49.43	2.21	4.5	49.1	42.7 - 56.1
All COULTER Instruments	16	58.26	2.76	4.7	58.5	49.9 - 66.6	16	49.43	2.21	4.5	49.1	42.7 - 56.1
COULTER UniCel DxH 600	10	55.33	0.77	1.4	55.0	53.0 - 57.7	10	49.53	1.16	2.3	49.3	46.0 - 53.1

	Specimen DIF-8						Specimen DIF-9					
All Method	16	58.17	2.62	4.5	59.3	50.2 - 66.1	16	49.55	1.35	2.7	49.4	45.4 - 53.7
All COULTER Instruments	16	58.17	2.62	4.5	59.3	50.2 - 66.1	16	49.55	1.35	2.7	49.4	45.4 - 53.7
COULTER UniCel DxH 600	10	55.25	0.62	1.1	55.4	53.4 - 57.1	10	49.28	0.98	2.0	49.0	46.3 - 52.3

	Specimen DIF-10					
All Method	16	64.22	3.46	5.4	66.0	53.8 - 74.7
All COULTER Instruments	16	64.22	3.46	5.4	66.0	53.8 - 74.7
COULTER UniCel DxH 600	10	60.60	1.05	1.7	60.4	57.4 - 63.8

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

	Specimen DIF-6						Specimen DIF-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	16	29.78	1.26	4.2	29.9	25.9 - 33.6	16	40.56	1.79	4.4	41.2	35.1 - 46.0
All COULTER Instruments	16	29.78	1.26	4.2	29.9	25.9 - 33.6	16	40.56	1.79	4.4	41.2	35.1 - 46.0
COULTER UniCel DxH 600	10	30.82	0.74	2.4	31.1	28.6 - 33.1	10	40.48	1.48	3.7	40.6	36.0 - 45.0
	Specimen DIF-8						**Specimen DIF-9**					
All Method	16	29.77	1.15	3.9	30.1	26.3 - 33.3	16	40.59	1.44	3.6	40.8	36.2 - 45.0
All COULTER Instruments	16	29.77	1.15	3.9	30.1	26.3 - 33.3	16	40.59	1.44	3.6	40.8	36.2 - 45.0
COULTER UniCel DxH 600	10	30.73	0.69	2.3	30.5	28.6 - 32.9	10	40.55	1.48	3.6	40.5	36.1 - 45.0
	Specimen DIF-10											
All Method	16	21.61	1.29	6.0	21.4	17.7 - 25.5						
All COULTER Instruments	16	21.61	1.29	6.0	21.4	17.7 - 25.5						
COULTER UniCel DxH 600	10	22.82	1.15	5.1	22.5	19.3 - 26.3						

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

	Specimen DIF-6						Specimen DIF-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	16	5.28	1.72	32.6	5.2	0.1 - 10.5	16	1.32	0.44	33.1	1.4	0.0 - 2.7
All COULTER Instruments	16	5.28	1.72	32.6	5.2	0.1 - 10.5	16	1.32	0.44	33.1	1.4	0.0 - 2.7
COULTER UniCel DxH 600	10	7.00	0.46	6.5	7.1	5.6 - 8.4	10	1.23	0.38	31.1	1.2	0.0 - 2.4
	Specimen DIF-8						**Specimen DIF-9**					
All Method	16	5.13	1.72	33.5	5.2	0.0 - 10.3	16	1.41	0.45	31.9	1.5	0.0 - 2.8
All COULTER Instruments	16	5.13	1.72	33.5	5.2	0.0 - 10.3	16	1.41	0.45	31.9	1.5	0.0 - 2.8
COULTER UniCel DxH 600	10	6.82	0.57	8.4	7.0	5.1 - 8.6	10	1.47	0.44	30.1	1.5	0.1 - 2.8
	Specimen DIF-10											
All Method	16	9.03	1.99	22.1	8.6	3.0 - 15.1						
All COULTER Instruments	16	9.03	1.99	22.1	8.6	3.0 - 15.1						
COULTER UniCel DxH 600	10	10.97	0.92	8.4	11.1	8.1 - 13.8						

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

	Specimen DIF-6						Specimen DIF-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	16	6.36	0.67	10.5	6.3	4.3 - 8.4	16	8.33	0.73	8.8	8.4	6.1 - 10.6
All COULTER Instruments	16	6.36	0.67	10.5	6.3	4.3 - 8.4	16	8.33	0.73	8.8	8.4	6.1 - 10.6
COULTER UniCel DxH 600	10	6.70	0.46	6.9	6.7	5.3 - 8.1	10	8.75	0.42	4.8	8.7	7.4 - 10.1
	Specimen DIF-8						**Specimen DIF-9**					
All Method	16	6.64	0.57	8.6	6.8	4.9 - 8.4	16	8.38	0.75	8.9	8.4	6.1 - 10.7
All COULTER Instruments	16	6.64	0.57	8.6	6.8	4.9 - 8.4	16	8.38	0.75	8.9	8.4	6.1 - 10.7
COULTER UniCel DxH 600	10	7.02	0.26	3.8	7.0	6.2 - 7.9	10	8.68	0.51	5.8	8.8	7.1 - 10.3
	Specimen DIF-10											
All Method	16	4.65	0.60	13.0	4.7	2.8 - 6.5						
All COULTER Instruments	16	4.65	0.60	13.0	4.7	2.8 - 6.5						
COULTER UniCel DxH 600	10	5.05	0.23	4.6	5.0	4.3 - 5.8						

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

	Specimen DIF-6						Specimen DIF-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	15	0.22	0.23	104.8	0.2	0.0 - 1.0	16	0.06	0.14	217.6	0.0	0.0 - 0.5
All COULTER Instruments	15	0.22	0.23	104.8	0.2	0.0 - 1.0	16	0.06	0.14	217.6	0.0	0.0 - 0.5
COULTER UniCel DxH 600	10	0.15	0.23	156.3	0.0	0.0 - 0.9	10	0.00	0.01	0.0	0.0	0.0 - 0.1
	Specimen DIF-8						**Specimen DIF-9**					
All Method	15	0.21	0.19	92.3	0.3	0.0 - 0.8	16	0.10	0.18	178.9	0.0	0.0 - 0.7
All COULTER Instruments	15	0.21	0.19	92.3	0.3	0.0 - 0.8	16	0.10	0.18	178.9	0.0	0.0 - 0.7
COULTER UniCel DxH 600	10	0.18	0.20	111.3	0.2	0.0 - 0.8	10	0.02	0.04	245.0	0.0	0.0 - 0.2
	Specimen DIF-10											
All Method	16	0.52	0.34	66.5	0.5	0.0 - 1.6						
All COULTER Instruments	16	0.52	0.34	66.5	0.5	0.0 - 1.6						
COULTER UniCel DxH 600	10	0.57	0.34	59.8	0.6	0.0 - 1.6						

BLOOD LEAD (µg/dL)

	Specimen LED-6						Specimen LED-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	11	60.18	9.88	16.4	65.0	54.1 - 66.2	11	6.87	1.26	18.4	6.9	2.8 - 10.9
All Magellan Diagnostics Methods	11	60.18	9.88	16.4	65.0	54.1 - 66.2	11	6.87	1.26	18.4	6.9	2.8 - 10.9
Magellan Diagnostics LeadCare II	11	60.18	9.88	16.4	65.0	54.1 - 66.2	11	6.87	1.26	18.4	6.9	2.8 - 10.9

	Specimen LED-8						Specimen LED-9					
	Labs	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	5	2.80	0.71	25.3	2.8	0.0 - 6.8	5	42.40	1.84	4.3	42.4	38.1 - 46.7
All Magellan Diagnostics Methods	5	2.80	0.71	25.3	2.8	0.0 - 6.8	5	42.40	1.84	4.3	42.4	38.1 - 46.7

	Specimen LED-10					
All Method	5	2.85	0.64	22.4	2.9	0.0 - 6.9
All Magellan Diagnostics Methods	5	2.85	0.64	22.4	2.9	0.0 - 6.9

RETICULOCYTE COUNT (percent)

	Specimen RT-3						Specimen RT-4					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	28	3.16	0.77	24.4	3.2	1.6 - 4.8	29	7.51	2.04	27.2	7.3	3.4 - 11.6
All Automated Methods	15	3.02	0.55	18.2	3.0	1.9 - 4.2	16	6.76	1.48	21.9	6.6	3.8 - 9.8
All Manual Methods	14	3.64	1.51	41.6	3.7	0.6 - 6.7	14	8.96	2.96	33.1	8.9	3.0 - 14.9

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

	Specimen BCX-6						Specimen BCX-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	122	7.03	0.16	2.3	7.0	5.9 - 8.1	122	3.78	0.10	2.6	3.8	3.2 - 4.4
All ABX Instruments	78	7.04	0.16	2.2	7.0	5.9 - 8.1	78	3.79	0.10	2.6	3.8	3.2 - 4.4
All COULTER Instruments	42	7.02	0.17	2.4	7.1	5.9 - 8.1	42	3.77	0.10	2.6	3.8	3.2 - 4.4
ABX Diagnostics Pentra 60C+	65	7.04	0.16	2.3	7.0	5.9 - 8.1	65	3.79	0.10	2.7	3.8	3.2 - 4.4
ABX Diagnostics Pentra 80 / XL 80	13	7.03	0.12	1.7	7.0	5.9 - 8.1	13	3.80	0.07	1.9	3.8	3.2 - 4.4
COULTER AcT 5diff	42	7.02	0.17	2.4	7.1	5.9 - 8.1	42	3.77	0.10	2.6	3.8	3.2 - 4.4
	Specimen BCX-8						**Specimen BCX-9**					
All Method	121	9.70	0.24	2.4	9.7	8.2 - 11.2	120	4.72	0.12	2.5	4.7	4.0 - 5.5
All ABX Instruments	76	9.73	0.22	2.2	9.7	8.2 - 11.2	77	4.73	0.11	2.3	4.7	4.0 - 5.5
All COULTER Instruments	42	9.67	0.22	2.3	9.7	8.2 - 11.2	42	4.70	0.13	2.7	4.7	3.9 - 5.5
ABX Diagnostics Pentra 60C+	65	9.73	0.24	2.5	9.7	8.2 - 11.2	65	4.73	0.11	2.4	4.7	4.0 - 5.5
ABX Diagnostics Pentra 80 / XL 80	12	9.71	0.14	1.4	9.7	8.2 - 11.2	13	4.68	0.20	4.3	4.7	3.9 - 5.4
COULTER AcT 5diff	42	9.67	0.22	2.3	9.7	8.2 - 11.2	42	4.70	0.13	2.7	4.7	3.9 - 5.5
	Specimen BCX-10											
All Method	118	18.62	0.48	2.6	18.6	15.8 - 21.5						
All ABX Instruments	75	18.57	0.45	2.4	18.6	15.7 - 21.4						
All COULTER Instruments	41	18.70	0.53	2.9	18.7	15.8 - 21.5						
ABX Diagnostics Pentra 60C+	63	18.60	0.45	2.4	18.6	15.8 - 21.4						
ABX Diagnostics Pentra 80 / XL 80	13	18.22	0.76	4.2	18.3	15.4 - 21.0						
COULTER AcT 5diff	41	18.70	0.53	2.9	18.7	15.8 - 21.5						

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

	Specimen BCX-6						Specimen BCX-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	121	4.547	0.067	1.5	4.54	4.27 - 4.82	120	3.844	0.061	1.6	3.84	3.61 - 4.08
All ABX Instruments	77	4.533	0.066	1.5	4.53	4.26 - 4.81	77	3.828	0.055	1.4	3.83	3.59 - 4.06
All COULTER Instruments	42	4.567	0.058	1.3	4.57	4.29 - 4.85	41	3.871	0.063	1.6	3.87	3.63 - 4.11
ABX Diagnostics Pentra 60C+	64	4.520	0.058	1.3	4.52	4.24 - 4.80	65	3.831	0.057	1.5	3.83	3.60 - 4.07
ABX Diagnostics Pentra 80 / XL 80	12	4.548	0.096	2.1	4.55	4.27 - 4.83	12	3.815	0.046	1.2	3.79	3.58 - 4.05
COULTER AcT 5diff	42	4.567	0.058	1.3	4.57	4.29 - 4.85	41	3.871	0.063	1.6	3.87	3.63 - 4.11

	Specimen BCX-8						Specimen BCX-9					
All Method	120	2.556	0.042	1.6	2.56	2.40 - 2.71	121	4.803	0.068	1.4	4.80	4.51 - 5.10
All ABX Instruments	76	2.547	0.040	1.6	2.55	2.39 - 2.71	78	4.786	0.066	1.4	4.79	4.49 - 5.08
All COULTER Instruments	42	2.571	0.040	1.6	2.58	2.41 - 2.73	41	4.834	0.060	1.2	4.83	4.54 - 5.13
ABX Diagnostics Pentra 60C+	65	2.553	0.038	1.5	2.55	2.40 - 2.71	66	4.782	0.068	1.4	4.78	4.49 - 5.07
ABX Diagnostics Pentra 80 / XL 80	11	2.512	0.038	1.5	2.50	2.36 - 2.67	12	4.807	0.054	1.1	4.79	4.51 - 5.10
COULTER AcT 5diff	42	2.571	0.040	1.6	2.58	2.41 - 2.73	41	4.834	0.060	1.2	4.83	4.54 - 5.13

	Specimen BCX-10					
All Method	119	6.073	0.083	1.4	6.08	5.70 - 6.44
All ABX Instruments	76	6.066	0.085	1.4	6.07	5.70 - 6.43
All COULTER Instruments	41	6.086	0.079	1.3	6.10	5.72 - 6.46
ABX Diagnostics Pentra 60C+	64	6.053	0.078	1.3	6.05	5.68 - 6.42
ABX Diagnostics Pentra 80 / XL 80	12	6.138	0.106	1.7	6.13	5.77 - 6.51
COULTER AcT 5diff	41	6.086	0.079	1.3	6.10	5.72 - 6.46

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

	Specimen BCX-6						Specimen BCX-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	119	13.35	0.15	1.2	13.4	12.4 - 14.3	120	10.82	0.14	1.3	10.8	10.0 - 11.6
All ABX Instruments	75	13.33	0.14	1.0	13.3	12.4 - 14.3	75	10.78	0.11	1.0	10.8	10.0 - 11.6
All COULTER Instruments	41	13.37	0.16	1.2	13.4	12.4 - 14.4	41	10.87	0.16	1.4	10.9	10.1 - 11.7
ABX Diagnostics Pentra 60C+	64	13.32	0.14	1.0	13.3	12.3 - 14.3	63	10.78	0.11	1.0	10.8	10.0 - 11.6
ABX Diagnostics Pentra 80 / XL 80	12	13.35	0.25	1.8	13.4	12.4 - 14.3	12	10.77	0.13	1.2	10.8	10.0 - 11.6
COULTER AcT 5diff	41	13.37	0.16	1.2	13.4	12.4 - 14.4	41	10.87	0.16	1.4	10.9	10.1 - 11.7

	Specimen BCX-8						Specimen BCX-9					
All Method	120	7.45	0.12	1.6	7.4	6.9 - 8.0	120	14.08	0.15	1.1	14.1	13.0 - 15.1
All ABX Instruments	76	7.39	0.09	1.2	7.4	6.8 - 8.0	77	14.09	0.15	1.1	14.1	13.0 - 15.1
All COULTER Instruments	42	7.53	0.11	1.5	7.6	7.0 - 8.1	41	14.08	0.16	1.1	14.1	13.0 - 15.1
ABX Diagnostics Pentra 60C+	65	7.40	0.09	1.3	7.4	6.8 - 8.0	65	14.08	0.16	1.1	14.1	13.0 - 15.1
ABX Diagnostics Pentra 80 / XL 80	11	7.39	0.07	0.9	7.4	6.8 - 8.0	12	14.11	0.13	0.9	14.1	13.1 - 15.1
COULTER AcT 5diff	42	7.53	0.11	1.5	7.6	7.0 - 8.1	41	14.08	0.16	1.1	14.1	13.0 - 15.1

	Specimen BCX-10					
All Method	120	19.94	0.31	1.6	20.0	18.5 - 21.4
All ABX Instruments	76	20.09	0.24	1.2	20.1	18.6 - 21.5
All COULTER Instruments	42	19.68	0.26	1.3	19.7	18.3 - 21.1
ABX Diagnostics Pentra 60C+	64	20.07	0.24	1.2	20.0	18.6 - 21.5
ABX Diagnostics Pentra 80 / XL 80	12	20.17	0.21	1.1	20.2	18.7 - 21.6
COULTER AcT 5diff	42	19.68	0.26	1.3	19.7	18.3 - 21.1

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

	Specimen BCX-6						Specimen BCX-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	119	39.00	0.69	1.8	39.0	36.6 - 41.4	118	32.69	0.61	1.9	32.6	30.7 - 34.7
All ABX Instruments	76	39.21	0.61	1.6	39.1	36.8 - 41.6	76	32.83	0.50	1.5	32.7	30.8 - 34.8
All COULTER Instruments	41	38.65	0.63	1.6	38.6	36.3 - 41.0	41	32.35	0.71	2.2	32.4	30.4 - 34.3
ABX Diagnostics Pentra 60C+	65	39.16	0.60	1.5	39.1	36.8 - 41.6	64	32.81	0.51	1.6	32.7	30.8 - 34.8
ABX Diagnostics Pentra 80 / XL 80	12	39.33	0.96	2.4	39.4	36.9 - 41.7	12	32.90	0.49	1.5	32.8	30.9 - 34.9
COULTER AcT 5diff	41	38.65	0.63	1.6	38.6	36.3 - 41.0	41	32.35	0.71	2.2	32.4	30.4 - 34.3

	Specimen BCX-8						Specimen BCX-9					
All Method	120	22.02	0.44	2.0	22.0	20.6 - 23.4	120	41.20	0.67	1.6	41.1	38.7 - 43.7
All ABX Instruments	77	22.14	0.42	1.9	22.1	20.8 - 23.5	78	41.38	0.62	1.5	41.2	38.8 - 43.9
All COULTER Instruments	42	21.79	0.39	1.8	21.9	20.4 - 23.2	42	40.82	0.69	1.7	40.9	38.3 - 43.3
ABX Diagnostics Pentra 60C+	65	22.11	0.36	1.6	22.1	20.7 - 23.5	66	41.37	0.62	1.5	41.3	38.8 - 43.9
ABX Diagnostics Pentra 80 / XL 80	11	22.43	0.49	2.2	22.5	21.0 - 23.8	12	41.44	0.69	1.7	41.2	38.9 - 44.0
COULTER AcT 5diff	42	21.79	0.39	1.8	21.9	20.4 - 23.2	42	40.82	0.69	1.7	40.9	38.3 - 43.3

	Specimen BCX-10					
All Method	118	56.78	1.00	1.8	56.8	53.3 - 60.2
All ABX Instruments	76	57.08	0.89	1.6	57.0	53.6 - 60.6
All COULTER Instruments	42	56.15	1.03	1.8	56.2	52.7 - 59.6
ABX Diagnostics Pentra 60C+	63	57.22	0.75	1.3	57.1	53.7 - 60.7
ABX Diagnostics Pentra 80 / XL 80	12	56.58	1.16	2.0	56.5	53.1 - 60.0
COULTER AcT 5diff	42	56.15	1.03	1.8	56.2	52.7 - 59.6

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

	Specimen BCX-6						Specimen BCX-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	122	247.7	8.7	3.5	247	185 - 310	120	107.3	5.6	5.2	107	80 - 135
All ABX Instruments	78	246.6	8.2	3.3	246	184 - 309	77	106.2	5.3	5.0	106	79 - 133
All COULTER Instruments	42	250.0	9.3	3.7	250	187 - 313	42	110.0	6.1	5.5	110	82 - 138
ABX Diagnostics Pentra 60C+	66	245.6	7.0	2.9	246	184 - 308	65	106.0	5.2	4.9	105	79 - 133
ABX Diagnostics Pentra 80 / XL 80	12	251.8	12.2	4.8	250	188 - 315	12	107.7	5.7	5.3	107	80 - 135
COULTER AcT 5diff	42	250.0	9.3	3.7	250	187 - 313	42	110.0	6.1	5.5	110	82 - 138
	Specimen BCX-8						**Specimen BCX-9**					
All Method	121	77.0	4.4	5.7	77	57 - 97	122	142.8	6.3	4.4	143	107 - 179
All ABX Instruments	77	76.2	4.6	6.0	76	57 - 96	78	141.6	6.2	4.3	141	106 - 177
All COULTER Instruments	42	78.3	3.8	4.8	79	58 - 98	42	145.0	5.9	4.0	145	108 - 182
ABX Diagnostics Pentra 60C+	66	76.4	4.6	6.0	76	57 - 96	66	140.9	5.9	4.2	141	105 - 177
ABX Diagnostics Pentra 80 / XL 80	12	72.9	10.0	13.8	77	54 - 92	12	145.3	6.3	4.4	146	108 - 182
COULTER AcT 5diff	42	78.3	3.8	4.8	79	58 - 98	42	145.0	5.9	4.0	145	108 - 182

	Specimen BCX-10					
All Method	120	512.8	15.6	3.0	511	384 - 641
All ABX Instruments	77	511.3	15.3	3.0	510	383 - 640
All COULTER Instruments	42	515.6	16.1	3.1	514	386 - 645
ABX Diagnostics Pentra 60C+	65	508.5	13.9	2.7	506	381 - 636
ABX Diagnostics Pentra 80 / XL 80	12	526.6	13.4	2.5	527	394 - 659
COULTER AcT 5diff	42	515.6	16.1	3.1	514	386 - 645

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

	Specimen BCX-6						Specimen BCX-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	120	53.56	3.48	6.5	53.6	43.1 - 64.0	121	57.57	3.71	6.4	57.9	46.4 - 68.8
All ABX Instruments	77	53.87	3.30	6.1	53.9	43.9 - 63.8	77	58.93	2.89	4.9	59.2	50.2 - 67.7
All COULTER Instruments	42	53.09	3.77	7.1	53.0	41.7 - 64.4	42	55.50	3.64	6.6	54.9	44.5 - 66.5
ABX Diagnostics Pentra 60C+	66	54.01	3.18	5.9	54.0	44.4 - 63.6	66	59.10	2.96	5.0	59.4	50.2 - 68.0
ABX Diagnostics Pentra 80 / XL 80	12	52.08	4.99	9.6	53.3	37.0 - 67.1	12	57.03	3.64	6.4	57.7	46.1 - 68.0
COULTER AcT 5diff	42	53.09	3.77	7.1	53.0	41.7 - 64.4	42	55.50	3.64	6.6	54.9	44.5 - 66.5

	Specimen BCX-8						Specimen BCX-9					
All Method	120	59.21	2.74	4.6	59.0	50.9 - 67.5	119	44.77	3.23	7.2	45.0	35.0 - 54.5
All ABX Instruments	78	59.79	2.78	4.6	59.7	51.4 - 68.2	78	45.12	2.89	6.4	44.8	36.4 - 53.8
All COULTER Instruments	41	58.17	2.34	4.0	58.5	51.1 - 65.2	41	44.55	4.00	9.0	45.3	32.5 - 56.6
ABX Diagnostics Pentra 60C+	66	60.21	2.66	4.4	60.2	52.2 - 68.2	66	45.42	2.83	6.2	45.2	36.9 - 54.0
ABX Diagnostics Pentra 80 / XL 80	12	57.51	2.33	4.0	58.1	50.5 - 64.5	12	43.50	2.80	6.4	43.4	35.0 - 52.0
COULTER AcT 5diff	41	58.17	2.34	4.0	58.5	51.1 - 65.2	41	44.55	4.00	9.0	45.3	32.5 - 56.6

	Specimen BCX-10					
All Method	121	61.99	5.84	9.4	62.6	44.4 - 79.5
All ABX Instruments	77	63.69	5.01	7.9	63.9	48.6 - 78.8
All COULTER Instruments	42	59.57	5.58	9.4	59.8	42.8 - 76.3
ABX Diagnostics Pentra 60C+	65	64.49	4.52	7.0	64.8	50.9 - 78.1
ABX Diagnostics Pentra 80 / XL 80	12	59.38	5.48	9.2	61.2	42.9 - 75.9
COULTER AcT 5diff	42	59.57	5.58	9.4	59.8	42.8 - 76.3

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

	Specimen BCX-6						Specimen BCX-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	118	30.49	3.26	10.7	30.3	20.7 - 40.3	120	25.62	3.37	13.1	25.9	15.5 - 35.8
All ABX Instruments	76	31.81	2.86	9.0	31.4	23.2 - 40.4	77	26.84	2.83	10.5	26.8	18.3 - 35.4
All COULTER Instruments	42	27.86	2.79	10.0	28.4	19.5 - 36.3	42	23.34	3.13	13.4	23.3	13.9 - 32.8
ABX Diagnostics Pentra 60C+	66	31.58	2.70	8.5	31.2	23.4 - 39.7	66	26.52	2.81	10.6	26.4	18.0 - 35.0
ABX Diagnostics Pentra 80 / XL 80	12	35.05	5.11	14.6	34.9	19.7 - 50.4	12	29.49	3.21	10.9	29.0	19.8 - 39.2
COULTER AcT 5diff	42	27.86	2.79	10.0	28.4	19.5 - 36.3	42	23.34	3.13	13.4	23.3	13.9 - 32.8

	Specimen BCX-8						Specimen BCX-9					
All Method	118	24.11	2.49	10.3	23.9	16.6 - 31.6	120	38.33	3.76	9.8	38.1	27.0 - 49.7
All ABX Instruments	76	24.83	2.40	9.7	24.8	17.6 - 32.1	78	39.35	3.25	8.3	39.1	29.6 - 49.1
All COULTER Instruments	42	22.63	2.33	10.3	22.6	15.6 - 29.7	42	35.98	4.03	11.2	35.2	23.8 - 48.1
ABX Diagnostics Pentra 60C+	64	24.32	1.81	7.4	24.1	18.8 - 29.8	66	39.05	3.15	8.1	38.9	29.5 - 48.5
ABX Diagnostics Pentra 80 / XL 80	12	27.74	4.77	17.2	28.2	13.4 - 42.1	12	41.03	3.40	8.3	40.8	30.8 - 51.3
COULTER AcT 5diff	42	22.63	2.33	10.3	22.6	15.6 - 29.7	42	35.98	4.03	11.2	35.2	23.8 - 48.1

	Specimen BCX-10					
All Method	119	26.26	4.59	17.5	26.2	12.5 - 40.1
All ABX Instruments	76	26.92	3.92	14.6	27.0	15.1 - 38.7
All COULTER Instruments	42	24.21	5.23	21.6	23.8	8.5 - 40.0
ABX Diagnostics Pentra 60C+	65	26.54	3.44	13.0	26.7	16.2 - 36.9
ABX Diagnostics Pentra 80 / XL 80	12	32.28	5.05	15.6	31.3	17.1 - 47.5
COULTER AcT 5diff	42	24.21	5.23	21.6	23.8	8.5 - 40.0

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

	Specimen BCX-6						Specimen BCX-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	118	1.51	0.84	55.3	1.4	0.0 - 4.1	118	0.96	0.60	62.8	0.9	0.0 - 2.8
All ABX Instruments	76	1.54	0.86	55.7	1.5	0.0 - 4.2	76	0.89	0.56	62.7	0.8	0.0 - 2.6
All COULTER Instruments	41	1.42	0.79	55.4	1.2	0.0 - 3.8	40	1.01	0.60	59.8	1.0	0.0 - 2.9
ABX Diagnostics Pentra 60C+	65	1.52	0.80	52.6	1.5	0.0 - 4.0	66	0.92	0.60	65.3	0.8	0.0 - 2.8
ABX Diagnostics Pentra 80 / XL 80	12	1.91	1.42	74.2	1.8	0.0 - 6.2	12	1.08	0.84	77.7	1.1	0.0 - 3.6
COULTER AcT 5diff	41	1.42	0.79	55.4	1.2	0.0 - 3.8	40	1.01	0.60	59.8	1.0	0.0 - 2.9

	Specimen BCX-8						Specimen BCX-9					
All Method	119	0.82	0.42	52.1	0.8	0.0 - 2.1	120	1.08	0.53	49.4	1.0	0.0 - 2.7
All ABX Instruments	77	0.84	0.45	53.5	0.8	0.0 - 2.2	78	1.08	0.53	48.7	1.0	0.0 - 2.7
All COULTER Instruments	41	0.76	0.38	49.7	0.7	0.0 - 2.0	42	1.11	0.62	55.2	1.0	0.0 - 3.0
ABX Diagnostics Pentra 60C+	66	0.84	0.45	53.3	0.8	0.0 - 2.2	66	1.08	0.52	48.1	1.0	0.0 - 2.7
ABX Diagnostics Pentra 80 / XL 80	12	1.08	0.89	83.2	0.8	0.0 - 3.8	12	1.04	0.57	54.4	1.0	0.0 - 2.8
COULTER AcT 5diff	41	0.76	0.38	49.7	0.7	0.0 - 2.0	42	1.11	0.62	55.2	1.0	0.0 - 3.0

	Specimen BCX-10					
All Method	120	2.40	1.47	61.2	2.2	0.0 - 6.9
All ABX Instruments	77	2.37	1.45	61.0	2.1	0.0 - 6.8
All COULTER Instruments	42	2.42	1.52	62.8	2.2	0.0 - 7.0
ABX Diagnostics Pentra 60C+	65	2.41	1.46	60.6	2.1	0.0 - 6.8
ABX Diagnostics Pentra 80 / XL 80	12	2.16	1.41	65.3	2.1	0.0 - 6.4
COULTER AcT 5diff	42	2.42	1.52	62.8	2.2	0.0 - 7.0

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

	Specimen BCX-6						Specimen BCX-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	120	11.20	2.50	22.4	10.8	3.6 - 18.8	121	12.59	1.90	15.1	12.6	6.8 - 18.4
All ABX Instruments	78	12.06	2.83	23.5	11.5	3.5 - 20.6	78	12.88	1.92	14.9	12.8	7.1 - 18.7
All COULTER Instruments	42	9.82	1.19	12.2	9.7	6.2 - 13.5	42	12.05	1.80	14.9	11.9	6.6 - 17.5
ABX Diagnostics Pentra 60C+	66	12.33	2.83	22.9	11.7	3.8 - 20.9	66	13.04	1.94	14.9	12.9	7.2 - 18.9
ABX Diagnostics Pentra 80 / XL 80	12	10.58	2.45	23.2	9.6	3.2 - 18.0	12	12.00	1.56	13.0	11.6	7.3 - 16.7
COULTER AcT 5diff	42	9.82	1.19	12.2	9.7	6.2 - 13.5	42	12.05	1.80	14.9	11.9	6.6 - 17.5

	Specimen BCX-8						Specimen BCX-9					
All Method	115	12.95	2.01	15.5	12.5	6.9 - 19.0	121	13.88	1.98	14.2	13.8	7.9 - 19.9
All ABX Instruments	75	13.83	2.44	17.6	13.5	6.5 - 21.2	78	14.27	1.91	13.4	14.2	8.5 - 20.1
All COULTER Instruments	42	11.92	1.49	12.5	11.7	7.4 - 16.4	42	13.22	1.90	14.4	13.3	7.5 - 19.0
ABX Diagnostics Pentra 60C+	66	14.34	2.82	19.7	13.6	5.8 - 22.9	66	14.29	1.82	12.7	14.2	8.8 - 19.8
ABX Diagnostics Pentra 80 / XL 80	12	13.32	3.89	29.2	12.9	1.6 - 25.0	12	14.21	2.47	17.4	14.3	6.7 - 21.7
COULTER AcT 5diff	42	11.92	1.49	12.5	11.7	7.4 - 16.4	42	13.22	1.90	14.4	13.3	7.5 - 19.0

	Specimen BCX-10					
All Method	119	5.96	0.77	13.0	5.9	3.6 - 8.3
All ABX Instruments	77	6.22	0.84	13.4	6.2	3.7 - 8.8
All COULTER Instruments	41	5.62	0.45	8.0	5.6	4.2 - 7.0
ABX Diagnostics Pentra 60C+	65	6.30	0.81	12.9	6.3	3.8 - 8.8
ABX Diagnostics Pentra 80 / XL 80	12	5.79	0.86	14.8	5.7	3.2 - 8.4
COULTER AcT 5diff	41	5.62	0.45	8.0	5.6	4.2 - 7.0

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

	Specimen BCX-6						Specimen BCX-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	74	0.40	0.01	0.0	0.4	0.3 - 0.5	76	0.40	0.01	0.0	0.4	0.3 - 0.5
All ABX Instruments	74	0.40	0.01	0.0	0.4	0.3 - 0.5	76	0.40	0.01	0.0	0.4	0.3 - 0.5
All COULTER Instruments	42	7.72	0.42	5.5	7.7	6.4 - 9.0	42	8.00	0.55	6.8	8.1	6.3 - 9.7
ABX Diagnostics Pentra 60C+	64	0.40	0.01	0.0	0.4	0.3 - 0.5	64	0.40	0.01	0.0	0.4	0.3 - 0.5
ABX Diagnostics Pentra 80 / XL 80	12	0.38	0.04	10.2	0.4	0.2 - 0.6	12	0.40	0.01	0.0	0.4	0.3 - 0.5
COULTER AcT 5diff	42	7.72	0.42	5.5	7.7	6.4 - 9.0	42	8.00	0.55	6.8	8.1	6.3 - 9.7

	Specimen BCX-8						Specimen BCX-9					
All Method	77	0.31	0.03	9.7	0.3	0.2 - 0.4	78	0.26	0.05	19.6	0.3	0.1 - 0.5
All ABX Instruments	70	0.30	0.01	0.0	0.3	0.2 - 0.4	78	0.26	0.05	19.6	0.3	0.1 - 0.5
All COULTER Instruments	41	6.25	0.34	5.4	6.2	5.2 - 7.3	41	4.91	0.38	7.7	4.9	3.7 - 6.1
ABX Diagnostics Pentra 60C+	59	0.30	0.01	0.0	0.3	0.2 - 0.4	66	0.26	0.05	18.9	0.3	0.1 - 0.5
ABX Diagnostics Pentra 80 / XL 80	11	0.30	0.01	0.0	0.3	0.2 - 0.4	12	0.23	0.05	20.1	0.2	0.0 - 0.4
COULTER AcT 5diff	41	6.25	0.34	5.4	6.2	5.2 - 7.3	41	4.91	0.38	7.7	4.9	3.7 - 6.1

	Specimen BCX-10					
All Method	76	0.42	0.05	11.1	0.4	0.2 - 0.6
All ABX Instruments	76	0.42	0.05	11.1	0.4	0.2 - 0.6
All COULTER Instruments	42	8.27	1.16	14.0	8.6	4.8 - 11.8
ABX Diagnostics Pentra 60C+	64	0.42	0.04	10.5	0.4	0.2 - 0.6
ABX Diagnostics Pentra 80 / XL 80	12	0.39	0.05	13.1	0.4	0.2 - 0.6
COULTER AcT 5diff	42	8.27	1.16	14.0	8.6	4.8 - 11.8

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

	Specimen MX-6						Specimen MX-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	58	7.68	0.30	4.0	7.7	6.5 - 8.9	59	3.91	0.14	3.6	3.9	3.3 - 4.6
All Sysmex XE/XT Instruments	9	7.41	0.38	5.2	7.4	6.2 - 8.6	9	3.86	0.10	2.6	3.8	3.2 - 4.5
All Sysmex XN/XS Instruments	49	7.73	0.26	3.4	7.8	6.5 - 8.9	50	3.92	0.15	3.7	3.9	3.3 - 4.6
Sysmex XN-1000	11	7.39	0.13	1.8	7.4	6.2 - 8.5	11	3.75	0.09	2.5	3.7	3.1 - 4.4
Sysmex XS-1000i	37	7.84	0.20	2.5	7.8	6.6 - 9.1	37	3.98	0.11	2.7	4.0	3.3 - 4.6
	Specimen MX-8						**Specimen MX-9**					
All Method	59	7.66	0.29	3.8	7.7	6.5 - 8.9	59	3.90	0.15	3.7	3.9	3.3 - 4.5
All Sysmex XE/XT Instruments	9	7.50	0.32	4.2	7.5	6.3 - 8.7	9	3.80	0.13	3.5	3.8	3.2 - 4.4
All Sysmex XN/XS Instruments	50	7.69	0.28	3.6	7.8	6.5 - 8.9	50	3.92	0.14	3.6	3.9	3.3 - 4.6
Sysmex XN-1000	11	7.34	0.17	2.3	7.4	6.2 - 8.5	11	3.74	0.05	1.4	3.7	3.1 - 4.3
Sysmex XS-1000i	36	7.80	0.14	1.8	7.8	6.6 - 9.0	37	3.98	0.11	2.7	4.0	3.3 - 4.6
	Specimen MX-10											
All Method	59	24.03	1.12	4.7	24.3	20.4 - 27.7						
All Sysmex XE/XT Instruments	9	22.57	1.10	4.9	22.1	19.1 - 26.0						
All Sysmex XN/XS Instruments	50	24.29	0.91	3.7	24.6	20.6 - 28.0						
Sysmex XN-1000	11	23.08	0.36	1.6	23.1	19.6 - 26.6						
Sysmex XS-1000i	37	24.73	0.58	2.3	24.7	21.0 - 28.5						

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

	Specimen MX-6						Specimen MX-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	57	4.599	0.061	1.3	4.59	4.32 - 4.88	59	2.402	0.050	2.1	2.39	2.25 - 2.55
All Sysmex XE/XT Instruments	9	4.676	0.079	1.7	4.67	4.39 - 4.96	9	2.479	0.024	1.0	2.48	2.33 - 2.63
All Sysmex XN/XS Instruments	49	4.589	0.054	1.2	4.59	4.31 - 4.87	49	2.385	0.033	1.4	2.38	2.24 - 2.53
Sysmex XN-1000	11	4.605	0.063	1.4	4.61	4.32 - 4.89	11	2.382	0.044	1.8	2.39	2.23 - 2.53
Sysmex XS-1000i	37	4.585	0.052	1.1	4.58	4.31 - 4.87	37	2.386	0.030	1.3	2.38	2.24 - 2.53

	Specimen MX-8						Specimen MX-9					
All Method	59	4.600	0.061	1.3	4.58	4.32 - 4.88	59	2.396	0.051	2.1	2.39	2.25 - 2.54
All Sysmex XE/XT Instruments	9	4.684	0.067	1.4	4.69	4.40 - 4.97	9	2.482	0.037	1.5	2.49	2.33 - 2.64
All Sysmex XN/XS Instruments	50	4.584	0.046	1.0	4.58	4.30 - 4.86	50	2.380	0.034	1.4	2.38	2.23 - 2.53
Sysmex XN-1000	11	4.596	0.058	1.3	4.58	4.32 - 4.88	11	2.384	0.040	1.7	2.38	2.24 - 2.53
Sysmex XS-1000i	37	4.580	0.043	0.9	4.57	4.30 - 4.86	37	2.381	0.033	1.4	2.38	2.23 - 2.53

	Specimen MX-10					
All Method	57	6.534	0.080	1.2	6.55	6.14 - 6.93
All Sysmex XE/XT Instruments	9	6.534	0.162	2.5	6.48	6.14 - 6.93
All Sysmex XN/XS Instruments	49	6.540	0.067	1.0	6.55	6.14 - 6.94
Sysmex XN-1000	11	6.575	0.116	1.8	6.54	6.18 - 6.97
Sysmex XS-1000i	37	6.536	0.066	1.0	6.55	6.14 - 6.93

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

	Specimen MX-6						Specimen MX-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	58	13.47	0.13	1.0	13.5	12.5 - 14.5	58	6.02	0.08	1.4	6.0	5.6 - 6.5
All Sysmex XE/XT Instruments	9	13.52	0.04	0.3	13.5	12.5 - 14.5	9	6.08	0.07	1.1	6.1	5.6 - 6.6
All Sysmex XN/XS Instruments	49	13.46	0.14	1.0	13.5	12.5 - 14.4	49	6.01	0.08	1.3	6.0	5.5 - 6.5
Sysmex XN-1000	11	13.39	0.14	1.1	13.4	12.4 - 14.4	11	6.00	0.12	2.0	6.0	5.5 - 6.5
Sysmex XS-1000i	37	13.48	0.12	0.9	13.5	12.5 - 14.5	37	6.02	0.07	1.1	6.0	5.5 - 6.5
	Specimen MX-8						**Specimen MX-9**					
All Method	58	13.44	0.13	0.9	13.5	12.4 - 14.4	59	6.02	0.07	1.2	6.0	5.5 - 6.5
All Sysmex XE/XT Instruments	9	13.49	0.11	0.8	13.5	12.5 - 14.5	9	6.08	0.04	0.7	6.1	5.6 - 6.6
All Sysmex XN/XS Instruments	49	13.43	0.13	0.9	13.4	12.4 - 14.4	50	6.01	0.07	1.2	6.0	5.5 - 6.5
Sysmex XN-1000	11	13.36	0.14	1.0	13.4	12.4 - 14.3	11	6.00	0.10	1.7	6.0	5.5 - 6.5
Sysmex XS-1000i	36	13.46	0.12	0.9	13.5	12.5 - 14.4	37	6.01	0.06	1.0	6.0	5.5 - 6.5
	Specimen MX-10											
All Method	58	20.33	0.22	1.1	20.3	18.9 - 21.8						
All Sysmex XE/XT Instruments	9	20.21	0.26	1.3	20.3	18.7 - 21.7						
All Sysmex XN/XS Instruments	49	20.35	0.21	1.0	20.3	18.9 - 21.8						
Sysmex XN-1000	11	20.17	0.16	0.8	20.2	18.7 - 21.6						
Sysmex XS-1000i	37	20.41	0.19	0.9	20.4	18.9 - 21.9						

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

	Specimen MX-6						Specimen MX-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	58	40.50	0.81	2.0	40.6	38.0 - 43.0	59	19.01	0.47	2.5	19.1	17.8 - 20.2
All Sysmex XE/XT Instruments	9	40.92	0.81	2.0	41.0	38.4 - 43.4	9	19.46	0.35	1.8	19.4	18.2 - 20.7
All Sysmex XN/XS Instruments	49	40.42	0.79	2.0	40.5	37.9 - 42.9	50	18.93	0.45	2.4	19.0	17.7 - 20.1
Sysmex XN-1000	11	40.02	0.78	2.0	40.1	37.6 - 42.5	11	18.44	0.42	2.3	18.4	17.3 - 19.6
Sysmex XS-1000i	37	40.59	0.71	1.8	40.7	38.1 - 43.1	37	19.08	0.31	1.6	19.1	17.9 - 20.3
	Specimen MX-8						**Specimen MX-9**					
All Method	59	40.53	0.75	1.9	40.6	38.1 - 43.0	59	18.98	0.48	2.5	19.0	17.8 - 20.2
All Sysmex XE/XT Instruments	9	41.10	0.61	1.5	41.0	38.6 - 43.6	9	19.49	0.36	1.9	19.5	18.3 - 20.7
All Sysmex XN/XS Instruments	50	40.43	0.73	1.8	40.4	38.0 - 42.9	50	18.89	0.44	2.4	19.0	17.7 - 20.1
Sysmex XN-1000	11	40.00	0.80	2.0	40.3	37.6 - 42.4	11	18.47	0.41	2.2	18.4	17.3 - 19.6
Sysmex XS-1000i	37	40.58	0.65	1.6	40.6	38.1 - 43.1	37	19.05	0.35	1.9	19.0	17.9 - 20.2
	Specimen MX-10											
All Method	59	60.47	1.21	2.0	60.3	56.8 - 64.2						
All Sysmex XE/XT Instruments	9	60.67	1.44	2.4	60.2	57.0 - 64.4						
All Sysmex XN/XS Instruments	50	60.44	1.18	2.0	60.3	56.8 - 64.1						
Sysmex XN-1000	11	60.35	1.25	2.1	60.2	56.7 - 64.0						
Sysmex XS-1000i	37	60.48	1.20	2.0	60.3	56.8 - 64.2						

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

	Specimen MX-6						Specimen MX-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	56	210.3	7.0	3.3	209	157 - 263	58	54.1	4.4	8.1	54	40 - 68
All Sysmex XE/XT Instruments	9	209.3	13.7	6.6	217	156 - 262	9	55.9	6.9	12.4	58	41 - 70
All Sysmex XN/XS Instruments	48	209.9	6.3	3.0	209	157 - 263	49	53.8	3.8	7.0	53	40 - 68
Sysmex XN-1000	10	205.3	5.7	2.8	204	153 - 257	10	51.2	2.3	4.4	52	38 - 64
Sysmex XS-1000i	37	211.2	6.0	2.9	210	158 - 265	37	54.5	3.9	7.1	54	40 - 69
	Specimen MX-8						**Specimen MX-9**					
All Method	58	210.9	6.9	3.3	211	158 - 264	58	55.3	4.7	8.6	55	41 - 70
All Sysmex XE/XT Instruments	9	212.3	11.4	5.4	214	159 - 266	9	57.3	7.0	12.2	60	42 - 72
All Sysmex XN/XS Instruments	49	210.6	5.9	2.8	211	157 - 264	49	55.0	4.2	7.6	55	41 - 69
Sysmex XN-1000	10	205.9	5.3	2.6	206	154 - 258	10	49.9	4.0	8.0	50	37 - 63
Sysmex XS-1000i	37	211.7	5.3	2.5	212	158 - 265	37	56.1	3.2	5.6	55	42 - 71
	Specimen MX-10											
All Method	58	417.8	17.6	4.2	416	313 - 523						
All Sysmex XE/XT Instruments	9	413.6	24.7	6.0	408	310 - 517						
All Sysmex XN/XS Instruments	48	417.5	14.6	3.5	417	313 - 522						
Sysmex XN-1000	10	429.3	16.4	3.8	426	321 - 537						
Sysmex XS-1000i	37	413.5	11.5	2.8	411	310 - 517						

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

Specimen MX-6

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	58	53.30	3.24	6.1	52.3	43.5 - 63.1
All Sysmex XE/XT Instruments	9	58.20	1.33	2.3	58.6	54.2 - 62.2
All Sysmex XN/XS Instruments	48	52.22	2.30	4.4	52.0	45.3 - 59.2
Sysmex XN-1000	11	55.28	3.19	5.8	53.8	45.7 - 64.9
Sysmex XS-1000i	37	51.38	1.29	2.5	51.2	47.5 - 55.3

Specimen MX-7

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	57	61.65	5.30	8.6	60.7	45.7 - 77.6
All Sysmex XE/XT Instruments	9	67.99	1.33	2.0	68.4	64.0 - 72.0
All Sysmex XN/XS Instruments	48	60.46	4.91	8.1	59.8	45.7 - 75.2
Sysmex XN-1000	11	65.51	4.65	7.1	62.7	51.5 - 79.5
Sysmex XS-1000i	35	58.22	2.30	4.0	58.7	51.3 - 65.2

Specimen MX-8

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	59	53.34	3.50	6.6	52.2	42.8 - 63.9
All Sysmex XE/XT Instruments	9	58.07	1.88	3.2	58.6	52.4 - 63.7
All Sysmex XN/XS Instruments	46	51.76	1.72	3.3	51.6	46.6 - 57.0
Sysmex XN-1000	11	55.00	3.02	5.5	53.8	45.9 - 64.1
Sysmex XS-1000i	37	51.26	1.38	2.7	51.3	47.1 - 55.5

Specimen MX-9

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	58	61.81	5.20	8.4	60.5	46.2 - 77.5
All Sysmex XE/XT Instruments	9	68.41	1.27	1.9	68.7	64.6 - 72.3
All Sysmex XN/XS Instruments	48	60.29	4.22	7.0	60.1	47.6 - 73.0
Sysmex XN-1000	11	65.59	4.61	7.0	63.4	51.7 - 79.5
Sysmex XS-1000i	36	58.50	2.15	3.7	58.8	52.0 - 65.0

Specimen MX-10

Instrument	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	52	60.54	5.08	8.4	59.7	45.3 - 75.8
All Sysmex XE/XT Instruments	9	63.21	1.96	3.1	63.1	57.3 - 69.1
All Sysmex XN/XS Instruments	43	59.98	5.36	8.9	57.2	43.9 - 76.1
Sysmex XN-1000	11	60.98	2.87	4.7	59.8	52.3 - 69.6
Sysmex XS-1000i	30	59.00	5.56	9.4	56.2	42.3 - 75.7

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

	Specimen MX-6						Specimen MX-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	58	23.37	3.41	14.6	24.8	13.1 - 33.6	59	13.25	2.18	16.4	13.6	6.7 - 19.8
All Sysmex XE/XT Instruments	10	25.04	2.07	8.3	24.8	18.8 - 31.3	10	14.24	2.20	15.5	13.9	7.6 - 20.9
All Sysmex XN/XS Instruments	48	23.02	3.54	15.4	24.8	12.4 - 33.7	49	13.04	2.14	16.4	13.6	6.6 - 19.5
Sysmex XN-1000	10	23.88	2.46	10.3	24.8	16.4 - 31.3	10	13.69	2.42	17.7	14.6	6.4 - 21.0
Sysmex XS-1000i	37	22.88	3.79	16.6	24.8	11.5 - 34.3	37	12.94	2.02	15.6	13.5	6.8 - 19.0
	Specimen MX-8						**Specimen MX-9**					
All Method	59	23.45	3.44	14.7	24.5	13.1 - 33.8	59	13.12	2.24	17.1	13.6	6.3 - 19.9
All Sysmex XE/XT Instruments	10	25.07	2.63	10.5	23.5	17.1 - 33.0	10	13.83	2.48	17.9	13.9	6.4 - 21.3
All Sysmex XN/XS Instruments	49	23.12	3.51	15.2	24.6	12.5 - 33.7	49	12.97	2.19	16.9	13.6	6.3 - 19.6
Sysmex XN-1000	10	24.24	1.60	6.6	24.5	19.4 - 29.1	10	13.51	2.96	21.9	14.2	4.6 - 22.4
Sysmex XS-1000i	37	23.03	3.81	16.5	25.1	11.6 - 34.5	37	12.95	1.95	15.0	13.5	7.1 - 18.8
	Specimen MX-10											
All Method	55	17.65	2.71	15.3	18.5	9.5 - 25.8						
All Sysmex XE/XT Instruments	10	19.47	2.78	14.3	19.1	11.1 - 27.9						
All Sysmex XN/XS Instruments	45	17.25	2.55	14.8	18.5	9.5 - 24.9						
Sysmex XN-1000	10	17.94	2.53	14.1	18.0	10.3 - 25.6						
Sysmex XS-1000i	33	17.20	2.56	14.9	18.7	9.5 - 24.9						

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

	Specimen MX-6						Specimen MX-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	59	4.11	2.61	63.5	2.9	0.0 - 12.0	59	2.28	1.50	65.5	1.4	0.0 - 6.8
All Sysmex XE/XT Instruments	10	2.93	0.64	21.7	3.1	1.0 - 4.9	10	1.82	1.06	58.1	2.1	0.0 - 5.0
All Sysmex XN/XS Instruments	49	4.35	2.79	64.2	2.8	0.0 - 12.8	49	2.38	1.56	65.6	1.4	0.0 - 7.1
Sysmex XN-1000	10	4.36	2.33	53.4	3.2	0.0 - 11.4	10	2.31	1.69	73.1	1.4	0.0 - 7.4
Sysmex XS-1000i	37	4.23	2.93	69.2	2.1	0.0 - 13.1	37	2.36	1.57	66.2	1.3	0.0 - 7.1
	Specimen MX-8						**Specimen MX-9**					
All Method	59	4.21	2.73	64.8	3.2	0.0 - 12.4	59	2.33	1.59	68.3	1.6	0.0 - 7.2
All Sysmex XE/XT Instruments	10	3.38	0.99	29.2	3.8	0.4 - 6.4	10	1.82	1.13	62.0	1.6	0.0 - 5.3
All Sysmex XN/XS Instruments	49	4.38	2.94	67.1	2.9	0.0 - 13.2	49	2.43	1.66	68.2	1.6	0.0 - 7.5
Sysmex XN-1000	10	4.00	2.21	55.2	3.2	0.0 - 10.7	10	2.32	1.76	76.1	1.5	0.0 - 7.7
Sysmex XS-1000i	37	4.25	3.02	71.0	2.1	0.0 - 13.4	37	2.36	1.58	66.8	1.3	0.0 - 7.2
	Specimen MX-10											
All Method	54	2.49	1.92	77.3	1.7	0.0 - 8.3						
All Sysmex XE/XT Instruments	10	2.31	1.53	66.4	1.9	0.0 - 7.0						
All Sysmex XN/XS Instruments	45	2.68	2.23	83.2	1.4	0.0 - 9.4						
Sysmex XN-1000	10	3.00	2.96	98.7	1.8	0.0 - 11.9						
Sysmex XS-1000i	33	2.39	1.89	79.2	1.1	0.0 - 8.1						

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

	Specimen MX-6						Specimen MX-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	59	15.51	4.00	25.8	13.9	3.5 - 27.6	57	18.55	6.16	33.2	15.8	0.0 - 37.1
All Sysmex XE/XT Instruments	9	13.86	0.42	3.0	13.9	12.5 - 15.2	9	15.59	0.52	3.3	15.8	14.0 - 17.2
All Sysmex XN/XS Instruments	50	15.81	4.28	27.1	14.0	2.9 - 28.7	48	19.10	6.57	34.4	15.8	0.0 - 38.9
Sysmex XN-1000	11	12.95	1.93	14.9	14.0	7.1 - 18.8	11	15.02	2.19	14.6	16.0	8.4 - 21.6
Sysmex XS-1000i	37	17.02	4.16	24.4	13.9	4.5 - 29.5	35	20.75	6.90	33.3	15.7	0.0 - 41.5
	Specimen MX-8						**Specimen MX-9**					
All Method	59	15.48	4.01	25.9	13.8	3.4 - 27.5	58	18.63	6.05	32.5	15.8	0.4 - 36.8
All Sysmex XE/XT Instruments	9	13.70	0.34	2.5	13.7	12.6 - 14.8	9	15.66	0.58	3.7	15.4	13.9 - 17.5
All Sysmex XN/XS Instruments	50	15.80	4.28	27.1	13.9	2.9 - 28.7	49	19.18	6.44	33.6	15.8	0.0 - 38.6
Sysmex XN-1000	11	12.95	2.05	15.8	14.0	6.8 - 19.1	11	15.14	2.40	15.9	16.2	7.9 - 22.4
Sysmex XS-1000i	37	16.97	4.21	24.8	13.9	4.3 - 29.7	36	20.75	6.72	32.4	15.8	0.5 - 41.0
	Specimen MX-10											
All Method	48	14.46	1.60	11.1	15.0	9.6 - 19.3						
All Sysmex XE/XT Instruments	9	15.04	0.30	2.0	15.0	14.1 - 16.0						
All Sysmex XN/XS Instruments	42	13.84	2.44	17.6	14.9	6.5 - 21.2						
Sysmex XN-1000	10	13.30	3.63	27.3	15.3	2.4 - 24.2						
Sysmex XS-1000i	29	14.56	0.80	5.5	14.9	12.1 - 17.0						

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

	Specimen MX-6						Specimen MX-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	9	74.40	0.68	0.9	6.6	72.3 - 76.5	9	84.22	0.62	0.7	8.1	82.3 - 86.1
All Sysmex XE/XT Instruments	9	74.40	0.68	0.9	74.4	72.3 - 76.5	9	84.22	0.62	0.7	84.1	82.3 - 86.1
All Sysmex XN/XS Instruments	50	4.03	3.62	89.7	4.7	0.0 - 14.9	50	4.71	4.36	92.6	4.8	0.0 - 17.8
Sysmex XN-1000	11	3.19	2.18	68.3	4.6	0.0 - 9.8	11	3.12	2.36	75.6	4.7	0.0 - 10.2
Sysmex XS-1000i	37	4.49	3.91	87.2	7.1	0.0 - 16.3	37	5.44	4.67	85.8	8.4	0.0 - 19.5

	Specimen MX-8						Specimen MX-9					
All Method	9	73.98	0.66	0.9	7.0	72.0 - 76.0	9	84.44	1.15	1.4	8.0	80.9 - 87.9
All Sysmex XE/XT Instruments	9	73.98	0.66	0.9	74.1	72.0 - 76.0	9	84.44	1.15	1.4	84.5	80.9 - 87.9
All Sysmex XN/XS Instruments	49	4.21	3.74	88.8	4.7	0.0 - 15.5	49	4.70	4.25	90.5	4.9	0.0 - 17.5
Sysmex XN-1000	11	3.16	2.21	70.0	4.7	0.0 - 9.9	11	3.16	2.28	71.9	4.6	0.0 - 10.0
Sysmex XS-1000i	36	4.74	4.03	84.9	7.3	0.0 - 16.9	36	5.43	4.56	84.0	8.3	0.0 - 19.1

	Specimen MX-10					
All Method	9	83.94	1.53	1.8	8.3	79.3 - 88.6
All Sysmex XE/XT Instruments	9	83.94	1.53	1.8	84.5	79.3 - 88.6
All Sysmex XN/XS Instruments	46	5.17	4.24	82.1	5.0	0.0 - 17.9
Sysmex XN-1000	11	3.10	2.38	76.8	4.7	0.0 - 10.3
Sysmex XS-1000i	33	6.17	4.41	71.5	8.7	0.0 - 19.4

2016 M2
BLOOD CELL IDENTIFICATION
Specimens BC-7 through BC-12

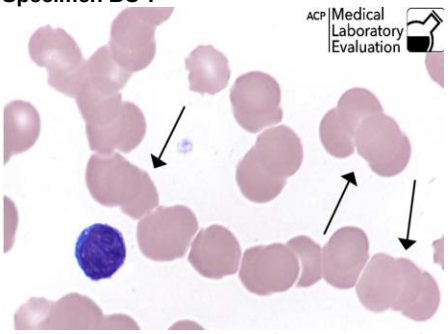
Case history:
A 65-year old male scheduled to have orthopedic surgery was referred to his primary care physician for preoperative evaluation and blood testing. The patient's history includes treatment for carpal tunnel syndrome, back pain, and urinary tract infections. A series of laboratory tests, including a CBC, were performed. Significant results appear below.

Test	Results	Reference Range
WBC	4.5 x 10^9/L	5 - 10 x 10^9/L
RBC	3.9 x 10^{12}/L	4.6 - 6.0 x 10^{12}/L
Hgb	11.7 g/dL	14.0 - 18.0 g/dL
Hct	35 %	40 - 54 %
Plt	165 x 10^9/L	150 - 400 x 10^9/L
MCV	89 fL	80 - 94 fL
MCH	30 pg	26 - 32 pg
MCHC	33 g/dL	32 - 36 g/dL
RDW	14.7 %	11.5 - 14.5 %

This patient was diagnosed with multiple myeloma. Multiple myeloma (MM) is a malignant proliferation of plasma cells in the bone marrow that occurs in some older adults. The plasma cells produce a single type of antibody, or paraprotein. This monoclonal immunoglobulin may be detected as a single band called an "M-spike" using serum protein electrophoresis. Multiple myeloma is highly treatable with chemotherapy and bone marrow transplantation, but is rarely curable. MM can affect many organs, including the bones, kidneys, nerves, heart, and liver. Symptoms result from the proliferation of malignant cells as well as the increased quantity of IgM they produce. Both processes can contribute to anemia: the abnormal proteins can cause autoimmune hemolysis, and the filling of the bone marrow with plasma cells can suppress the production of other blood cells. Platelet counts are usually normal but may be decreased, and platelet dysfuction may occur due to coating of the platelet membranes by paraprotein. IgM is a large protein molecule, also referred to as macroglobulin. High levels of macroglobulins thicken the blood, interfering with blood flow to the skin, fingers, toes, nose, and brain. This may aggravate heart conditions and cause increased pressure in the brain. Tiny blood vessels in the back of the eyes may bleed, resulting in retinal damage and impaired eyesight. Some patients develop symptoms of hyperviscosity syndrome including bleeding from the skin and mucous membranes, fatigue, weakness, headache, confusion, dizziness, and even coma. In some patients the antibodies precipitate at cold temperatures and clog the smaller vessels, causing pain and whiteness, especially in the hands. The macroglobulin is then called a cryoglobulin or cold agglutinin. MM is associated with osteolytic bone lesions or pathologic bone fractures, which occur mostly in the vertebrae, ribs, skull, pelvis, and femur. Patients may have enlarged lymph nodes, liver, and spleen due to infiltration of plasma cells. The malignant plasma cells also suppress normal immunoglobulin production, resulting in recurring bacterial infections due to inadequate production of normal antibodies, which is a major cause of death in these patients.
Technical tip: Cryoglobulinemia and marked hyperviscosity can interfere with the performance of some blood tests. For example, CBC specimens may need to be warmed in a 37˚C water bath in order to obtain accurate results, especially for the RBC count and calculated RBC indices.

BLOOD CELL IDENTIFICATION

Specimen BC-7

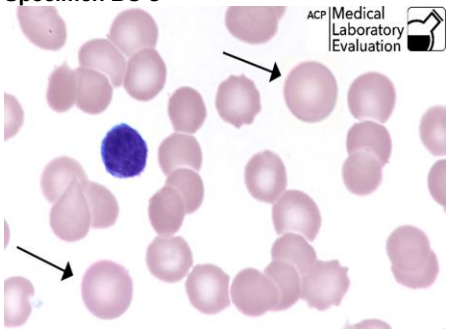


Identification	Labs	Percent	Performance
Rouleaux	202	98.06%	Acceptable

The arrow in this photograph points to **rouleaux**. Rouleaux are stacks or chains of red blood cells. In the presence of increased protein, RBCs stick together in a linear arrangement resembling a stack of coins that has been knocked over. Rouleaux formation, if seen in the thin readable area of the smear, is indicative of elevated fibrinogen and/or globulins. It is often associated with inflammatory or infectious conditions and/or malignant disorders, such as multiple myeloma and macroglobulinemia. It usually does not adversely affect CBC results.
A blue-staining background may be observed along with rouleaux due to the abnormally high amount of plasma protein. The cells settle faster than normal, causing the erythrocyte sedimentation rate (ESR) to be elevated. The presence of rouleaux on a blood smear should prompt the observer to scan the slide carefully for abnormal leukocytes such as plasma cells. To view another photo of rouleaux, see 2011 M2 Specimen BC-9.

BLOOD CELL IDENTIFICATION

Specimen BC-8



Identification	Labs	Percent	Performance
Macrocyte	136	66.02%	Acceptable
Erythrocyte, normal	66	32.04%	

The arrows in this photograph point to **macrocytes**. Macrocytes are abnormally large red blood cells, and may be round or oval. As a "rule of thumb", the nucleus of a mature resting (non-reactive) lymphocyte can be used to provide a relative measurement of the size of the surrounding red blood cells. Normal red blood cells are about the same size as the nucleus of a small normal lymphocyte. The arrowed cells above are much larger than the nucleus of the lymphocyte in the same field. To view another photo of macrocytes, see 2012 M1 BC-2. Specimen BC-8 is graded to 90% referee consensus.
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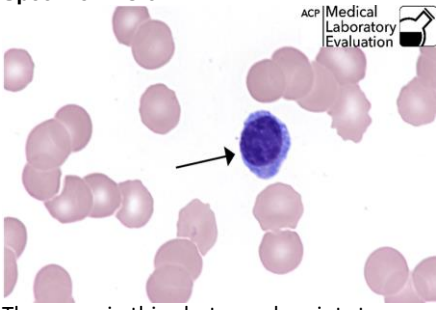
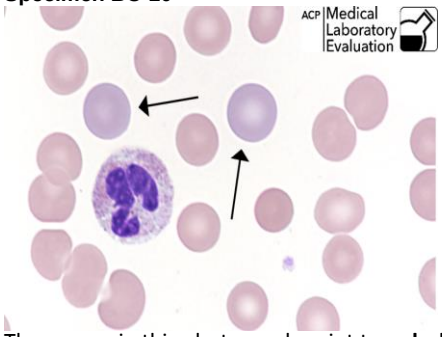
Specimen BC-9



Identification	Labs	Percent	Performance
Lymphocyte	182	88.78%	Acceptable
Lymphocyte, reactive	12	5.85%	
Nucleated red cell	8	3.90%	

The arrow in this photograph points to a **normal lymphocyte**. The nucleus is round to oval in shape. The nuclear chromatin is condensed. To view another photo of a mature, resting lymphocyte, see 2015 M1 BC-4.

Specimen BC-10

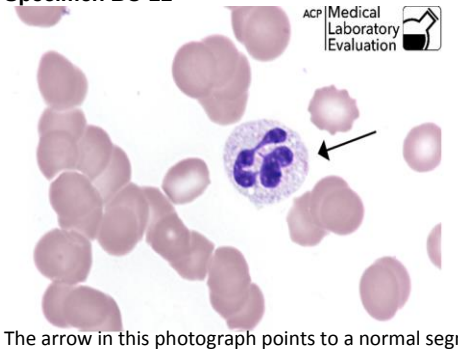


Identification	Labs	Percent	Performance
Polychromatophilic red cell	206	100%	Acceptable

The arrows in this photograph point to **polychromatophilic red blood cells**. These immature red cells have a distinctive gray-blue color due to diffused residual RNA, which will be absorbed later as they mature. These cells are larger than the mature RBCs around them. Polychromasia (presence of polychromatophilic red cells) in the peripheral blood smear is an indicator of increased bone marrow activity. When there is hemolysis or bleeding and the bone marrow cannot keep up with the need for new red cells, it compensates by releasing cells into circulation before they are fully mature. These polychromatophilic cells would be called reticulocytes only when examined with a supravital stain such as New Methylene Blue. To view another photo of polychromatophilic RBCs, see 2015 M2 BC-11.

BLOOD CELL IDENTIFICATION

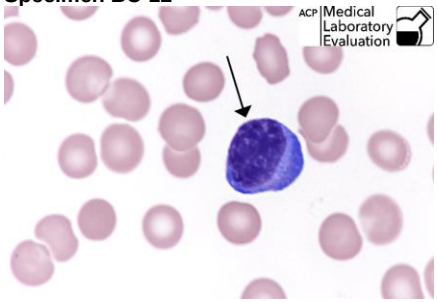
Specimen BC-11



Identification	Labs	Percent	Performance
Neutrophil-Segmented or band	173	83.98%	Acceptable
Neutrophil-seg/band w/toxic	19	9.22%	
Hypersegmented neutrophil	13	6.31%	

The arrow in this photograph points to a normal segmented neutrophil. The cytoplasm of this normal cell is pale pink and filled with fine, violet-pink granules. The nucleus of the cell is divided into two to five segments, or lobes, connected by a thin, thread-like filament. A filament connecting the segments must be visible to classify the cell as segmented. To view another photo of a normal "seg," see 2015 Specimen BC-1. To view a neutrophil with toxic granulation, see 2016 M1 BC-1.

Specimen BC-12



Identification	Labs	Percent	Performance
Plasma cell	91	44.39%	Not graded – Educational Challenge
Immature/abnormal cell-refer	48	23.41%	
Lymphocyte, reactive	48	23.41%	
Prolymphocyte	13	6.34%	
Blast cell	3	1.46%	
Myelcoyte cell	1	0.49%	
Lynphocyte	1	0.49%	

The arrow in this ungraded, educational challenge points to a **plasma cell**. A plasma cell is a specialized lymphocyte, sometimes described as resembling a fried egg. It is characterized by an eccentric nucleus with very little cytoplasm on one side and a perinuclear clear zone or pale-staining area adjacent to the nucleus on the other side. (This clear zone around the nucleus is absent in the normal lymph in BC-9 above.) The cytoplasm is moderately basophilic or purple-ish. The mature plasma cell has a perfectly round or oval shaped nucleus with blue-purple, prominently clumped, granular chromatin. Plasma cells are normally found in the bone marrow and are an important part of the immune system. The function of normal plasma cells is to produce antibodies, also known as immunoglobulins, which have an important role in fighting infection. Each type of plasma cell produces only one type of immunoglobulin. Normal immunoglobulins are composed of smaller units called heavy chains and light chains. When the light chains are not attached to the heavy chains, they are called free light chains. In individuals with myeloma and related disorders such as monoclonal gammopathy of undetermined significance (MGUS), excess light chains enter the bloodstream as free light chains. The amount of free light chain production is linked to the activity of myeloma or plasma cell growth. To view another photo of a plasma cell, see 2011 M2 Specimen BC-12.

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BLOOD BANK

ABO GROUP

Specimen	Results	Labs	Percent	Performance
BB-6	Group A	8	100%	Acceptable
BB-7	Group B	8	100%	Acceptable
BB-8	Group O	8	100%	Acceptable
BB-9	Group A	8	100%	Acceptable
BB-10	Group O	8	100%	Acceptable

RH FACTOR (D TYPE)

Specimen	Results	Labs	Percent	Performance
BB-6	Rh Positive	14	100%	Acceptable
BB-7	Rh Negative	14	100%	Acceptable
BB-8	Rh Positive	14	100%	Acceptable
BB-9	Rh Negative	14	100%	Acceptable
BB-10	Rh Negative	14	100%	Acceptable

UNEXPECTED ANTIBODY DETECTION

Specimen	Results	Labs	Percent	Performance
AB-6	Unexpected antibody detected	8	100%	Acceptable
AB-7	No unexpected antibody detected	8	100%	Acceptable
AB-8	No unexpected antibody detected	8	100%	Acceptable
AB-9	No unexpected antibody detected	7	100%	Acceptable
AB-10	Unexpected antibody detected	8	100%	Acceptable

BLOOD BANK

ANTIBODY IDENTIFICATION

Specimen	Results	Labs	Percent	Performance
AB-6	Anti-E	1	100%	Acceptable
AB-7	No antibody detected	1	100%	Acceptable
AB-8	No antibody detected	1	100%	Acceptable
AB-9	No antibody detected	1	100%	Acceptable
AB-10	Anti-D	1	100%	Acceptable

COMPATIBILITY TESTING

Specimen	Results	Labs	Percent	Performance
AB-6	Compatible	5	100%	Acceptable
AB-7	Compatible	5	100%	Acceptable
AB-8	Compatible	5	100%	Acceptable
AB-9	Compatible	5	100%	Acceptable
AB-10	Not Compatible	5	100%	Acceptable

PROTHROMBIN TIME (seconds)

Reagent/Instrument	Specimen CG-6 Labs	Mean	SD	CV	Median	Range	Specimen CG-7 Labs	Mean	SD	CV	Median	Range
All Method	40	25.09	2.71	10.8	25.3	21.3 - 28.9	40	45.10	6.65	14.8	45.6	38.3 - 51.9
Dade Innovin												
Dade Behring BFT II	5	26.40	1.59	6.0	25.9	22.4 - 30.4	5	49.84	1.61	3.2	49.3	42.3 - 57.4
Sysmex CA-500/600 series	21	25.56	1.18	4.6	25.5	21.7 - 29.4	21	45.99	2.66	5.8	45.8	39.0 - 52.9
All Coagulation Instruments	28	25.46	1.60	6.3	25.6	21.6 - 29.3	28	46.53	2.91	6.2	46.5	39.5 - 53.6
HemosIL RecombiPlasTin 2G												
IL ACL, all models	5	29.98	1.21	4.0	30.5	25.4 - 34.5	5	56.18	2.75	4.9	55.4	47.7 - 64.7
IL TEST PT Fibrinogen												
IL ACL, all models	6	21.43	0.71	3.3	21.6	18.2 - 24.7	6	35.42	1.89	5.3	35.3	30.1 - 40.8

Reagent/Instrument	Specimen CG-8 Labs	Mean	SD	CV	Median	Range	Specimen CG-9 Labs	Mean	SD	CV	Median	Range
All Method	39	10.55	0.64	6.1	10.6	8.9 - 12.2	40	10.29	0.84	8.2	10.4	8.7 - 11.9
Dade Innovin												
Dade Behring BFT II	5	9.70	0.51	5.3	9.6	8.2 - 11.2	5	8.92	0.66	7.4	8.8	7.5 - 10.3
Sysmex CA-500/600 series	22	10.56	0.27	2.5	10.6	8.9 - 12.2	21	10.23	0.23	2.2	10.3	8.6 - 11.8
All Coagulation Instruments	29	10.33	0.55	5.4	10.5	8.7 - 11.9	28	9.91	0.65	6.5	10.2	8.4 - 11.5
HemosIL RecombiPlasTin 2G												
IL ACL, all models	5	11.13	0.35	3.1	11.3	9.4 - 12.8	5	11.25	0.10	0.9	11.2	9.5 - 13.0
IL TEST PT Fibrinogen												
IL ACL, all models	6	11.78	1.08	9.1	11.4	10.0 - 13.6	6	11.13	0.65	5.8	11.0	9.4 - 12.9

Reagent/Instrument	Specimen CG-10 Labs	Mean	SD	CV	Median	Range
All Method	39	12.47	0.57	4.6	12.6	10.6 - 14.4
Dade Innovin						
Dade Behring BFT II	5	11.92	0.37	3.1	11.9	10.1 - 13.8
Sysmex CA-500/600 series	21	12.59	0.36	2.9	12.7	10.7 - 14.5
All Coagulation Instruments	28	12.36	0.57	4.6	12.6	10.5 - 14.3
HemosIL RecombiPlasTin 2G						
IL ACL, all models	5	12.78	0.19	1.5	12.9	10.8 - 14.7
IL TEST PT Fibrinogen						
IL ACL, all models	6	13.08	0.97	7.4	12.9	11.1 - 15.1

PROTHROMBIN TIME–INTERNATIONAL NORMALIZED RATIO (INR)

Reagent/Instrument	Specimen CG-6 Labs	Mean	SD	CV	Median	Range	Specimen CG-7 Labs	Mean	SD	CV	Median	Range
All Method	39	2.56	0.28	10.8	2.5	2.0 - 3.1	40	4.96	1.13	22.7	4.5	3.9 - 6.0
Dade Innovin												
Dade Behring BFT II	5	2.52	0.04	1.8	2.5	2.0 - 3.1	5	4.30	0.19	4.4	4.3	3.4 - 5.2
Sysmex CA-500/600 series	21	2.48	0.15	6.1	2.5	1.9 - 3.0	21	4.39	0.29	6.6	4.4	3.5 - 5.3
All Coagulation Instruments	28	2.46	0.15	6.3	2.5	1.9 - 3.0	28	4.36	0.26	6.1	4.4	3.4 - 5.3
HemosIL RecombiPlasTin 2G												
IL ACL, all models	5	2.75	0.13	4.7	2.8	2.2 - 3.3	5	5.23	0.45	8.6	5.2	4.1 - 6.3
IL TEST PT Fibrinogen												
IL ACL, all models	6	2.82	0.51	18.2	3.0	2.2 - 3.4	6	6.72	1.07	16.0	6.9	5.3 - 8.1

Reagent/Instrument	Specimen CG-8 Labs	Mean	SD	CV	Median	Range	Specimen CG-9 Labs	Mean	SD	CV	Median	Range
All Method	40	1.05	0.06	6.1	1.0	0.8 - 1.3	39	1.00	0.04	4.3	1.0	0.7 - 1.2
Dade Innovin												
Dade Behring BFT II	5	1.08	0.04	4.1	1.1	0.8 - 1.3	5	1.00	0.01	0.0	1.0	0.8 - 1.2
Sysmex CA-500/600 series	22	1.05	0.06	5.7	1.1	0.8 - 1.3	21	1.01	0.04	4.3	1.0	0.8 - 1.3
All Coagulation Instruments	29	1.05	0.06	5.5	1.1	0.8 - 1.3	28	1.01	0.04	3.8	1.0	0.8 - 1.3
HemosIL RecombiPlasTin 2G												
IL ACL, all models	5	0.98	0.05	5.1	1.0	0.7 - 1.2	5	1.00	0.01	0.0	1.0	0.8 - 1.2
IL TEST PT Fibrinogen												
IL ACL, all models	6	0.98	0.15	15.0	1.0	0.7 - 1.2	6	0.90	0.15	17.2	1.0	0.7 - 1.1

Reagent/Instrument	Specimen CG-10 Labs	Mean	SD	CV	Median	Range
All Method	39	1.23	0.06	5.0	1.2	0.9 - 1.5
Dade Innovin						
Dade Behring BFT II	5	1.28	0.04	3.5	1.3	1.0 - 1.6
Sysmex CA-500/600 series	21	1.23	0.06	4.7	1.2	0.9 - 1.5
All Coagulation Instruments	28	1.24	0.06	4.6	1.2	0.9 - 1.5
HemosIL RecombiPlasTin 2G						
IL ACL, all models	5	1.15	0.06	5.0	1.2	0.9 - 1.4
IL TEST PT Fibrinogen						
IL ACL, all models	6	1.18	0.19	16.4	1.3	0.9 - 1.5

ACTIVATED PARTIAL THROMBOPLASTIN (seconds)

	Specimen CG-6						Specimen CG-7					
Reagent/Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	13	52.8	7.7	14.5	50	44 - 61	13	75.0	10.1	13.5	71	63 - 87
Dade Actin FSL												
Sysmex CA-500/600 series	8	49.8	1.0	2.1	50	42 - 58	8	70.9	2.2	3.1	71	60 - 82
Hemoliance SynthASil												
IL ACL, all models	5	65.7	2.5	3.8	66	55 - 76	5	91.7	5.5	6.0	89	77 - 106
	Specimen CG-8						**Specimen CG-9**					
All Method	13	26.8	1.9	7.1	26	22 - 31	13	26.4	1.2	4.5	26	22 - 31
Dade Actin FSL												
Sysmex CA-500/600 series	8	25.6	0.7	2.9	26	21 - 30	8	25.9	0.8	3.2	26	21 - 30
Hemoliance SynthASil												
IL ACL, all models	5	29.7	1.2	3.9	29	25 - 35	5	27.7	1.5	5.5	28	23 - 32
	Specimen CG-10											
All Method	13	28.6	3.1	10.7	27	24 - 33						
Dade Actin FSL												
Sysmex CA-500/600 series	8	26.4	0.7	2.8	26	22 - 31						
Hemoliance SynthASil												
IL ACL, all models	5	32.3	1.2	3.6	33	27 - 38						

Fibrinogen (mg/dL)

One participant reported Fibrinogen. The vendor assay values for specimens CG-6 through CG-10 are: 288 mg/dL, 289 mg/dL, 322 mg/dL, 535 mg/dL and 101 mg/dL, respectively.

RH FACTOR (Slide Method)

Specimen	***Results***	***Labs***	***Percent***	***Performance***
RH-6	Rh Positive	2	100%	Acceptable
RH-7	Rh Negative	2	100%	Acceptable
RH-8	Rh Positive	2	100%	Acceptable
RH-9	Rh Negative	2	100%	Acceptable
RH-10	Rh Negative	2	100%	Acceptable

COAGUCHEK XS PLUS PROTHROMBIN TIME (seconds)

	Specimen XS-6						Specimen XS-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	26	25.40	1.06	4.2	25.4	21.5 - 29.3	26	29.14	2.32	8.0	30.1	24.7 - 33.6
All Roche CoaguChek XS Plus Instruments	26	25.40	1.06	4.2	25.4	21.5 - 29.3	26	29.14	2.32	8.0	30.1	24.7 - 33.6
Roche CoaguChek XS Plus - Waived	16	25.47	1.30	5.1	25.8	21.6 - 29.3	16	28.83	2.29	7.9	29.8	24.5 - 33.2
Roche CoaguChek XS Plus	10	25.31	0.72	2.8	25.2	21.5 - 29.2	10	29.53	2.49	8.4	30.5	25.0 - 34.0
	Specimen XS-8						**Specimen XS-9**					
All Method	15	30.21	5.20	17.2	32.1	25.6 - 34.8	15	32.69	1.43	4.4	32.7	27.7 - 37.6
All Roche CoaguChek XS Plus Instruments	15	30.21	5.20	17.2	32.1	25.6 - 34.8	15	32.69	1.43	4.4	32.7	27.7 - 37.6
Roche CoaguChek XS Plus - Waived	10	31.42	1.38	4.4	31.5	26.7 - 36.2	10	32.58	1.72	5.3	32.6	27.6 - 37.5
	Specimen XS-10											
All Method	11	45.83	7.19	15.7	48.5	38.9 - 52.8						
All Roche CoaguChek XS Plus Instruments	11	45.83	7.19	15.7	48.5	38.9 - 52.8						

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

	Specimen XS-6						Specimen XS-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	26	2.12	0.08	3.9	2.1	1.6 - 2.6	26	2.46	0.17	7.1	2.5	1.9 - 3.0
All Roche CoaguChek XS Plus Instruments	26	2.12	0.08	3.9	2.1	1.6 - 2.6	26	2.46	0.17	7.1	2.5	1.9 - 3.0
Roche CoaguChek XS Plus - Waived	16	2.14	0.09	4.3	2.2	1.7 - 2.6	16	2.46	0.16	6.5	2.5	1.9 - 3.0
Roche CoaguChek XS Plus	10	2.10	0.06	2.7	2.1	1.6 - 2.6	10	2.46	0.21	8.7	2.5	1.9 - 3.0

	Specimen XS-8						Specimen XS-9					
All Method	15	2.55	0.39	15.5	2.7	2.0 - 3.1	15	2.73	0.11	3.9	2.7	2.1 - 3.3
All Roche CoaguChek XS Plus Instruments	15	2.55	0.39	15.5	2.7	2.0 - 3.1	15	2.73	0.11	3.9	2.7	2.1 - 3.3
Roche CoaguChek XS Plus - Waived	10	2.63	0.11	4.2	2.7	2.1 - 3.2	10	2.73	0.13	4.6	2.7	2.1 - 3.3

	Specimen XS-10					
All Method	16	3.66	0.69	19.0	4.0	2.9 - 4.4
All Roche CoaguChek XS Plus Instruments	16	3.66	0.69	19.0	4.0	2.9 - 4.4
Roche CoaguChek XS Plus - Waived	11	3.48	0.77	22.0	3.9	2.7 - 4.2

COAGUCHECK XS - INTERNATIONAL NORMALIZED RATIO (INR)

	Specimen INX-3						Specimen INX-4					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	158	2.15	0.10	4.9	2.2	1.7 - 2.6	157	1.18	0.04	3.7	1.2	0.9 - 1.5
Roche CoaguChek XS	158	2.15	0.10	4.9	2.2	1.7 - 2.6	157	1.18	0.04	3.7	1.2	0.9 - 1.5

i-Stat PROTHROMBIN TIME (seconds)

	Specimen PTI-6					Specimen PTI-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
i-Stat Prothrombin Time	11	13.44	1.48	11.0	14.0	11.4 - 15.5	11	27.86	2.52	9.0	28.0	23.6 - 32.1
	Specimen PTI-8						**Specimen PTI-9**					
i-Stat Prothrombin Time	11	28.58	2.43	8.5	28.8	24.2 - 32.9	11	13.88	1.10	7.9	13.9	11.7 - 16.0
	Specimen PTI-10											
i-Stat Prothrombin Time	11	29.32	2.65	9.0	28.5	24.9 - 33.8						

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

	Specimen PTI-6					Specimen PTI-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
i-Stat Prothrombin Time	11	1.18	0.11	9.3	1.2	0.9 - 1.5	11	2.56	0.48	18.9	2.4	2.0 - 3.1
	Specimen PTI-8						**Specimen PTI-9**					
i-Stat Prothrombin Time	11	2.62	0.45	17.4	2.5	2.0 - 3.2	11	1.20	0.07	5.9	1.2	0.9 - 1.5
	Specimen PTI-10											
i-Stat Prothrombin Time	11	2.70	0.56	20.8	2.5	2.1 - 3.3						

FLUID CELL COUNT – WHITE BLOOD CELL COUNT (µL)

	Specimen BF-3						Specimen BF-4					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	5	6.7	3.5	52.7	7	0 - 14	5	330.7	15.9	4.8	323	298 - 363

FLUID CELL COUNT – RED BLOOD CELL COUNT (µL)

	Specimen BF-3						Specimen BF-4					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	5	0.0	0.1	0.0	0	0 - 1	5	1005.7	44.8	4.5	1022	916 - 1096

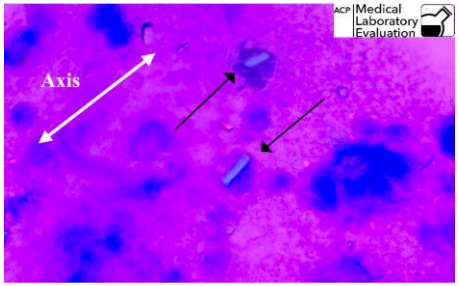
2016 M2
FLUID CRYSTAL IDENTIFICATION
Specimens FC-3 and FC-4

Crystals are classified as being either optically isotropic or anisotropic. Isotropic solids refract light rays equally in all directions throughout the crystalline structure. All isotropic crystals interact with light in a similar manner, regardless of the crystal orientation. If you look at an object through a large isotropic crystal, such as a piece of glass, you see only one image.

Anisotropic crystals have a different internal structure that will cause a single ray of light entering the crystal to split into two rays, each traveling in a different direction. This property of splitting light is called birefringence or double refraction. If you were to look at this page through a large anisotropic crystal, you would see two images. Anisotropic crystals interact with light in a manner that is dependent upon the orientation of the crystal. A light beam hitting the crystal from one direction or angle will react differently than a beam hitting the crystal at a different angle. Use of a compensator allows this optical property to be used to identify crystals.

Gout is caused by monosodium urate crystals, while pseudogout is caused by calcium pyrophosphate crystals. Synovial fluid analysis offers a valuable diagnostic tool for evaluating patients with gout or pseudogout. An accurate diagnosis can be made by a trained observer by detecting and identifying MSU crystals or CPPD crystals. Crystal analysis is done with compensated polarized light.

Specimen FC-3

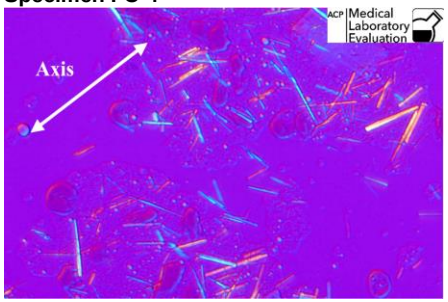


Identification	Labs	Percent	Performance
CPPD crystals	7	87.50%	Acceptable

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 intracellular crystals demonstrate **positive birefringence**, because they are blue when aligned with (parallel to) the compensator filter/axis. The large number of white blood cells in this fluid specimen indicates acute inflammation.

2016 M2
FLUID CRYSTAL IDENTIFICATION

Specimen FC-4



Identification	Labs	Percent	Performance
MSU (Monosodium Urate) crystals	7	87.50%	Acceptable

The crystals in this photograph are **monosodium urate (MSU) crystals**. Uric acid in body fluid, at pH 7.4, exists in the urate form. Thus, when referring to uric acid in physiologic fluid it is preferable to use the term *urate.* Crystal analysis of synovial fluid is commonly used to diagnose gout by the presence of MSU crystals. MSU crystals in synovial fluid are usually thin and needle-like with pointed ends, and may be intracellular or extracellular. Since CPPD and steroid crystals can also be needle-shaped, a red plate compensator can help with identification. MSU crystals polarize light and are **negatively birefringent**, meaning crystals that are lying parallel to (aligned with) the compensator filter axis are yellow, whereas crystals not in line with the filter axis are blue.

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MICROALBUMIN, DIPSTICK

Specimen UM-2

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	41	-	30	-	6	3	-	-	2	-	-
Roche Micral - 1 minute	4	-	-	-	1	3	-	-	-	-	-
Siemens Clinitek Microalbumin	37	-	30	-	5	-	-	-	2	-	-

CREATININE, DIPSTICK

Specimen UM-2

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	37	-	-	-	-	1	13	23
Siemens Clinitek Microalbumin	35	-	-	-	-	1	12	22
Siemens Multistix Pro	2	-	-	-	-	-	1	1

MICROALBUMIN, QUANTITATIVE

Specimen UM-2

Method	Labs	Mean	SD	CV	Median	Range
All Method	76	26.91	3.04	11.3	27.6	18.8 - 35.0
Beckman AU	10	26.68	2.00	7.5	26.2	18.6 - 34.7
Siemens DCA Vantage	10	28.05	2.02	7.2	28.9	19.6 - 36.5
Siemens Dimension/AR/ES/RxL/Xpand	27	27.01	2.46	9.1	27.3	18.9 - 35.2

CREATININE, URINE (mg/dL)

Specimen UM-2

Method	Labs	Mean	SD	CV	Median	Range
All Method	71	177.00	11.68	6.6	177.3	146.9 - 207.1
Beckman AU	14	178.11	5.26	3.0	179.7	147.8 - 208.4
Siemens DCA Vantage	10	195.20	7.13	3.7	196.2	162.0 - 228.4
Siemens Dimension/AR/ES/RxL/Xpand	20	172.41	9.02	5.2	174.7	143.1 - 201.8

WAIVED HEMATOLOGY–HEMOGLOBIN (g/dL)

	Specimen HD-6						Specimen HD-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	103	13.17	0.48	3.7	13.2	12.1 - 14.2	101	6.22	0.20	3.2	6.2	5.7 - 6.7
All Stanbio Methods	32	13.56	0.37	2.7	13.5	12.6 - 14.6	32	6.28	0.23	3.7	6.3	5.8 - 6.8
Alere (Stanbio) HemoPoint H2	30	13.52	0.35	2.6	13.5	12.5 - 14.5	32	6.28	0.23	3.7	6.3	5.8 - 6.8
HemoCue	69	13.00	0.40	3.1	13.0	12.0 - 14.0	68	6.20	0.18	2.8	6.2	5.7 - 6.7

WAIVED HEMATOLOGY–HEMATOCRIT (percent)

	Specimen HD-6						Specimen HD-7					
Instrument	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***	***Labs***	***Mean***	***SD***	***CV***	***Median***	***Range***
All Method	24	36.50	3.97	10.9	39.0	28.5 - 44.5	24	16.13	3.24	20.1	17.5	9.6 - 22.7
All Microhematocrit Methods	14	32.77	2.54	7.8	33.8	27.6 - 37.9	14	14.53	3.35	23.1	15.5	7.8 - 21.3
Microhematocrit	10	32.52	2.76	8.5	33.5	26.9 - 38.1	10	14.04	3.49	24.9	14.0	7.0 - 21.1

KOH SKIN PREPARATION

Specimen	***Identification***	***Labs***	***Percent***	***Performance***
K-3	Yeast/fungal elements absent	134	86.45%	Acceptable
	Yeast/fungal elements present	21	13.55%	

Organism present in specimen K-3: *Staphylococcus epidermidis.*

K-4	Yeast/fungal elements absent	124	80.00%	Acceptable
	Yeast/fungal elements present	31	20.00%	

Organism present in specimen K-4: *Streptococcus agalactiae*.

URINALYSIS DIPSTICK–SPECIFIC GRAVITY

Specimen UA-2

Method	*Labs*	*Mean*	*SD*	*CV*	*Median*	*Range*
All Method	832	1.0206	0.0058	0.6	1.025	1.010 - 1.031
All Roche Methods	41	1.0083	0.0029	0.3	1.010	0.998 - 1.019
All Siemens Methods	466	1.0245	0.0020	0.2	1.025	1.014 - 1.035
Consult Diagnostics Urine Analyzer	13	1.0162	0.0030	0.3	1.015	1.006 - 1.027
Henry Schein Urispec	12	1.0158	0.0020	0.2	1.015	1.005 - 1.026
McKesson 120 Urine Analyzer	15	1.0193	0.0041	0.4	1.020	1.009 - 1.030
Roche Chemstrips	41	1.0091	0.0025	0.2	1.010	0.999 - 1.020
Roche Urisys	31	1.0082	0.0027	0.3	1.010	0.998 - 1.019
Siemens Clinitek 10 / 100	10	1.0230	0.0048	0.5	1.025	1.013 - 1.033
Siemens Clinitek 50	26	1.0198	0.0026	0.3	1.020	1.009 - 1.030
Siemens Clinitek Advantus	22	1.0241	0.0020	0.2	1.025	1.014 - 1.035
Siemens Clinitek Status / Status+	397	1.0248	0.0018	0.2	1.025	1.014 - 1.035
Siemens Reagent Strips	152	1.0172	0.0038	0.4	1.015	1.007 - 1.028

URINALYSIS DIPSTICK–pH

Specimen UA-2

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	861	-	-	-	1	3	8	38	718	83	8	2	-
Arkray Aution Sticks	1	-	-	-	-	-	-	-	1	-	-	-	-
Beckman AU	1	-	-	-	-	-	-	1	-	-	-	-	-
Consult Diagnostics Urine Analyzer	15	-	-	-	1	-	-	11	3	-	-	-	-
CTMI CT-120 Urine Analyzer	9	-	-	-	-	-	-	3	6	-	-	-	-
Diagnostic Test Group Clarity Urocheck	5	-	-	-	-	1	-	1	3	-	-	-	-
Diagnostic Test Group Clarity Urocheck 120	7	-	-	-	-	1	1	-	5	-	-	-	-
Germaine Laboratories AimStrip	3	-	-	-	-	1	-	1	1	-	-	-	-
Germaine Labs AimStrip Urine Analyzer	4	-	-	-	-	-	-	2	2	-	-	-	-
Henry Schein One Step Plus	3	-	-	-	-	-	-	-	3	-	-	-	-
Henry Schein Urispec	12	-	-	-	-	-	-	-	12	-	-	-	-
Iris Diagnostics iChem Velocity Strips	1	-	-	-	-	-	-	-	1	-	-	-	-
McKesson 10SG Reagent Strips	6	-	-	-	-	-	-	1	4	1	-	-	-
McKesson 120 Urine Analyzer	15	-	-	-	-	-	1	4	10	-	-	-	-
NDC Pro Advantage	1	-	-	-	-	-	-	-	1	-	-	-	-
Other Analyzer Method	8	-	-	-	-	-	-	3	3	2	-	-	-
Other Dipstick Method	10	-	-	-	-	-	-	3	7	-	-	-	-
pH Paper	1	-	-	-	-	-	-	-	1	-	-	-	-
PSS Select Reagent Strips	2	-	-	-	-	-	-	1	1	-	-	-	-
PSS Select Urine Analyzer	1	-	-	-	-	-	-	-	1	-	-	-	-
Roche Chemstrip 101	2	-	-	-	-	-	-	-	2	-	-	-	-
Roche Chemstrips	50	-	-	-	-	-	-	-	44	-	6	-	-
Roche cobas u 411	2	-	-	-	-	-	-	-	2	-	-	-	-
Roche Criterion Analyzer	6	-	-	-	-	-	-	-	6	-	-	-	-
Roche Urisys	32	-	-	-	-	-	-	-	32	-	-	-	-
Siemens Clinitek 10 / 100	10	-	-	-	-	-	-	-	8	2	-	-	-
Siemens Clinitek 200/200+	1	-	-	-	-	-	-	-	-	1	-	-	-
Siemens Clinitek 2000	1	-	-	-	-	-	-	-	1	-	-	-	-
Siemens Clinitek 50	28	-	-	-	-	-	1	2	25	-	-	-	-
Siemens Clinitek 500	9	-	-	-	-	-	-	-	7	2	-	-	-
Siemens Clinitek Advantus	24	-	-	-	-	-	-	-	15	9	-	-	-
Siemens Clinitek Atlas	5	-	-	-	-	-	-	-	5	-	-	-	-
Siemens Clinitek Status / Status+	405	-	-	-	-	-	3	-	402	-	-	-	-
Siemens Clinitest, 2 drop	1	-	-	-	-	-	-	-	1	-	-	-	-
Siemens Hemacombistix	1	-	-	-	-	-	-	-	1	-	-	-	-
Siemens Multistix Pro	8	-	-	-	-	-	-	1	5	2	-	-	-
Siemens Reagent Strips	161	-	-	-	-	-	1	2	92	62	2	2	-
UriScan Reagent Strips	1	-	-	-	-	-	-	-	1	-	-	-	-

URINALYSIS DIPSTICK–PROTEIN QUALITATIVE

Specimen UA-2

		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	898	3	-	2	87	269	36	-	2	-	61	422	16
Arkray Aution Sticks	1	-	-	-	1	-	-	-	-	-	-	-	-
Consult Diagnostics Urine Analyzer	15	-	-	-	3	7	-	-	-	-	3	2	-
CTMI CT-120 Urine Analyzer	9	-	-	-	5	2	-	-	-	-	2	-	-
Diagnostic Test Group Clarity Urocheck	4	-	-	-	1	1	1	-	-	-	1	-	-
Diagnostic Test Group Clarity Urocheck 120	7	-	-	-	4	2	-	-	-	-	1	-	-
Germaine Laboratories AimStrip	4	-	-	-	-	2	-	-	-	-	1	-	1
Germaine Labs AimStrip Urine Analyzer	4	-	-	-	2	2	-	-	-	-	-	-	-
Henry Schein One Step Plus	3	-	-	-	-	-	-	-	-	-	3	-	-
Henry Schein Urispec	12	-	-	-	-	1	-	-	-	-	11	-	-
Iris Diagnostics iChem Velocity Strips	1	-	-	-	-	-	-	-	-	-	-	1	-
McKesson 10SG Reagent Strips	6	-	-	-	-	1	-	-	-	-	-	4	1
McKesson 120 Urine Analyzer	15	1	-	-	9	4	-	-	-	-	1	-	-
NDC Pro Advantage	1	-	-	-	1	-	-	-	-	-	-	-	-
Other Analyzer Method	6	-	-	-	2	1	-	-	-	-	1	2	-
Other Dipstick Method	11	-	-	-	1	6	1	-	-	-	-	-	3
PSS Select Reagent Strips	2	-	-	-	1	-	-	-	-	-	-	1	-
PSS Select Urine Analyzer	1	-	-	-	-	-	1	-	-	-	-	-	-
Roche Chemstrip 101	2	-	-	-	-	-	-	-	-	-	2	-	-
Roche Chemstrips	66	-	-	1	21	20	1	-	2	-	6	15	-
Roche cobas u 411	2	-	-	-	1	-	-	-	-	-	-	1	-
Roche Criterion Analyzer	6	-	-	-	1	1	-	-	-	-	4	-	-

URINALYSIS DIPSTICK–PROTEIN QUALITATIVE (cont'd)

Specimen UA-2

		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	32	-	-	-	8	5	-	-	-	-	9	10	-
Siemens Albustix	1	-	-	-	1	-	-	-	-	-	-	-	-
Siemens Clinitek 10 / 100	10	-	-	-	-	3	-	-	-	-	1	5	1
Siemens Clinitek 200/200+	1	-	-	-	-	-	1	-	-	-	-	-	-
Siemens Clinitek 2000	1	-	-	-	-	-	-	-	-	-	-	1	-
Siemens Clinitek 50	28	1	-	-	-	8	-	-	-	-	-	19	-
Siemens Clinitek 500	9	-	-	-	3	-	-	-	-	-	2	4	-
Siemens Clinitek Advantus	23	-	-	-	7	7	-	-	-	-	5	4	-
Siemens Clinitek Atlas	5	-	-	-	-	2	-	-	-	-	-	3	-
Siemens Clinitek Status / Status+	404	1	-	-	1	108	-	-	-	-	1	293	-
Siemens Clinitest, 2 drop	1	-	-	-	-	1	-	-	-	-	-	-	-
Siemens Hemacombistix	1	-	-	-	-	1	-	-	-	-	-	-	-
Siemens Multistix Pro	8	-	-	1	-	-	2	-	-	-	-	5	-
Siemens Reagent Strips	162	-	-	-	9	63	25	-	-	-	5	50	10
Siemens Uristix	21	-	-	-	2	18	1	-	-	-	-	-	-
Sulfosalicylic Acid	2	-	-	-	1	1	-	-	-	-	-	-	-
UriScan Reagent Strips	1	-	-	-	-	-	-	-	-	-	-	1	-

URINALYSIS DIPSTICK–GLUCOSE

Specimen UA-2

Method	Labs	Participant Results									
		Negative	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	881	3	2	24	151	56	12	5	32	427	169
Arkray Aution Sticks	1	-	-	-	-	1	-	-	-	-	-
Consult Diagnostics Urine Analyzer	15	-	-	-	2	6	1	1	-	4	1
CTMI CT-120 Urine Analyzer	9	-	-	2	2	2	-	-	1	2	-
Diagnostic Test Group Clarity Urocheck	5	-	-	1	2	1	-	-	1	-	-
Diagnostic Test Group Clarity Urocheck 120	7	-	-	1	2	2	-	-	-	2	-
Germaine Laboratories AimStrip	4	-	-	1	1	-	-	-	-	1	1
Germaine Labs AimStrip Urine Analyzer	4	-	-	1	1	2	-	-	-	-	-
Henry Schein One Step Plus	3	-	-	-	-	1	-	-	-	-	2
Henry Schein Urispec	12	-	-	-	-	1	-	-	1	2	8
Iris Diagnostics iChem Velocity Strips	1	-	-	-	-	-	-	-	-	-	1
McKesson 10SG Reagent Strips	6	-	-	-	-	1	-	-	-	4	1
McKesson 120 Urine Analyzer	15	1	-	-	5	7	-	-	-	1	1
NDC Pro Advantage	1	-	-	-	1	-	-	-	-	-	-
Other Analyzer Method	6	-	-	-	2	1	-	-	-	2	1
Other Dipstick Method	12	-	-	2	1	4	1	-	-	1	3
PSS Select Reagent Strips	2	-	-	-	1	-	-	-	-	-	1
Roche Chemstrip 101	2	-	-	-	-	-	-	-	-	-	2
Roche Chemstrips	67	-	-	-	-	2	5	1	3	2	54
Roche cobas u 411	2	-	-	-	-	-	-	-	-	-	2
Roche Criterion Analyzer	6	-	-	-	-	2	-	-	-	-	4
Roche Urisys	32	-	-	-	-	13	-	-	-	1	18
Siemens Clinitek 10 / 100	10	-	-	-	2	1	-	1	-	3	3
Siemens Clinitek 200/200+	1	-	-	-	-	-	-	-	-	1	-
Siemens Clinitek 2000	1	-	-	-	-	-	-	-	-	1	-
Siemens Clinitek 50	28	-	1	-	5	3	-	-	-	15	4
Siemens Clinitek 500	9	-	-	1	2	-	-	-	2	4	-
Siemens Clinitek Advantus	23	-	-	6	8	-	-	-	2	7	-
Siemens Clinitek Atlas	5	-	-	1	1	-	-	-	-	3	-
Siemens Clinitek Status / Status+	403	2	-	3	103	-	-	-	3	289	3
Siemens Clinitest, 2 drop	1	-	-	-	1	-	-	-	-	-	-
Siemens Clinitest, 5 drop	1	-	-	-	-	1	-	-	-	-	-
Siemens Hemacombistix	1	-	-	-	-	-	-	-	-	1	-
Siemens Multistix Pro	8	-	-	-	-	-	-	-	-	4	4
Siemens Reagent Strips	162	-	1	5	7	3	3	2	18	72	51
Siemens Uristix	5	-	-	-	1	-	1	-	1	1	1
UriScan Reagent Strips	1	-	-	-	-	-	-	-	-	-	1

URINALYSIS DIPSTICK–KETONES

Specimen UA-2

		Participant Results													
Method	***Labs***	***Negative***	***Trace***	***Small***	***Moderate***	***Large***	***(1+)***	***(2+)***	***(3+)***	***(4+)***	***5 - 10 mg/dL***	***15 - 20 mg/dL***	***40 - 60 mg/dL***	***80 - 100 mg/dL***	***≥150 mg/dL***
ALL METHODS	856	2	1	5	47	72	29	216	16	2	2	33	379	50	2
Arkray Aution Sticks	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Consult Diagnostics Urine Analyzer	15	-	-	-	-	-	2	6	1	-	2	-	4	-	-
CTMI CT-120 Urine Analyzer	9	-	-	-	-	-	3	3	1	-	-	1	1	-	-
Diagnostic Test Group Clarity Urocheck	5	-	-	-	-	-	-	4	-	-	-	1	-	-	-
Diagnostic Test Group Clarity Urocheck 120	7	-	-	-	-	-	1	3	2	-	-	1	-	-	-
Germaine Laboratories AimStrip	4	-	-	-	-	-	1	2	1	-	-	-	-	-	-
Germaine Labs AimStrip Urine Analyzer	4	-	-	-	-	-	-	3	-	-	-	-	1	-	-
Henry Schein One Step Plus	3	-	-	1	-	-	1	-	-	-	-	1	-	-	-
Henry Schein Urispec	12	-	1	-	-	-	1	2	-	-	-	8	-	-	-
Iris Diagnostics iChem Velocity Strips	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-
McKesson 10SG Reagent Strips	6	-	-	-	-	-	-	1	-	1	-	-	4	-	-
McKesson 120 Urine Analyzer	15	1	-	-	-	-	-	13	-	-	-	-	1	-	-
NDC Pro Advantage	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Other Analyzer Method	6	-	-	-	-	-	1	1	1	-	-	1	2	-	-
Other Dipstick Method	10	-	-	1	1	-	1	4	-	1	-	2	-	-	-
PSS Select Reagent Strips	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-
PSS Select Urine Analyzer	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Roche Chemstrip 101	2	-	-	-	1	-	-	-	-	-	-	-	1	-	-
Roche Chemstrips	50	-	-	1	13	4	-	28	4	-	-	-	-	-	-
Roche cobas u 411	2	-	-	-	-	-	-	1	-	-	-	-	1	-	-
Roche Criterion Analyzer	6	-	-	-	-	-	-	2	-	-	-	-	4	-	-
Roche Urisys	32	-	-	-	-	-	6	7	-	-	-	7	12	-	-
Siemens Acetest	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek 10 / 100	10	-	-	-	-	1	-	4	-	-	-	1	3	1	-
Siemens Clinitek 200/200+	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Siemens Clinitek 2000	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-
Siemens Clinitek 50	28	-	-	-	-	-	1	7	1	-	-	-	19	-	-
Siemens Clinitek 500	9	-	-	-	-	-	2	2	-	-	-	3	2	-	-
Siemens Clinitek Advantus	23	-	-	-	-	-	6	8	-	-	-	3	6	-	-
Siemens Clinitek Atlas	5	-	-	-	-	-	-	2	-	-	-	-	3	-	-
Siemens Clinitek Status / Status+	404	-	-	2	1	-	2	102	2	-	-	2	279	13	1
Siemens Clinitest, 2 drop	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Siemens Ketostix	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Siemens Multistix Pro	8	-	-	-	-	3	-	-	-	-	-	-	2	3	-
Siemens Reagent Strips	161	1	-	-	28	60	1	5	1	-	-	-	31	33	1
UriScan Reagent Strips	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-

URINALYSIS DIPSTICK–BILIRUBIN

Specimen UA-2

		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	832	9	-	29	243	198	21	140	134	9	11	24	14	-
Arkray Aution Sticks	1	-	-	-	-	-	1	-	-	-	-	-	-	-
Consult Diagnostics Urine Analyzer	15	1	-	-	-	-	3	6	-	-	5	-	-	-
CTMI CT-120 Urine Analyzer	9	-	-	-	-	-	1	6	1	-	-	1	-	-
Diagnostic Test Group Clarity Urocheck	5	-	-	-	-	-	-	-	5	-	-	-	-	-
Diagnostic Test Group Clarity Urocheck 120	7	-	-	-	-	-	-	4	3	-	-	-	-	-
Germaine Laboratories AimStrip	4	-	-	-	-	-	1	1	-	2	-	-	-	-
Germaine Labs AimStrip Urine Analyzer	4	-	-	-	-	-	-	3	1	-	-	-	-	-
Henry Schein One Step Plus	3	-	-	-	-	-	-	-	1	-	-	2	-	-
Henry Schein Urispec	12	-	-	-	-	-	-	1	-	2	-	9	-	-
McKesson 10SG Reagent Strips	6	-	-	-	-	3	-	1	1	-	1	-	-	-
McKesson 120 Urine Analyzer	15	1	-	-	-	-	-	9	4	-	-	1	-	-
NDC Pro Advantage	1	-	-	-	-	-	-	1	-	-	-	-	-	-
Other Analyzer Method	6	-	-	-	-	1	1	2	1	-	-	1	-	-
Other Dipstick Method	10	2	-	-	-	-	1	1	2	3	1	-	-	-
PSS Select Reagent Strips	1	-	-	-	-	-	-	1	-	-	-	-	-	-
PSS Select Urine Analyzer	1	-	-	-	1	-	-	-	-	-	-	-	-	-
Roche Chemstrip 101	2	-	-	-	-	-	-	-	1	-	-	1	-	-
Roche Chemstrips	48	-	-	-	-	3	-	4	41	-	-	-	-	-
Roche cobas u 411	2	-	-	-	-	-	-	-	-	-	-	-	2	-
Roche Criterion Analyzer	6	-	-	-	-	-	-	-	2	1	-	-	3	-
Roche Urisys	32	-	-	-	1	-	-	2	11	-	1	8	9	-
Siemens Clinitek 10 / 100	10	-	-	-	1	5	-	1	3	-	-	-	-	-
Siemens Clinitek 200/200+	1	-	-	-	1	-	-	-	-	-	-	-	-	-
Siemens Clinitek 2000	1	-	-	1	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek 50	28	1	-	-	4	15	-	2	6	-	-	-	-	-
Siemens Clinitek 500	9	-	-	-	5	1	-	3	-	-	-	-	-	-
Siemens Clinitek Advantus	22	-	-	-	7	1	-	14	-	-	-	-	-	-
Siemens Clinitek Atlas	5	-	-	3	-	-	2	-	-	-	-	-	-	-
Siemens Clinitek Status / Status+	394	2	-	15	193	83	8	58	35	-	-	-	-	-
Siemens Clinitest, 2 drop	1	-	-	-	-	-	1	-	-	-	-	-	-	-
Siemens Ictotest	1	-	-	-	-	-	-	1	-	-	-	-	-	-
Siemens Multistix Pro	6	-	-	-	-	6	-	-	-	-	-	-	-	-
Siemens Reagent Strips	154	2	-	10	28	78	2	17	15	1	1	-	-	-
UriScan Reagent Strips	1	-	-	-	-	-	-	-	-	-	1	-	-	-

URINALYSIS DIPSTICK–UROBILINOGEN

Specimen UA-2

Participant Results

Method	*Labs*	*Neg or 0.0 - 0.2 mg/dL*	*1.0 or <2.0 mg/dL*	*2.0/3.0 mg/dL*	*4.0 or 4.0/6.0 mg/dL*	*≥8.0 or ≥12.0 mg/dL*
ALL METHODS	817	50	63	223	420	61
Arkray Aution Sticks	1	1	-	-	-	-
Consult Diagnostics Urine Analyzer	15	1	1	-	5	8
CTMI CT-120 Urine Analyzer	8	7	-	1	-	-
Diagnostic Test Group Clarity Urocheck	5	2	3	-	-	-
Diagnostic Test Group Clarity Urocheck 120	7	5	2	-	-	-
Germaine Laboratories AimStrip	4	1	2	-	1	-
Germaine Labs AimStrip Urine Analyzer	4	4	-	-	-	-
Henry Schein One Step Plus	3	-	-	-	-	3
Henry Schein Urispec	12	-	1	-	2	9
Iris Diagnostics iChem Velocity Strips	1	-	-	-	1	-
McKesson 10SG Reagent Strips	5	1	1	2	-	1
McKesson 120 Urine Analyzer	14	13	-	-	1	-
NDC Pro Advantage	1	1	-	-	-	-
Other Analyzer Method	6	4	-	-	1	1
Other Dipstick Method	10	-	1	6	1	2
PSS Select Reagent Strips	1	-	-	-	-	1
PSS Select Urine Analyzer	1	-	-	1	-	-
Roche Chemstrip 101	2	-	-	-	1	1
Roche Chemstrips	45	1	7	2	26	9
Roche cobas u 411	2	-	-	-	2	-
Roche Criterion Analyzer	6	-	-	-	6	-
Roche Urisys	32	-	-	5	27	-
Siemens Clinitek 10 / 100	10	1	2	4	3	-
Siemens Clinitek 200/200+	1	-	-	-	1	-
Siemens Clinitek 2000	1	-	-	-	1	-
Siemens Clinitek 50	26	1	14	11	-	-
Siemens Clinitek 500	5	-	1	4	-	-
Siemens Clinitek Advantus	22	-	4	18	-	-
Siemens Clinitek Atlas	1	-	1	-	-	-
Siemens Clinitek Status / Status+	390	2	4	95	289	-
Siemens Clinitest, 2 drop	1	-	-	-	1	-
Siemens Multistix Pro	6	-	-	2	1	3
Siemens Reagent Strips	157	3	19	71	48	16
UriScan Reagent Strips	1	-	-	-	-	1

URINALYSIS DIPSTICK–BLOOD/HEMOGLOBIN

Specimen UA-2

		Participant Results																
Method	***Labs***	***Negative***	***Trace***	***Small***	***Moderate***	***Large***	***(1+)***	***(2+)***	***(3+)***	***(4+)***	***(5+)***	***5 - 25 Ery/µL***	***50 - 100 Ery/µL***	***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	865	3	4	2	16	476	-	29	236	8	2	-	2	86	-	-	-	1
Arkray Aution Sticks	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Consult Diagnostics Urine Analyzer	15	-	1	-	-	-	-	2	7	-	-	-	2	3	-	-	-	-
CTMI CT-120 Urine Analyzer	8	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-
Diagnostic Test Group Clarity Urocheck	5	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-
Diagnostic Test Group Clarity Urocheck 120	7	-	-	-	-	-	-	1	6	-	-	-	-	-	-	-	-	-
Germaine Laboratories AimStrip	4	1	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-
Germaine Labs AimStrip Urine Analyzer	4	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-
Henry Schein One Step Plus	3	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-
Henry Schein Urispec	11	-	-	-	-	-	-	-	1	-	-	-	-	10	-	-	-	-
Iris Diagnostics iChem Velocity Strips	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
McKesson 10SG Reagent Strips	5	-	-	-	-	2	-	-	2	-	-	-	-	1	-	-	-	-
McKesson 120 Urine Analyzer	15	1	-	-	-	-	-	-	13	-	-	-	-	1	-	-	-	-
NDC Pro Advantage	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Other Analyzer Method	6	-	1	-	-	-	-	1	3	-	-	-	-	1	-	-	-	-
Other Dipstick Method	10	-	-	-	-	2	-	-	8	-	-	-	-	-	-	-	-	-
PSS Select Reagent Strips	2	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-
PSS Select Urine Analyzer	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Roche Chemstrip 101	2	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-
Roche Chemstrips	59	-	-	-	-	8	-	3	4	-	2	-	-	42	-	-	-	-
Roche cobas u 411	2	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-
Roche Criterion Analyzer	6	-	-	-	-	-	-	-	-	3	-	-	-	3	-	-	-	-
Roche Urisys	31	-	-	-	-	1	-	13	-	-	-	-	-	17	-	-	-	-
Siemens Clinitek 10 / 100	10	-	-	-	-	6	-	-	4	-	-	-	-	-	-	-	-	-
Siemens Clinitek 200/200+	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek 2000	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek 50	27	-	1	-	-	18	-	-	8	-	-	-	-	-	-	-	-	-
Siemens Clinitek 500	9	-	-	-	-	6	-	-	3	-	-	-	-	-	-	-	-	-
Siemens Clinitek Advantus	24	-	-	-	-	9	-	-	15	-	-	-	-	-	-	-	-	-
Siemens Clinitek Atlas	5	-	-	-	-	3	-	-	2	-	-	-	-	-	-	-	-	-
Siemens Clinitek Status / Status+	404	1	1	-	15	282	-	7	98	-	-	-	-	-	-	-	-	-
Siemens Clinitest, 2 drop	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Siemens Hemacombistix	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Siemens Multistix Pro	8	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Siemens Reagent Strips	162	-	-	2	1	124	-	-	31	4	-	-	-	-	-	-	-	-
UriScan Reagent Strips	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-

URINALYSIS DIPSTICK–LEUKOCYTE ESTERASE

Specimen UA-2

		Participant Results											
Method	***Labs***	***Negative***	***Trace***	***Small***	***Moderate***	***Large***	***(1+)***	***(2+)***	***(3+)***	***(4+)***	***25 µL***	***75 or 100 µL***	***250 or 500 µL***
ALL METHODS	881	5	16	266	201	19	114	178	28	3	1	2	48
Arkray Aution Sticks	1	-	-	-	-	-	-	-	-	-	-	-	1
Consult Diagnostics Urine Analyzer	15	1	-	-	-	-	2	4	4	-	1	2	1
CTMI CT-120 Urine Analyzer	8	-	-	1	-	-	3	2	2	-	-	-	-
Diagnostic Test Group Clarity Urocheck	5	-	-	-	-	-	1	3	1	-	-	-	-
Diagnostic Test Group Clarity Urocheck 120	7	-	-	-	-	-	1	4	2	-	-	-	-
Germaine Laboratories AimStrip	4	-	-	-	-	-	2	-	-	2	-	-	-
Germaine Labs AimStrip Urine Analyzer	4	-	-	-	-	-	-	2	1	-	-	-	1
Henry Schein One Step Plus	3	-	-	-	-	-	-	-	-	-	-	-	3
Henry Schein Urispec	12	-	-	-	-	-	-	-	1	-	-	-	11
Iris Diagnostics iChem Velocity Strips	1	-	-	-	-	-	-	-	-	-	-	-	1
McKesson 10SG Reagent Strips	5	-	-	2	-	-	-	1	1	-	-	-	1
McKesson 120 Urine Analyzer	15	2	-	-	-	-	1	8	2	-	-	-	2
NDC Pro Advantage	1	-	-	-	-	-	-	1	-	-	-	-	-
Other Analyzer Method	5	-	-	-	-	1	-	3	1	-	-	-	-
Other Dipstick Method	10	-	1	-	1	-	1	3	2	-	-	-	2
PSS Select Reagent Strips	2	-	-	-	-	-	-	1	1	-	-	-	-
PSS Select Urine Analyzer	1	-	-	-	1	-	-	-	-	-	-	-	-
Roche Chemstrip 101	2	-	-	-	-	-	-	1	-	-	-	-	1
Roche Chemstrips	61	-	-	1	-	3	1	54	1	-	-	-	1
Roche cobas u 411	2	-	-	-	-	-	-	1	-	-	-	-	1
Roche Criterion Analyzer	6	-	-	-	-	-	-	3	-	-	-	-	3
Roche Urisys	32	-	-	1	-	-	-	13	-	-	-	-	18
Siemens Clinitek 10 / 100	10	1	-	5	-	-	4	-	-	-	-	-	-
Siemens Clinitek 200/200+	1	-	-	-	-	1	-	-	-	-	-	-	-
Siemens Clinitek 2000	2	-	-	1	1	-	-	-	-	-	-	-	-
Siemens Clinitek 50	27	-	2	15	2	-	7	1	-	-	-	-	-
Siemens Clinitek 500	9	-	-	5	1	-	3	-	-	-	-	-	-
Siemens Clinitek Advantus	24	-	-	6	3	-	9	6	-	-	-	-	-
Siemens Clinitek Atlas	5	-	-	-	2	1	-	-	2	-	-	-	-
Siemens Clinitek Status / Status+	404	1	9	198	88	5	69	29	5	-	-	-	-
Siemens Clinitest, 2 drop	1	-	1	-	-	-	-	-	-	-	-	-	-
Siemens Multistix Pro	8	-	-	4	3	-	-	-	-	1	-	-	-
Siemens Reagent Strips	159	-	3	24	82	5	8	37	-	-	-	-	-
Siemens Uristix	16	-	-	1	15	-	-	-	-	-	-	-	-
UriScan Reagent Strips	1	-	-	-	-	1	-	-	-	-	-	-	-

URINALYSIS DIPSTICK–NITRITE

Specimen UA-2

		Participant Results	
Method	***Labs***	***Positive***	***Negative***
ALL METHODS	883	881	2
Arkray Aution Sticks	1	1	-
Consult Diagnostics Urine Analyzer	15	15	-
CTMI CT-120 Urine Analyzer	8	8	-
Diagnostic Test Group Clarity Urocheck	5	5	-
Diagnostic Test Group Clarity Urocheck 120	7	7	-
Germaine Laboratories AimStrip	4	4	-
Germaine Labs AimStrip Urine Analyzer	4	4	-
Henry Schein One Step Plus	4	4	-
Henry Schein Urispec	11	10	1
Iris Diagnostics iChem Velocity Strips	1	1	-
McKesson 10SG Reagent Strips	5	5	-
McKesson 120 Urine Analyzer	15	14	1
NDC Pro Advantage	1	1	-
Other Analyzer Method	6	6	-
Other Dipstick Method	10	10	-
PSS Select Reagent Strips	2	2	-
PSS Select Urine Analyzer	1	1	-
Roche Chemstrip 101	2	2	-
Roche Chemstrips	61	61	-
Roche cobas u 411	2	2	-
Roche Criterion Analyzer	6	6	-
Roche Urisys	32	32	-
Siemens Clinitek 10 / 100	10	10	-
Siemens Clinitek 200/200+	1	1	-
Siemens Clinitek 2000	1	1	-
Siemens Clinitek 50	27	27	-
Siemens Clinitek 500	9	9	-
Siemens Clinitek Advantus	24	24	-
Siemens Clinitek Atlas	5	5	-
Siemens Clinitek Status / Status+	403	403	-
Siemens Clinitest, 2 drop	1	1	-
Siemens Ictotest	1	1	-
Siemens Multistix Pro	8	8	-
Siemens Reagent Strips	161	161	-
Siemens Uristix	16	16	-
UriScan Reagent Strips	1	1	-

URINALYSIS –MICROALBUMIN (dipstick only)

Specimen UA-2

		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	71	3	1	2	2	2	1	12	48	-	-
McKesson 10SG Reagent Strips	1	-	-	-	-	-	-	-	1	-	-
Other Dipstick Method	1	-	-	-	-	-	-	-	1	-	-
Roche Micral - 1 minute	17	1	-	2	-	2	1	11	-	-	-
Siemens Clinitek 2000	1	-	1	-	-	-	-	-	-	-	-
Siemens Clinitek Microalbumin	44	1	-	-	2	-	-	-	41	-	-
Siemens Clinitek Status / Status+	6	1	-	-	-	-	-	-	5	-	-
Siemens Reagent Strips	1	-	-	-	-	-	-	1	-	-	-

URINALYSIS –URINE hCG
Specimen UA-2

	Participant Results		
Method	***Labs***	***Positive***	***Negative***
ALL METHODS	500	498	2
AimStep Combo Pregnancy	1	1	-
Alere Acceava hCG-Urine	1	1	-
Alere Clearview 25 hCG Combo	2	2	-
Alere Clearview hCG Cassette	7	7	-
Alere Clearview hCG Combo II	3	3	-
Alfa Scientific Instant View	4	4	-
Beckman Coulter ICON 25 hCG	22	22	-
Beckman Coulter ICON II/20 HCG	9	9	-
BioSign hCG	1	1	-
Cardinal Health SP Brand combo	23	23	-
Cardinal Hlth SPBrand-cassette	1	1	-
CONSULT diagnostics hCG Cassette	61	61	-
CONSULT diagnostics hCG Combo	16	16	-
CONSULT diagnostics hCG Dipstick	29	29	-
Diagnostic Test Group Clarity hCG strip/cassette	7	7	-
Germaine Laboratories AimStrip Pregnancy	6	6	-
Henry Schein One Step	55	55	-
Henry Schein Urispec	1	1	-
Immunostics Cept-D	2	-	2
Immunostics Detector Combi	1	1	-
Immunostics hCG Detector-urine	6	6	-
Instant Tech. i Pregnancy	1	1	-
McKesson hCG Combo Cassette	5	5	-
McKesson hCG Urine Cassette	9	9	-
McKesson urine hCG-all 20 mIU kits	1	1	-
MediChoice hCG Combi Cassette	8	8	-
MediChoice hCG Urine Cassette	1	1	-
Medline hCG Combo Test Cassette	3	3	-
Medline hCG Test Cassette	7	7	-
Medline hCG Test Strip	1	1	-
NDC Pro Advantage	1	1	-
PEP (Lab Supply) HCG	3	3	-
Polymedco Poly stat hCG	6	6	-
PSS Select hCG Cassette	1	1	-
Quidel QuickVue One-Step Combo	22	22	-
Quidel QuickVue One-Step Urine	59	59	-
Quidel QuickVue+ One-Step Combo	20	20	-
Quidel RapidVue	2	2	-

URINALYSIS –URINE hCG
Specimen UA-2

	Participant Results		
Method	***Labs***	***Positive***	***Negative***
Quidel Sofia hCG	2	2	-
RefuAH hCG Dipstick	10	10	-
Sekisui OSOM - Urine Test	3	3	-
Sekisui OSOM Card Pregnancy	9	9	-
Sekisui OSOM hCG Combo Test	1	1	-
Siemens Clinitek 10 / 100	1	1	-
Siemens Clinitek Status / Status+	5	5	-
Stanbio QuPID	10	10	-
Stanbio QuPID Plus	3	3	-
Stanbio TRUE hCG	8	8	-
Sure-Vue hCG - 25mIU	3	3	-
Sure-Vue hCG-STAT	10	10	-
Quidel Sofia hCG	2	2	-

FECAL OCCULT BLOOD

	Specimen OC-3			Specimen OC-4		
Method	***Labs***	***Positive***	***Negative***	***Labs***	***Positive***	***Negative***
ALL METHODS	343	9	334	343	13	330
Alere Clearview iFOBT Complete	1	-	1	1	-	1
Alfa Scientific Instant View	1	-	1	1	-	1
Beckman Coulter Hemoccult ICT	37	-	37	37	1	36
Guaiac (slide) Test	211	9	202	211	10	201
Hemosure IFOB	36	-	36	36	-	36
Henry Schein One Step	1	-	1	1	-	1
Other Immunochemical FOB kit	21	-	21	21	1	20
Polymedco OC Auto Micro 80	6	-	6	6	-	6
Polymedco OC-Light iFOB	11	-	11	11	-	11
Quidel QuickVue iFOB	8	-	8	8	-	8

2016 M2
Urine Sediment Identification
SPECIMENS US-3 AND US-4

CASE HISTORY:

A 48 year old female presented to an urgent care center for evaluation and treatment of minor injuries resulting from a motor vehicle accident. Upon examination the patient had multiple scrapes, cuts, and bruises. She appeared alert, oriented, and generally healthy. A routine urinalysis was performed, and the results appear below.

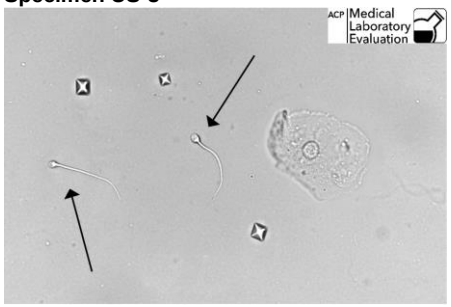
Color = Yellow
Appearance = Hazy

Dipstick results:

Specific gravity = 1.020
pH = 6.5
Protein = Negative
Glucose = Negative
Ketones = Negative
Bilirubin = Negative
Urobilinogen = Normal/0.2 mg/dL
Blood = Negative
Leukocyte Esterase = Negative
Nitrite = Negative

This patient's urinalysis results are normal.

Specimen US-3



Identification	Labs	Percent	Performance
Spermatozoa	562	99.29%	Acceptable

The arrow 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. In this case it is most likely a specimen contaminant. 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. For example, if a patient is a child or is mentally or physically incapacitated, 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 2014 M3 Specimen PPM-13.

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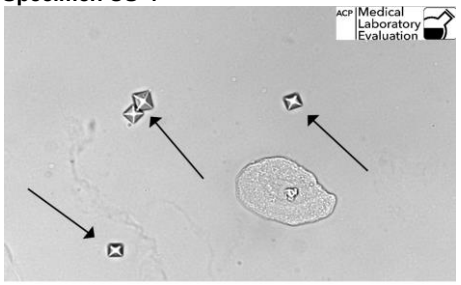
Specimen US-4



Identification	Labs	Percent	Performance
Calcium oxalate crystal	553	98.22%	Acceptable

The arrows in this photograph point to calcium oxalate crystals. Calcium oxalate crystals are octahedral in shape. The typical form resembles a square envelope with diagonal lines forming a distinctive "X". Rarely, calcium oxalate may also appear as oval spheres or biconcave disks. Calcium oxalate crystals are normally seen in the urine after ingestion of oxalate-rich foods. These include tomatoes, spinach, garlic, asparagus, and oranges. Although it is considered a normal urinary crystal, calcium oxalate may be seen in pathologic conditions such as ethylene glycol poisoning, diabetes mellitus, liver disease, and severe chronic renal disease. Calcium oxalate is the most common source of kidney stones (renal calculi.) If seen in freshly voided urine, these crystals may suggest the possibility of oxalate calculi. To view another photo of calcium oxalate crystals, see 2012 M1 Specimen US-1.

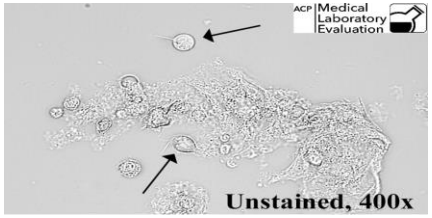
Reference:

Mundt, L.A, Shanahan, K.: *Graff's Textbook of Routine Urinalysis and Body Fluids, 2nd ed.* Philadelphia: Lippincott Williams & Wilkins, 2011.

PROVIDER-PERFORMED MICROSCOPY (PPM)

Wet Mount Preparation

Specimen PPM-7

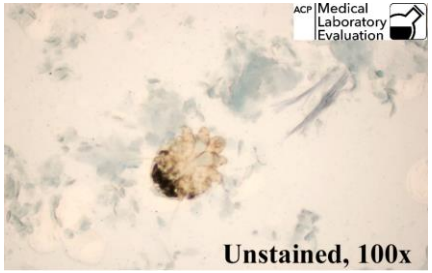


Identification	Labs	Percent	Performance
Trichomonas vaginalis	548	95.14%	Acceptable
White blood cell(WBC)	13	2.26%	
Yeast/fungi	5	0.87%	

The arrows in this photograph of a vaginal wet mount point to ***Trichomonas vaginalis*.**
T. vaginalis is a single-celled protozoan parasite that appears round, pear-shaped, or triangular. It is about the same size as a white blood cell, and is easily identified in a fresh wet prep under the microscope by its rapid movement and distinctive irregular, rotating motility. It has a single nucleus, four anterior flagella, an anterior undulating membrane, and a sharp protruding posterior axostyle. Trichomoniasis is a common sexually-transmitted infection (STI) that affects women more often than men. Symptoms include urinary frequency, burning and discharge. The genital inflammation can make it easier for the patient to contract other STIs such as HIV. Trichomoniasis is easily cured with medication. To view another photo of Trichomonas, see 2013 M3 Specimen PPM-13.

KOH Preparation

Specimen PPM-8



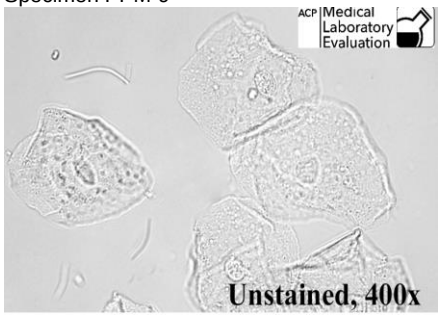
Identification	Labs	Percent	Performance
Scabies present	262	98.87%	Acceptable

Scabies is present in this photograph of a skin scrapings preparation. The scabies mite, or human itch mite (*Sarcoptes scabiei*), is spread by prolonged direct personal contact with an infested person or indirectly by prolonged contact with infested clothing or bedding. The mites burrow into the skin and produce a papular rash that itches. The diagnosis of scabies is often made only by examination of the skin and the patient history. Scabies can be difficult to find by laboratory testing, because mites are often few in number. 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 2015 M1 Specimen PPM-3.

PROVIDER-PERFORMED MICROSCOPY (PPM)

Sperm Identification

Specimen PPM-9



Identification	Labs	Percent	Performance
Sperm absent	514	99.42%	Acceptable

Spermatozoa are absent in this photograph of a vaginal wet mount preparation. The long, filamentous objects seen in this photo are Lactobacillus bacteria, part of the normal vaginal flora. To view a photo of sperm, see 2015 M2 Specimen PPM-9.

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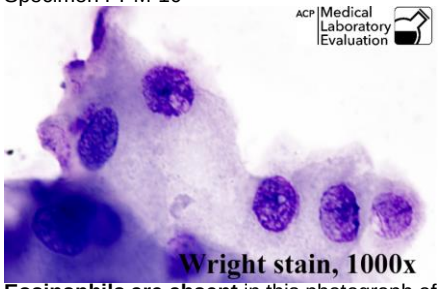
Nasal Smear

Specimen PPM-10

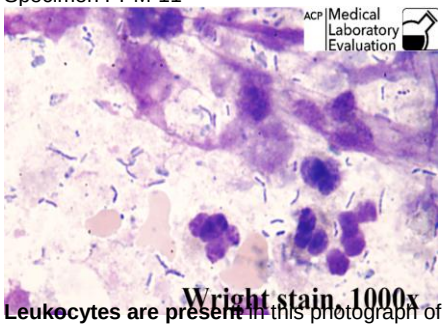


Identification	Labs	Percent	Performance
Eosinophils absent	114	69.94%	Acceptable
Eosinphlis present	49	30.06%	

Eosinophils are absent in this photograph of Wright-stained nasal mucus. The purpose of examining respiratory secretions for leukocytes (white blood cells) is to differentiate allergic conditions from infections. Eosinophils are a specific type of leukocyte associated with allergic conditions. "Eos" take on a unique red-orange color that makes them easy to spot and identify. The orange color comes from the dye eosin, which is a component of Wright stain. The cytoplasm of an eosinophil is filled with large, round, orange-staining granules that surround the purple nucleus but do not obscure it from view. The cells shown in this photo are leukocytes, but they are not eosinophils. To view a photo of eosinophils in a nasal smear, see 2015 M2 Specimen PPM-10. Specimen PMM-10 is graded to 100% referee consensus.

Stool Preparation

Specimen PPM-11



Identification	Labs	Percent	Performance
Leukocytes present	212	99.07%	Acceptable

Leukocytes are present in this photograph of a Wright stained stool preparation. to view another photo of fecal leukocytes, see 2015 M3 Specimen PPM-17.

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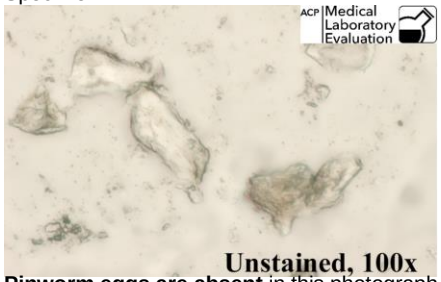
PROVIDER-PERFORMED MICROSCOPY (PPM)

Vaginal Fluid Preparation
Specimen PPM-12



Identification	Labs	Percent	Performance
Pinworms/eggs absent	230	97.46%	Acceptable
Pinworms/eggs present	6	2.54%	

Pinworm eggs are absent in this photograph of a perianal pinworm preparation. To view a positive pinworm prep, see 2015 M2 Specimen PPM-12.

References:

Fischer, P. M.: *The Office Laboratory.* Norwalk, Conn.: Appleton-Century-Crofts, 1983.

Mundt, L.A, Shanahan, K.: ***Graff's Textbook of Routine** Urinalysis and Body Fluids, 2nd ed.* Philadelphia: Lippincott Williams & Wilkins, 2011.

Reed-Guy, Lauren. "Trichomoniasis." *Healthline*. Healthline Media, 29 Jan. 2016. Web. 20 Apr. 2016. Available at: http://www.healthline.com/health/trichomonas-infection#Overview1

Ringsrud, K. M., Linné, J. J.: *Urinalysis and Body Fluids/ A ColorText and Atlas.* St. Louis: Mosby, 1995.

Scabies. In: Parasite Image Library at DPDx Laboratory Identification of Parasites of Public Health Concern. Centers for Disease Control and Prevention (CDC). Available at: http://www.cdc.gov/dpdx/scabies/index.html

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