

MEDICAL LABORATORY EVALUATION

PARTICIPANT SUMMARY

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



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

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EVALUATION CRITERIA

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

Qualitative

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

ABO Group	95% Participant or 100% Referee Consensus
Antibody Identification	95% Consensus
Blood Cell Identification	80% Consensus
Compatibility Testing	95% Participant or 100% Referee Consensus
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 $\pm$ 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	$\pm 15\%$
Automated Differential	± 3 SD
Blood Lead	$\pm 4 \mu\text{g/dL}$ or $\pm 10\%^*$
Body Fluid - Red Cell Count	± 2 SD
Body Fluid - White Cell Count	± 2 SD
Creatinine, Urine (Quantitative)	$\pm 17\%$
Fibrinogen	$\pm 20\%$
Hematocrit	$\pm 6\%$
Hematocrit, Waived	$\pm 6\%$ or ± 2 SD*
Hemoglobin	$\pm 7\%$
Hemoglobin, Waived	$\pm 7\%$
International Normalized Ratio (INR)	$\pm 20\%$
Microalbumin (Quantitative)	$\pm 30\%$
Platelet Count	$\pm 25\%$
Prothrombin Time	$\pm 15\%$
Red Blood Cell Count	$\pm 6\%$
Reticulocyte Count	$\pm 30\%$ or ± 2 SD*
Sedimentation Rate	± 2 SD
Specific Gravity	± 0.010
White Blood Cell Count	$\pm 15\%$
Whole Blood Glucose – HemoCue	$\pm 12 \text{ mg/dL}$ or $\pm 20\%^*$

*Whichever is greater

HEMOCUE HEMATOLOGY–HEMOGLOBIN (g/dL)

Specimen HQ-3							Specimen HQ-4					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
HemoCue	37	5.95	0.14	2.4	5.9	5.5 - 6.4	17.15	0.46	2.7	17.1	15.9 - 18.4	17.15

HEMOCUE HEMATOLOGY–GLUCOSE (mg/dL)

Specimen HQ-3							Specimen HQ-4					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	40	47.9	7.2	15.1	47	35 - 60	40	304.4	12.9	4.3	305	243 - 366
All HemoCue Methods	40	47.9	7.2	15.1	47	35 - 60	40	304.4	12.9	4.3	305	243 - 366
HemoCue Glucose 201/+	39	47.4	6.6	14.0	47	35 - 60	40	304.4	12.9	4.3	305	243 - 366

SEDIMENTATION RATE (MM/HR)

Specimen ES-3							Specimen ES-4					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	155	7.7	2.6	33.5	8	0 - 16	153	48.8	12.9	26.4	47	10 - 88
All HiChem Methods	10	4.7	2.5	54.1	5	0 - 10	10	80.5	13.0	16.2	82	54 - 107
All Vital Diagnostics Methods	16	7.5	2.0	27.1	7	3 - 12	16	57.3	4.6	8.1	57	47 - 67
HiChem Mini-Ves	10	4.7	2.5	54.1	5	0 - 10	10	80.5	13.0	16.2	82	54 - 107
Polymedco Sedimat	10	4.6	2.8	60.8	5	0 - 11	10	50.0	6.2	12.4	51	37 - 63
Streck ESR-Auto Plus	13	11.6	2.3	20.0	11	6 - 17	13	66.9	5.6	8.4	67	55 - 79
Vital Diagnostics Excyte M/10	15	7.5	2.1	28.1	7	3 - 12	15	57.3	4.8	8.4	57	47 - 67
Westergren - diluted	88	7.8	2.1	27.1	8	3 - 12	88	43.5	7.7	17.8	42	27 - 59

SEDIMAT SEDIMENTATION RATE (MM/HR)

Specimen MAT-3							Specimen MAT-4					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
Polymedco Sedimat 15	10	2.2	1.2	55.9	2	0 - 5	10	67.0	12.7	18.9	63	41 - 93

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

Specimen CL-6							Specimen CL-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	26	8.03	0.24	3.0	8.1	6.8 - 9.3	26	3.09	0.12	4.0	3.1	2.6 - 3.6
All Abbott Cell-Dyn Instruments	25	8.04	0.24	3.0	8.1	6.8 - 9.3	25	3.10	0.12	4.0	3.1	2.6 - 3.6
Abbott Cell-Dyn Ruby	13	8.13	0.23	2.8	8.2	6.9 - 9.4	13	3.14	0.12	3.8	3.1	2.6 - 3.7
Specimen CL-8							Specimen CL-9					
All Method	26	20.70	0.68	3.3	20.6	17.5 - 23.9	25	20.76	0.64	3.1	20.6	17.6 - 23.9
All Abbott Cell-Dyn Instruments	25	20.64	0.60	2.9	20.6	17.5 - 23.8	24	20.72	0.61	2.9	20.6	17.6 - 23.9
Abbott Cell-Dyn Ruby	13	20.88	0.55	2.6	20.7	17.7 - 24.1	13	21.06	0.56	2.7	21.3	17.9 - 24.3
Specimen CL-10												
All Method	26	3.15	0.19	6.2	3.1	2.6 - 3.7						
All Abbott Cell-Dyn Instruments	25	3.16	0.19	6.1	3.1	2.6 - 3.7						
Abbott Cell-Dyn Ruby	13	3.25	0.19	5.7	3.2	2.7 - 3.8						

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

Specimen CL-6							Specimen CL-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	26	4.618	0.116	2.5	4.63	4.34 - 4.90	26	2.137	0.055	2.6	2.13	2.00 - 2.27
All Abbott Cell-Dyn Instruments	25	4.627	0.110	2.4	4.63	4.34 - 4.91	25	2.140	0.052	2.4	2.13	2.01 - 2.27
Abbott Cell-Dyn Ruby	13	4.684	0.074	1.6	4.69	4.40 - 4.97	13	2.165	0.046	2.1	2.16	2.03 - 2.30
Specimen CL-8							Specimen CL-9					
All Method	26	5.172	0.144	2.8	5.19	4.86 - 5.49	26	5.173	0.121	2.3	5.20	4.86 - 5.49
All Abbott Cell-Dyn Instruments	25	5.175	0.147	2.8	5.20	4.86 - 5.49	25	5.178	0.121	2.3	5.22	4.86 - 5.49
Abbott Cell-Dyn Ruby	13	5.267	0.098	1.9	5.30	4.95 - 5.59	13	5.246	0.060	1.1	5.25	4.93 - 5.57
Specimen CL-10												
All Method	26	2.132	0.045	2.1	2.13	2.00 - 2.26						
All Abbott Cell-Dyn Instruments	25	2.136	0.041	1.9	2.13	2.00 - 2.27						
Abbott Cell-Dyn Ruby	13	2.136	0.044	2.1	2.13	2.00 - 2.27						

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

Specimen CL-6							Specimen CL-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	26	13.68	0.30	2.2	13.7	12.7 - 14.7	26	5.48	0.10	1.8	5.5	5.0 - 5.9
All Abbott Cell-Dyn Instruments	25	13.70	0.29	2.1	13.7	12.7 - 14.7	25	5.48	0.10	1.8	5.5	5.0 - 5.9
Abbott Cell-Dyn Ruby	13	13.75	0.23	1.7	13.7	12.7 - 14.8	13	5.45	0.08	1.4	5.5	5.0 - 5.9
Specimen CL-8							Specimen CL-9					
All Method	25	16.34	0.27	1.7	16.4	15.1 - 17.5	26	16.42	0.33	2.0	16.4	15.2 - 17.6
All Abbott Cell-Dyn Instruments	24	16.33	0.28	1.7	16.4	15.1 - 17.5	25	16.42	0.34	2.0	16.4	15.2 - 17.6
Abbott Cell-Dyn Ruby	13	16.53	0.33	2.0	16.5	15.3 - 17.7	13	16.54	0.24	1.5	16.5	15.3 - 17.7
Specimen CL-10												
All Method	26	5.47	0.12	2.1	5.4	5.0 - 5.9						
All Abbott Cell-Dyn Instruments	25	5.47	0.12	2.2	5.4	5.0 - 5.9						
Abbott Cell-Dyn Ruby	13	5.42	0.08	1.5	5.4	5.0 - 5.9						

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

Specimen CL-6							Specimen CL-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	26	38.43	2.06	5.3	37.9	36.1 - 40.8	26	15.38	0.80	5.2	15.3	14.4 - 16.4
All Abbott Cell-Dyn Instruments	21	37.59	0.98	2.6	37.3	35.3 - 39.9	21	15.05	0.42	2.8	15.1	14.1 - 16.0
Abbott Cell-Dyn Ruby	13	37.81	0.99	2.6	37.7	35.5 - 40.1	13	15.08	0.47	3.1	15.2	14.1 - 16.0
Specimen CL-8							Specimen CL-9					
All Method	26	43.97	2.39	5.4	43.3	41.3 - 46.7	26	43.96	2.45	5.6	43.5	41.3 - 46.6
All Abbott Cell-Dyn Instruments	21	42.96	1.15	2.7	42.9	40.3 - 45.6	21	42.91	1.14	2.7	43.0	40.3 - 45.5
Abbott Cell-Dyn Ruby	13	43.38	1.07	2.5	43.4	40.7 - 46.0	13	43.15	0.98	2.3	43.4	40.5 - 45.8
Specimen CL-10												
All Method	26	15.37	0.85	5.5	15.3	14.4 - 16.3						
All Abbott Cell-Dyn Instruments	21	15.02	0.46	3.1	15.0	14.1 - 16.0						
Abbott Cell-Dyn Ruby	13	14.92	0.46	3.1	14.9	14.0 - 15.9						

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

Specimen CL-6							Specimen CL-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	24	265.6	10.7	4.0	270	199 - 332	26	73.0	4.9	6.7	74	54 - 92
All Abbott Cell-Dyn Instruments	23	266.7	9.3	3.5	270	200 - 334	25	72.8	4.9	6.7	74	54 - 92
Abbott Cell-Dyn Ruby	13	266.7	8.6	3.2	270	200 - 334	13	71.1	4.4	6.3	71	53 - 89
Specimen CL-8							Specimen CL-9					
All Method	23	491.9	18.2	3.7	494	368 - 615	26	488.3	20.1	4.1	490	366 - 611
All Abbott Cell-Dyn Instruments	22	493.0	17.7	3.6	495	369 - 617	25	489.7	19.1	3.9	490	367 - 613
Abbott Cell-Dyn Ruby	11	490.6	15.1	3.1	493	367 - 614	13	489.2	13.0	2.7	490	366 - 612
Specimen CL-10												
All Method	26	71.6	3.1	4.4	71	53 - 90						
All Abbott Cell-Dyn Instruments	25	71.6	3.2	4.5	71	53 - 90						
Abbott Cell-Dyn Ruby	13	71.2	2.9	4.1	71	53 - 90						

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

Specimen CL-6							Specimen CL-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	26	63.25	0.87	1.4	63.3	60.6 - 65.9	26	51.06	1.19	2.3	50.9	47.4 - 54.7
All Abbott Cell-Dyn Instruments	25	63.24	0.89	1.4	63.3	60.5 - 66.0	25	51.01	1.18	2.3	50.8	47.4 - 54.6
Abbott Cell-Dyn Ruby	13	63.28	0.71	1.1	63.5	61.1 - 65.5	13	51.22	1.07	2.1	50.8	48.0 - 54.5
Specimen CL-8							Specimen CL-9					
All Method	25	72.24	0.63	0.9	72.3	70.3 - 74.2	25	72.25	0.68	0.9	72.4	70.2 - 74.3
All Abbott Cell-Dyn Instruments	24	72.23	0.64	0.9	72.3	70.3 - 74.2	24	72.25	0.69	1.0	72.4	70.1 - 74.4
Abbott Cell-Dyn Ruby	13	72.46	0.50	0.7	72.6	70.9 - 74.0	13	72.38	0.70	1.0	72.4	70.2 - 74.5
Specimen CL-10												
All Method	26	51.65	1.33	2.6	51.5	47.6 - 55.7						
All Abbott Cell-Dyn Instruments	25	51.70	1.34	2.6	51.5	47.6 - 55.8						
Abbott Cell-Dyn Ruby	13	52.27	1.19	2.3	51.9	48.6 - 55.9						

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

Specimen CL-6							Specimen CL-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	25	26.48	1.15	4.3	26.4	23.0 - 30.0	25	38.84	1.10	2.8	38.9	35.5 - 42.2
All Abbott Cell-Dyn Instruments	24	26.49	1.17	4.4	26.5	22.9 - 30.1	24	38.91	1.07	2.7	39.0	35.6 - 42.2
Abbott Cell-Dyn Ruby	13	26.30	1.15	4.4	26.4	22.8 - 29.8	13	38.79	1.19	3.1	38.7	35.2 - 42.4
Specimen CL-8							Specimen CL-9					
All Method	24	17.27	0.78	4.5	17.5	14.9 - 19.7	25	17.08	0.70	4.1	17.1	14.9 - 19.2
All Abbott Cell-Dyn Instruments	23	17.28	0.80	4.6	17.5	14.8 - 19.7	24	17.11	0.71	4.1	17.2	14.9 - 19.3
Abbott Cell-Dyn Ruby	12	16.89	0.68	4.0	16.8	14.8 - 19.0	13	16.92	0.77	4.6	17.0	14.5 - 19.3
Specimen CL-10												
All Method	25	38.66	1.67	4.3	38.6	33.6 - 43.7						
All Abbott Cell-Dyn Instruments	25	38.40	2.11	5.5	38.5	32.0 - 44.8						
Abbott Cell-Dyn Ruby	13	37.65	1.89	5.0	38.1	31.9 - 43.4						

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

Specimen CL-6							Specimen CL-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	24	6.21	0.41	6.6	6.2	4.9 - 7.5	25	6.51	0.65	10.0	6.3	4.5 - 8.5
All Abbott Cell-Dyn Instruments	23	6.21	0.42	6.7	6.2	4.9 - 7.5	24	6.52	0.66	10.2	6.4	4.5 - 8.6
Abbott Cell-Dyn Ruby	13	6.46	0.63	9.8	6.2	4.5 - 8.4	13	6.51	0.64	9.9	6.3	4.5 - 8.5
Specimen CL-8							Specimen CL-9					
All Method	25	4.54	0.40	8.8	4.6	3.3 - 5.8	25	4.68	0.38	8.2	4.6	3.5 - 5.9
All Abbott Cell-Dyn Instruments	24	4.56	0.40	8.8	4.6	3.3 - 5.8	24	4.65	0.35	7.6	4.6	3.5 - 5.7
Abbott Cell-Dyn Ruby	13	4.58	0.33	7.2	4.6	3.5 - 5.6	13	4.73	0.36	7.6	4.7	3.6 - 5.9
Specimen CL-10												
All Method	25	6.44	1.10	17.0	6.4	3.1 - 9.8						
All Abbott Cell-Dyn Instruments	24	6.44	1.12	17.4	6.3	3.0 - 9.9						
Abbott Cell-Dyn Ruby	13	6.31	0.76	12.0	6.2	4.0 - 8.6						

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

Specimen CL-6							Specimen CL-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	26	3.59	0.25	7.0	3.6	2.8 - 4.4	26	3.07	0.23	7.4	3.1	2.3 - 3.8
All Abbott Cell-Dyn Instruments	25	3.60	0.25	7.1	3.6	2.8 - 4.4	25	3.07	0.23	7.6	3.1	2.3 - 3.8
Abbott Cell-Dyn Ruby	13	3.56	0.25	6.9	3.6	2.8 - 4.4	13	2.99	0.27	8.9	3.0	2.1 - 3.8
Specimen CL-8							Specimen CL-9					
All Method	25	5.27	0.25	4.8	5.3	4.5 - 6.1	26	5.26	0.33	6.2	5.4	4.2 - 6.3
All Abbott Cell-Dyn Instruments	24	5.28	0.26	4.8	5.3	4.5 - 6.1	25	5.27	0.33	6.2	5.4	4.2 - 6.3
Abbott Cell-Dyn Ruby	13	5.38	0.25	4.6	5.4	4.6 - 6.2	13	5.34	0.32	6.0	5.4	4.3 - 6.3
Specimen CL-10												
All Method	26	3.13	0.43	13.9	3.2	1.8 - 4.5						
All Abbott Cell-Dyn Instruments	25	3.14	0.44	14.1	3.2	1.8 - 4.5						
Abbott Cell-Dyn Ruby	13	3.25	0.49	15.1	3.3	1.7 - 4.8						

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

Specimen CL-6							Specimen CL-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	26	0.36	0.22	62.1	0.4	0.0 - 1.1	26	0.56	0.30	53.8	0.5	0.0 - 1.5
All Abbott Cell-Dyn Instruments	25	0.35	0.22	63.6	0.3	0.0 - 1.1	23	0.47	0.16	33.6	0.4	0.0 - 1.0
Abbott Cell-Dyn Ruby	13	0.33	0.26	78.4	0.3	0.0 - 1.2	13	0.45	0.23	51.5	0.4	0.0 - 1.2
Specimen CL-8							Specimen CL-9					
All Method	26	0.58	0.25	42.6	0.5	0.0 - 1.4	24	0.60	0.14	24.1	0.6	0.1 - 1.1
All Abbott Cell-Dyn Instruments	25	0.56	0.23	40.9	0.5	0.0 - 1.3	25	0.66	0.25	38.1	0.6	0.0 - 1.5
Abbott Cell-Dyn Ruby	13	0.55	0.18	32.3	0.5	0.0 - 1.1	13	0.59	0.13	21.2	0.6	0.2 - 1.0
Specimen CL-10												
All Method	26	0.51	0.32	63.1	0.4	0.0 - 1.5						
All Abbott Cell-Dyn Instruments	25	0.48	0.27	57.3	0.4	0.0 - 1.3						
Abbott Cell-Dyn Ruby	13	0.42	0.19	44.9	0.4	0.0 - 1.0						

SYSMEX HEMATOLOGY W/ AUTOMATED DIFFERENTIAL–WHITE BLOOD CELL COUNT (x 10⁹/L)

<u>Instrument</u>	Specimen SYX-6						Specimen SYX-7					
	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	55	8.37	0.27	3.2	8.4	7.1 - 9.7	56	3.01	0.10	3.3	3.0	2.5 - 3.5
All Sysmex Instruments	53	8.38	0.27	3.2	8.4	7.1 - 9.7	54	3.02	0.10	3.3	3.0	2.5 - 3.5
Sysmex KX-21N & K-800, 1000, 4500	23	8.30	0.21	2.5	8.3	7.0 - 9.6	23	3.00	0.09	2.9	3.0	2.5 - 3.5
Sysmex pocH-100i	19	8.38	0.29	3.4	8.4	7.1 - 9.7	19	2.99	0.10	3.2	3.0	2.5 - 3.5
Sysmex XP-300	11	8.56	0.28	3.3	8.6	7.2 - 9.9	12	3.09	0.09	2.9	3.1	2.6 - 3.6
	Specimen SYX-8						Specimen SYX-9					
	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	55	20.69	0.52	2.5	20.7	17.5 - 23.8	54	20.80	0.50	2.4	20.7	17.6 - 24.0
All Sysmex Instruments	53	20.69	0.53	2.5	20.7	17.5 - 23.8	52	20.81	0.51	2.4	20.7	17.6 - 24.0
Sysmex KX-21N & K-800, 1000, 4500	23	20.67	0.35	1.7	20.7	17.5 - 23.8	23	20.62	0.33	1.6	20.6	17.5 - 23.8
Sysmex pocH-100i	19	20.43	0.58	2.8	20.4	17.3 - 23.5	18	20.84	0.61	2.9	20.7	17.7 - 24.0
Sysmex XP-300	11	21.18	0.41	1.9	21.2	18.0 - 24.4	11	21.15	0.49	2.3	21.0	17.9 - 24.4
	Specimen SYX-10											
	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>						
All Method	56	3.00	0.11	3.8	3.0	2.5 - 3.5						
All Sysmex Instruments	54	3.01	0.11	3.6	3.0	2.5 - 3.5						
Sysmex KX-21N & K-800, 1000, 4500	23	3.00	0.13	4.2	3.0	2.5 - 3.5						
Sysmex pocH-100i	19	3.00	0.09	3.1	3.0	2.5 - 3.5						
Sysmex XP-300	12	3.05	0.09	3.0	3.0	2.5 - 3.6						

SYSMEX HEMATOLOGY W/ AUTOMATED DIFFERENTIAL–RED BLOOD CELL COUNT (x 10¹²/L)

Specimen SYX-6							Specimen SYX-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	56	4.257	0.082	1.9	4.24	4.00 - 4.52	56	2.461	0.037	1.5	2.46	2.31 - 2.61
All Sysmex Instruments	54	4.259	0.083	1.9	4.24	4.00 - 4.52	54	2.462	0.038	1.5	2.46	2.31 - 2.61
Sysmex KX-21N & K-800, 1000, 4500	23	4.234	0.042	1.0	4.23	3.97 - 4.49	23	2.457	0.030	1.2	2.45	2.30 - 2.61
Sysmex pocH-100i	19	4.308	0.104	2.4	4.33	4.04 - 4.57	19	2.478	0.047	1.9	2.49	2.32 - 2.63
Sysmex XP-300	12	4.229	0.073	1.7	4.23	3.97 - 4.49	12	2.446	0.025	1.0	2.45	2.29 - 2.60
Specimen SYX-8							Specimen SYX-9					
All Method	55	5.844	0.098	1.7	5.83	5.49 - 6.20	55	5.852	0.087	1.5	5.84	5.50 - 6.21
All Sysmex Instruments	53	5.843	0.099	1.7	5.82	5.49 - 6.20	53	5.853	0.088	1.5	5.84	5.50 - 6.21
Sysmex KX-21N & K-800, 1000, 4500	23	5.827	0.066	1.1	5.82	5.47 - 6.18	23	5.821	0.049	0.8	5.80	5.47 - 6.18
Sysmex pocH-100i	18	5.883	0.138	2.3	5.90	5.53 - 6.24	18	5.920	0.106	1.8	5.92	5.56 - 6.28
Sysmex XP-300	12	5.811	0.065	1.1	5.83	5.46 - 6.16	12	5.812	0.058	1.0	5.81	5.46 - 6.17
Specimen SYX-10												
All Method	55	2.463	0.036	1.5	2.45	2.31 - 2.62						
All Sysmex Instruments	53	2.463	0.036	1.5	2.45	2.31 - 2.62						
Sysmex KX-21N & K-800, 1000, 4500	23	2.455	0.029	1.2	2.45	2.30 - 2.61						
Sysmex pocH-100i	18	2.477	0.046	1.9	2.48	2.32 - 2.63						
Sysmex XP-300	12	2.458	0.026	1.0	2.45	2.31 - 2.61						

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

<u>Instrument</u>	Specimen SYX-6						Specimen SYX-7					
	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	54	12.19	0.19	1.6	12.2	11.3 - 13.1	56	6.13	0.11	1.8	6.1	5.6 - 6.6
All Sysmex Instruments	52	12.19	0.20	1.6	12.2	11.3 - 13.1	54	6.13	0.11	1.8	6.1	5.6 - 6.6
Sysmex KX-21N & K-800, 1000, 4500	23	12.19	0.13	1.1	12.2	11.3 - 13.1	23	6.17	0.11	1.8	6.2	5.7 - 6.7
Sysmex pocH-100i	17	12.20	0.26	2.1	12.3	11.3 - 13.1	19	6.11	0.11	1.8	6.1	5.6 - 6.6
Sysmex XP-300	12	12.17	0.21	1.7	12.2	11.3 - 13.1	12	6.08	0.10	1.6	6.1	5.6 - 6.6
	Specimen SYX-8						Specimen SYX-9					
	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	56	18.33	0.30	1.6	18.4	17.0 - 19.7	55	18.36	0.23	1.3	18.3	17.0 - 19.7
All Sysmex Instruments	54	18.33	0.30	1.6	18.3	17.0 - 19.7	53	18.35	0.23	1.3	18.3	17.0 - 19.7
Sysmex KX-21N & K-800, 1000, 4500	23	18.43	0.17	0.9	18.4	17.1 - 19.8	23	18.40	0.17	0.9	18.4	17.1 - 19.7
Sysmex pocH-100i	19	18.19	0.40	2.2	18.2	16.9 - 19.5	18	18.33	0.32	1.7	18.3	17.0 - 19.7
Sysmex XP-300	12	18.34	0.27	1.5	18.3	17.0 - 19.7	12	18.31	0.18	1.0	18.3	17.0 - 19.6
	Specimen SYX-10											
	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>						
All Method	56	6.14	0.12	1.9	6.1	5.7 - 6.6						
All Sysmex Instruments	54	6.14	0.12	1.9	6.1	5.7 - 6.6						
Sysmex KX-21N & K-800, 1000, 4500	23	6.19	0.10	1.6	6.2	5.7 - 6.7						
Sysmex pocH-100i	19	6.12	0.12	1.9	6.1	5.6 - 6.6						
Sysmex XP-300	12	6.07	0.10	1.6	6.1	5.6 - 6.5						

SYSMEX HEMATOLOGY W/ AUTOMATED DIFFERENTIAL–HEMATOCRIT (percent)

Specimen SYX-6							Specimen SYX-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	56	32.43	1.35	4.2	31.9	30.4 - 34.4	56	16.71	0.65	3.9	16.5	15.7 - 17.8
All Sysmex Instruments	54	32.48	1.35	4.1	32.0	30.5 - 34.5	54	16.73	0.65	3.9	16.6	15.7 - 17.8
Sysmex KX-21N & K-800, 1000, 4500	23	31.63	0.44	1.4	31.6	29.7 - 33.6	23	16.32	0.26	1.6	16.3	15.3 - 17.4
Sysmex pocH-100i	19	33.97	1.17	3.4	33.9	31.9 - 36.1	19	17.45	0.54	3.1	17.5	16.4 - 18.5
Sysmex XP-300	12	31.78	0.49	1.6	31.8	29.8 - 33.7	12	16.38	0.24	1.4	16.4	15.4 - 17.4
Specimen SYX-8							Specimen SYX-9					
All Method	56	48.77	1.62	3.3	48.2	45.8 - 51.7	56	48.86	1.67	3.4	48.3	45.9 - 51.8
All Sysmex Instruments	54	48.81	1.63	3.3	48.3	45.8 - 51.8	54	48.91	1.67	3.4	48.3	45.9 - 51.9
Sysmex KX-21N & K-800, 1000, 4500	23	47.95	0.63	1.3	48.0	45.0 - 50.9	23	47.95	0.57	1.2	48.0	45.0 - 50.9
Sysmex pocH-100i	19	50.43	1.74	3.4	49.8	47.4 - 53.5	19	50.70	1.57	3.1	50.8	47.6 - 53.8
Sysmex XP-300	12	47.88	0.38	0.8	47.9	45.0 - 50.8	12	47.90	0.48	1.0	47.9	45.0 - 50.8
Specimen SYX-10												
All Method	56	16.73	0.63	3.8	16.5	15.7 - 17.8						
All Sysmex Instruments	54	16.75	0.64	3.8	16.5	15.7 - 17.8						
Sysmex KX-21N & K-800, 1000, 4500	23	16.32	0.21	1.3	16.3	15.3 - 17.3						
Sysmex pocH-100i	19	17.46	0.55	3.1	17.4	16.4 - 18.6						
Sysmex XP-300	12	16.44	0.17	1.0	16.4	15.4 - 17.5						

SYSMEX HEMATOLOGY W/ AUTOMATED DIFFERENTIAL–PLATELET COUNT (x10⁹/L)

Specimen SYX-6							Specimen SYX-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	54	192.4	7.4	3.8	192	144 - 241	55	67.0	4.7	7.0	67	50 - 84
All Sysmex Instruments	52	192.5	7.5	3.9	192	144 - 241	53	67.0	4.8	7.1	67	50 - 84
Sysmex KX-21N & K-800, 1000, 4500	23	195.1	7.3	3.8	195	146 - 244	23	66.6	5.4	8.1	67	49 - 84
Sysmex pocH-100i	18	188.2	7.6	4.0	189	141 - 236	18	66.9	4.3	6.4	66	50 - 84
Sysmex XP-300	11	194.2	4.2	2.1	195	145 - 243	12	67.9	4.4	6.5	69	50 - 85
Specimen SYX-8							Specimen SYX-9					
All Method	54	381.1	16.6	4.4	382	285 - 477	55	381.2	18.8	4.9	381	285 - 477
All Sysmex Instruments	52	380.8	16.8	4.4	382	285 - 476	53	380.8	18.9	5.0	381	285 - 477
Sysmex KX-21N & K-800, 1000, 4500	23	384.6	15.5	4.0	384	288 - 481	23	384.6	17.4	4.5	385	288 - 481
Sysmex pocH-100i	18	368.4	13.5	3.7	368	276 - 461	19	367.9	15.9	4.3	368	275 - 460
Sysmex XP-300	11	392.9	11.3	2.9	393	294 - 492	11	395.3	12.5	3.2	394	296 - 495
Specimen SYX-10												
All Method	55	67.5	4.6	6.8	67	50 - 85						
All Sysmex Instruments	53	67.6	4.6	6.9	68	50 - 85						
Sysmex KX-21N & K-800, 1000, 4500	23	68.8	4.5	6.5	69	51 - 87						
Sysmex pocH-100i	18	67.4	3.8	5.6	67	50 - 85						
Sysmex XP-300	12	65.5	5.6	8.6	65	49 - 82						

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

<u>Instrument</u>	Specimen SYX-6						Specimen SYX-7					
	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	49	32.45	0.91	2.8	32.4	29.7 - 35.2	50	10.55	1.04	9.9	10.6	7.4 - 13.7
All Sysmex Instruments	47	32.42	0.91	2.8	32.4	29.6 - 35.2	48	10.52	1.05	10.0	10.6	7.3 - 13.7
Sysmex KX-21N & K-800, 1000, 4500	21	32.95	0.62	1.9	33.0	31.0 - 34.8	21	10.90	0.68	6.2	10.8	8.8 - 13.0
Sysmex pocH-100i	16	31.71	0.72	2.3	31.7	29.5 - 33.9	17	9.84	1.06	10.8	9.8	6.6 - 13.1
Sysmex XP-300	10	32.46	0.99	3.0	32.4	29.4 - 35.5	10	10.91	1.18	10.8	11.2	7.3 - 14.5
	Specimen SYX-8						Specimen SYX-9					
	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	50	62.81	0.62	1.0	62.9	60.9 - 64.7	51	62.81	0.57	0.9	62.8	61.0 - 64.6
All Sysmex Instruments	48	62.79	0.62	1.0	62.9	60.9 - 64.7	49	62.79	0.57	0.9	62.8	61.0 - 64.5
Sysmex KX-21N & K-800, 1000, 4500	20	62.88	0.52	0.8	63.0	61.3 - 64.5	21	62.81	0.51	0.8	62.8	61.2 - 64.4
Sysmex pocH-100i	18	62.91	0.48	0.8	63.0	61.4 - 64.4	18	62.75	0.53	0.8	62.7	61.1 - 64.4
Sysmex XP-300	10	62.41	0.89	1.4	62.1	59.7 - 65.1	10	62.83	0.78	1.2	63.0	60.4 - 65.2
	Specimen SYX-10											
	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>						
All Method	50	10.80	1.17	10.8	10.8	7.2 - 14.4						
All Sysmex Instruments	48	10.79	1.19	11.0	10.7	7.2 - 14.4						
Sysmex KX-21N & K-800, 1000, 4500	21	11.09	0.97	8.7	11.0	8.1 - 14.0						
Sysmex pocH-100i	17	10.18	1.02	10.0	9.9	7.1 - 13.3						
Sysmex XP-300	10	11.20	1.54	13.8	11.2	6.5 - 15.9						

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

Specimen SYX-6							Specimen SYX-7					
<i><u>Instrument</u></i>	<i><u>Labs</u></i>	<i><u>Mean</u></i>	<i><u>SD</u></i>	<i><u>CV</u></i>	<i><u>Median</u></i>	<i><u>Range</u></i>	<i><u>Labs</u></i>	<i><u>Mean</u></i>	<i><u>SD</u></i>	<i><u>CV</u></i>	<i><u>Median</u></i>	<i><u>Range</u></i>
All Method	50	14.87	0.90	6.1	15.0	12.1 - 17.6	48	18.58	1.08	5.8	18.8	15.3 - 21.9
All Sysmex Instruments	48	14.85	0.87	5.9	15.0	12.2 - 17.5	46	18.61	1.09	5.9	19.0	15.3 - 21.9
Sysmex KX-21N & K-800, 1000, 4500	21	15.06	0.68	4.5	15.1	13.0 - 17.2	21	18.68	1.20	6.4	18.9	15.0 - 22.3
Sysmex pocH-100i	18	14.64	1.16	7.9	14.7	11.1 - 18.2	16	18.68	0.88	4.7	19.1	16.0 - 21.4
Specimen SYX-8							Specimen SYX-9					
All Method	50	12.73	0.88	6.9	12.8	10.0 - 15.4	50	12.75	0.88	6.9	12.8	10.1 - 15.4
All Sysmex Instruments	48	12.72	0.89	7.0	12.8	10.0 - 15.4	48	12.74	0.88	6.9	12.8	10.0 - 15.4
Sysmex KX-21N & K-800, 1000, 4500	21	13.14	0.71	5.4	13.1	11.0 - 15.3	21	13.09	0.73	5.6	13.2	10.8 - 15.3
Sysmex pocH-100i	18	12.00	0.68	5.6	11.9	9.9 - 14.1	18	12.09	0.70	5.8	12.1	9.9 - 14.2
Specimen SYX-10												
All Method	49	18.05	1.49	8.3	18.4	13.5 - 22.6						
All Sysmex Instruments	47	17.96	1.46	8.1	18.3	13.5 - 22.4						
Sysmex KX-21N & K-800, 1000, 4500	21	18.50	1.04	5.6	18.8	15.3 - 21.7						
Sysmex pocH-100i	17	16.96	1.39	8.2	16.7	12.7 - 21.2						

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

<u>Instrument</u>	Specimen SYX-6						Specimen SYX-7					
	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	48	52.56	1.47	2.8	52.3	48.1 - 57.0	45	71.04	1.54	2.2	71.0	66.4 - 75.7
All Sysmex Instruments	46	52.60	1.48	2.8	52.4	48.1 - 57.1	43	71.04	1.56	2.2	71.0	66.3 - 75.8
Sysmex KX-21N & K-800, 1000, 4500	21	52.00	0.84	1.6	51.8	49.4 - 54.6	21	70.43	1.36	1.9	70.3	66.3 - 74.6
Sysmex pocH-100i	16	53.61	1.48	2.8	53.2	49.1 - 58.1	13	72.17	1.40	1.9	71.7	67.9 - 76.4
	Specimen SYX-8						Specimen SYX-9					
	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	47	24.31	0.71	2.9	24.2	22.1 - 26.5	45	24.33	0.68	2.8	24.4	22.2 - 26.4
All Sysmex Instruments	45	24.33	0.70	2.9	24.2	22.2 - 26.5	43	24.36	0.68	2.8	24.4	22.3 - 26.5
Sysmex KX-21N & K-800, 1000, 4500	20	23.91	0.45	1.9	23.9	22.5 - 25.3	20	24.19	0.50	2.0	24.3	22.7 - 25.7
Sysmex pocH-100i	16	24.87	0.54	2.2	24.7	23.2 - 26.5	14	24.96	0.60	2.4	24.8	23.1 - 26.8
	Specimen SYX-10											
	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>						
All Method	45	71.10	2.00	2.8	70.9	65.1 - 77.1						
All Sysmex Instruments	43	71.20	1.98	2.8	71.0	65.2 - 77.2						
Sysmex KX-21N & K-800, 1000, 4500	21	70.40	1.45	2.1	70.4	66.0 - 74.8						
Sysmex pocH-100i	13	73.16	1.52	2.1	73.6	68.5 - 77.8						

BASIC HEMATOLOGY W/ 3-PART DIFFERENTIAL–WHITE BLOOD CELL COUNT (x 10⁹/L)

<u>Instrument</u>	Specimen HD-6						Specimen HD-7					
	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	674	7.99	0.30	3.7	8.0	6.7 - 9.2	676	2.15	0.14	6.3	2.1	1.8 - 2.5
All Abbott Cell-Dyn Instruments	223	7.87	0.31	4.0	7.8	6.6 - 9.1	223	2.14	0.11	5.2	2.1	1.8 - 2.5
All ABX Instruments	122	7.83	0.21	2.7	7.8	6.6 - 9.1	122	2.09	0.08	3.8	2.1	1.7 - 2.5
All Boule (CDS) Instruments	101	8.00	0.23	2.9	8.0	6.7 - 9.2	99	2.01	0.09	4.3	2.0	1.7 - 2.4
All COULTER Instruments	220	8.19	0.24	2.9	8.2	6.9 - 9.5	217	2.27	0.11	4.9	2.3	1.9 - 2.7
All Danam/Drew Scientific Instruments	11	7.80	0.41	5.3	7.8	6.6 - 9.0	11	2.13	0.12	5.6	2.1	1.8 - 2.5
Abbott Cell-Dyn 1700	20	8.16	0.42	5.1	8.2	6.9 - 9.4	20	2.24	0.13	5.9	2.2	1.8 - 2.6
Abbott Cell-Dyn 1800	96	7.89	0.30	3.8	7.9	6.7 - 9.1	98	2.10	0.11	5.1	2.1	1.7 - 2.5
Abbott Cell-Dyn Emerald	106	7.78	0.26	3.3	7.8	6.6 - 9.0	105	2.16	0.09	4.4	2.2	1.8 - 2.5
ABX Diagnostics Micros/45/60	122	7.83	0.21	2.7	7.8	6.6 - 9.1	122	2.09	0.08	3.8	2.1	1.7 - 2.5
Boule (CDS) Medonic M series	91	7.99	0.20	2.5	8.0	6.7 - 9.2	92	2.00	0.08	4.2	2.0	1.7 - 2.4
COULTER AcT diff/diff 2	213	8.19	0.24	2.9	8.2	6.9 - 9.5	210	2.27	0.11	4.9	2.3	1.9 - 2.7
Drew Scientific D3	11	7.80	0.41	5.3	7.8	6.6 - 9.0	11	2.13	0.12	5.6	2.1	1.8 - 2.5

<u>Instrument</u>	Specimen HD-8						Specimen HD-9					
	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	683	20.89	0.90	4.3	21.0	17.7 - 24.1	685	20.93	0.95	4.5	21.0	17.7 - 24.1
All Abbott Cell-Dyn Instruments	227	20.25	0.94	4.6	20.2	17.2 - 23.3	227	20.26	0.91	4.5	20.2	17.2 - 23.4
All ABX Instruments	122	20.42	0.48	2.4	20.4	17.3 - 23.5	119	20.41	0.46	2.3	20.4	17.3 - 23.5
All Boule (CDS) Instruments	102	21.47	0.55	2.6	21.5	18.2 - 24.7	100	21.46	0.52	2.4	21.4	18.2 - 24.7
All COULTER Instruments	218	21.53	0.51	2.3	21.5	18.3 - 24.8	220	21.70	0.51	2.3	21.7	18.4 - 25.0
All Danam/Drew Scientific Instruments	11	19.75	0.84	4.2	19.8	16.7 - 22.8	11	19.79	0.76	3.9	19.7	16.8 - 22.8
Abbott Cell-Dyn 1700	20	20.74	1.17	5.6	21.3	17.6 - 23.9	20	20.70	1.19	5.8	21.1	17.5 - 23.9
Abbott Cell-Dyn 1800	97	20.80	0.63	3.0	20.8	17.6 - 24.0	98	20.80	0.72	3.5	20.8	17.6 - 24.0
Abbott Cell-Dyn Emerald	107	19.63	0.66	3.4	19.6	16.6 - 22.6	108	19.68	0.60	3.0	19.7	16.7 - 22.7
ABX Diagnostics Micros/45/60	122	20.42	0.48	2.4	20.4	17.3 - 23.5	119	20.41	0.46	2.3	20.4	17.3 - 23.5
Boule (CDS) Medonic M series	93	21.44	0.52	2.4	21.5	18.2 - 24.7	92	21.45	0.50	2.3	21.4	18.2 - 24.7
COULTER AcT diff/diff 2	211	21.53	0.51	2.4	21.5	18.2 - 24.8	213	21.69	0.51	2.3	21.7	18.4 - 25.0
Drew Scientific D3	11	19.75	0.84	4.2	19.8	16.7 - 22.8	11	19.79	0.76	3.9	19.7	16.8 - 22.8

BASIC HEMATOLOGY W/ 3-PART DIFFERENTIAL–WHITE BLOOD CELL COUNT (x 10⁹/L) cont'd

Specimen HD-10						
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	681	2.20	0.17	7.9	2.2	1.8 - 2.6
All Abbott Cell-Dyn Instruments	223	2.18	0.11	5.2	2.2	1.8 - 2.6
All ABX Instruments	122	2.09	0.07	3.4	2.1	1.7 - 2.4
All Boule (CDS) Instruments	101	2.02	0.11	5.2	2.0	1.7 - 2.4
All COULTER Instruments	218	2.37	0.14	5.8	2.4	2.0 - 2.8
All Danam/Drew Scientific Instruments	11	2.17	0.11	5.1	2.2	1.8 - 2.5
Abbott Cell-Dyn 1700	20	2.30	0.14	5.9	2.3	1.9 - 2.7
Abbott Cell-Dyn 1800	95	2.14	0.09	4.4	2.1	1.8 - 2.5
Abbott Cell-Dyn Emerald	108	2.20	0.11	4.9	2.2	1.8 - 2.6
ABX Diagnostics Micros/45/60	122	2.09	0.07	3.4	2.1	1.7 - 2.4
Boule (CDS) Medonic M series	93	2.01	0.10	4.8	2.0	1.7 - 2.4
COULTER AcT diff/diff 2	211	2.38	0.13	5.6	2.4	2.0 - 2.8
Drew Scientific D3	11	2.17	0.11	5.1	2.2	1.8 - 2.5

BASIC HEMATOLOGY W/ 3-PART DIFFERENTIAL–RED BLOOD CELL COUNT (x 10¹²/L)

Specimen HD-6							Specimen HD-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	675	4.586	0.129	2.8	4.59	4.31 - 4.87	679	2.409	0.080	3.3	2.41	2.26 - 2.56
All Abbott Cell-Dyn Instruments	224	4.523	0.157	3.5	4.55	4.25 - 4.80	227	2.417	0.113	4.7	2.43	2.27 - 2.57
All ABX Instruments	120	4.581	0.101	2.2	4.59	4.30 - 4.86	121	2.381	0.051	2.1	2.38	2.23 - 2.53
All Boule (CDS) Instruments	99	4.589	0.077	1.7	4.59	4.31 - 4.87	102	2.367	0.042	1.8	2.36	2.22 - 2.51
All COULTER Instruments	221	4.642	0.106	2.3	4.65	4.36 - 4.93	219	2.437	0.056	2.3	2.44	2.29 - 2.59
All Danam/Drew Scientific Instruments	11	4.606	0.125	2.7	4.57	4.32 - 4.89	11	2.428	0.053	2.2	2.43	2.28 - 2.58
Abbott Cell-Dyn 1700	19	4.628	0.109	2.3	4.62	4.35 - 4.91	20	2.456	0.071	2.9	2.47	2.30 - 2.61
Abbott Cell-Dyn 1800	95	4.611	0.106	2.3	4.60	4.33 - 4.89	98	2.499	0.067	2.7	2.50	2.34 - 2.65
Abbott Cell-Dyn Emerald	109	4.431	0.147	3.3	4.44	4.16 - 4.70	108	2.332	0.086	3.7	2.33	2.19 - 2.48
ABX Diagnostics Micros/45/60	120	4.581	0.101	2.2	4.59	4.30 - 4.86	121	2.381	0.051	2.1	2.38	2.23 - 2.53
Boule (CDS) Medonic M series	90	4.589	0.072	1.6	4.59	4.31 - 4.87	93	2.366	0.042	1.8	2.36	2.22 - 2.51
COULTER AcT diff/diff 2	214	4.641	0.106	2.3	4.64	4.36 - 4.92	212	2.437	0.055	2.3	2.44	2.29 - 2.59
Drew Scientific D3	11	4.606	0.125	2.7	4.57	4.32 - 4.89	11	2.428	0.053	2.2	2.43	2.28 - 2.58

BASIC HEMATOLOGY W/ 3-PART DIFFERENTIAL-RED BLOOD CELL COUNT (x 10¹²/L) cont'd

Specimen HD-8							Specimen HD-9					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	678	5.666	0.174	3.1	5.69	5.32 - 6.01	678	5.677	0.171	3.0	5.69	5.33 - 6.02
All Abbott Cell-Dyn Instruments	223	5.512	0.174	3.2	5.53	5.18 - 5.85	225	5.522	0.156	2.8	5.54	5.19 - 5.86
All ABX Instruments	122	5.715	0.120	2.1	5.71	5.37 - 6.06	121	5.714	0.119	2.1	5.70	5.37 - 6.06
All Boule (CDS) Instruments	102	5.752	0.100	1.7	5.75	5.40 - 6.10	100	5.770	0.086	1.5	5.78	5.42 - 6.12
All COULTER Instruments	218	5.749	0.117	2.0	5.75	5.40 - 6.10	216	5.774	0.119	2.1	5.77	5.42 - 6.13
All Danam/Drew Scientific Instruments	11	5.661	0.135	2.4	5.63	5.32 - 6.01	11	5.687	0.128	2.2	5.66	5.34 - 6.03
Abbott Cell-Dyn 1700	20	5.696	0.221	3.9	5.72	5.35 - 6.04	20	5.695	0.097	1.7	5.71	5.35 - 6.04
Abbott Cell-Dyn 1800	95	5.587	0.108	1.9	5.57	5.25 - 5.93	95	5.564	0.108	1.9	5.56	5.23 - 5.90
Abbott Cell-Dyn Emerald	107	5.423	0.160	3.0	5.42	5.09 - 5.75	110	5.445	0.162	3.0	5.47	5.11 - 5.78
ABX Diagnostics Micros/45/60	122	5.715	0.120	2.1	5.71	5.37 - 6.06	121	5.714	0.119	2.1	5.70	5.37 - 6.06
Boule (CDS) Medonic M series	91	5.755	0.085	1.5	5.75	5.40 - 6.11	92	5.774	0.087	1.5	5.78	5.42 - 6.13
COULTER AcT diff/diff 2	211	5.749	0.118	2.1	5.75	5.40 - 6.10	210	5.772	0.123	2.1	5.77	5.42 - 6.12
Drew Scientific D3	11	5.661	0.135	2.4	5.63	5.32 - 6.01	11	5.687	0.128	2.2	5.66	5.34 - 6.03
Specimen HD-10												
All Method	675	2.411	0.078	3.2	2.41	2.26 - 2.56						
All Abbott Cell-Dyn Instruments	225	2.416	0.105	4.4	2.42	2.27 - 2.57						
All ABX Instruments	122	2.379	0.051	2.1	2.38	2.23 - 2.53						
All Boule (CDS) Instruments	102	2.363	0.037	1.6	2.36	2.22 - 2.51						
All COULTER Instruments	218	2.444	0.058	2.4	2.45	2.29 - 2.60						
All Danam/Drew Scientific Instruments	11	2.415	0.063	2.6	2.41	2.26 - 2.56						
Abbott Cell-Dyn 1700	20	2.452	0.079	3.2	2.48	2.30 - 2.60						
Abbott Cell-Dyn 1800	94	2.498	0.070	2.8	2.50	2.34 - 2.65						
Abbott Cell-Dyn Emerald	109	2.342	0.070	3.0	2.34	2.20 - 2.49						
ABX Diagnostics Micros/45/60	122	2.379	0.051	2.1	2.38	2.23 - 2.53						
Boule (CDS) Medonic M series	93	2.363	0.039	1.6	2.36	2.22 - 2.51						
COULTER AcT diff/diff 2	211	2.445	0.058	2.4	2.45	2.29 - 2.60						
Drew Scientific D3	11	2.415	0.063	2.6	2.41	2.26 - 2.56						

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

Specimen HD-6							Specimen HD-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	685	13.53	0.30	2.2	13.5	12.5 - 14.5	682	6.03	0.16	2.7	6.0	5.6 - 6.5
All Abbott Cell-Dyn Instruments	225	13.69	0.31	2.3	13.7	12.7 - 14.7	224	6.12	0.19	3.1	6.1	5.6 - 6.6
All ABX Instruments	121	13.57	0.23	1.7	13.6	12.6 - 14.6	122	6.05	0.12	2.0	6.1	5.6 - 6.5
All Boule (CDS) Instruments	102	13.40	0.21	1.6	13.4	12.4 - 14.4	100	6.00	0.09	1.5	6.0	5.5 - 6.5
All COULTER Instruments	221	13.39	0.28	2.1	13.4	12.4 - 14.4	219	5.95	0.13	2.2	6.0	5.5 - 6.4
All Danam/Drew Scientific Instruments	11	13.75	0.26	1.9	13.7	12.7 - 14.8	11	6.17	0.23	3.7	6.1	5.7 - 6.7
Abbott Cell-Dyn 1700	19	13.76	0.35	2.5	13.9	12.7 - 14.8	20	6.29	0.16	2.5	6.3	5.8 - 6.8
Abbott Cell-Dyn 1800	98	13.76	0.32	2.3	13.8	12.7 - 14.8	98	6.20	0.17	2.7	6.2	5.7 - 6.7
Abbott Cell-Dyn Emerald	108	13.63	0.29	2.1	13.7	12.6 - 14.6	105	6.00	0.14	2.3	6.0	5.5 - 6.5
ABX Diagnostics Micros/45/60	121	13.57	0.23	1.7	13.6	12.6 - 14.6	122	6.05	0.12	2.0	6.1	5.6 - 6.5
Boule (CDS) Medonic M series	93	13.40	0.21	1.5	13.4	12.4 - 14.4	91	6.00	0.09	1.5	6.0	5.5 - 6.5
COULTER AcT diff/diff 2	213	13.38	0.27	2.0	13.4	12.4 - 14.4	212	5.95	0.13	2.2	6.0	5.5 - 6.4
Drew Scientific D3	11	13.75	0.26	1.9	13.7	12.7 - 14.8	11	6.17	0.23	3.7	6.1	5.7 - 6.7

Specimen HD-8							Specimen HD-9					
All Method	680	18.47	0.39	2.1	18.5	17.1 - 19.8	679	18.50	0.37	2.0	18.5	17.2 - 19.8
All Abbott Cell-Dyn Instruments	223	18.72	0.39	2.1	18.8	17.4 - 20.1	224	18.75	0.35	1.9	18.8	17.4 - 20.1
All ABX Instruments	120	18.43	0.30	1.6	18.4	17.1 - 19.8	122	18.40	0.31	1.7	18.4	17.1 - 19.7
All Boule (CDS) Instruments	98	18.38	0.29	1.6	18.4	17.0 - 19.7	101	18.40	0.32	1.7	18.4	17.1 - 19.7
All COULTER Instruments	216	18.30	0.31	1.7	18.3	17.0 - 19.6	218	18.35	0.31	1.7	18.4	17.0 - 19.7
All Danam/Drew Scientific Instruments	11	18.59	0.23	1.2	18.6	17.2 - 19.9	11	18.58	0.32	1.7	18.7	17.2 - 19.9
Abbott Cell-Dyn 1700	20	18.56	0.46	2.5	18.7	17.2 - 19.9	20	18.64	0.41	2.2	18.7	17.3 - 20.0
Abbott Cell-Dyn 1800	97	18.86	0.38	2.0	18.9	17.5 - 20.2	96	18.87	0.38	2.0	18.9	17.5 - 20.2
Abbott Cell-Dyn Emerald	105	18.62	0.32	1.7	18.6	17.3 - 20.0	107	18.65	0.27	1.5	18.6	17.3 - 20.0
ABX Diagnostics Micros/45/60	120	18.43	0.30	1.6	18.4	17.1 - 19.8	122	18.40	0.31	1.7	18.4	17.1 - 19.7
Boule (CDS) Medonic M series	91	18.41	0.26	1.4	18.4	17.1 - 19.7	92	18.42	0.28	1.5	18.4	17.1 - 19.8
COULTER AcT diff/diff 2	210	18.30	0.31	1.7	18.3	17.0 - 19.6	212	18.34	0.31	1.7	18.4	17.0 - 19.7
Drew Scientific D3	11	18.59	0.23	1.2	18.6	17.2 - 19.9	11	18.58	0.32	1.7	18.7	17.2 - 19.9

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

Specimen HD-10						
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	681	6.04	0.16	2.7	6.0	5.6 - 6.5
All Abbott Cell-Dyn Instruments	226	6.14	0.20	3.3	6.1	5.7 - 6.6
All ABX Instruments	122	6.07	0.12	1.9	6.1	5.6 - 6.5
All Boule (CDS) Instruments	102	5.98	0.10	1.6	6.0	5.5 - 6.5
All COULTER Instruments	219	5.97	0.14	2.3	6.0	5.5 - 6.4
All Danam/Drew Scientific Instruments	11	6.14	0.11	1.8	6.2	5.7 - 6.6
Abbott Cell-Dyn 1700	20	6.36	0.19	3.0	6.4	5.9 - 6.9
Abbott Cell-Dyn 1800	96	6.23	0.16	2.6	6.2	5.7 - 6.7
Abbott Cell-Dyn Emerald	109	6.01	0.14	2.4	6.0	5.5 - 6.5
ABX Diagnostics Micros/45/60	122	6.07	0.12	1.9	6.1	5.6 - 6.5
Boule (CDS) Medonic M series	93	5.99	0.09	1.5	6.0	5.5 - 6.5
COULTER AcT diff/diff 2	212	5.97	0.14	2.3	6.0	5.5 - 6.4
Drew Scientific D3	11	6.14	0.11	1.8	6.2	5.7 - 6.6

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

Specimen HD-6							Specimen HD-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	681	38.47	1.57	4.1	38.6	36.1 - 40.8	681	17.25	0.93	5.4	17.4	16.2 - 18.3
All Abbott Cell-Dyn Instruments	225	39.43	1.38	3.5	39.4	37.0 - 41.8	225	17.89	0.72	4.0	17.9	16.8 - 19.0
All ABX Instruments	120	37.05	0.94	2.5	37.0	34.8 - 39.3	118	16.19	0.39	2.4	16.2	15.2 - 17.2
All Boule (CDS) Instruments	102	36.83	1.01	2.7	36.8	34.6 - 39.1	102	16.22	0.41	2.5	16.2	15.2 - 17.2
All COULTER Instruments	220	39.03	0.97	2.5	39.1	36.6 - 41.4	220	17.63	0.46	2.6	17.6	16.5 - 18.7
All Danam/Drew Scientific Instruments	11	39.59	0.92	2.3	39.3	37.2 - 42.0	11	18.07	0.41	2.3	18.1	16.9 - 19.2
Abbott Cell-Dyn 1700	20	38.54	1.50	3.9	38.8	36.2 - 40.9	20	17.52	0.69	3.9	17.7	16.4 - 18.6
Abbott Cell-Dyn 1800	96	40.15	1.07	2.7	40.1	37.7 - 42.6	96	18.34	0.56	3.1	18.3	17.2 - 19.5
Abbott Cell-Dyn Emerald	108	38.92	1.27	3.3	38.8	36.5 - 41.3	108	17.58	0.63	3.6	17.6	16.5 - 18.7
ABX Diagnostics Micros/45/60	120	37.05	0.94	2.5	37.0	34.8 - 39.3	118	16.19	0.39	2.4	16.2	15.2 - 17.2
Boule (CDS) Medonic M series	90	36.87	0.81	2.2	36.9	34.6 - 39.1	91	16.25	0.36	2.2	16.2	15.2 - 17.3
COULTER AcT diff/diff 2	212	39.01	0.98	2.5	39.0	36.6 - 41.4	212	17.63	0.46	2.6	17.6	16.5 - 18.7
Drew Scientific D3	11	39.59	0.92	2.3	39.3	37.2 - 42.0	11	18.07	0.41	2.3	18.1	16.9 - 19.2

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

Specimen HD-8							Specimen HD-9					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	677	52.18	1.62	3.1	52.3	49.0 - 55.4	678	52.38	1.60	3.1	52.5	49.2 - 55.6
All Abbott Cell-Dyn Instruments	223	52.60	1.64	3.1	52.8	49.4 - 55.8	226	52.67	1.57	3.0	52.7	49.5 - 55.9
All ABX Instruments	120	50.60	1.19	2.3	50.8	47.5 - 53.7	120	50.68	1.13	2.2	50.6	47.6 - 53.8
All Boule (CDS) Instruments	102	51.96	1.55	3.0	52.1	48.8 - 55.1	101	52.32	1.41	2.7	52.5	49.1 - 55.5
All COULTER Instruments	219	52.69	1.19	2.3	52.7	49.5 - 55.9	218	52.95	1.29	2.4	52.9	49.7 - 56.2
All Danam/Drew Scientific Instruments	11	52.98	1.54	2.9	53.0	49.8 - 56.2	11	53.25	1.33	2.5	52.9	50.0 - 56.5
Abbott Cell-Dyn 1700	20	52.26	2.34	4.5	52.8	49.1 - 55.4	20	52.36	1.33	2.5	52.7	49.2 - 55.6
Abbott Cell-Dyn 1800	96	53.32	1.33	2.5	53.4	50.1 - 56.6	96	53.26	1.36	2.6	53.2	50.0 - 56.5
Abbott Cell-Dyn Emerald	107	52.01	1.51	2.9	52.0	48.8 - 55.2	110	52.22	1.62	3.1	52.3	49.0 - 55.4
ABX Diagnostics Micros/45/60	120	50.60	1.19	2.3	50.8	47.5 - 53.7	120	50.68	1.13	2.2	50.6	47.6 - 53.8
Boule (CDS) Medonic M series	93	52.21	1.35	2.6	52.2	49.0 - 55.4	92	52.51	1.15	2.2	52.7	49.3 - 55.7
COULTER AcT diff/diff 2	211	52.68	1.20	2.3	52.7	49.5 - 55.9	210	52.93	1.30	2.5	52.8	49.7 - 56.2
Drew Scientific D3	11	52.98	1.54	2.9	53.0	49.8 - 56.2	11	53.25	1.33	2.5	52.9	50.0 - 56.5
Specimen HD-10												
All Method	679	17.23	0.94	5.5	17.4	16.1 - 18.3						
All Abbott Cell-Dyn Instruments	223	17.89	0.67	3.8	17.9	16.8 - 19.0						
All ABX Instruments	120	16.15	0.38	2.3	16.2	15.1 - 17.2						
All Boule (CDS) Instruments	102	16.14	0.42	2.6	16.2	15.1 - 17.2						
All COULTER Instruments	218	17.66	0.46	2.6	17.6	16.5 - 18.8						
All Danam/Drew Scientific Instruments	11	17.98	0.54	3.0	17.9	16.9 - 19.1						
Abbott Cell-Dyn 1700	19	17.46	0.71	4.1	17.7	16.4 - 18.6						
Abbott Cell-Dyn 1800	94	18.27	0.59	3.2	18.3	17.1 - 19.4						
Abbott Cell-Dyn Emerald	109	17.66	0.55	3.1	17.6	16.6 - 18.8						
ABX Diagnostics Micros/45/60	120	16.15	0.38	2.3	16.2	15.1 - 17.2						
Boule (CDS) Medonic M series	93	16.18	0.39	2.4	16.2	15.2 - 17.2						
COULTER AcT diff/diff 2	210	17.66	0.46	2.6	17.6	16.5 - 18.8						
Drew Scientific D3	11	17.98	0.54	3.0	17.9	16.9 - 19.1						

BASIC HEMATOLOGY W/ 3-PART DIFFERENTIAL–PLATELET COUNT (x 10⁹/L)

Specimen HD-6							Specimen HD-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	679	264.2	18.0	6.8	264	198 - 331	672	69.5	8.7	12.5	69	52 - 87
All Abbott Cell-Dyn Instruments	226	273.3	18.5	6.8	272	204 - 342	219	71.0	10.4	14.6	69	53 - 89
All ABX Instruments	121	273.3	15.3	5.6	275	204 - 342	122	77.0	6.8	8.8	77	57 - 97
All Boule (CDS) Instruments	101	244.5	11.7	4.8	245	183 - 306	102	62.2	5.4	8.7	61	46 - 78
All COULTER Instruments	221	259.4	12.4	4.8	259	194 - 325	219	67.0	5.7	8.5	67	50 - 84
All Danam/Drew Scientific Instruments	11	271.4	12.0	4.4	271	203 - 340	11	76.2	4.4	5.7	75	57 - 96
Abbott Cell-Dyn 1700	20	274.3	18.7	6.8	272	205 - 343	20	63.9	6.0	9.4	63	47 - 80
Abbott Cell-Dyn 1800	96	270.4	15.2	5.6	270	202 - 339	96	66.4	4.9	7.3	66	49 - 83
Abbott Cell-Dyn Emerald	109	276.1	20.1	7.3	274	207 - 346	105	77.5	12.6	16.2	76	58 - 97
ABX Diagnostics Micros/45/60	121	273.3	15.3	5.6	275	204 - 342	122	77.0	6.8	8.8	77	57 - 97
Boule (CDS) Medonic M series	93	243.5	10.3	4.2	244	182 - 305	93	61.7	5.0	8.0	61	46 - 78
COULTER AcT diff/diff 2	214	259.3	12.3	4.8	259	194 - 325	214	67.3	5.9	8.8	67	50 - 85
Drew Scientific D3	11	271.4	12.0	4.4	271	203 - 340	11	76.2	4.4	5.7	75	57 - 96

Specimen HD-8							Specimen HD-9					
All Method	677	519.5	29.4	5.7	519	389 - 650	678	518.9	29.1	5.6	518	389 - 649
All Abbott Cell-Dyn Instruments	225	539.0	32.9	6.1	539	404 - 674	228	540.3	33.3	6.2	539	405 - 676
All ABX Instruments	122	519.6	19.7	3.8	520	389 - 650	122	515.6	18.9	3.7	516	386 - 645
All Boule (CDS) Instruments	101	487.7	20.8	4.3	487	365 - 610	101	489.9	19.0	3.9	489	367 - 613
All COULTER Instruments	222	516.6	21.8	4.2	518	387 - 646	220	515.7	21.0	4.1	516	386 - 645
All Danam/Drew Scientific Instruments	11	511.4	27.8	5.4	515	383 - 640	11	511.8	30.9	6.0	515	383 - 640
Abbott Cell-Dyn 1700	20	556.9	40.4	7.3	551	417 - 697	20	560.1	36.5	6.5	551	420 - 701
Abbott Cell-Dyn 1800	96	553.5	26.3	4.7	555	415 - 692	97	554.2	27.9	5.0	548	415 - 693
Abbott Cell-Dyn Emerald	106	521.8	25.8	4.9	527	391 - 653	110	525.4	29.0	5.5	527	394 - 657
ABX Diagnostics Micros/45/60	122	519.6	19.7	3.8	520	389 - 650	122	515.6	18.9	3.7	516	386 - 645
Boule (CDS) Medonic M series	93	487.5	20.2	4.1	487	365 - 610	92	488.9	17.2	3.5	489	366 - 612
COULTER AcT diff/diff 2	215	516.6	21.7	4.2	518	387 - 646	214	515.5	21.1	4.1	516	386 - 645
Drew Scientific D3	11	511.4	27.8	5.4	515	383 - 640	11	511.8	30.9	6.0	515	383 - 640

BASIC HEMATOLOGY W/ 3-PART DIFFERENTIAL–PLATELET COUNT (x 10⁹/L) cont'd

Specimen HD-10						
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	665	69.9	9.1	13.0	69	52 - 88
All Abbott Cell-Dyn Instruments	223	74.2	12.9	17.4	71	55 - 93
All ABX Instruments	122	77.4	7.1	9.2	77	58 - 97
All Boule (CDS) Instruments	101	62.0	5.1	8.3	62	46 - 78
All COULTER Instruments	217	67.1	5.4	8.0	67	50 - 84
All Danam/Drew Scientific Instruments	11	72.2	7.0	9.6	75	54 - 91
Abbott Cell-Dyn 1700	20	64.9	7.4	11.4	64	48 - 82
Abbott Cell-Dyn 1800	95	67.4	5.0	7.4	67	50 - 85
Abbott Cell-Dyn Emerald	109	82.3	14.5	17.7	81	61 - 103
ABX Diagnostics Micros/45/60	122	77.4	7.1	9.2	77	58 - 97
Boule (CDS) Medonic M series	93	61.9	4.7	7.6	62	46 - 78
COULTER AcT diff/diff 2	210	67.2	5.4	8.1	67	50 - 84
Drew Scientific D3	11	72.2	7.0	9.6	75	54 - 91

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

Specimen HD-6							Specimen HD-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	654	28.69	4.03	14.0	30.0	16.6 - 40.8	658	54.11	6.97	12.9	55.3	33.2 - 75.1
All Abbott Cell-Dyn Instruments	213	26.34	2.44	9.3	26.7	19.0 - 33.7	214	50.32	3.42	6.8	51.1	40.0 - 60.6
All ABX Instruments	113	23.22	1.77	7.6	23.1	17.9 - 28.6	116	44.30	3.15	7.1	43.7	34.8 - 53.8
All Boule (CDS) Instruments	99	31.80	1.13	3.5	31.8	28.4 - 35.2	100	61.77	2.48	4.0	61.8	54.3 - 69.2
All COULTER Instruments	205	32.33	0.86	2.7	32.4	29.7 - 35.0	206	59.67	1.68	2.8	59.8	54.6 - 64.8
All Danam/Drew Scientific Instruments	11	29.49	1.05	3.6	29.5	26.3 - 32.7	11	55.53	1.55	2.8	55.7	50.8 - 60.2
Abbott Cell-Dyn 1700	18	27.41	1.46	5.3	27.4	23.0 - 31.8	19	52.81	2.10	4.0	52.6	46.5 - 59.2
Abbott Cell-Dyn 1800	88	23.91	0.95	4.0	23.9	21.0 - 26.8	90	46.98	2.31	4.9	46.7	40.0 - 53.9
Abbott Cell-Dyn Emerald	102	28.05	1.41	5.0	28.0	23.8 - 32.3	106	52.62	1.89	3.6	52.8	46.9 - 58.3
ABX Diagnostics Micros/45/60	113	23.22	1.77	7.6	23.1	17.9 - 28.6	116	44.30	3.15	7.1	43.7	34.8 - 53.8
Boule (CDS) Medonic M series	91	31.62	0.95	3.0	31.6	28.7 - 34.5	91	61.46	2.27	3.7	61.4	54.6 - 68.3
COULTER AcT diff/diff 2	204	32.33	0.86	2.7	32.4	29.7 - 35.0	205	59.66	1.68	2.8	59.8	54.6 - 64.7
Drew Scientific D3	11	29.49	1.05	3.6	29.5	26.3 - 32.7	11	55.53	1.55	2.8	55.7	50.8 - 60.2

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

<u>Instrument</u>	Specimen HD-8						Specimen HD-9					
	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	658	13.71	1.63	11.9	14.1	8.8 - 18.7	656	13.69	1.64	12.0	14.1	8.7 - 18.7
All Abbott Cell-Dyn Instruments	212	12.69	1.38	10.9	12.7	8.5 - 16.9	212	12.63	1.41	11.2	12.8	8.4 - 16.9
All ABX Instruments	117	12.08	0.87	7.2	12.1	9.4 - 14.7	117	12.07	0.84	6.9	12.0	9.5 - 14.6
All Boule (CDS) Instruments	99	14.67	0.64	4.3	14.6	12.7 - 16.6	96	14.63	0.54	3.7	14.6	13.0 - 16.3
All COULTER Instruments	202	15.06	0.53	3.5	15.1	13.4 - 16.7	203	15.08	0.53	3.5	15.1	13.4 - 16.7
All Danam/Drew Scientific Instruments	11	14.17	1.06	7.4	13.9	11.0 - 17.4	11	14.24	1.05	7.4	14.1	11.0 - 17.5
Abbott Cell-Dyn 1700	18	12.93	1.04	8.0	12.4	9.8 - 16.1	19	13.16	1.48	11.2	13.0	8.7 - 17.6
Abbott Cell-Dyn 1800	87	11.31	0.41	3.6	11.3	10.0 - 12.6	88	11.28	0.50	4.5	11.3	9.7 - 12.8
Abbott Cell-Dyn Emerald	102	13.79	0.87	6.3	13.8	11.1 - 16.4	102	13.72	0.96	7.0	13.6	10.8 - 16.6
ABX Diagnostics Micros/45/60	117	12.08	0.87	7.2	12.1	9.4 - 14.7	117	12.07	0.84	6.9	12.0	9.5 - 14.6
Boule (CDS) Medonic M series	89	14.54	0.50	3.4	14.5	13.0 - 16.1	89	14.54	0.46	3.2	14.5	13.1 - 16.0
COULTER AcT diff/diff 2	201	15.07	0.53	3.5	15.1	13.4 - 16.7	202	15.08	0.54	3.5	15.1	13.4 - 16.7
Drew Scientific D3	11	14.17	1.06	7.4	13.9	11.0 - 17.4	11	14.24	1.05	7.4	14.1	11.0 - 17.5
Specimen HD-10												
All Method	657	53.61	7.08	13.2	54.8	32.3 - 74.9						
All Abbott Cell-Dyn Instruments	216	49.63	3.72	7.5	50.2	38.4 - 60.9						
All ABX Instruments	113	43.68	3.22	7.4	43.5	34.0 - 53.4						
All Boule (CDS) Instruments	98	61.16	2.29	3.8	60.9	54.2 - 68.1						
All COULTER Instruments	206	59.18	1.81	3.1	59.3	53.7 - 64.7						
All Danam/Drew Scientific Instruments	11	55.16	2.02	3.7	55.2	49.0 - 61.3						
Abbott Cell-Dyn 1700	18	51.68	1.45	2.8	51.7	47.3 - 56.1						
Abbott Cell-Dyn 1800	91	46.22	2.41	5.2	46.0	38.9 - 53.5						
Abbott Cell-Dyn Emerald	104	52.00	2.10	4.0	52.1	45.7 - 58.3						
ABX Diagnostics Micros/45/60	113	43.68	3.22	7.4	43.5	34.0 - 53.4						
Boule (CDS) Medonic M series	90	60.87	2.07	3.4	60.8	54.6 - 67.1						
COULTER AcT diff/diff 2	205	59.16	1.81	3.1	59.3	53.7 - 64.6						
Drew Scientific D3	11	55.16	2.02	3.7	55.2	49.0 - 61.3						

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

Specimen HD-6							Specimen HD-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	646	8.19	2.17	26.4	7.4	1.6 - 14.7	648	13.28	4.16	31.3	11.4	0.8 - 25.8
All Abbott Cell-Dyn Instruments	214	9.36	2.81	30.1	9.5	0.9 - 17.9	214	15.11	3.98	26.4	14.4	3.1 - 27.1
All ABX Instruments	112	9.57	0.89	9.3	9.6	6.8 - 12.3	111	18.53	1.90	10.3	18.5	12.8 - 24.3
All Boule (CDS) Instruments	99	7.82	1.08	13.8	7.9	4.5 - 11.1	99	10.29	1.78	17.3	10.2	4.9 - 15.7
All COULTER Instruments	210	6.60	0.63	9.5	6.7	4.7 - 8.5	208	10.24	1.18	11.5	10.2	6.7 - 13.8
All Danam/Drew Scientific Instruments	11	6.24	0.21	3.3	6.2	5.6 - 6.9	11	10.57	0.65	6.1	10.6	8.6 - 12.6
Abbott Cell-Dyn 1700	19	9.85	0.49	4.9	9.8	8.3 - 11.4	19	14.85	0.80	5.4	14.7	12.4 - 17.3
Abbott Cell-Dyn 1800	89	12.30	0.67	5.5	12.3	10.2 - 14.4	89	19.38	1.41	7.3	19.3	15.1 - 23.7
Abbott Cell-Dyn Emerald	102	6.61	0.65	9.9	6.5	4.6 - 8.6	103	11.46	1.27	11.1	11.4	7.6 - 15.3
ABX Diagnostics Micros/45/60	112	9.57	0.89	9.3	9.6	6.8 - 12.3	111	18.53	1.90	10.3	18.5	12.8 - 24.3
Boule (CDS) Medonic M series	90	7.74	1.07	13.8	7.9	4.5 - 11.0	90	10.30	1.86	18.0	10.4	4.7 - 15.9
COULTER AcT diff/diff 2	207	6.61	0.62	9.4	6.7	4.7 - 8.5	205	10.25	1.17	11.4	10.2	6.7 - 13.8
Drew Scientific D3	11	6.24	0.21	3.3	6.2	5.6 - 6.9	11	10.57	0.65	6.1	10.6	8.6 - 12.6

Specimen HD-8							Specimen HD-9					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	645	4.68	1.37	29.2	4.2	0.5 - 8.8	642	4.66	1.37	29.4	4.2	0.5 - 8.8
All Abbott Cell-Dyn Instruments	213	4.76	1.77	37.3	5.2	0.0 - 10.1	213	4.80	1.78	37.1	5.3	0.0 - 10.2
All ABX Instruments	111	3.98	0.26	6.5	4.0	3.2 - 4.8	111	4.00	0.27	6.8	4.0	3.1 - 4.9
All Boule (CDS) Instruments	98	6.44	0.91	14.1	6.3	3.7 - 9.2	100	6.49	1.08	16.6	6.4	3.2 - 9.8
All COULTER Instruments	210	4.25	0.42	9.9	4.2	2.9 - 5.6	207	4.21	0.38	9.1	4.2	3.0 - 5.4
All Danam/Drew Scientific Instruments	11	3.03	0.11	3.6	3.0	2.6 - 3.4	11	2.95	0.18	5.9	3.0	2.4 - 3.5
Abbott Cell-Dyn 1700	19	5.62	0.51	9.0	5.5	4.1 - 7.2	19	5.68	0.51	9.0	5.6	4.1 - 7.3
Abbott Cell-Dyn 1800	89	6.59	0.41	6.2	6.5	5.3 - 7.9	89	6.63	0.47	7.1	6.6	5.2 - 8.1
Abbott Cell-Dyn Emerald	102	2.98	0.28	9.3	3.0	2.1 - 3.9	101	3.01	0.26	8.5	2.9	2.2 - 3.8
ABX Diagnostics Micros/45/60	111	3.98	0.26	6.5	4.0	3.2 - 4.8	111	4.00	0.27	6.8	4.0	3.1 - 4.9
Boule (CDS) Medonic M series	90	6.28	0.72	11.5	6.2	4.1 - 8.5	91	6.27	0.85	13.5	6.4	3.7 - 8.9
COULTER AcT diff/diff 2	207	4.26	0.42	9.8	4.2	2.9 - 5.6	204	4.21	0.38	9.1	4.2	3.0 - 5.4
Drew Scientific D3	11	3.03	0.11	3.6	3.0	2.6 - 3.4	11	2.95	0.18	5.9	3.0	2.4 - 3.5

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

Specimen HD-10						
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	646	13.36	4.16	31.1	11.8	0.8 - 25.9
All Abbott Cell-Dyn Instruments	213	15.15	3.85	25.4	14.6	3.5 - 26.8
All ABX Instruments	112	18.55	2.46	13.3	18.8	11.1 - 26.0
All Boule (CDS) Instruments	100	10.35	2.09	20.2	10.6	4.0 - 16.7
All COULTER Instruments	208	10.37	1.23	11.9	10.3	6.6 - 14.1
All Danam/Drew Scientific Instruments	11	10.54	0.93	8.8	10.8	7.7 - 13.4
Abbott Cell-Dyn 1700	19	14.78	1.22	8.3	14.9	11.1 - 18.5
Abbott Cell-Dyn 1800	88	19.15	1.17	6.1	19.3	15.6 - 22.7
Abbott Cell-Dyn Emerald	102	11.62	1.43	12.3	11.4	7.3 - 16.0
ABX Diagnostics Micros/45/60	112	18.55	2.46	13.3	18.8	11.1 - 26.0
Boule (CDS) Medonic M series	91	10.38	2.16	20.9	10.6	3.8 - 16.9
COULTER AcT diff/diff 2	205	10.38	1.22	11.8	10.3	6.7 - 14.1
Drew Scientific D3	11	10.54	0.93	8.8	10.8	7.7 - 13.4

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

Specimen HD-6							Specimen HD-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	647	63.10	2.78	4.4	62.6	54.7 - 71.5	651	32.54	3.76	11.5	32.6	21.2 - 43.9
All Abbott Cell-Dyn Instruments	210	64.39	1.46	2.3	64.5	60.0 - 68.8	215	34.64	2.00	5.8	34.8	28.6 - 40.7
All ABX Instruments	110	67.07	1.33	2.0	67.3	63.0 - 71.1	111	37.08	1.84	5.0	37.1	31.5 - 42.7
All Boule (CDS) Instruments	98	60.36	1.67	2.8	60.4	55.3 - 65.4	98	27.99	2.43	8.7	27.8	20.7 - 35.3
All COULTER Instruments	206	61.04	0.89	1.5	61.0	58.3 - 63.8	209	30.11	1.77	5.9	30.1	24.8 - 35.5
All Danam/Drew Scientific Instruments	11	64.27	1.00	1.6	64.3	61.2 - 67.3	11	33.89	1.56	4.6	34.1	29.1 - 38.6
Abbott Cell-Dyn 1700	18	62.71	1.63	2.6	62.7	57.8 - 67.7	19	32.35	1.97	6.1	32.5	26.4 - 38.3
Abbott Cell-Dyn 1800	89	63.73	0.87	1.4	63.8	61.1 - 66.4	90	33.62	1.65	4.9	33.9	28.6 - 38.6
Abbott Cell-Dyn Emerald	103	65.25	1.31	2.0	65.5	61.3 - 69.2	105	35.88	1.36	3.8	35.9	31.8 - 40.0
ABX Diagnostics Micros/45/60	110	67.07	1.33	2.0	67.3	63.0 - 71.1	111	37.08	1.84	5.0	37.1	31.5 - 42.7
Boule (CDS) Medonic M series	90	60.62	1.46	2.4	60.5	56.2 - 65.0	90	28.22	2.34	8.3	28.0	21.1 - 35.3
COULTER AcT diff/diff 2	203	61.04	0.90	1.5	61.0	58.3 - 63.8	206	30.11	1.77	5.9	30.1	24.7 - 35.5
Drew Scientific D3	11	64.27	1.00	1.6	64.3	61.2 - 67.3	11	33.89	1.56	4.6	34.1	29.1 - 38.6

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

<u>Instrument</u>	Specimen HD-8						Specimen HD-9					
	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	642	81.64	1.85	2.3	81.6	76.0 - 87.2	641	81.67	1.85	2.3	81.6	76.1 - 87.3
All Abbott Cell-Dyn Instruments	212	82.51	1.07	1.3	82.5	79.2 - 85.8	210	82.60	1.05	1.3	82.6	79.4 - 85.8
All ABX Instruments	111	83.95	0.75	0.9	84.0	81.7 - 86.2	112	83.91	0.74	0.9	83.9	81.6 - 86.2
All Boule (CDS) Instruments	96	79.04	1.13	1.4	79.1	75.6 - 82.5	98	78.82	1.47	1.9	79.1	74.4 - 83.3
All COULTER Instruments	206	80.68	0.72	0.9	80.7	78.5 - 82.9	203	80.73	0.61	0.8	80.7	78.8 - 82.6
All Danam/Drew Scientific Instruments	11	82.77	1.14	1.4	83.0	79.3 - 86.2	11	82.80	1.04	1.3	83.0	79.6 - 86.0
Abbott Cell-Dyn 1700	18	81.19	1.99	2.4	82.0	75.2 - 87.2	19	81.18	1.90	2.3	82.0	75.4 - 86.9
Abbott Cell-Dyn 1800	90	82.05	0.64	0.8	82.1	80.1 - 84.0	91	82.03	0.76	0.9	82.1	79.7 - 84.4
Abbott Cell-Dyn Emerald	102	83.17	0.81	1.0	83.3	80.7 - 85.7	99	83.34	0.69	0.8	83.4	81.2 - 85.5
ABX Diagnostics Micros/45/60	111	83.95	0.75	0.9	84.0	81.7 - 86.2	112	83.91	0.74	0.9	83.9	81.6 - 86.2
Boule (CDS) Medonic M series	89	79.17	0.85	1.1	79.2	76.6 - 81.8	88	79.19	1.00	1.3	79.1	76.1 - 82.3
COULTER AcT diff/diff 2	203	80.68	0.72	0.9	80.7	78.5 - 82.9	200	80.73	0.62	0.8	80.7	78.8 - 82.6
Drew Scientific D3	11	82.77	1.14	1.4	83.0	79.3 - 86.2	11	82.80	1.04	1.3	83.0	79.6 - 86.0

Specimen HD-10						
All Method	649	32.96	3.89	11.8	33.0	21.2 - 44.7
All Abbott Cell-Dyn Instruments	215	35.17	2.13	6.1	35.3	28.7 - 41.6
All ABX Instruments	110	37.42	1.89	5.1	37.5	31.7 - 43.1
All Boule (CDS) Instruments	99	28.39	2.69	9.5	28.1	20.3 - 36.5
All COULTER Instruments	205	30.42	1.73	5.7	30.4	25.2 - 35.6
All Danam/Drew Scientific Instruments	10	34.21	1.70	5.0	34.6	29.1 - 39.4
Abbott Cell-Dyn 1700	18	33.37	1.73	5.2	33.4	28.1 - 38.6
Abbott Cell-Dyn 1800	92	34.50	1.94	5.6	34.6	28.6 - 40.4
Abbott Cell-Dyn Emerald	106	36.12	2.02	5.6	36.4	30.0 - 42.2
ABX Diagnostics Micros/45/60	110	37.42	1.89	5.1	37.5	31.7 - 43.1
Boule (CDS) Medonic M series	90	28.73	2.53	8.8	28.3	21.1 - 36.4
COULTER AcT diff/diff 2	202	30.43	1.72	5.7	30.4	25.2 - 35.7
Drew Scientific D3	10	34.21	1.70	5.0	34.6	29.1 - 39.4

HEMATOLOGY W/ 5-PART DIFFERENTIAL–WHITE BLOOD CELL COUNT (x 10⁹/L)

Specimen DIF-6							Specimen DIF-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	16	10.01	0.28	2.8	10.1	8.5 - 11.6	16	4.04	0.12	2.9	4.0	3.4 - 4.7
All COULTER Instruments	15	10.00	0.29	2.9	10.0	8.5 - 11.5	15	4.05	0.12	2.9	4.0	3.4 - 4.7
Specimen DIF-8							Specimen DIF-9					
All Method	16	22.44	0.61	2.7	22.4	19.0 - 25.9	17	4.06	0.19	4.6	4.1	3.4 - 4.7
All COULTER Instruments	15	22.47	0.62	2.8	22.4	19.1 - 25.9	17	4.06	0.19	4.6	4.1	3.4 - 4.7
Specimen DIF-10												
All Method	16	4.08	0.15	3.7	4.1	3.4 - 4.7						
All COULTER Instruments	15	4.07	0.15	3.8	4.1	3.4 - 4.7						

HEMATOLOGY W/ 5-PART DIFFERENTIAL–RED BLOOD CELL COUNT (x 10¹²/L)

Specimen DIF-6							Specimen DIF-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	16	4.213	0.082	2.0	4.21	3.96 - 4.47	16	2.633	0.042	1.6	2.63	2.47 - 2.80
All COULTER Instruments	15	4.207	0.081	1.9	4.20	3.95 - 4.46	15	2.633	0.043	1.6	2.63	2.47 - 2.80
Specimen DIF-8							Specimen DIF-9					
All Method	16	5.390	0.092	1.7	5.39	5.06 - 5.72	16	5.403	0.076	1.4	5.38	5.07 - 5.73
All COULTER Instruments	15	5.387	0.095	1.8	5.39	5.06 - 5.72	15	5.405	0.078	1.4	5.38	5.08 - 5.73
Specimen DIF-10												
All Method	16	2.624	0.040	1.5	2.62	2.46 - 2.79						
All COULTER Instruments	15	2.623	0.041	1.6	2.61	2.46 - 2.79						

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

Specimen DIF-6							Specimen DIF-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	16	11.94	0.17	1.4	12.0	11.1 - 12.8	16	6.51	0.12	1.9	6.5	6.0 - 7.0
All COULTER Instruments	15	11.94	0.17	1.4	11.9	11.1 - 12.8	15	6.51	0.13	2.0	6.5	6.0 - 7.0
Specimen DIF-8							Specimen DIF-9					
All Method	16	16.74	0.32	1.9	16.8	15.5 - 18.0	15	16.83	0.20	1.2	16.9	15.6 - 18.1
All COULTER Instruments	15	16.73	0.34	2.0	16.8	15.5 - 18.0	14	16.84	0.20	1.2	16.9	15.6 - 18.1
Specimen DIF-10												
All Method	16	6.56	0.11	1.7	6.5	6.1 - 7.1						
All COULTER Instruments	15	6.57	0.12	1.8	6.5	6.1 - 7.1						

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

Specimen DIF-6							Specimen DIF-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	16	37.59	0.82	2.2	37.7	35.3 - 39.9	16	20.40	0.44	2.2	20.5	19.1 - 21.7
All COULTER Instruments	15	37.55	0.83	2.2	37.6	35.2 - 39.8	15	20.40	0.46	2.2	20.5	19.1 - 21.7
Specimen DIF-8							Specimen DIF-9					
All Method	16	54.20	0.85	1.6	54.2	50.9 - 57.5	16	54.26	0.80	1.5	54.2	51.0 - 57.6
All COULTER Instruments	15	54.22	0.88	1.6	54.2	50.9 - 57.5	15	54.32	0.79	1.5	54.3	51.0 - 57.6
Specimen DIF-10												
All Method	16	20.38	0.35	1.7	20.4	19.1 - 21.6						
All COULTER Instruments	15	20.38	0.36	1.8	20.4	19.1 - 21.7						

HEMATOLOGY W/ 5-PART DIFFERENTIAL–PLATELET COUNT (x 10⁹/L)

Specimen DIF-6							Specimen DIF-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	16	249.0	13.0	5.2	252	186 - 312	16	83.1	5.8	7.0	83	62 - 104
All COULTER Instruments	15	247.6	12.1	4.9	249	185 - 310	15	83.1	6.0	7.3	83	62 - 104
Specimen DIF-8							Specimen DIF-9					
All Method	16	497.3	35.5	7.1	490	372 - 622	16	492.5	32.4	6.6	485	369 - 616
All COULTER Instruments	15	499.1	36.0	7.2	491	374 - 624	15	493.1	33.5	6.8	486	369 - 617
Specimen DIF-10												
All Method	16	83.8	4.8	5.7	84	62 - 105						
All COULTER Instruments	15	83.8	5.0	5.9	84	62 - 105						

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

Specimen DIF-6							Specimen DIF-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	15	58.59	2.93	5.0	59.1	49.7 - 67.4	15	51.23	0.99	1.9	51.7	48.2 - 54.2
All COULTER Instruments	14	58.41	2.96	5.1	59.1	49.5 - 67.4	15	51.53	1.66	3.2	51.7	46.5 - 56.6
Specimen DIF-8							Specimen DIF-9					
All Method	16	66.73	2.92	4.4	67.4	57.9 - 75.5	16	66.63	2.94	4.4	67.7	57.8 - 75.5
All COULTER Instruments	15	66.44	2.79	4.2	67.3	58.0 - 74.9	15	66.60	3.04	4.6	67.8	57.4 - 75.8
Specimen DIF-10												
All Method	16	51.83	1.69	3.3	51.6	46.7 - 56.9						
All COULTER Instruments	15	51.89	1.73	3.3	51.7	46.6 - 57.1						

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

Specimen DIF-6							Specimen DIF-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	16	30.79	1.35	4.4	30.9	26.7 - 34.9	16	39.04	1.88	4.8	39.4	33.4 - 44.7
All COULTER Instruments	15	30.77	1.40	4.5	30.8	26.5 - 35.0	15	39.04	1.94	5.0	39.4	33.2 - 44.9
Specimen DIF-8							Specimen DIF-9					
All Method	16	20.97	1.03	4.9	20.8	17.8 - 24.1	16	20.59	1.24	6.0	20.1	16.8 - 24.4
All COULTER Instruments	15	21.03	1.03	4.9	20.9	17.9 - 24.2	15	20.63	1.28	6.2	20.1	16.8 - 24.5
Specimen DIF-10												
All Method	16	39.04	1.84	4.7	39.3	33.5 - 44.6						
All COULTER Instruments	15	38.97	1.89	4.8	39.2	33.3 - 44.7						

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

Specimen DIF-6							Specimen DIF-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	16	3.64	1.95	53.6	3.4	0.0 - 9.5	16	0.78	0.39	50.0	0.8	0.0 - 2.0
All COULTER Instruments	15	3.75	1.97	52.5	3.4	0.0 - 9.7	15	0.76	0.40	52.1	0.8	0.0 - 2.0
Specimen DIF-8							Specimen DIF-9					
All Method	16	7.14	2.07	29.0	6.7	0.9 - 13.4	16	7.67	1.84	24.0	7.0	2.1 - 13.2
All COULTER Instruments	15	7.35	1.96	26.6	6.7	1.4 - 13.3	15	7.67	1.91	24.9	7.0	1.9 - 13.4
Specimen DIF-10												
All Method	16	0.81	0.38	46.2	0.8	0.0 - 2.0						
All COULTER Instruments	15	0.81	0.39	48.1	0.6	0.0 - 2.0						

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

Specimen DIF-6							Specimen DIF-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	15	6.66	0.35	5.3	6.7	5.5 - 7.8	16	8.17	0.55	6.7	8.1	6.5 - 9.9
All COULTER Instruments	14	6.64	0.36	5.4	6.6	5.5 - 7.8	15	8.19	0.56	6.9	8.1	6.4 - 9.9
Specimen DIF-8							Specimen DIF-9					
All Method	16	4.54	0.30	6.7	4.5	3.6 - 5.5	16	4.48	0.45	10.0	4.5	3.1 - 5.9
All COULTER Instruments	15	4.55	0.31	6.7	4.5	3.6 - 5.5	15	4.44	0.44	9.9	4.4	3.1 - 5.8
Specimen DIF-10												
All Method	15	8.05	0.54	6.8	8.0	6.4 - 9.7						
All COULTER Instruments	14	8.06	0.56	7.0	8.1	6.3 - 9.8						

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

Specimen DIF-6							Specimen DIF-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	16	0.23	0.19	80.1	0.2	0.0 - 0.8	14	0.20	0.17	83.2	0.2	0.0 - 0.7
All COULTER Instruments	15	0.24	0.19	78.4	0.2	0.0 - 0.9	13	0.20	0.17	86.6	0.2	0.0 - 0.8
Specimen DIF-8							Specimen DIF-9					
All Method	16	0.64	0.47	73.1	0.5	0.0 - 2.1	16	0.69	0.47	67.7	0.6	0.0 - 2.2
All COULTER Instruments	15	0.63	0.48	76.6	0.5	0.0 - 2.1	15	0.66	0.47	70.6	0.5	0.0 - 2.1
Specimen DIF-10												
All Method	14	0.19	0.15	81.4	0.2	0.0 - 0.7						
All COULTER Instruments	13	0.19	0.16	80.7	0.2	0.0 - 0.7						

BLOOD LEAD (µg/dL)

<u>Instrument</u>	Specimen LED-6						Specimen LED-7					
	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
Magellan Diagnostics LeadCare II	10	3.21	0.89	27.8	3.3	0.0 - 7.3	10	18.87	1.01	5.3	18.7	14.8 - 22.9
	Specimen LED-8						Specimen LED-9					
	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	2	-	-	-	10.0	Not graded	2	-	-	-	16.0	Not graded
	Specimen LED-10											
	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>						
All Method	2	-	-	-	10.0	Not graded						

RETICULOCYTE COUNT (percent)

<u>Instrument</u>	Specimen RT-3						Specimen RT-4					
	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	31	8.10	2.25	27.8	7.4	3.5 - 12.7	30	1.08	0.44	40.9	1.0	0.1 - 2.0
All Automated Methods	16	6.96	1.23	17.7	7.0	4.5 - 9.5	17	0.96	0.17	17.3	1.0	0.6 - 1.3
All Manual Methods	14	9.46	2.52	26.7	9.8	4.4 - 14.6	13	1.36	0.76	55.7	1.2	0.0 - 2.9

HEMATOLOGY W/ 5-PART DIFFERENTIAL–WHITE BLOOD CELL COUNT (x 10⁹/L)

<u>Instrument</u>	Specimen BCX-6						Specimen BCX-7					
	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	92	24.98	0.80	3.2	25.0	21.2 - 28.8	94	4.12	0.15	3.6	4.1	3.5 - 4.8
All ABX Instruments	52	24.63	0.87	3.5	24.7	20.9 - 28.4	53	4.08	0.15	3.8	4.1	3.4 - 4.7
All COULTER Instruments	41	25.37	0.59	2.3	25.4	21.5 - 29.2	41	4.16	0.13	3.1	4.1	3.5 - 4.8
ABX Diagnostics Pentra 60C+ (version 2.21 and up)	40	24.55	0.90	3.7	24.6	20.8 - 28.3	41	4.06	0.16	3.9	4.1	3.4 - 4.7
ABX Diagnostics Pentra 80 / XL 80	11	24.86	0.75	3.0	24.9	21.1 - 28.6	11	4.18	0.10	2.3	4.2	3.5 - 4.9
COULTER AcT 5diff (version 2.01)	40	25.38	0.59	2.3	25.4	21.5 - 29.2	40	4.17	0.13	3.1	4.2	3.5 - 4.8
	Specimen BCX-8						Specimen BCX-9					
	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	90	18.95	0.54	2.8	19.1	16.1 - 21.8	93	4.77	0.16	3.3	4.8	4.0 - 5.5
All ABX Instruments	53	18.62	0.72	3.9	18.8	15.8 - 21.5	53	4.72	0.19	4.0	4.7	4.0 - 5.5
All COULTER Instruments	41	19.18	0.44	2.3	19.2	16.3 - 22.1	41	4.82	0.11	2.4	4.8	4.0 - 5.6
ABX Diagnostics Pentra 60C+ (version 2.21 and up)	41	18.60	0.74	4.0	18.7	15.8 - 21.4	41	4.68	0.19	4.0	4.7	3.9 - 5.4
ABX Diagnostics Pentra 80 / XL 80	11	18.65	0.73	3.9	18.9	15.8 - 21.5	11	4.84	0.14	3.0	4.8	4.1 - 5.6
COULTER AcT 5diff (version 2.01)	40	19.22	0.39	2.0	19.3	16.3 - 22.1	40	4.82	0.11	2.4	4.8	4.0 - 5.6
	Specimen BCX-10											
	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>						
All Method	85	9.98	0.28	2.9	10.0	8.4 - 11.5						
All ABX Instruments	46	9.86	0.27	2.8	9.8	8.3 - 11.4						
All COULTER Instruments	38	10.10	0.20	2.0	10.1	8.5 - 11.7						
ABX Diagnostics Pentra 60C+ (version 2.21 and up)	35	9.83	0.26	2.7	9.8	8.3 - 11.3						
ABX Diagnostics Pentra 80 / XL 80	12	10.06	0.37	3.7	10.1	8.5 - 11.6						
COULTER AcT 5diff (version 2.01)	38	10.10	0.20	2.0	10.1	8.5 - 11.7						

HEMATOLOGY W/ 5-PART DIFFERENTIAL-RED BLOOD CELL COUNT (x 10¹²/L)

<u>Instrument</u>	Specimen BCX-6						Specimen BCX-7					
	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	94	5.942	0.117	2.0	5.95	5.58 - 6.30	93	3.868	0.064	1.6	3.87	3.63 - 4.11
All ABX Instruments	53	5.945	0.133	2.2	5.97	5.58 - 6.31	52	3.853	0.061	1.6	3.85	3.62 - 4.09
All COULTER Instruments	41	5.939	0.095	1.6	5.94	5.58 - 6.30	41	3.887	0.062	1.6	3.89	3.65 - 4.13
ABX Diagnostics Pentra 60C+ (version 2.21 and up)	41	5.912	0.118	2.0	5.93	5.55 - 6.27	40	3.852	0.060	1.6	3.85	3.62 - 4.09
ABX Diagnostics Pentra 80 / XL 80	11	6.075	0.112	1.8	6.06	5.71 - 6.44	11	3.863	0.071	1.8	3.85	3.63 - 4.10
COULTER AcT 5diff (version 2.01)	40	5.933	0.089	1.5	5.94	5.57 - 6.29	40	3.887	0.063	1.6	3.89	3.65 - 4.12
	Specimen BCX-8						Specimen BCX-9					
	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	93	5.050	0.073	1.5	5.05	4.74 - 5.36	93	4.935	0.078	1.6	4.94	4.63 - 5.24
All ABX Instruments	53	5.033	0.087	1.7	5.04	4.73 - 5.34	52	4.922	0.083	1.7	4.93	4.62 - 5.22
All COULTER Instruments	41	5.066	0.060	1.2	5.07	4.76 - 5.38	41	4.952	0.068	1.4	4.96	4.65 - 5.25
ABX Diagnostics Pentra 60C+ (version 2.21 and up)	41	5.026	0.084	1.7	5.03	4.72 - 5.33	40	4.915	0.079	1.6	4.93	4.62 - 5.21
ABX Diagnostics Pentra 80 / XL 80	11	5.064	0.098	1.9	5.07	4.75 - 5.37	11	4.959	0.088	1.8	4.98	4.66 - 5.26
COULTER AcT 5diff (version 2.01)	40	5.066	0.061	1.2	5.08	4.76 - 5.37	40	4.951	0.069	1.4	4.96	4.65 - 5.25
	Specimen BCX-10											
	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>						
All Method	93	4.251	0.079	1.9	4.26	3.99 - 4.51						
All ABX Instruments	52	4.237	0.089	2.1	4.25	3.98 - 4.50						
All COULTER Instruments	41	4.268	0.062	1.4	4.27	4.01 - 4.53						
ABX Diagnostics Pentra 60C+ (version 2.21 and up)	40	4.234	0.090	2.1	4.25	3.98 - 4.49						
ABX Diagnostics Pentra 80 / XL 80	11	4.253	0.092	2.2	4.27	3.99 - 4.51						
COULTER AcT 5diff (version 2.01)	40	4.268	0.062	1.5	4.27	4.01 - 4.53						

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

Specimen BCX-6							Specimen BCX-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	94	17.80	0.26	1.4	17.8	16.5 - 19.1	92	10.73	0.14	1.3	10.7	9.9 - 11.5
All ABX Instruments	53	17.88	0.24	1.3	17.9	16.6 - 19.2	51	10.69	0.12	1.1	10.7	9.9 - 11.5
All COULTER Instruments	41	17.70	0.25	1.4	17.7	16.4 - 19.0	41	10.78	0.15	1.3	10.8	10.0 - 11.6
ABX Diagnostics Pentra 60C+ (version 2.21 and up)	41	17.86	0.23	1.3	17.9	16.6 - 19.2	40	10.69	0.12	1.1	10.7	9.9 - 11.5
ABX Diagnostics Pentra 80 / XL 80	11	17.95	0.24	1.3	18.0	16.6 - 19.3	10	10.70	0.12	1.2	10.7	9.9 - 11.5
COULTER AcT 5diff (version 2.01)	40	17.69	0.25	1.4	17.7	16.4 - 19.0	40	10.78	0.14	1.3	10.8	10.0 - 11.6
Specimen BCX-8							Specimen BCX-9					
All Method	93	16.18	0.20	1.2	16.2	15.0 - 17.4	92	14.74	0.18	1.2	14.8	13.7 - 15.8
All ABX Instruments	52	16.23	0.20	1.2	16.3	15.0 - 17.4	51	14.76	0.17	1.2	14.8	13.7 - 15.8
All COULTER Instruments	41	16.12	0.19	1.2	16.1	14.9 - 17.3	41	14.71	0.19	1.3	14.7	13.6 - 15.8
ABX Diagnostics Pentra 60C+ (version 2.21 and up)	41	16.23	0.19	1.2	16.2	15.0 - 17.4	40	14.75	0.17	1.1	14.7	13.7 - 15.8
ABX Diagnostics Pentra 80 / XL 80	10	16.26	0.24	1.5	16.3	15.1 - 17.4	10	14.80	0.20	1.4	14.8	13.7 - 15.9
COULTER AcT 5diff (version 2.01)	40	16.12	0.19	1.2	16.1	14.9 - 17.3	40	14.71	0.19	1.3	14.7	13.6 - 15.8
Specimen BCX-10												
All Method	91	11.72	0.15	1.3	11.7	10.9 - 12.6						
All ABX Instruments	51	11.70	0.13	1.1	11.7	10.8 - 12.6						
All COULTER Instruments	40	11.75	0.16	1.4	11.7	10.9 - 12.6						
ABX Diagnostics Pentra 60C+ (version 2.21 and up)	40	11.70	0.13	1.1	11.7	10.8 - 12.6						
ABX Diagnostics Pentra 80 / XL 80	10	11.71	0.16	1.4	11.7	10.8 - 12.6						
COULTER AcT 5diff (version 2.01)	39	11.75	0.16	1.4	11.7	10.9 - 12.6						

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

<u>Instrument</u>	Specimen BCX-6						Specimen BCX-7					
	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	93	50.48	1.05	2.1	50.5	47.4 - 53.6	92	31.04	0.50	1.6	31.0	29.1 - 33.0
All ABX Instruments	53	50.61	1.20	2.4	50.7	47.5 - 53.7	51	31.03	0.48	1.5	31.0	29.1 - 32.9
All COULTER Instruments	41	50.39	0.99	2.0	50.3	47.3 - 53.5	41	31.06	0.54	1.7	31.0	29.1 - 33.0
ABX Diagnostics Pentra 60C+ (version 2.21 and up)	41	50.57	1.29	2.6	50.5	47.5 - 53.6	39	30.93	0.41	1.3	30.9	29.0 - 32.8
ABX Diagnostics Pentra 80 / XL 80	11	50.88	0.76	1.5	50.8	47.8 - 54.0	11	31.38	0.58	1.8	31.3	29.4 - 33.3
COULTER AcT 5diff (version 2.01)	40	50.37	0.99	2.0	50.3	47.3 - 53.4	40	31.05	0.54	1.7	31.0	29.1 - 33.0
	Specimen BCX-8						Specimen BCX-9					
	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	93	45.97	0.72	1.6	45.9	43.2 - 48.8	93	41.59	0.77	1.9	41.6	39.0 - 44.1
All ABX Instruments	52	45.90	0.72	1.6	45.9	43.1 - 48.7	52	41.52	0.79	1.9	41.5	39.0 - 44.1
All COULTER Instruments	41	46.04	0.71	1.6	46.0	43.2 - 48.9	41	41.68	0.75	1.8	41.6	39.1 - 44.2
ABX Diagnostics Pentra 60C+ (version 2.21 and up)	40	45.89	0.72	1.6	45.9	43.1 - 48.7	40	41.44	0.75	1.8	41.5	38.9 - 44.0
ABX Diagnostics Pentra 80 / XL 80	11	45.99	0.79	1.7	46.2	43.2 - 48.8	11	41.91	0.83	2.0	41.8	39.3 - 44.5
COULTER AcT 5diff (version 2.01)	40	46.05	0.72	1.6	46.0	43.2 - 48.9	40	41.68	0.76	1.8	41.6	39.1 - 44.2
	Specimen BCX-10											
	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>						
All Method	91	34.22	0.69	2.0	34.2	32.1 - 36.3						
All ABX Instruments	50	34.23	0.75	2.2	34.3	32.1 - 36.3						
All COULTER Instruments	41	34.20	0.61	1.8	34.1	32.1 - 36.3						
ABX Diagnostics Pentra 60C+ (version 2.21 and up)	38	34.14	0.76	2.2	34.2	32.0 - 36.2						
ABX Diagnostics Pentra 80 / XL 80	11	34.56	0.71	2.1	34.6	32.4 - 36.7						
COULTER AcT 5diff (version 2.01)	40	34.19	0.61	1.8	34.1	32.1 - 36.3						

HEMATOLOGY W/ 5-PART DIFFERENTIAL–PLATELET COUNT (x 10⁹/L)

Specimen BCX-6							Specimen BCX-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	92	479.7	18.4	3.8	479	359 - 600	94	115.0	7.4	6.4	114	86 - 144
All ABX Instruments	52	476.5	19.8	4.2	479	357 - 596	53	112.5	6.5	5.8	112	84 - 141
All COULTER Instruments	40	483.8	15.7	3.2	484	362 - 605	41	118.2	7.3	6.1	118	88 - 148
ABX Diagnostics Pentra 60C+ (version 2.21 and up)	41	474.0	20.6	4.3	473	355 - 593	41	112.0	6.2	5.6	111	83 - 140
ABX Diagnostics Pentra 80 / XL 80	10	488.1	11.6	2.4	484	366 - 611	11	115.7	6.3	5.5	114	86 - 145
COULTER AcT 5diff (version 2.01)	40	483.8	15.7	3.2	484	362 - 605	40	117.8	6.8	5.8	118	88 - 148
Specimen BCX-8							Specimen BCX-9					
All Method	90	512.1	16.0	3.1	514	384 - 641	93	147.3	8.2	5.5	147	110 - 185
All ABX Instruments	50	511.8	16.1	3.1	514	383 - 640	52	145.9	7.4	5.1	146	109 - 183
All COULTER Instruments	40	512.5	16.1	3.1	509	384 - 641	41	149.0	8.8	5.9	150	111 - 187
ABX Diagnostics Pentra 60C+ (version 2.21 and up)	39	510.7	17.0	3.3	510	383 - 639	40	145.4	7.6	5.2	145	109 - 182
ABX Diagnostics Pentra 80 / XL 80	11	522.1	19.3	3.7	515	391 - 653	11	148.8	5.9	4.0	147	111 - 187
COULTER AcT 5diff (version 2.01)	40	512.5	16.1	3.1	509	384 - 641	40	148.5	8.3	5.6	150	111 - 186
Specimen BCX-10												
All Method	92	218.2	9.1	4.2	218	163 - 273						
All ABX Instruments	52	217.1	9.2	4.2	218	162 - 272						
All COULTER Instruments	40	219.6	9.0	4.1	220	164 - 275						
ABX Diagnostics Pentra 60C+ (version 2.21 and up)	40	216.0	9.6	4.5	216	161 - 270						
ABX Diagnostics Pentra 80 / XL 80	11	221.4	6.6	3.0	220	166 - 277						
COULTER AcT 5diff (version 2.01)	40	219.6	9.0	4.1	220	164 - 275						

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

<u>Instrument</u>	Specimen BCX-6						Specimen BCX-7					
	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	93	50.63	4.08	8.1	51.4	38.3 - 62.9	93	61.34	4.12	6.7	61.1	48.9 - 73.7
All ABX Instruments	52	52.66	3.23	6.1	53.2	42.9 - 62.4	53	62.55	3.78	6.0	62.3	51.2 - 74.0
All COULTER Instruments	41	48.05	3.59	7.5	47.7	37.2 - 58.9	41	59.44	4.40	7.4	59.5	46.2 - 72.7
ABX Diagnostics Pentra 60C+ (version 2.21 and up)	41	52.95	3.13	5.9	53.2	43.5 - 62.4	41	63.00	3.70	5.9	62.5	51.8 - 74.2
ABX Diagnostics Pentra 80 / XL 80	10	51.31	3.60	7.0	52.9	40.5 - 62.2	11	60.54	3.57	5.9	61.1	49.8 - 71.3
COULTER AcT 5diff (version 2.01)	40	48.24	3.43	7.1	47.9	37.9 - 58.6	40	59.73	4.03	6.7	59.8	47.6 - 71.9
	Specimen BCX-8						Specimen BCX-9					
	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	92	65.24	5.87	9.0	65.1	47.6 - 82.9	94	48.65	4.01	8.2	48.4	36.6 - 60.7
All ABX Instruments	52	68.32	5.07	7.4	68.9	53.1 - 83.6	53	49.64	3.91	7.9	50.2	37.8 - 61.4
All COULTER Instruments	40	61.25	4.23	6.9	61.1	48.5 - 74.0	41	47.37	3.81	8.0	47.0	35.9 - 58.9
ABX Diagnostics Pentra 60C+ (version 2.21 and up)	41	68.95	4.74	6.9	69.0	54.7 - 83.2	41	50.21	3.20	6.4	50.2	40.5 - 59.9
ABX Diagnostics Pentra 80 / XL 80	10	65.34	5.70	8.7	65.6	48.2 - 82.5	11	47.25	5.50	11.6	47.9	30.7 - 63.8
COULTER AcT 5diff (version 2.01)	40	61.25	4.23	6.9	61.1	48.5 - 74.0	40	47.59	3.58	7.5	47.1	36.8 - 58.4
	Specimen BCX-10											
	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>						
All Method	91	65.77	4.55	6.9	65.7	52.1 - 79.5						
All ABX Instruments	52	67.57	4.62	6.8	69.0	53.6 - 81.5						
All COULTER Instruments	39	63.38	3.17	5.0	64.2	53.8 - 73.0						
ABX Diagnostics Pentra 60C+ (version 2.21 and up)	41	68.25	4.18	6.1	69.5	55.7 - 80.8						
ABX Diagnostics Pentra 80 / XL 80	10	64.18	4.99	7.8	64.4	49.2 - 79.2						
COULTER AcT 5diff (version 2.01)	39	63.38	3.17	5.0	64.2	53.8 - 73.0						

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

Specimen BCX-6							Specimen BCX-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	92	39.30	2.95	7.5	39.4	30.4 - 48.2	93	25.22	4.12	16.3	25.0	12.8 - 37.6
All ABX Instruments	52	40.17	2.77	6.9	40.2	31.8 - 48.5	52	26.65	3.37	12.6	26.9	16.5 - 36.8
All COULTER Instruments	41	37.95	3.07	8.1	37.7	28.7 - 47.2	41	23.40	4.30	18.4	23.4	10.5 - 36.3
ABX Diagnostics Pentra 60C+ (version 2.21 and up)	41	39.72	2.71	6.8	39.6	31.5 - 47.9	41	26.31	3.36	12.8	26.5	16.2 - 36.5
ABX Diagnostics Pentra 80 / XL 80	10	42.01	2.49	5.9	41.9	34.5 - 49.5	10	28.18	3.26	11.6	27.6	18.4 - 38.0
COULTER AcT 5diff (version 2.01)	40	37.76	2.86	7.6	37.7	29.1 - 46.4	40	23.14	4.02	17.4	23.2	11.0 - 35.3
Specimen BCX-8							Specimen BCX-9					
All Method	90	22.74	3.67	16.1	22.5	11.7 - 33.8	93	40.69	3.92	9.6	40.4	28.9 - 52.5
All ABX Instruments	52	24.36	4.19	17.2	23.8	11.7 - 37.0	52	41.63	3.87	9.3	41.1	30.0 - 53.3
All COULTER Instruments	40	21.29	3.33	15.6	21.1	11.3 - 31.3	41	39.51	3.71	9.4	39.5	28.3 - 50.7
ABX Diagnostics Pentra 60C+ (version 2.21 and up)	39	22.91	2.77	12.1	23.2	14.5 - 31.3	41	41.00	3.27	8.0	40.7	31.1 - 50.8
ABX Diagnostics Pentra 80 / XL 80	10	28.10	3.89	13.9	28.3	16.4 - 39.8	10	44.31	5.24	11.8	44.6	28.5 - 60.1
COULTER AcT 5diff (version 2.01)	40	21.29	3.33	15.6	21.1	11.3 - 31.3	40	39.27	3.42	8.7	39.5	29.0 - 49.6
Specimen BCX-10												
All Method	88	22.27	3.26	14.6	22.0	12.4 - 32.1						
All ABX Instruments	51	24.34	3.85	15.8	23.6	12.7 - 35.9						
All COULTER Instruments	40	20.56	2.85	13.8	19.8	12.0 - 29.1						
ABX Diagnostics Pentra 60C+ (version 2.21 and up)	39	23.19	2.52	10.9	22.8	15.6 - 30.8						
ABX Diagnostics Pentra 80 / XL 80	10	28.07	4.27	15.2	27.9	15.2 - 40.9						
COULTER AcT 5diff (version 2.01)	40	20.56	2.85	13.8	19.8	12.0 - 29.1						

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

Specimen BCX-6							Specimen BCX-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	91	2.50	1.32	52.8	2.3	0.0 - 6.5	90	0.99	0.71	71.5	0.9	0.0 - 3.2
All ABX Instruments	52	2.41	1.25	51.7	2.3	0.0 - 6.2	51	0.81	0.53	66.1	0.7	0.0 - 2.5
All COULTER Instruments	41	2.84	1.73	60.9	2.7	0.0 - 8.1	41	1.35	0.97	71.9	1.1	0.0 - 4.3
ABX Diagnostics Pentra 60C+ (version 2.21 and up)	40	2.49	1.26	50.7	2.4	0.0 - 6.3	39	0.81	0.56	69.3	0.7	0.0 - 2.6
ABX Diagnostics Pentra 80 / XL 80	11	2.21	1.24	56.2	1.9	0.0 - 6.0	11	0.84	0.42	49.7	0.9	0.0 - 2.1
COULTER AcT 5diff (version 2.01)	40	2.81	1.74	61.9	2.7	0.0 - 8.1	40	1.32	0.96	73.0	1.1	0.0 - 4.2
Specimen BCX-8							Specimen BCX-9					
All Method	90	2.25	1.36	60.5	2.0	0.0 - 6.4	92	1.25	0.83	66.0	1.1	0.0 - 3.8
All ABX Instruments	52	2.13	1.32	62.1	2.0	0.0 - 6.1	51	1.15	0.75	65.6	1.1	0.0 - 3.5
All COULTER Instruments	41	2.82	2.00	70.8	2.5	0.0 - 8.9	41	1.38	0.90	65.3	1.2	0.0 - 4.1
ABX Diagnostics Pentra 60C+ (version 2.21 and up)	40	2.30	1.34	58.6	2.2	0.0 - 6.4	39	1.23	0.69	56.4	1.2	0.0 - 3.4
ABX Diagnostics Pentra 80 / XL 80	11	1.62	1.15	71.3	1.0	0.0 - 5.1	11	0.93	0.94	55.9	1.0	0.0 - 3.8
COULTER AcT 5diff (version 2.01)	40	2.77	2.00	72.1	2.4	0.0 - 8.8	40	1.38	0.91	66.3	1.2	0.0 - 4.2
Specimen BCX-10												
All Method	90	1.46	0.92	63.1	1.2	0.0 - 4.3						
All ABX Instruments	52	1.31	0.83	63.6	1.1	0.0 - 3.9						
All COULTER Instruments	41	1.95	1.40	71.8	1.6	0.0 - 6.2						
ABX Diagnostics Pentra 60C+ (version 2.21 and up)	40	1.37	0.83	60.3	1.2	0.0 - 3.9						
ABX Diagnostics Pentra 80 / XL 80	11	1.17	0.89	75.5	0.8	0.0 - 3.9						
COULTER AcT 5diff (version 2.01)	40	1.90	1.38	72.7	1.6	0.0 - 6.1						

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

Specimen BCX-6							Specimen BCX-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	94	3.57	0.63	17.6	3.6	1.6 - 5.5	92	8.31	1.34	16.1	8.2	4.2 - 12.4
All ABX Instruments	53	3.78	0.59	15.6	3.8	2.0 - 5.6	51	8.79	1.20	13.7	9.0	5.1 - 12.5
All COULTER Instruments	41	3.30	0.58	17.6	3.3	1.5 - 5.1	41	7.71	1.27	16.4	7.5	3.9 - 11.6
ABX Diagnostics Pentra 60C+ (version 2.21 and up)	41	3.86	0.61	15.9	3.9	2.0 - 5.8	39	8.91	1.05	11.7	9.1	5.7 - 12.1
ABX Diagnostics Pentra 80 / XL 80	11	3.48	0.42	12.1	3.5	2.2 - 4.8	11	8.46	1.68	19.9	8.0	3.4 - 13.6
COULTER AcT 5diff (version 2.01)	40	3.32	0.58	17.5	3.3	1.5 - 5.1	40	7.72	1.28	16.6	7.5	3.8 - 11.6
Specimen BCX-8							Specimen BCX-9					
All Method	94	3.68	0.57	15.5	3.6	1.9 - 5.4	94	6.12	1.50	24.5	5.8	1.6 - 10.7
All ABX Instruments	53	3.79	0.57	15.0	3.8	2.0 - 5.5	53	6.51	1.60	24.6	6.3	1.7 - 11.4
All COULTER Instruments	41	3.54	0.55	15.6	3.6	1.8 - 5.2	41	5.62	1.20	21.3	5.4	2.0 - 9.3
ABX Diagnostics Pentra 60C+ (version 2.21 and up)	41	3.90	0.57	14.5	3.9	2.1 - 5.6	41	6.75	1.50	22.2	6.5	2.2 - 11.3
ABX Diagnostics Pentra 80 / XL 80	11	3.36	0.37	11.1	3.4	2.2 - 4.5	11	5.62	1.80	32.1	5.7	0.2 - 11.1
COULTER AcT 5diff (version 2.01)	40	3.57	0.53	14.9	3.6	1.9 - 5.2	40	5.65	1.19	21.1	5.5	2.0 - 9.3
Specimen BCX-10												
All Method	91	5.15	0.69	13.3	5.2	3.0 - 7.3						
All ABX Instruments	51	5.33	0.62	11.6	5.3	3.4 - 7.2						
All COULTER Instruments	40	4.92	0.71	14.4	4.8	2.7 - 7.1						
ABX Diagnostics Pentra 60C+ (version 2.21 and up)	40	5.32	0.61	11.5	5.3	3.4 - 7.2						
ABX Diagnostics Pentra 80 / XL 80	10	5.34	0.71	13.3	5.4	3.2 - 7.5						
COULTER AcT 5diff (version 2.01)	39	4.94	0.69	14.0	4.8	2.8 - 7.1						

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

<u>Instrument</u>	Specimen BCX-6						Specimen BCX-7					
	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	90	3.79	3.83	100.9	0.4	0.0 - 15.3	87	4.03	3.97	98.5	0.4	0.0 - 16.0
All ABX Instruments	50	0.40	0.01	0.0	0.4	0.3 - 0.5	47	0.40	0.01	0.0	0.4	0.3 - 0.5
All COULTER Instruments	40	8.03	0.45	5.6	8.0	6.6 - 9.4	40	8.29	0.42	5.1	8.3	7.0 - 9.6
ABX Diagnostics Pentra 60C+ (version 2.21 and up)	39	0.40	0.01	0.0	0.4	0.3 - 0.5	36	0.40	0.01	0.0	0.4	0.3 - 0.5
ABX Diagnostics Pentra 80 / XL 80	10	0.40	0.01	0.0	0.4	0.3 - 0.5	10	0.40	0.01	0.0	0.4	0.3 - 0.5
COULTER AcT 5diff (version 2.01)	39	8.05	0.43	5.4	8.0	6.7 - 9.4	39	8.29	0.43	5.2	8.3	7.0 - 9.6
	Specimen BCX-8						Specimen BCX-9					
	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	89	5.34	5.41	101.4	0.6	0.0 - 21.6	88	3.01	3.00	99.4	0.3	0.0 - 12.0
All ABX Instruments	50	0.59	0.03	5.6	0.6	0.4 - 0.7	48	0.30	0.01	0.0	0.3	0.2 - 0.4
All COULTER Instruments	39	11.43	0.25	2.2	11.4	10.6 - 12.2	40	6.27	0.30	4.8	6.3	5.3 - 7.2
ABX Diagnostics Pentra 60C+ (version 2.21 and up)	39	0.59	0.03	5.2	0.6	0.4 - 0.7	37	0.30	0.01	0.0	0.3	0.2 - 0.4
ABX Diagnostics Pentra 80 / XL 80	10	0.58	0.04	7.3	0.6	0.4 - 0.8	10	0.30	0.01	0.0	0.3	0.2 - 0.4
COULTER AcT 5diff (version 2.01)	38	11.42	0.25	2.2	11.4	10.6 - 12.2	39	6.26	0.30	4.8	6.2	5.3 - 7.2
	Specimen BCX-10											
	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>						
All Method	90	4.34	4.35	100.2	0.5	0.0 - 17.4						
All ABX Instruments	50	0.48	0.04	9.1	0.5	0.3 - 0.7						
All COULTER Instruments	40	9.17	0.31	3.4	9.2	8.2 - 10.1						
ABX Diagnostics Pentra 60C+ (version 2.21 and up)	39	0.48	0.04	9.0	0.5	0.3 - 0.7						
ABX Diagnostics Pentra 80 / XL 80	10	0.47	0.05	10.3	0.5	0.3 - 0.7						
COULTER AcT 5diff (version 2.01)	39	9.15	0.28	3.1	9.1	8.2 - 10.0						

HEMATOLOGY W/ 5-PART DIFFERENTIAL–WHITE BLOOD CELL COUNT (x 10⁹/L)

Specimen MX-6							Specimen MX-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	44	7.01	0.55	7.9	7.0	5.9 - 8.1	44	3.66	0.36	9.9	3.8	3.1 - 4.3
All Sysmex XE/XT Instruments	12	7.32	0.32	4.4	7.3	6.2 - 8.5	12	3.82	0.20	5.2	3.9	3.2 - 4.4
All Sysmex XN/XS Instruments	30	6.88	0.59	8.6	6.6	5.8 - 8.0	30	3.60	0.41	11.3	3.8	3.0 - 4.2
Sysmex XS-1000i	27	6.84	0.61	9.0	6.6	5.8 - 7.9	27	3.58	0.43	11.9	3.9	3.0 - 4.2
Specimen MX-8							Specimen MX-9					
All Method	44	20.09	0.87	4.3	20.1	17.0 - 23.2	44	20.10	0.86	4.3	20.0	17.0 - 23.2
All Sysmex XE/XT Instruments	12	19.51	0.88	4.5	19.1	16.5 - 22.5	12	19.68	0.89	4.5	19.3	16.7 - 22.7
All Sysmex XN/XS Instruments	30	20.39	0.72	3.5	20.2	17.3 - 23.5	30	20.35	0.74	3.6	20.2	17.2 - 23.5
Sysmex XS-1000i	27	20.47	0.70	3.4	20.3	17.4 - 23.6	27	20.41	0.74	3.6	20.3	17.3 - 23.5
Specimen MX-10												
All Method	44	3.68	0.36	9.9	3.8	3.1 - 4.3						
All Sysmex XE/XT Instruments	12	3.67	0.20	5.4	3.7	3.1 - 4.3						
All Sysmex XN/XS Instruments	30	3.67	0.42	11.5	3.9	3.1 - 4.3						
Sysmex XS-1000i	27	3.66	0.44	12.1	3.9	3.1 - 4.3						

HEMATOLOGY W/ 5-PART DIFFERENTIAL–RED BLOOD CELL COUNT (x 10¹²/L)

Specimen MX-6							Specimen MX-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	44	4.607	0.061	1.3	4.61	4.33 - 4.89	44	2.317	0.051	2.2	2.31	2.17 - 2.46
All Sysmex XE/XT Instruments	12	4.653	0.052	1.1	4.64	4.37 - 4.94	12	2.372	0.031	1.3	2.37	2.22 - 2.52
All Sysmex XN/XS Instruments	30	4.589	0.056	1.2	4.58	4.31 - 4.87	29	2.289	0.033	1.4	2.30	2.15 - 2.43
Sysmex XS-1000i	27	4.588	0.058	1.3	4.57	4.31 - 4.87	27	2.295	0.042	1.8	2.30	2.15 - 2.44
Specimen MX-8							Specimen MX-9					
All Method	44	5.522	0.078	1.4	5.54	5.19 - 5.86	44	5.528	0.071	1.3	5.54	5.19 - 5.86
All Sysmex XE/XT Instruments	12	5.500	0.091	1.6	5.49	5.17 - 5.83	12	5.505	0.083	1.5	5.48	5.17 - 5.84
All Sysmex XN/XS Instruments	30	5.536	0.071	1.3	5.55	5.20 - 5.87	30	5.543	0.061	1.1	5.55	5.21 - 5.88
Sysmex XS-1000i	27	5.536	0.073	1.3	5.54	5.20 - 5.87	27	5.543	0.064	1.2	5.55	5.21 - 5.88
Specimen MX-10												
All Method	43	2.313	0.047	2.0	2.30	2.17 - 2.46						
All Sysmex XE/XT Instruments	12	2.366	0.030	1.3	2.37	2.22 - 2.51						
All Sysmex XN/XS Instruments	29	2.289	0.033	1.4	2.29	2.15 - 2.43						
Sysmex XS-1000i	26	2.293	0.033	1.4	2.29	2.15 - 2.44						

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

Specimen MX-6							Specimen MX-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	44	13.18	0.13	1.0	13.2	12.2 - 14.2	44	5.94	0.08	1.3	5.9	5.5 - 6.4
All Sysmex XE/XT Instruments	12	13.22	0.10	0.8	13.2	12.2 - 14.2	12	5.98	0.07	1.2	6.0	5.5 - 6.5
All Sysmex XN/XS Instruments	30	13.16	0.13	1.0	13.2	12.2 - 14.1	30	5.93	0.08	1.3	5.9	5.5 - 6.4
Sysmex XS-1000i	27	13.17	0.13	1.0	13.2	12.2 - 14.1	27	5.93	0.08	1.4	5.9	5.5 - 6.4
Specimen MX-8							Specimen MX-9					
All Method	44	17.42	0.24	1.4	17.5	16.2 - 18.7	43	17.46	0.20	1.2	17.5	16.2 - 18.7
All Sysmex XE/XT Instruments	12	17.25	0.34	2.0	17.2	16.0 - 18.5	12	17.24	0.28	1.6	17.3	16.0 - 18.5
All Sysmex XN/XS Instruments	30	17.50	0.14	0.8	17.5	16.2 - 18.8	30	17.53	0.14	0.8	17.6	16.3 - 18.8
Sysmex XS-1000i	27	17.51	0.13	0.7	17.5	16.2 - 18.8	27	17.54	0.13	0.8	17.6	16.3 - 18.8
Specimen MX-10												
All Method	43	5.95	0.07	1.1	6.0	5.5 - 6.4						
All Sysmex XE/XT Instruments	12	5.97	0.07	1.1	6.0	5.5 - 6.4						
All Sysmex XN/XS Instruments	29	5.94	0.07	1.1	5.9	5.5 - 6.4						
Sysmex XS-1000i	26	5.93	0.07	1.1	5.9	5.5 - 6.4						

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

Specimen MX-6							Specimen MX-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	44	39.49	0.67	1.7	39.4	37.1 - 41.9	44	18.37	0.39	2.1	18.5	17.2 - 19.5
All Sysmex XE/XT Instruments	12	39.63	0.36	0.9	39.7	37.2 - 42.1	12	18.61	0.27	1.4	18.6	17.4 - 19.8
All Sysmex XN/XS Instruments	30	39.42	0.77	1.9	39.2	37.0 - 41.8	30	18.26	0.40	2.2	18.3	17.1 - 19.4
Sysmex XS-1000i	27	39.48	0.77	2.0	39.3	37.1 - 41.9	27	18.33	0.36	1.9	18.4	17.2 - 19.5
Specimen MX-8							Specimen MX-9					
All Method	44	51.69	1.01	2.0	51.7	48.5 - 54.8	44	51.87	0.99	1.9	51.9	48.7 - 55.0
All Sysmex XE/XT Instruments	12	51.42	0.69	1.3	51.3	48.3 - 54.6	12	51.62	0.80	1.6	51.6	48.5 - 54.8
All Sysmex XN/XS Instruments	30	51.81	1.13	2.2	51.9	48.6 - 55.0	30	51.98	1.08	2.1	52.3	48.8 - 55.2
Sysmex XS-1000i	27	51.90	1.12	2.2	52.0	48.7 - 55.1	27	52.06	1.09	2.1	52.3	48.9 - 55.2
Specimen MX-10												
All Method	43	18.31	0.38	2.1	18.3	17.2 - 19.5						
All Sysmex XE/XT Instruments	12	18.58	0.29	1.6	18.7	17.4 - 19.7						
All Sysmex XN/XS Instruments	29	18.18	0.37	2.0	18.2	17.0 - 19.3						
Sysmex XS-1000i	26	18.26	0.29	1.6	18.2	17.1 - 19.4						

HEMATOLOGY W/ 5-PART DIFFERENTIAL–PLATELET COUNT (x 10⁹/L)

Specimen MX-6							Specimen MX-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	44	208.3	9.5	4.5	208	156 - 261	44	57.7	4.9	8.5	57	43 - 73
All Sysmex XE/XT Instruments	12	206.5	12.3	5.9	209	154 - 259	12	58.8	5.4	9.2	57	44 - 74
All Sysmex XN/XS Instruments	30	209.2	8.5	4.1	208	156 - 262	30	57.1	4.8	8.4	56	42 - 72
Sysmex XS-1000i	27	209.1	8.7	4.2	208	156 - 262	27	57.4	4.7	8.2	56	43 - 72
Specimen MX-8							Specimen MX-9					
All Method	43	407.9	13.7	3.3	407	305 - 510	44	410.7	15.1	3.7	410	307 - 514
All Sysmex XE/XT Instruments	12	398.4	14.5	3.6	398	298 - 499	12	399.3	17.0	4.2	399	299 - 500
All Sysmex XN/XS Instruments	29	412.6	11.3	2.7	409	309 - 516	30	415.5	12.3	3.0	414	311 - 520
Sysmex XS-1000i	27	411.4	10.7	2.6	408	308 - 515	27	413.7	10.9	2.6	410	310 - 518
Specimen MX-10												
All Method	44	57.6	4.9	8.5	58	43 - 72						
All Sysmex XE/XT Instruments	12	59.1	6.2	10.4	61	44 - 74						
All Sysmex XN/XS Instruments	30	57.0	4.4	7.7	58	42 - 72						
Sysmex XS-1000i	27	57.1	4.5	7.8	58	42 - 72						

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

Specimen MX-6							Specimen MX-7						
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	
All Method	44	51.91	5.43	10.5	52.6	35.6 - 68.3	42	65.51	3.18	4.9	65.3	55.9 - 75.1	
All Sysmex XE/XT Instruments	12	54.92	2.12	3.9	54.9	48.5 - 61.3	12	68.73	1.84	2.7	69.3	63.2 - 74.3	
All Sysmex XN/XS Instruments	30	50.29	5.73	11.4	47.6	33.1 - 67.5	28	63.83	2.24	3.5	63.6	57.0 - 70.6	
Sysmex XS-1000i	27	49.25	4.42	9.0	47.3	35.9 - 62.6	27	63.81	2.28	3.6	63.4	56.9 - 70.7	
Specimen MX-8							Specimen MX-9						
All Method	44	59.59	5.04	8.5	58.5	44.4 - 74.8	43	58.92	5.28	9.0	58.1	43.0 - 74.8	
All Sysmex XE/XT Instruments	12	60.88	2.20	3.6	61.7	54.2 - 67.5	12	60.61	2.01	3.3	61.7	54.5 - 66.7	
All Sysmex XN/XS Instruments	30	58.87	5.83	9.9	55.8	41.3 - 76.4	29	58.05	6.14	10.6	54.6	39.6 - 76.5	
Sysmex XS-1000i	27	57.95	4.95	8.5	55.5	43.1 - 72.8	26	57.12	5.43	9.5	54.1	40.8 - 73.5	
Specimen MX-10													
All Method	42	65.61	3.35	5.1	65.4	55.5 - 75.7							
All Sysmex XE/XT Instruments	12	69.06	1.94	2.8	69.7	63.2 - 74.9							
All Sysmex XN/XS Instruments	28	63.83	2.36	3.7	63.8	56.7 - 71.0							
Sysmex XS-1000i	27	63.83	2.41	3.8	63.8	56.6 - 71.1							

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

Specimen MX-6							Specimen MX-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	44	29.17	4.76	16.3	31.5	14.8 - 43.5	44	11.49	2.87	25.0	11.9	2.8 - 20.2
All Sysmex XE/XT Instruments	12	29.88	2.36	7.9	30.8	22.7 - 37.0	12	14.31	1.76	12.3	14.3	9.0 - 19.7
All Sysmex XN/XS Instruments	30	29.10	5.52	19.0	32.4	12.5 - 45.7	30	10.27	2.47	24.0	10.3	2.8 - 17.7
Sysmex XS-1000i	27	29.64	5.37	18.1	32.6	13.5 - 45.8	27	10.29	2.31	22.5	10.4	3.3 - 17.3
Specimen MX-8							Specimen MX-9					
All Method	44	20.78	2.64	12.7	21.2	12.8 - 28.7	44	21.13	2.72	12.9	21.5	12.9 - 29.4
All Sysmex XE/XT Instruments	12	22.74	2.48	10.9	21.6	15.3 - 30.2	12	22.90	2.19	9.6	21.6	16.3 - 29.5
All Sysmex XN/XS Instruments	30	19.97	2.39	12.0	21.0	12.7 - 27.2	30	20.32	2.62	12.9	21.2	12.4 - 28.2
Sysmex XS-1000i	27	20.14	2.35	11.7	21.0	13.0 - 27.3	27	20.57	2.57	12.5	21.5	12.8 - 28.3
Specimen MX-10												
All Method	44	11.19	2.96	26.4	11.5	2.3 - 20.1						
All Sysmex XE/XT Instruments	12	14.12	1.67	11.9	14.1	9.0 - 19.2						
All Sysmex XN/XS Instruments	30	9.92	2.55	25.7	9.5	2.2 - 17.6						
Sysmex XS-1000i	27	9.93	2.22	22.4	10.0	3.2 - 16.6						

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

Specimen MX-6							Specimen MX-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	42	2.36	1.94	82.2	1.6	0.0 - 8.2	42	1.13	0.96	85.0	0.8	0.0 - 4.1
All Sysmex XE/XT Instruments	12	2.46	0.85	34.5	2.3	0.0 - 5.1	12	1.11	0.51	46.1	0.8	0.0 - 2.7
All Sysmex XN/XS Instruments	30	2.85	3.09	108.3	1.1	0.0 - 12.2	28	1.16	1.13	97.5	0.6	0.0 - 4.6
Sysmex XS-1000i	27	2.32	2.37	102.0	1.0	0.0 - 9.5	26	1.05	0.90	85.4	0.6	0.0 - 3.8
Specimen MX-8							Specimen MX-9					
All Method	42	2.25	1.43	63.4	2.1	0.0 - 6.6	44	2.45	1.63	66.5	2.0	0.0 - 7.4
All Sysmex XE/XT Instruments	12	2.57	0.39	15.1	2.7	1.4 - 3.8	12	2.67	0.45	17.0	2.7	1.3 - 4.1
All Sysmex XN/XS Instruments	28	2.08	1.71	82.5	1.2	0.0 - 7.3	30	2.38	1.95	81.9	1.3	0.0 - 8.3
Sysmex XS-1000i	27	2.08	1.75	84.1	1.1	0.0 - 7.4	27	2.07	1.63	78.7	1.2	0.0 - 7.0
Specimen MX-10												
All Method	42	1.24	0.93	74.6	0.8	0.0 - 4.1						
All Sysmex XE/XT Instruments	12	1.13	0.74	65.8	0.9	0.0 - 3.4						
All Sysmex XN/XS Instruments	30	1.59	1.52	95.4	0.8	0.0 - 6.2						
Sysmex XS-1000i	27	1.32	1.04	78.5	0.8	0.0 - 4.5						

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

Specimen MX-6							Specimen MX-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	42	13.30	1.87	14.0	12.6	7.6 - 19.0	42	17.20	3.17	18.4	16.4	7.6 - 26.8
All Sysmex XE/XT Instruments	12	12.74	0.60	4.7	12.6	10.9 - 14.6	12	15.86	0.62	3.9	15.9	13.9 - 17.8
All Sysmex XN/XS Instruments	28	13.48	2.20	16.3	12.5	6.8 - 20.1	30	16.90	5.05	29.9	16.4	1.7 - 32.1
Sysmex XS-1000i	27	13.48	2.24	16.6	12.5	6.7 - 20.2	27	17.89	3.78	21.1	16.5	6.5 - 29.3
Specimen MX-8							Specimen MX-9					
All Method	42	13.73	0.63	4.6	13.6	11.8 - 15.7	40	13.79	0.52	3.8	13.7	12.2 - 15.4
All Sysmex XE/XT Instruments	12	13.81	0.72	5.2	13.5	11.6 - 16.0	12	13.83	0.43	3.1	13.9	12.5 - 15.2
All Sysmex XN/XS Instruments	28	13.72	0.62	4.5	13.6	11.8 - 15.6	26	13.77	0.57	4.2	13.6	12.0 - 15.5
Sysmex XS-1000i	27	13.73	0.63	4.6	13.6	11.8 - 15.7	25	13.74	0.55	4.0	13.5	12.0 - 15.4
Specimen MX-10												
All Method	42	17.25	3.13	18.2	16.1	7.8 - 26.7						
All Sysmex XE/XT Instruments	12	15.70	0.49	3.1	15.6	14.2 - 17.2						
All Sysmex XN/XS Instruments	30	17.05	5.01	29.4	16.2	2.0 - 32.1						
Sysmex XS-1000i	27	18.13	3.62	20.0	16.3	7.2 - 29.0						

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

Specimen MX-6							Specimen MX-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	14	71.88	0.79	1.1	7.7	69.5 - 74.3	14	91.78	3.63	4.0	10.0	80.8 - 102.7
All Sysmex XE/XT Instruments	12	71.87	0.79	1.1	71.7	69.4 - 74.3	12	91.43	3.11	3.4	90.3	82.0 - 100.8
All Sysmex XN/XS Instruments	29	5.13	3.47	67.7	7.0	0.0 - 15.6	29	6.53	4.55	69.6	8.7	0.0 - 20.2
Sysmex XS-1000i	26	5.53	3.37	60.9	7.3	0.0 - 15.7	26	7.09	4.42	62.4	9.1	0.0 - 20.4
Specimen MX-8							Specimen MX-9					
All Method	14	80.84	1.34	1.7	8.5	76.8 - 84.9	14	80.69	1.30	1.6	9.4	76.8 - 84.6
All Sysmex XE/XT Instruments	12	80.73	1.43	1.8	81.3	76.4 - 85.1	12	80.68	1.41	1.7	81.2	76.4 - 85.0
All Sysmex XN/XS Instruments	29	5.86	4.03	68.9	8.0	0.0 - 18.0	29	6.10	4.21	69.0	8.3	0.0 - 18.8
Sysmex XS-1000i	26	6.33	3.93	62.0	8.1	0.0 - 18.2	26	6.61	4.10	62.0	8.8	0.0 - 18.9
Specimen MX-10												
All Method	14	94.54	4.24	4.5	9.8	81.8 - 107.3						
All Sysmex XE/XT Instruments	12	95.41	3.94	4.1	96.1	83.5 - 107.3						
All Sysmex XN/XS Instruments	29	6.51	4.49	68.9	9.2	0.0 - 20.0						
Sysmex XS-1000i	26	7.06	4.35	61.6	9.4	0.0 - 20.1						

2015 M2

BLOOD CELL IDENTIFICATION

Specimens BC-7 through BC-12

CASE HISTORY:

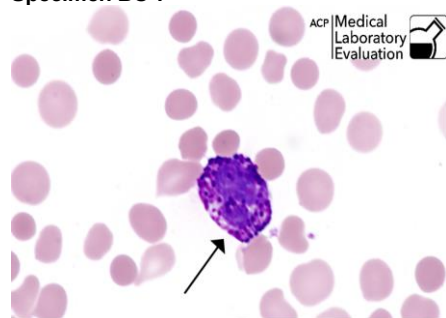
A 23-year-old white female medical student presented to urgent care center. She was concerned about her liver because she had suddenly noticed her skin looked yellow and she had been experiencing some abdominal pain. She also recently experienced shortness of breath after climbing a flight of stairs. Upon physical examination, the patient appeared slightly jaundiced, with mild splenomegaly. Blood tests were performed, and significant results appear below:

Test	Results	Reference Range
WBC	$12.9 \times 10^9/L$	$4.5 - 11.5 \times 10^9/L$
RBC	$3.88 \times 10^{12}/L$	$4.2 - 5.4 \times 10^{12}/L$
Hgb	11.3 g/dL	12 - 15 g/dL
Hct	32 %	35 - 49 %
Plt	$303 \times 10^9/L$	$150 - 450 \times 10^9/L$
MCV	82 fL	80 - 94 fL
MCH	29 pg	26 - 32 pg
MCHC	35 %	32 - 36 %
RDW	22 %	11.5 - 14.5 %

This patient was diagnosed with Hereditary Spherocytosis. Hereditary spherocytosis (HS) is an inherited disorder of the red blood cell membranes. HS is characterized by a predominance of microspherocytes and increased Mean Cell Hemoglobin Concentration (MCHC). Affected red blood cells are smaller and have a spherical shape due to loss of membrane surface area, and have a darker red color than normal cells. Spherocytes in the blood stream are removed from circulation at a greater rate and in a shorter time than normal red cells, causing increased hemolysis. Spherocytes get trapped in the spleen and destroyed, because they cannot deform enough to squeeze through the small spaces of the spleen. The clinical spectrum of HS can range from asymptomatic to severe chronic hemolytic anemia. The majority of cases are diagnosed in childhood, but mild cases may be diagnosed at any age, usually when exacerbated by another condition. Many patients are able to compensate for a mild degree of hemolysis with increased RBC production. If the degree of anemia is clinically significant, the patient's spleen is surgically removed to eliminate the hemolysis. Bilirubin gallstones are a common side effect of chronic hemolysis.

BLOOD CELL IDENTIFICATION

Specimen BC-7



Identification
Basophil, any stage

Labs
223

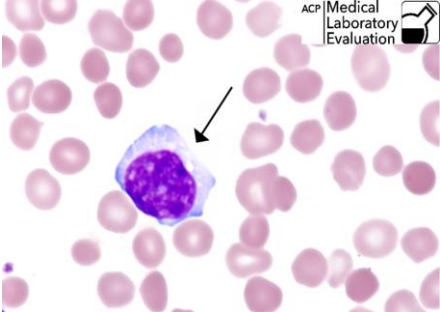
Percent
99.55%

Performance
Acceptable

The arrow in this photograph points to a **basophil**. The characteristic large, dense, blue-black granules protrude from the cytoplasmic edge and obscure the features of the nucleus. To view another photo of a basophil, see 2013 M1 Specimen BC-5.

BLOOD CELL IDENTIFICATION

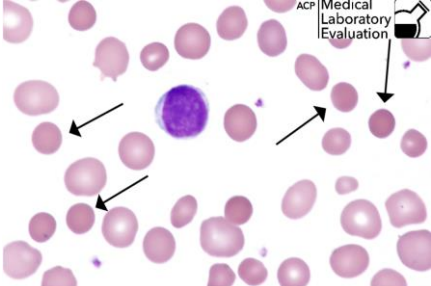
Specimen BC-8



Identification	Labs	Percent	Performance
Lymphocyte, reactive	191	85.65%	Acceptable
Immature abnormal cell-refer	16	7.17%	Acceptable
Monocyte	12	5.38%	

The arrow in this photograph points to a **reactive lymphocyte**. Reactive lymphs appear in a wide variety of forms, sizes and shapes. These large atypical lymphocytes are reacting to immune stimuli in the body. They are often increased in viral infections such as infectious mononucleosis. The cytoplasm is light blue, with peripheral basophilia- a deeper blue color at the extreme border. The edges of the cytoplasm tend to flow around the adjacent red blood cells. The nucleus is large, appearing slightly elongated or stretched. Some participants incorrectly identified this cell as a monocyte. Monocytes often appear to push away adjacent red cells with their cytoplasm, and lack the dark blue periphery that is typical of lymphocytes. To view another photo of a reactive lymphocyte, see 2014 M1 Specimen BC-2. To view a monocyte, see 2013 M1 Specimen BC-3.

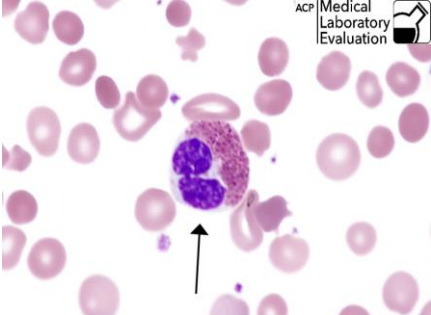
Specimen BC-9



Identification	Labs	Percent	Performance
Spherocyte	196	87.89%	Acceptable
Microcyte	26	11.66%	

The arrows in this photograph point to **spherocytes**. Notice the difference in size between the nucleus of the lymphocyte and the spherocyte below it. The nucleus of a small lymph such as this one is a good reference for estimating the size of red blood cells. A normal RBC is approximately the same size or slightly smaller than the lymph's nucleus. The deep red color and absence of central pallor distinguishes spherocytes from microcytes. Microcytes look just like average RBCs, only smaller. To view a photo of microcytes, see 2014 M1, Specimen BC-5. To view another photo of spherocytes, see 2010 M3 Specimen BC-15.

Specimen BC-10

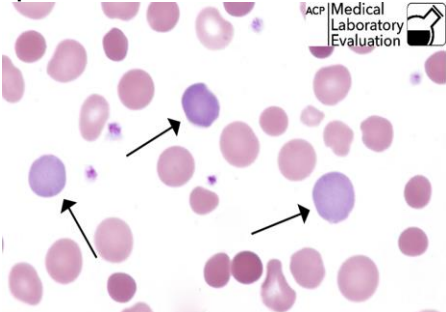


Identification	Labs	Percent	Performance
Eosinophil	218	97.76%	Acceptable

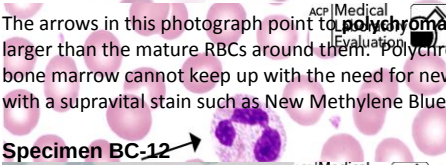
The arrow in this photograph points to an **eosinophil**. These cells are easily identified by their characteristic red-orange color, imparted by the dye eosin. The cytoplasm of an eosinophil is filled with large round red-orange granules which surround the nucleus but do not obscure it.

BLOOD CELL IDENTIFICATION

Specimen BC-11

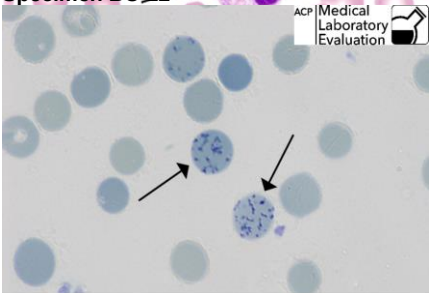


<u>Identification</u>	<u>Labs</u>	<u>Percent</u>	<u>Performance</u>
Polychromatophilic red cell	216	97.30%	Acceptable



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 (see BC-12 below). To view another photo of polychromatophilic RBCs, see 2014 M3 Specimen BC13.

Specimen BC-12



<u>Identification</u>	<u>Labs</u>	<u>Percent</u>	<u>Performance</u>
Reticulocyte	184	85.58%	Not graded – Educational Challenge
Basophilic stippling	14	6.51%	
Immature abnormal cell-refer	12	5.58%	
Heinz body	3	1.40%	
Basophil, any stage	1	0.47%	
Polychronatophilic red cell	1	0.47%	

The arrows in this ungraded educational challenge point to **reticulocytes** in a supravital stain. A reticulocyte is a RBC that has ejected its nucleus, has just been released from the bone marrow into circulation, and still contains some residual RNA. A reticulocyte count provides an assessment of the patient’s bone marrow activity, which helps in determining the nature of the anemia. If the anemia is due to blood loss or hemolysis, (as in this case study) the retic count will be increased. If the anemia is due to inadequate production of red blood cells, the retic count is decreased. While each laboratory must establish its own reference range, a normal adult reticulocyte count would be approximately 0.5-1.5%.

References:

Rodak, B. F.: *Hematology: Clinical Principles and Applications*. 3rd ed. W. B. Saunders, Philadelphia, 2007.

Schrier, S. L. “Hemoglobinopathies and Hemolytic Anemias.” *ACP Medicine*. Ed. D. C. Dale. New York: WebMD, Inc., 2004. 1092-1093.

BLOOD BANK

ABO GROUP

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

RH FACTOR (D TYPE)

<u>Specimen</u>	<u>Results</u>	<u>Labs</u>	<u>Percent</u>	<u>Performance</u>
BB-6	Rh Positive	14	100%	Acceptable
BB-7	Rh Positive	13	92.86%	Acceptable
	Rh Negative	1	7.14%	
BB-8	Rh Negative	14	100%	Acceptable
BB-9	Rh Negative	14	100%	Acceptable
BB-10	Rh Positive	14	100%	Acceptable

Specimen BB-7 was graded by 100% referee consensus.

UNEXPECTED ANTIBODY DETECTION

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

BLOOD BANK

ANTIBODY IDENTIFICATION

<u>Specimen</u>	<u>Results</u>	<u>Labs</u>	<u>Percent</u>	<u>Performance</u>
AB-6	Anti-K	1	100%	Acceptable
AB-7	No antibody detected	1	100%	Acceptable
AB-8	No antibody detected	1	100%	Acceptable
AB-9	Anti-Fy ^a	1	100%	Acceptable
AB-10	No antibody detected	1	100%	Acceptable

COMPATIBILITY TESTING

<u>Specimen</u>	<u>Results</u>	<u>Labs</u>	<u>Percent</u>	<u>Performance</u>
AB-6	Not Compatible	6	100%	Acceptable
AB-7	Compatible	6	100%	Acceptable
AB-8	Compatible	6	100%	Acceptable
AB-9	Compatible	6	100%	Acceptable
AB-10	Compatible	6	100%	Acceptable

PROTHROMBIN TIME (seconds)

<u>Reagent/Instrument</u>	Specimen CG-6						Specimen CG-7					
	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	56	42.33	7.64	18.0	43.6	35.9 - 48.7	56	10.59	0.82	7.8	10.5	8.9 - 12.2
Dade Innovin												
Dade Behring BFT II	5	46.60	5.26	11.3	46.1	39.6 - 53.6	5	9.16	0.29	3.1	9.2	7.7 - 10.6
Sysmex CA-500/600 series	27	43.72	2.25	5.1	43.8	37.1 - 50.3	27	10.36	0.23	2.2	10.4	8.8 - 12.0
All Coagulation Instruments	34	44.00	2.98	6.8	43.9	37.4 - 50.6	34	10.11	0.55	5.4	10.3	8.5 - 11.7
HemosIL RecombiPlasTin 2G												
IL ACL, all models	5	51.52	3.72	7.2	52.5	43.7 - 59.3	5	11.40	0.16	1.4	11.4	9.6 - 13.2
IL TEST PT Fibrinogen												
IL ACL, all models	8	30.53	1.85	6.1	30.9	25.9 - 35.2	8	10.95	0.21	2.0	11.0	9.3 - 12.6
<u>Reagent/Instrument</u>	Specimen CG-8						Specimen CG-9					
	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	55	12.58	0.63	5.0	12.6	10.6 - 14.5	56	10.72	0.83	7.7	10.6	9.1 - 12.4
Dade Innovin												
Dade Behring BFT II	5	12.02	0.41	3.4	12.1	10.2 - 13.9	5	9.42	0.41	4.4	9.5	8.0 - 10.9
Sysmex CA-500/600 series	26	12.52	0.34	2.7	12.6	10.6 - 14.5	27	10.43	0.27	2.6	10.4	8.8 - 12.0
All Coagulation Instruments	33	12.39	0.44	3.5	12.5	10.5 - 14.3	34	10.21	0.52	5.1	10.4	8.6 - 11.8
HemosIL RecombiPlasTin 2G												
IL ACL, all models	5	12.02	0.15	1.2	12.0	10.2 - 13.9	5	11.14	0.17	1.5	11.1	9.4 - 12.9
IL TEST PT Fibrinogen												
IL ACL, all models	8	13.16	0.34	2.6	13.2	11.1 - 15.2	8	11.49	0.28	2.4	11.5	9.7 - 13.3
<u>Reagent/Instrument</u>	Specimen CG-10											
	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	56	25.24	3.21	12.7	25.8	21.4 - 29.1						
Dade Innovin												
Dade Behring BFT II	5	26.60	2.40	9.0	27.3	22.6 - 30.6						
Sysmex CA-500/600 series	27	25.67	1.12	4.4	25.8	21.8 - 29.6						
All Coagulation Instruments	34	25.73	1.42	5.5	25.8	21.8 - 29.6						
HemosIL RecombiPlasTin 2G												
IL ACL, all models	5	29.64	2.15	7.3	30.0	25.1 - 34.1						
IL TEST PT Fibrinogen												
IL ACL, all models	8	20.95	1.81	8.6	20.3	17.8 - 24.1						

PROTHROMBIN TIME–INTERNATIONAL NORMALIZED RATIO (INR)

Specimen CG-6							Specimen CG-7					
<u>Reagent/Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	57	4.91	1.20	24.4	4.3	3.9 - 5.9	58	0.98	0.06	6.1	1.0	0.7 - 1.2
Dade Innovin												
Dade Behring BFT II	5	4.10	0.47	11.4	4.3	3.2 - 5.0	5	1.02	0.08	8.2	1.0	0.8 - 1.3
Sysmex CA-500/600 series	26	4.18	0.15	3.5	4.2	3.3 - 5.1	27	1.00	0.04	3.9	1.0	0.8 - 1.2
All Coagulation Instruments	34	4.14	0.26	6.2	4.2	3.3 - 5.0	34	1.00	0.05	4.6	1.0	0.8 - 1.3
HemosIL RecombiPlasTin 2G												
IL ACL, all models	5	4.84	0.23	4.8	5.0	3.8 - 5.9	5	1.04	0.05	5.3	1.0	0.8 - 1.3
IL TEST PT Fibrinogen												
IL ACL, all models	8	6.13	0.79	13.0	6.2	4.9 - 7.4	8	0.93	0.05	5.0	0.9	0.7 - 1.2
PH/CMS Thromboplastin-D												
All Coagulation Instruments	5	8.02	1.01	12.6	7.5	6.4 - 9.7	5	0.96	0.05	5.7	1.0	0.7 - 1.2
Specimen CG-8							Specimen CG-9					
All Method	58	1.20	0.10	8.3	1.2	0.9 - 1.5	58	1.01	0.06	5.6	1.0	0.8 - 1.3
Dade Innovin												
Dade Behring BFT II	5	1.28	0.04	3.5	1.3	1.0 - 1.6	5	1.06	0.05	5.2	1.1	0.8 - 1.3
Sysmex CA-500/600 series	26	1.21	0.05	4.0	1.2	0.9 - 1.5	27	1.02	0.06	5.5	1.0	0.8 - 1.3
All Coagulation Instruments	34	1.22	0.06	5.0	1.2	0.9 - 1.5	34	1.02	0.06	5.4	1.0	0.8 - 1.3
HemosIL RecombiPlasTin 2G												
IL ACL, all models	5	1.10	0.01	0.0	1.1	0.8 - 1.4	5	1.02	0.04	4.4	1.0	0.8 - 1.3
IL TEST PT Fibrinogen												
IL ACL, all models	8	1.30	0.05	4.1	1.3	1.0 - 1.6	8	1.01	0.04	3.5	1.0	0.8 - 1.3
PH/CMS Thromboplastin-D												
All Coagulation Instruments	5	1.14	0.13	11.8	1.2	0.9 - 1.4	5	1.00	0.07	7.1	1.0	0.8 - 1.2
Specimen CG-10												
All Method	56	2.64	0.33	12.3	2.6	2.1 - 3.2						
Dade Innovin												
Dade Behring BFT II	5	2.54	0.24	9.5	2.6	2.0 - 3.1						
Sysmex CA-500/600 series	26	2.47	0.09	3.7	2.5	1.9 - 3.0						
All Coagulation Instruments	34	2.47	0.14	5.5	2.5	1.9 - 3.0						
HemosIL RecombiPlasTin 2G												
IL ACL, all models	5	2.78	0.13	4.7	2.8	2.2 - 3.4						
IL TEST PT Fibrinogen												
IL ACL, all models	8	3.03	0.38	12.5	2.9	2.4 - 3.7						
PH/CMS Thromboplastin-D												
All Coagulation Instruments	5	3.36	0.55	16.4	3.4	2.6 - 4.1						

ACTIVATED PARTIAL THROMBOPLASTIN (seconds)

Specimen CG-6							Specimen CG-7					
<u>Reagent/Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	23	74.9	11.8	15.7	70	63 - 87	23	28.0	1.2	4.2	28	23 - 33
Dade Actin FSL												
Sysmex CA-500/600 series	13	68.4	2.7	3.9	68	58 - 79	13	28.0	0.9	3.3	28	23 - 33
All Coagulation Instruments	14	69.3	4.2	6.1	69	58 - 80	14	27.9	1.0	3.7	28	23 - 33
Hemoliance SynthASil												
IL ACL, all models	4	95.8	6.8	7.1	95	81 - 111	4	29.0	0.8	2.8	29	24 - 34
IL TEST APTT-SP												
IL ACL, all models	4	69.0	3.7	5.3	69	58 - 80	4	27.3	1.7	6.3	28	23 - 32
Specimen CG-8							Specimen CG-9					
All Method	23	33.7	7.0	20.9	29	28 - 39	23	26.1	2.9	11.1	25	22 - 31
Dade Actin FSL												
Sysmex CA-500/600 series	13	28.5	0.5	1.8	29	24 - 33	13	24.4	0.7	2.7	24	20 - 29
All Coagulation Instruments	13	28.5	0.5	1.8	29	24 - 33	14	24.5	0.8	3.1	25	20 - 29
Hemoliance SynthASil												
IL ACL, all models	4	45.0	3.4	7.5	47	38 - 52	4	31.0	1.4	4.6	32	26 - 36
IL TEST APTT-SP												
IL ACL, all models	4	35.0	1.4	4.0	35	29 - 41	4	25.5	1.0	3.9	25	21 - 30
Specimen CG-10												
All Method	23	50.4	6.9	13.8	47	42 - 58						
Dade Actin FSL												
Sysmex CA-500/600 series	13	46.5	1.5	3.2	46	39 - 54						
All Coagulation Instruments	14	47.1	2.7	5.7	47	40 - 55						
Hemoliance SynthASil												
IL ACL, all models	4	62.5	3.3	5.3	62	53 - 72						
IL TEST APTT-SP												
IL ACL, all models	4	47.0	1.6	3.5	47	39 - 55						

Fibrinogen (mg/dL)

One participant reported Fibrinogen. The vendor assay values for specimens CG-6 through CG-10 are: 262 mg/dL, 595 mg/dL, 105 mg/dL, 312 mg/dL and 269 mg/dL respectively.

RH FACTOR (Slide Method)

<u>Specimen</u>	<u>Results</u>	<u>Labs</u>	<u>Percent</u>	<u>Performance</u>
RH-6	Rh Positive	2	100%	Acceptable
RH-7	Rh Positive	2	100%	Acceptable
RH-8	Rh Negative	2	100%	Acceptable
RH-9	Rh Negative	2	100%	Acceptable
RH-10	Rh Positive	2	100%	Acceptable

COAGUCHEK XS PLUS PROTHROMBIN TIME (seconds)

Specimen XS-6							Specimen XS-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	29	16.76	0.53	3.2	16.8	14.2 - 19.3	29	48.36	6.76	14.0	49.8	41.1 - 55.7
All Roche CoaguChek XS Plus Instruments	26	16.78	0.57	3.4	16.8	14.2 - 19.4	26	50.14	4.39	8.8	50.4	42.6 - 57.7
Roche CoaguChek XS Plus - Waived	16	16.63	0.70	4.2	16.6	14.1 - 19.2	16	49.27	5.33	10.8	49.8	41.8 - 56.7
Roche CoaguChek XS Plus	10	15.88	2.75	17.3	16.9	13.5 - 18.3	10	51.36	2.68	5.2	51.0	43.6 - 59.1
Specimen XS-8							Specimen XS-9					
All Method	18	33.43	2.55	7.6	33.6	28.4 - 38.5	18	50.36	3.46	6.9	51.2	42.8 - 58.0
All Roche CoaguChek XS Plus Instruments	16	33.47	2.70	8.1	33.7	28.4 - 38.5	16	50.42	3.66	7.3	51.2	42.8 - 58.0
Roche CoaguChek XS Plus - Waived	12	32.52	3.28	10.1	33.4	27.6 - 37.4	12	49.08	4.56	9.3	51.1	41.7 - 56.5
Specimen XS-10												
All Method	18	14.72	0.33	2.3	14.8	12.5 - 17.0						
All Roche CoaguChek XS Plus Instruments	16	14.76	0.33	2.3	14.8	12.5 - 17.0						
Roche CoaguChek XS Plus - Waived	12	14.76	0.44	3.0	15.0	12.5 - 17.0						

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

Specimen XS-6							Specimen XS-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	29	1.40	0.07	5.2	1.4	1.1 - 1.7	29	4.20	0.18	4.2	4.2	3.3 - 5.1
All Roche CoaguChek XS Plus Instruments	26	1.40	0.08	5.5	1.4	1.1 - 1.7	26	4.23	0.15	3.6	4.2	3.3 - 5.1
Roche CoaguChek XS Plus - Waived	16	1.39	0.09	6.5	1.4	1.1 - 1.7	16	4.13	0.32	7.8	4.2	3.3 - 5.0
Roche CoaguChek XS Plus	10	1.42	0.04	2.9	1.4	1.1 - 1.8	10	4.25	0.19	4.4	4.2	3.4 - 5.1
Specimen XS-8							Specimen XS-9					
All Method	18	2.78	0.22	8.0	2.8	2.2 - 3.4	18	4.20	0.27	6.4	4.3	3.3 - 5.1
All Roche CoaguChek XS Plus Instruments	16	2.78	0.23	8.4	2.8	2.2 - 3.4	16	4.20	0.28	6.7	4.3	3.3 - 5.1
Roche CoaguChek XS Plus - Waived	12	2.73	0.26	9.6	2.8	2.1 - 3.3	12	4.14	0.33	8.0	4.3	3.3 - 5.0
Specimen XS-10												
All Method	18	1.22	0.04	3.1	1.2	0.9 - 1.5						
All Roche CoaguChek XS Plus Instruments	16	1.22	0.04	3.2	1.2	0.9 - 1.5						
Roche CoaguChek XS Plus - Waived	12	1.23	0.05	3.8	1.2	0.9 - 1.5						

COAGUCHECK XS - INTERNATIONAL NORMALIZED RATIO (INR)

Specimen INX-3							Specimen INX-4					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
Roche CoaguChek XS	132	2.84	0.11	3.8	2.8	2.2 - 3.5	138	1.40	0.04	2.9	1.4	1.1 - 1.7

i-Stat PROTHROMBIN TIME (seconds)

Specimen PTI-6							Specimen PTI-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
i-Stat Prothrombin Time	11	31.55	1.35	4.3	31.7	26.8 - 36.3	11	14.60	1.64	11.2	14.9	12.4 - 16.8
Specimen PTI-8							Specimen PTI-9					
i-Stat Prothrombin Time	11	15.15	0.88	5.8	15.1	12.8 - 17.5	11	31.93	3.14	9.8	31.5	27.1 - 36.8
Specimen PTI-10												
i-Stat Prothrombin Time	11	15.13	0.55	3.7	15.1	12.8 - 17.5						

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

Specimen PTI-6							Specimen PTI-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
i-Stat Prothrombin Time	11	2.77	0.14	4.9	2.8	2.2 - 3.4	11	1.23	0.14	11.1	1.3	0.9 - 1.5
Specimen PTI-8							Specimen PTI-9					
i-Stat Prothrombin Time	11	1.28	0.08	5.9	1.3	1.0 - 1.6	11	2.80	0.30	10.6	2.8	2.2 - 3.4
Specimen PTI-10												
i-Stat Prothrombin Time	11	1.28	0.08	5.9	1.3	1.0 - 1.6						

FLUID CELL COUNT – WHITE BLOOD CELL COUNT (µL)

Specimen BF-3							Specimen BF-4					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	6	3.0	2.0	66.7	3	0 - 7	6	266.7	71.9	27.0	283	122 - 411

FLUID CELL COUNT – RED BLOOD CELL COUNT (µL)

Specimen BF-3							Specimen BF-4					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	6	3.3	2.9	86.6	5	0 - 10	6	1147.0	20.1	1.8	1145	1106 - 1188

2015 M2
FLUID CRYSTAL IDENTIFICATION
Specimen FC-3

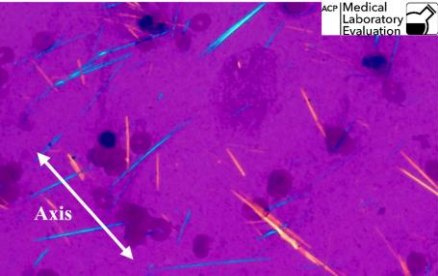
Crystals are classified as being either optically isotropic or anisotropic. Isotropic solids refract light rays equally in all directions throughout the crystalline structure. All isotropic crystals interact with light in a similar manner, regardless of the crystal orientation. If you look at an object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

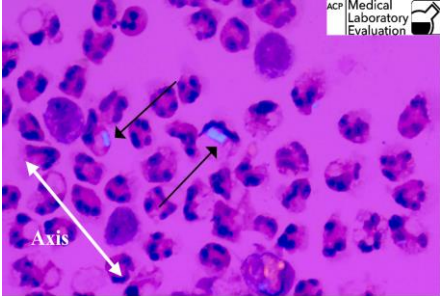


<u>Identification</u>	<u>Labs</u>	<u>Percent</u>	<u>Performance</u>
MSU (Monosodium Urate) crystals	9	100%	Acceptable

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 lying perpendicular to the filter axis are blue.

2015 M2
FLUID CRYSTAL IDENTIFICATION
Specimen FC-4

Specimen FC-4



<u>Identification</u>	<u>Labs</u>	<u>Percent</u>	<u>Performance</u>
CPPD crystals	9	100%	Acceptable

The arrows in this photograph point to **calcium pyrophosphate dihydrate (CPPD) crystals**. Calcium pyrophosphate crystals cause calcium pyrophosphate disease, a condition commonly called pseudogout. CPPD crystals are usually rhomboidal or rod shaped but are occasionally needle-shaped. These 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.

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<http://www.olympusmicro.com/primer/lightandcolor/birefringence.html>

MICROALBUMIN, DIPSTICK

Specimen UM-2

Participant Results

<u>Method</u>	<u>Labs</u>	<u>Negative</u>	<u>10 mg/L</u>	<u>20 mg/L</u>	<u>30 mg/L</u>	<u>50 mg/L</u>	<u>80 mg/L</u>	<u>100 mg/L</u>	<u>150 mg/L</u>	<u>+ (4 - 8 mg/dL)</u>	<u>++ (>8 mg/dL)</u>
ALL METHODS	46	-	-	-	-	3	27	3	13	-	-
Roche Micral - 1 minute	6	-	-	-	-	3	-	3	-	-	-
Siemens Clinitek Microalbumin	40	-	-	-	-	-	27	-	13	-	-

CREATININE, DIPSTICK

Specimen UM-2

Participant Results

<u>Method</u>	<u>Labs</u>	<u>Negative</u>	<u>10 mg/dL</u>	<u>30 mg/dL</u>	<u>50 mg/dL</u>	<u>100 mg/dL</u>	<u>200 mg/dL</u>	<u>300 mg/dL</u>
ALL METHODS	40	-	-	-	-	11	23	6
Siemens Clinitek Microalbumin	39	-	-	-	-	11	22	6
Siemens Multistix Pro	1	-	-	-	-	-	1	-

MICROALBUMIN, QUANTITATIVE

Specimen UM-2

<u>Method</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	78	110.9	7.6	6.8	110	77 - 145
Beckman AU	11	106.0	2.9	2.8	106	74 - 138
Siemens DCA Vantage	11	110.5	4.6	4.2	111	77 - 144
Siemens Dimension/AR/ES/RxL/Xpand	27	111.8	9.1	8.1	110	78 - 146

CREATININE, URINE (mg/dL)

Specimen UM-2

<u>Method</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	76	98.0	5.2	5.3	98	81 - 115
Beckman AU	11	101.2	2.4	2.4	101	83 - 119
Siemens DCA Vantage	11	99.5	5.0	5.0	99	82 - 117
Siemens Dimension/AR/ES/RxL/Xpand	20	95.4	3.4	3.6	96	79 - 112

WAIVED HEMATOLOGY–HEMOGLOBIN (g/dL)

Specimen HD-6							Specimen HD-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	93	13.26	0.60	4.5	13.4	12.3 - 14.2	93	6.15	0.20	3.2	6.1	5.7 - 6.6
All Stanbio Methods	31	13.62	0.43	3.2	13.7	12.6 - 14.6	30	6.22	0.19	3.0	6.2	5.7 - 6.7
HemoCue	56	13.21	0.43	3.3	13.2	12.2 - 14.2	57	6.12	0.17	2.8	6.1	5.6 - 6.6
Stanbio HemoPoint H2	30	13.62	0.44	3.2	13.7	12.6 - 14.6	29	6.22	0.19	3.0	6.2	5.7 - 6.7

WAIVED HEMATOLOGY–HEMATOCRIT (percent)

Specimen HD-6							Specimen HD-7					
<u>Instrument</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	18	37.22	2.72	7.3	37.0	31.7 - 42.7	15	16.88	1.94	11.5	17.0	13.0 - 20.8
All Microhematocrit Methods	16	35.11	1.43	4.1	35.0	32.2 - 38.0	16	16.15	1.89	11.7	16.0	12.3 - 20.0
Microhematocrit	11	34.85	1.14	3.3	35.0	32.5 - 37.2	11	16.08	2.15	13.4	16.0	11.7 - 20.4

KOH SKIN PREPARATION

<u>Specimen</u>	<u>Identification</u>	<u>Labs</u>	<u>Percent</u>	<u>Performance</u>
K-3	Yeast/fungal elements present	145	95.39%	Acceptable
	Yeast/fungal elements absent	7	4.61%	
Organism present in specimen K-3: <i>Microsporum gypseum</i> .				
K-4	Yeast/fungal elements present	75	49.34%	Acceptable
	Yeast/fungal elements absent	77	50.66%	

Organism present in specimen K-4: *Candida albicans*. This specimen was graded by 83% referee consensus.

URINALYSIS DIPSTICK–SPECIFIC GRAVITY

Specimen UA-2

<u>Method</u>	<u>Labs</u>	<u>Mean</u>	<u>SD</u>	<u>CV</u>	<u>Median</u>	<u>Range</u>
All Method	853	1.0163	0.0052	0.5	1.020	1.006 - 1.027
All Roche Methods	42	1.0101	0.0023	0.2	1.010	1.000 - 1.021
All Siemens Methods	419	1.0203	0.0023	0.2	1.020	1.010 - 1.031
Consult Diagnostics Urine Analyzer	15	1.0143	0.0041	0.4	1.015	1.004 - 1.025
Other Dipstick Method	15	1.0157	0.0049	0.5	1.015	1.005 - 1.026
Roche Chemstrips	48	1.0102	0.0018	0.2	1.010	1.000 - 1.021
Roche Urisys	32	1.0098	0.0024	0.2	1.010	0.999 - 1.020
Siemens Clinitek 10 / 100	12	1.0208	0.0020	0.2	1.020	1.010 - 1.031
Siemens Clinitek 50	32	1.0163	0.0023	0.2	1.015	1.006 - 1.027
Siemens Clinitek 500	10	1.0200	0.0001	0.0	1.020	1.010 - 1.030
Siemens Clinitek Advantus	24	1.0194	0.0016	0.2	1.020	1.009 - 1.030
Siemens Clinitek Status / Status+	335	1.0209	0.0020	0.2	1.020	1.010 - 1.031
Siemens Reagent Strips	217	1.0116	0.0032	0.3	1.010	1.001 - 1.022

URINALYSIS DIPSTICK–pH

Specimen UA-2

Participant Results

<u>Method</u>	<u>Labs</u>	<u>≤3.5</u>	<u>4.0</u>	<u>4.5</u>	<u>5.0</u>	<u>5.5</u>	<u>6.0</u>	<u>6.5</u>	<u>7.0</u>	<u>7.5</u>	<u>8.0</u>	<u>8.5</u>	<u>≥9.0</u>
ALL METHODS	881	-	-	-	1	1	4	13	548	308	5	1	-
Consult Diagnostics Urine Analyzer	16	-	-	-	-	1	-	6	8	1	-	-	-
CTMI CT-120 Urine Analyzer	9	-	-	-	-	-	-	-	9	-	-	-	-
Diagnostic Test Group Clarity Urocheck	9	-	-	-	1	-	-	-	8	-	-	-	-
Diagnostic Test Group Clarity Urocheck 120	10	-	-	-	-	-	-	-	10	-	-	-	-
Germaine Laboratories AimStrip	6	-	-	-	-	-	-	-	6	-	-	-	-
Henry Schein One Step Plus	6	-	-	-	-	-	-	-	6	-	-	-	-
Henry Schein Urispec	8	-	-	-	-	-	-	-	7	1	-	-	-
Iris Diagnostics iChem Velocity Strips	1	-	-	-	-	-	-	-	1	-	-	-	-
McKesson 10SG Reagent Strips	8	-	-	-	-	-	-	-	6	2	-	-	-
McKesson 120 Urine Analyzer	6	-	-	-	-	-	-	-	6	-	-	-	-
NDC Pro Advantage	1	-	-	-	-	-	-	-	1	-	-	-	-
Other Analyzer Method	3	-	-	-	-	-	-	-	2	1	-	-	-
Other Dipstick Method	15	-	-	-	-	-	1	-	13	1	-	-	-
pH Paper	1	-	-	-	-	-	-	-	1	-	-	-	-
PSS Select Reagent Strips	8	-	-	-	-	-	1	-	7	-	-	-	-
PSS Select Urine Analyzer	1	-	-	-	-	-	-	1	-	-	-	-	-
Roche Chemstrip 101	3	-	-	-	-	-	-	-	3	-	-	-	-
Roche Chemstrips	56	-	-	-	-	-	1	-	53	-	2	-	-
Roche Criterion Analyzer	6	-	-	-	-	-	-	-	6	-	-	-	-
Roche SuperUA/ChemstripUA	1	-	-	-	-	-	-	-	1	-	-	-	-
Roche Urisys	32	-	-	-	-	-	-	-	32	-	-	-	-
Siemens Clinitek 10 / 100	13	-	-	-	-	-	-	-	5	8	-	-	-
Siemens Clinitek 50	33	-	-	-	-	-	-	1	31	1	-	-	-
Siemens Clinitek 500	12	-	-	-	-	-	-	-	1	11	-	-	-
Siemens Clinitek Advantus	25	-	-	-	-	-	-	-	3	22	-	-	-
Siemens Clinitek Atlas	5	-	-	-	-	-	-	-	5	-	-	-	-
Siemens Clinitek Status / Status+	338	-	-	-	-	-	-	-	273	65	-	-	-
Siemens Hemacombistix	1	-	-	-	-	-	-	-	-	1	-	-	-
Siemens Multistix Pro	5	-	-	-	-	-	-	-	2	3	-	-	-
Siemens Reagent Strips	229	-	-	-	-	-	1	4	32	189	2	1	-
UriScan Reagent Strips	1	-	-	-	-	-	-	-	1	-	-	-	-

URINALYSIS DIPSTICK–PROTEIN QUALITATIVE

Specimen UA-2

<u>Method</u>	<i>Participant Results</i>												
	<u>Labs</u>	<u>Negative</u>	<u>Trace</u>	<u>(1+)</u>	<u>(2+)</u>	<u>(3+)</u>	<u>(4+)</u>	<u>10 - 20</u> <u>mg/dL</u>	<u>30 - 70</u> <u>mg/dL</u>	<u>75</u> <u>mg/dL</u>	<u>100 - 200</u> <u>mg/dL</u>	<u>≥300 -</u> <u>600</u> <u>mg/dL</u>	<u>>600 or</u> <u>≥1000</u> <u>mg/dL</u>
ALL METHODS	916	5	3	20	236	166	13	-	7	-	196	267	3
Consult Diagnostics Urine Analyzer	16	1	-	1	7	-	-	-	-	-	7	-	-
CTMI CT-120 Urine Analyzer	9	-	-	-	7	-	-	-	-	-	2	-	-
Diagnostic Test Group Clarity Urocheck	8	-	-	1	4	1	-	-	-	-	2	-	-
Diagnostic Test Group Clarity Urocheck 120	10	-	-	1	9	-	-	-	-	-	-	-	-
Germaine Laboratories AimStrip	6	-	-	-	6	-	-	-	-	-	-	-	-
Henry Schein One Step Plus	6	-	-	-	-	-	-	-	-	-	6	-	-
Henry Schein Urispec	8	-	2	-	1	2	-	-	-	-	2	1	-
Iris Diagnostics iChem Velocity Strips	1	-	-	-	-	-	-	-	-	-	1	-	-
McKesson 10SG Reagent Strips	8	-	-	1	1	1	1	-	-	-	3	1	-
McKesson 120 Urine Analyzer	6	-	-	-	6	-	-	-	-	-	-	-	-
NDC Pro Advantage	1	-	-	-	1	-	-	-	-	-	-	-	-
Other Analyzer Method	3	-	-	-	-	-	-	-	1	-	2	-	-
Other Dipstick Method	17	-	-	3	5	4	-	-	-	-	2	1	2
PSS Select Reagent Strips	8	1	-	-	5	1	-	-	-	-	1	-	-
PSS Select Urine Analyzer	1	-	-	-	-	-	1	-	-	-	-	-	-
Roche Chemstrip 101	3	-	-	-	1	-	-	-	-	-	2	-	-
Roche Chemstrips	71	1	-	3	41	5	-	-	1	-	16	4	-
Roche Criterion Analyzer	6	-	-	-	2	-	-	-	1	-	3	-	-
Roche SuperUA/ChemstripUA	1	-	-	-	1	-	-	-	-	-	-	-	-
Roche Urisys	32	-	-	7	6	-	-	-	4	-	14	1	-
Siemens Albustix	1	-	-	-	-	-	-	-	-	-	1	-	-
Siemens Clinitek 10 / 100	13	-	-	1	2	2	-	-	-	-	3	5	-
Siemens Clinitek 50	33	-	-	-	-	7	-	-	-	-	3	23	-
Siemens Clinitek 500	12	-	-	-	6	-	-	-	-	-	5	1	-
Siemens Clinitek Advantus	24	-	-	-	15	-	-	-	-	-	9	-	-
Siemens Clinitek Atlas	5	-	-	-	1	-	-	-	-	-	4	-	-
Siemens Clinitek Status / Status+	338	-	-	-	27	74	-	-	-	-	66	171	-
Siemens Hemacombistix	1	-	-	-	-	1	-	-	-	-	-	-	-
Siemens Multistix Pro	5	-	-	1	2	-	-	-	-	-	1	1	-
Siemens Reagent Strips	226	2	1	1	76	55	10	-	-	-	35	45	1
Siemens Uristix	22	-	-	-	2	8	1	-	-	-	1	10	-
Sulfosalicylic Acid	2	-	-	-	1	1	-	-	-	-	-	-	-
UriScan Reagent Strips	1	-	-	-	-	-	-	-	-	-	1	-	-

URINALYSIS DIPSTICK–GLUCOSE

Specimen UA-2

<u>Method</u>	<u>Labs</u>	<u>Negative</u>	<u>Trace</u>	<u>(1+)</u>	<u>Participant Results</u>			<u>30 - 100 mg/dL</u>	<u>150 - 300 mg/dL</u>	<u>500 mg/dL</u>	<u>>500 or ≥1000 or ≥2000 mg/dL</u>
					<u>(2+)</u>	<u>(3+)</u>	<u>(4+)</u>				
ALL METHODS	903	897	-	-	1	-	1	3	1	-	-
Consult Diagnostics Urine Analyzer	16	16	-	-	-	-	-	-	-	-	-
CTMI CT-120 Urine Analyzer	9	9	-	-	-	-	-	-	-	-	-
Diagnostic Test Group Clarity Urocheck	9	9	-	-	-	-	-	-	-	-	-
Diagnostic Test Group Clarity Urocheck 120	10	10	-	-	-	-	-	-	-	-	-
Germaine Laboratories AimStrip	6	6	-	-	-	-	-	-	-	-	-
Henry Schein One Step Plus	6	6	-	-	-	-	-	-	-	-	-
Henry Schein Urispec	8	8	-	-	-	-	-	-	-	-	-
Iris Diagnostics iChem Velocity Strips	1	1	-	-	-	-	-	-	-	-	-
McKesson 10SG Reagent Strips	8	8	-	-	-	-	-	-	-	-	-
McKesson 120 Urine Analyzer	6	6	-	-	-	-	-	-	-	-	-
NDC Pro Advantage	1	1	-	-	-	-	-	-	-	-	-
Other Analyzer Method	3	3	-	-	-	-	-	-	-	-	-
Other Dipstick Method	18	18	-	-	-	-	-	-	-	-	-
PSS Select Reagent Strips	8	8	-	-	-	-	-	-	-	-	-
PSS Select Urine Analyzer	1	-	-	-	-	-	1	-	-	-	-
Roche Chemstrip 101	3	3	-	-	-	-	-	-	-	-	-
Roche Chemstrips	71	69	-	-	-	-	-	2	-	-	-
Roche Criterion Analyzer	6	6	-	-	-	-	-	-	-	-	-
Roche SuperUA/ChemstripUA	1	1	-	-	-	-	-	-	-	-	-
Roche Urisys	32	31	-	-	-	-	-	1	-	-	-
Siemens Clinitek 10 / 100	13	13	-	-	-	-	-	-	-	-	-
Siemens Clinitek 50	33	33	-	-	-	-	-	-	-	-	-
Siemens Clinitek 500	12	12	-	-	-	-	-	-	-	-	-
Siemens Clinitek Advantus	25	25	-	-	-	-	-	-	-	-	-
Siemens Clinitek Atlas	5	5	-	-	-	-	-	-	-	-	-
Siemens Clinitek Status / Status+	333	332	-	-	-	-	-	-	1	-	-
Siemens Clinitest, 5 drop	1	1	-	-	-	-	-	-	-	-	-
Siemens Hemacombistix	1	1	-	-	-	-	-	-	-	-	-
Siemens Multistix Pro	5	5	-	-	-	-	-	-	-	-	-
Siemens Reagent Strips	234	233	-	-	1	-	-	-	-	-	-
Siemens Uristix	6	6	-	-	-	-	-	-	-	-	-
UriScan Reagent Strips	1	1	-	-	-	-	-	-	-	-	-

URINALYSIS DIPSTICK–KETONES

Specimen UA-2

<u>Method</u>	<u>Labs</u>	<u>Negative</u>	<u>Trace</u>	<u>Small</u>	<u>Moderate</u>	<u>Large</u>	<u>Participant Results</u>								
							<u>(1+)</u>	<u>(2+)</u>	<u>(3+)</u>	<u>(4+)</u>	<u>5 - 10</u> <u>mg/dL</u>	<u>15 - 20</u> <u>mg/dL</u>	<u>40 - 60</u> <u>mg/dL</u>	<u>80 - 100</u> <u>mg/dL</u>	<u>≥150</u> <u>mg/dL</u>
ALL METHODS	878	866	9	-	-	-	1	1	-	-	-	-	1	-	-
Consult Diagnostics Urine Analyzer	16	16	-	-	-	-	-	-	-	-	-	-	-	-	-
CTMI CT-120 Urine Analyzer	9	9	-	-	-	-	-	-	-	-	-	-	-	-	-
Diagnostic Test Group Clarity Urocheck	9	9	-	-	-	-	-	-	-	-	-	-	-	-	-
Diagnostic Test Group Clarity Urocheck 120	10	10	-	-	-	-	-	-	-	-	-	-	-	-	-
Germaine Laboratories AimStrip	6	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Henry Schein One Step Plus	6	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Henry Schein Urispec	8	7	1	-	-	-	-	-	-	-	-	-	-	-	-
Iris Diagnostics iChem Velocity Strips	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
McKesson 10SG Reagent Strips	8	8	-	-	-	-	-	-	-	-	-	-	-	-	-
McKesson 120 Urine Analyzer	6	6	-	-	-	-	-	-	-	-	-	-	-	-	-
NDC Pro Advantage	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Analyzer Method	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Dipstick Method	15	12	2	-	-	-	1	-	-	-	-	-	-	-	-
PSS Select Reagent Strips	7	7	-	-	-	-	-	-	-	-	-	-	-	-	-
PSS Select Urine Analyzer	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Roche Chemstrip 101	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Roche Chemstrips	56	56	-	-	-	-	-	-	-	-	-	-	-	-	-
Roche Criterion Analyzer	6	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Roche SuperUA/ChemstripUA	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Roche Urisys	32	32	-	-	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek 10 / 100	13	13	-	-	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek 50	33	33	-	-	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek 500	12	12	-	-	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek Advantus	25	25	-	-	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek Atlas	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek Status / Status+	339	338	-	-	-	-	-	-	-	-	-	-	1	-	-
Siemens Ketostix	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Siemens Multistix Pro	5	4	1	-	-	-	-	-	-	-	-	-	-	-	-
Siemens Reagent Strips	228	223	5	-	-	-	-	-	-	-	-	-	-	-	-
UriScan Reagent Strips	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-

URINALYSIS DIPSTICK–BILIRUBIN

Specimen UA-2

<u>Method</u>	<u>Labs</u>	<u>Negative</u>	<u>Trace</u>	<u>Small</u>	<u>Moderate</u>	<u>Participant Results</u>					<u>0.5 - 1.0 mg/dL</u>	<u>2.0 - 4.0 mg/dL</u>	<u>6.0 - 10.0 mg/dL</u>	<u>>10.0 mg/dL</u>
						<u>Large</u>	<u>(1+)</u>	<u>(2+)</u>	<u>(3+)</u>	<u>(4+)</u>				
ALL METHODS	857	851	-	-	1	3	-	-	2	-	-	-	-	-
Consult Diagnostics Urine Analyzer	16	16	-	-	-	-	-	-	-	-	-	-	-	-
CTMI CT-120 Urine Analyzer	9	9	-	-	-	-	-	-	-	-	-	-	-	-
Diagnostic Test Group Clarity Urocheck	9	9	-	-	-	-	-	-	-	-	-	-	-	-
Diagnostic Test Group Clarity Urocheck 120	10	10	-	-	-	-	-	-	-	-	-	-	-	-
Germaine Laboratories AimStrip	6	6	-	-	-	-	-	-	-	-	-	-	-	-
Henry Schein One Step Plus	6	6	-	-	-	-	-	-	-	-	-	-	-	-
Henry Schein Urispec	7	7	-	-	-	-	-	-	-	-	-	-	-	-
Iris Diagnostics iChem Velocity Strips	1	1	-	-	-	-	-	-	-	-	-	-	-	-
McKesson 10SG Reagent Strips	8	8	-	-	-	-	-	-	-	-	-	-	-	-
McKesson 120 Urine Analyzer	6	6	-	-	-	-	-	-	-	-	-	-	-	-
NDC Pro Advantage	1	1	-	-	-	-	-	-	-	-	-	-	-	-
Other Analyzer Method	3	3	-	-	-	-	-	-	-	-	-	-	-	-
Other Dipstick Method	15	15	-	-	-	-	-	-	-	-	-	-	-	-
PSS Select Reagent Strips	7	7	-	-	-	-	-	-	-	-	-	-	-	-
PSS Select Urine Analyzer	1	-	-	-	-	-	-	-	1	-	-	-	-	-
Roche Chemstrip 101	3	3	-	-	-	-	-	-	-	-	-	-	-	-
Roche Chemstrips	53	52	-	-	-	1	-	-	-	-	-	-	-	-
Roche Criterion Analyzer	6	6	-	-	-	-	-	-	-	-	-	-	-	-
Roche SuperUA/ChemstripUA	1	1	-	-	-	-	-	-	-	-	-	-	-	-
Roche Urisys	32	32	-	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek 10 / 100	13	13	-	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek 50	31	31	-	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek 500	11	11	-	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek Advantus	24	24	-	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek Atlas	5	5	-	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek Status / Status+	331	329	-	-	-	2	-	-	-	-	-	-	-	-
Siemens Multistix Pro	5	5	-	-	-	-	-	-	-	-	-	-	-	-
Siemens Reagent Strips	224	222	-	-	1	-	-	-	1	-	-	-	-	-
UriScan Reagent Strips	1	1	-	-	-	-	-	-	-	-	-	-	-	-

URINALYSIS DIPSTICK–UROBILINOGEN

Specimen UA-2

<u>Method</u>	<u>Labs</u>	<i>Participant Results</i>				
		<u>Neg or 0.0 - 0.2 mg/dL</u>	<u>1.0 or <2.0 mg/dL</u>	<u>2.0/3.0 mg/dL</u>	<u>4.0 or 4.0/6.0 mg/dL</u>	<u>≥8.0 or ≥12.0 mg/dL</u>
ALL METHODS	829	817	3	7	-	2
Consult Diagnostics Urine Analyzer	15	14	-	1	-	-
CTMI CT-120 Urine Analyzer	7	7	-	-	-	-
Diagnostic Test Group Clarity Urocheck	9	9	-	-	-	-
Diagnostic Test Group Clarity Urocheck 120	10	10	-	-	-	-
Germaine Laboratories AimStrip	6	5	-	1	-	-
Henry Schein One Step Plus	5	5	-	-	-	-
Henry Schein Urispec	9	9	-	-	-	-
Iris Diagnostics iChem Velocity Strips	1	1	-	-	-	-
McKesson 10SG Reagent Strips	8	8	-	-	-	-
McKesson 120 Urine Analyzer	6	5	-	1	-	-
NDC Pro Advantage	1	1	-	-	-	-
Other Analyzer Method	3	3	-	-	-	-
Other Dipstick Method	15	15	-	-	-	-
PSS Select Reagent Strips	7	7	-	-	-	-
PSS Select Urine Analyzer	1	-	-	-	-	1
Roche Chemstrip 101	2	2	-	-	-	-
Roche Chemstrips	51	51	-	-	-	-
Roche Criterion Analyzer	6	6	-	-	-	-
Roche SuperUA/ChemstripUA	1	1	-	-	-	-
Roche Urisys	32	32	-	-	-	-
Siemens Clinitek 10 / 100	13	13	-	-	-	-
Siemens Clinitek 50	32	32	-	-	-	-
Siemens Clinitek 500	7	7	-	-	-	-
Siemens Clinitek Advantus	23	23	-	-	-	-
Siemens Clinitek Atlas	1	1	-	-	-	-
Siemens Clinitek Status / Status+	322	315	2	4	-	1
Siemens Multistix Pro	5	5	-	-	-	-
Siemens Reagent Strips	223	222	1	-	-	-
UriScan Reagent Strips	1	1	-	-	-	-

URINALYSIS DIPSTICK–BLOOD/HEMOGLOBIN

Specimen UA-2

<u>Method</u>	<u>Participant Results</u>																	
	<u>Labs</u>	<u>Negative</u>	<u>Trace</u>	<u>Small</u>	<u>Moderate</u>	<u>Large</u>	<u>(1+)</u>	<u>(2+)</u>	<u>(3+)</u>	<u>(4+)</u>	<u>(5+)</u>	<u>5 - 25</u> <u>Ery/μL</u>	<u>50 -</u> <u>100</u> <u>Ery/μL</u>	<u>250</u> <u>Ery/μL</u>	<u>±0.03</u> <u>mg/dL</u>	<u>0.06</u> <u>-</u> <u>0.10</u> <u>mg/</u> <u>dL</u>	<u>0.2 -</u> <u>0.5</u> <u>mg/</u> <u>dL</u>	<u>≥ 1.0</u> <u>mg/</u> <u>dL</u>
ALL METHODS	879	2	2	1	9	444	-	19	289	10	1	-	2	98	-	-	-	2
Consult Diagnostics Urine Analyzer	15	1	-	-	-	-	-	-	7	-	-	-	2	5	-	-	-	-
CTMI CT-120 Urine Analyzer	8	-	-	-	-	-	-	-	7	-	-	-	-	1	-	-	-	-
Diagnostic Test Group Clarity Urocheck	9	-	-	-	-	-	-	-	9	-	-	-	-	-	-	-	-	-
Diagnostic Test Group Clarity Urocheck 120	10	-	-	-	-	-	-	1	9	-	-	-	-	-	-	-	-	-
Germaine Laboratories AimStrip	6	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	-
Henry Schein One Step Plus	5	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-
Henry Schein Urispec	9	-	-	-	-	2	-	-	2	-	-	-	-	5	-	-	-	-
Iris Diagnostics iChem Velocity Strips	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
McKesson 10SG Reagent Strips	6	-	-	1	-	2	-	-	2	-	-	-	-	1	-	-	-	-
McKesson 120 Urine Analyzer	5	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-
NDC Pro Advantage	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Other Analyzer Method	3	-	-	-	-	-	-	-	1	-	-	-	-	2	-	-	-	-
Other Dipstick Method	15	-	-	-	1	3	-	1	8	-	-	-	-	2	-	-	-	-
PSS Select Reagent Strips	8	-	-	-	-	1	-	2	5	-	-	-	-	-	-	-	-	-
PSS Select Urine Analyzer	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Roche Chemstrip 101	3	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-
Roche Chemstrips	67	-	-	-	-	6	-	2	9	-	1	-	-	48	-	-	-	1
Roche Criterion Analyzer	6	-	-	-	-	-	-	-	-	3	-	-	-	3	-	-	-	-
Roche SuperUA/ChemstripUA	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Roche Urisys	32	-	1	-	-	-	-	10	1	-	-	-	-	20	-	-	-	-
Siemens Clinitek 10 / 100	13	-	-	-	-	8	-	-	5	-	-	-	-	-	-	-	-	-
Siemens Clinitek 50	32	-	1	-	-	23	-	-	8	-	-	-	-	-	-	-	-	-
Siemens Clinitek 500	12	-	-	-	-	6	-	-	6	-	-	-	-	-	-	-	-	-
Siemens Clinitek Advantus	25	-	-	-	-	9	-	-	16	-	-	-	-	-	-	-	-	-
Siemens Clinitek Atlas	5	-	-	-	-	4	-	-	1	-	-	-	-	-	-	-	-	-
Siemens Clinitek Status / Status+	334	-	-	-	5	237	-	2	90	-	-	-	-	-	-	-	-	-
Siemens Hemacombistix	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Siemens Multistix Pro	5	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-
Siemens Reagent Strips	228	1	-	-	2	133	-	-	86	6	-	-	-	-	-	-	-	-
UriScan Reagent Strips	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-

URINALYSIS DIPSTICK–LEUKOCYTE ESTERASE

Specimen UA-2

<u>Method</u>	<u>Labs</u>	<i>Participant Results</i>											
		<u>Negative</u>	<u>Trace</u>	<u>Small</u>	<u>Moderate</u>	<u>Large</u>	<u>(1+)</u>	<u>(2+)</u>	<u>(3+)</u>	<u>(4+)</u>	<u>25 µL</u>	<u>75 or 100 µL</u>	<u>250 or 500 µL</u>
ALL METHODS	893	886	4	-	-	1	-	-	1	-	-	-	1
Consult Diagnostics Urine Analyzer	14	14	-	-	-	-	-	-	-	-	-	-	-
CTMI CT-120 Urine Analyzer	8	8	-	-	-	-	-	-	-	-	-	-	-
Diagnostic Test Group Clarity Urocheck	9	9	-	-	-	-	-	-	-	-	-	-	-
Diagnostic Test Group Clarity Urocheck 120	10	10	-	-	-	-	-	-	-	-	-	-	-
Germaine Laboratories AimStrip	6	5	1	-	-	-	-	-	-	-	-	-	-
Henry Schein One Step Plus	5	5	-	-	-	-	-	-	-	-	-	-	-
Henry Schein Urispec	9	9	-	-	-	-	-	-	-	-	-	-	-
Iris Diagnostics iChem Velocity Strips	1	1	-	-	-	-	-	-	-	-	-	-	-
McKesson 10SG Reagent Strips	7	6	-	-	-	-	-	-	-	-	-	-	1
McKesson 120 Urine Analyzer	6	6	-	-	-	-	-	-	-	-	-	-	-
NDC Pro Advantage	1	1	-	-	-	-	-	-	-	-	-	-	-
Other Analyzer Method	2	2	-	-	-	-	-	-	-	-	-	-	-
Other Dipstick Method	15	15	-	-	-	-	-	-	-	-	-	-	-
PSS Select Reagent Strips	8	8	-	-	-	-	-	-	-	-	-	-	-
PSS Select Urine Analyzer	1	-	-	-	-	-	-	-	1	-	-	-	-
Roche Chemstrip 101	2	2	-	-	-	-	-	-	-	-	-	-	-
Roche Chemstrips	67	66	1	-	-	-	-	-	-	-	-	-	-
Roche Criterion Analyzer	6	6	-	-	-	-	-	-	-	-	-	-	-
Roche SuperUA/ChemstripUA	1	1	-	-	-	-	-	-	-	-	-	-	-
Roche Urisys	32	32	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek 10 / 100	13	13	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek 50	33	33	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek 500	12	12	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek Advantus	25	25	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek Atlas	5	5	-	-	-	-	-	-	-	-	-	-	-
Siemens Clinitek Status / Status+	334	333	-	-	-	1	-	-	-	-	-	-	-
Siemens Multistix Pro	5	5	-	-	-	-	-	-	-	-	-	-	-
Siemens Reagent Strips	226	225	1	-	-	-	-	-	-	-	-	-	-
Siemens Uristix	17	17	-	-	-	-	-	-	-	-	-	-	-
UriScan Reagent Strips	1	1	-	-	-	-	-	-	-	-	-	-	-

URINALYSIS DIPSTICK–NITRITE

Specimen UA-2

Participant Results

<u>Method</u>	<u>Labs</u>	<u>Positive</u>	<u>Negative</u>
ALL METHODS	896	8	888
Consult Diagnostics Urine Analyzer	15	-	15
CTMI CT-120 Urine Analyzer	8	-	8
Diagnostic Test Group Clarity Urocheck	9	-	9
Diagnostic Test Group Clarity Urocheck 120	10	-	10
Germaine Laboratories AimStrip	6	-	6
Henry Schein One Step Plus	5	-	5
Henry Schein Urispec	9	-	9
Iris Diagnostics iChem Velocity Strips	1	-	1
McKesson 10SG Reagent Strips	7	-	7
McKesson 120 Urine Analyzer	6	-	6
NDC Pro Advantage	1	-	1
Other Analyzer Method	3	-	3
Other Dipstick Method	15	-	15
PSS Select Reagent Strips	8	-	8
PSS Select Urine Analyzer	1	1	-
Roche Chemstrip 101	2	-	2
Roche Chemstrips	67	1	66
Roche Criterion Analyzer	6	-	6
Roche SuperUA/ChemstripUA	1	-	1
Roche Urisys	32	-	32
Siemens Clinitek 10 / 100	13	1	12
Siemens Clinitek 50	32	-	32
Siemens Clinitek 500	12	-	12
Siemens Clinitek Advantus	25	-	25
Siemens Clinitek Atlas	5	-	5
Siemens Clinitek Status / Status+	334	1	333
Siemens Multistix Pro	5	1	4
Siemens Reagent Strips	227	3	224
Siemens Uristix	17	-	17
UriScan Reagent Strips	1	-	1

URINALYSIS –MICROALBUMIN (dipstick only)

Specimen UA-2

<u>Method</u>	<u>Labs</u>	<u>Negative</u>	<i>Participant Results</i>								
			<u>10 mg/L</u>	<u>20 mg/L</u>	<u>30 mg/L</u>	<u>50 mg/L</u>	<u>80 mg/L</u>	<u>100 mg/L</u>	<u>150 mg/L</u>	<u>+ (4 - 8 mg/dL)</u>	<u>++ (>8 mg/dL)</u>
ALL METHODS	73	2	-	-	2	10	4	13	42	-	-
Roche Micral - 1 minute	19	-	-	-	-	9	-	9	1	-	-
Siemens Clinitek Microalbumin	37	1	-	-	1	-	3	-	32	-	-

URINALYSIS –URINE hCG
Specimen UA-2

<u>Method</u>	<i>Participant Results</i>		
	<u>Labs</u>	<u>Positive</u>	<u>Negative</u>
ALL METHODS	524	520	4
AimStep Combo Pregnancy	3	3	-
Alere Aceava hCG-Urine	2	1	1
Alere Clearview 25 hCG Combo	1	1	-
Alere Clearview hCG Cassette	6	6	-
Alfa Scientific Instant View	5	5	-
Beckman Coulter ICON 25 hCG	27	26	1
Beckman Coulter ICON II/20 HCG	6	6	-
BioSign hCG	1	1	-
Cardinal Health SP Brand combo	21	21	-
Cardinal Hlth SPBrand-cassette	9	9	-
CONSULT diagnostics hCG Cassette	50	50	-
CONSULT diagnostics hCG Combo	13	13	-
CONSULT diagnostics hCG Dipstick	28	28	-
Diagnostic Test Group Clarity hCG Combo	1	1	-
Diagnostic Test Group Clarity hCG strip/cassette	5	5	-
Germaine Laboratories AimStrip Pregnancy	6	6	-
Henry Schein One Step	54	54	-
Immunostics Cept-D	1	-	1
Immunostics Detector Combi	1	1	-
Immunostics hCG Detector-urine	8	8	-
McKesson hCG Combo Cassette	10	10	-
McKesson hCG Urine Cassette	18	18	-
McKesson urine hCG-all 20 mIU kits	3	3	-
MediChoice hCG Combi Cassette	9	9	-
NDC Pro Advantage	1	1	-
PEP (Lab Supply) HCG	3	3	-
Polymedco Poly stat hCG	7	7	-
PSS Select hCG Cassette	2	2	-
Quidel QuickVue One-Step Combo	27	27	-
Quidel QuickVue One-Step Urine	65	64	1
Quidel QuickVue+ One-Step Combo	24	24	-
Quidel RapidVue	2	2	-
Quidel Sofia hCG	1	1	-
RefuAH hCG Dipstick	8	8	-
Sekisui OSOM - Urine Test	6	6	-
Sekisui OSOM Card Pregnancy	5	5	-
Sekisui OSOM hCG Combo Test	9	9	-
Siemens Clinitek Status / Status+	4	4	-
Stanbio QuPID	8	8	-
Stanbio QuPID Plus	3	3	-
Stanbio TRUE hCG	7	7	-
Sure-Vue hCG - 25mIU	5	5	-
Sure-Vue hCG-STAT	4	4	-

FECAL OCCULT BLOOD

<u>Method</u>	Specimen OC-3			Specimen OC-4		
	<u>Labs</u>	<u>Positive</u>	<u>Negative</u>	<u>Labs</u>	<u>Positive</u>	<u>Negative</u>
ALL METHODS	402	393	9	397	9	388
Alere Clearview iFOBT Complete	1	1	-	1	-	1
Alfa Scientific Instant View	2	2	-	2	-	2
Beckman Coulter Hemocult ICT	35	35	-	31	-	31
Guaiac (slide) Test	260	251	9	259	9	250
Hemosure iFOB	37	37	-	37	-	37
Other Immunochemical FOB kit	24	24	-	24	-	24
Polymedco OC Auto Micro 80	6	6	-	6	-	6
Polymedco OC-Light iFOB	11	11	-	11	-	11
Quidel QuickVue iFOB	11	11	-	11	-	11

2015 M2

Urine Sediment Identification

SPECIMENS US-3 AND US-4

CASE HISTORY:

A 28-year-old female presented to her physician in the ninth month of her first pregnancy. She is being monitored weekly due to her gradually increasing blood pressure. The patient complains of swollen fingers and a persistent headache that developed during the past week. Since the previous visit, she has gained more weight than expected, and her blood pressure has increased. A urinalysis was performed, and the results appear below.

Color = Yellow

Appearance = Hazy

Dipstick results:

Specific gravity = 1.020

pH = 5.5

Protein = 300 mg/dL (3+)

Glucose = Negative

Ketones = Negative

Bilirubin = Negative

Urobilinogen = Normal/0.2 mg/dL

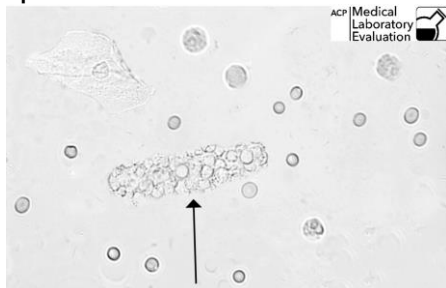
Blood = Small (1+)

Leukocyte Esterase = Trace

Nitrite = Negative

This patient was diagnosed with preeclampsia. Preeclampsia is a disorder that occurs during pregnancy and the postpartum period, affecting at least 5-8% of all pregnancies. It is a progressive condition characterized by hypertension, edema, and proteinuria. Proper prenatal care is essential to diagnose and manage preeclampsia, as it is often “silent,” and found unexpectedly during a routine blood pressure check and urine test. The signs and symptoms of preeclampsia develop gradually, and may go undetected for months then seem to appear suddenly. Symptoms of severe disease include sudden weight gain, abdominal pain, headaches, and changes in vision. Preeclampsia affects the health of both the mother and the baby. Globally, preeclampsia and other hypertensive disorders of pregnancy are a leading cause of maternal and infant illness and death. The cause of preeclampsia is incompletely understood. It appears to be a combination of vascular changes and immune factors. The vascular changes affect the kidneys, causing acute glomerulonephritis, which allows blood and protein to pass through into the urine. Preeclampsia can appear at any time during pregnancy and even up to six weeks post-partum, though it most frequently occurs in the final trimester and resolves within 48 hours of delivery. The healthcare provider will watch for signs of instability in the mother, such as very high blood pressure, lab results indicating kidney and/or liver failure or abnormal clotting function (*e.g.*, increased PT/PTT, decreased RBC and platelet counts.) Unfortunately, the only “cure” for this disease is delivery of the baby and placenta.

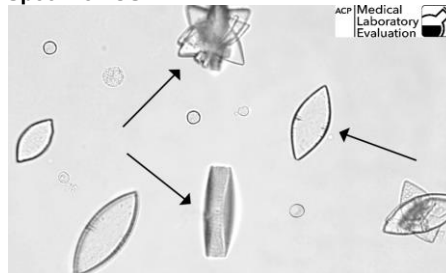
Specimen US-3



<u>Identification</u>	<u>Labs</u>	<u>Percent</u>	<u>Performance</u>
RBC/blood/hgb cast	457	80.18%	Acceptable
Identification Unknown – Refer	1	0.18%	Acceptable
Cellular (WBC) cast	60	10.53%	
Cellular (RTE) cast	17	2.98%	
Red blood cell (RBC)	15	2.63%	
Fatty cast	10	1.75%	

The arrows in this photograph point to a **red blood cell (RBC) cast**. The cells within the cast have similar morphology as the free-floating RBCs in the surrounding field. *Technical tip: When unsure of the identity of a cast or other object, observe “the company it keeps.”* RBC casts may be the most diagnostically significant of all elements found in urine sediment. The presence of red cell casts and proteinuria usually indicates bleeding into the nephron due to injury to the glomerulus of the kidney, *ie*, glomerulonephritis. The morphology of the red cells in the urine can provide a clue to the source of the bleeding. Glomerular hematuria is associated with dysmorphic RBCs in the urine, while intact RBCs are associated with nonglomerular hematuria. The glomerulus is where urine formation begins. It is the structure that delivers blood to the nephron for filtration. Inflammation there reduces the kidney’s ability to excrete water and salt, causing reduced urine output. This “back up” can lead to expanded circulatory volume, edema, high blood pressure, anemia, and encephalopathy. To view another photo of a RBC cast, see 2009 M2 Specimen US-3.

Specimen US-4



<u>Identification</u>	<u>Labs</u>	<u>Percent</u>	<u>Performance</u>
Uric acid crystal	534	91.18%	Acceptable
Triple phosphate crystal	10	1.76%	
Calcium oxalate crystal	8	1.41%	
Identification Unknown –Refer	5	0.88%	

The arrows in this photograph point to **uric acid crystals**. Uric acid is a normal crystal found in acid urines (pH less than 6). Uric acid crystals are the most common crystals seen in urine sediment, as well as the most varied in size and shape. The most characteristic forms are the diamond or rhombic prism and the rosette. The variety of forms can also include six-sided plates, cubes, prisms, lemon-shaped, barrel-shaped, spears, and stars. Uric acid crystals rarely have pathologic significance, unless they are seen in a freshly voided specimen. Some participants misidentified these crystals as cystine. Cystine crystals are rare, hexagonal (six-sided) plates with pathological significance. To view another photo of uric acid crystals, see 2011 M3 Specimen US-5.

References:

Black, R.M. “Vascular Diseases of the Kidney.” *ACP Medicine*. Ed. D. C. Dale. New York: WebMD, Inc., 2004. 2019-2021.

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

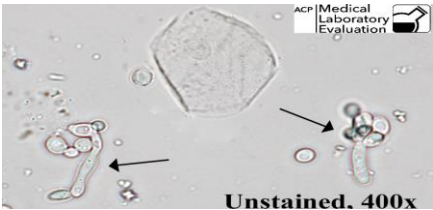
Preeclampsia Foundation. Preeclampsia.org. Copyright, 2015.

Rodak, B. F.: *Hematology: Clinical Principles and Applications*. 3rd ed. W. B. Saunders, Philadelphia, 2007.

PROVIDER-PERFORMED MICROSCOPY (PPM)

Wet Mount Preparation

Specimen PPM-7

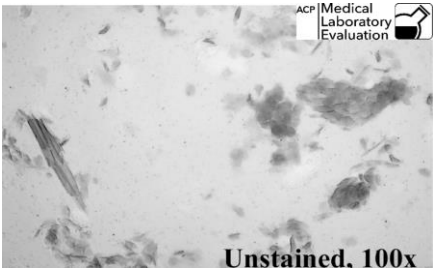


<u>Identification</u>	<u>Labs</u>	<u>Percent</u>	<u>Performance</u>
Yeast/fungi	541	95.75%	Acceptable
Identification Unknown – Refer	7	1.24%	
Mucus strands	5	0.88%	
Bacteria	5	0.88%	

The arrows in this photograph of a vaginal wet mount point to **yeast**. Yeasts are small single-celled fungal organisms that are typically round to oval in shape. They reproduce by budding, a process in which a small portion of the cell is pinched off and grows into a new cell. Sometimes yeasts form long, branching chains of buds resembling the hyphae produced by molds. Technically, these are pseudohyphae, but in the clinical lab they are generally referred to simply as hyphae. The species *Candida albicans* causes the majority of yeast infections in women. It is a part of the normal intestinal flora, and can be part of the normal vaginal flora in small amounts. *C. albicans* primarily infects the genital tract but it can also cause urinary tract infections. To view another photo of yeast, see 2009 M3 Specimen PPM-13.

Scabies Identification

Specimen PPM-8



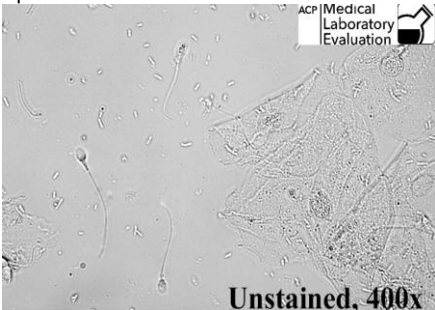
<u>Identification</u>	<u>Labs</u>	<u>Percent</u>	<u>Performance</u>
Scabies absent	215	92.27%	Acceptable
Scabies present	18	7.73%	

Scabies are absent in this photograph of a skin scrapings preparation. The scabies mite, or human itch mite (*Sarcoptes scabiei*), is usually spread by prolonged direct personal contact with an infested person. It can also be spread indirectly by prolonged contact with infested clothing or bedding. The mites burrow into the skin and produce a pimple-like (papular) rash that itches. The diagnosis of scabies is often made only by examination of the skin and the patient history. Identification of the mite, its burrows, eggs, or feces (called scybala) confirms the clinical suspicion of scabies. Scabies can be difficult to find by laboratory testing, though, because mites are often few in number. 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 a photo of a scabies mite, see 2015 M1 Specimen PPM-3.

PROVIDER-PERFORMED MICROSCOPY (PPM)

Sperm Identification

Specimen PPM-9

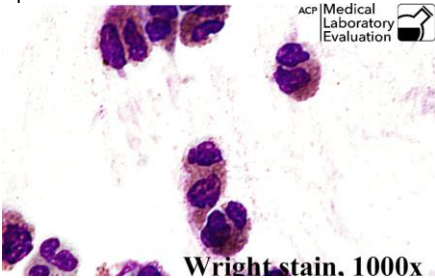


Three spermatozoa are present in this photograph of a vaginal wet mount preparation.

<u>Identification</u>	<u>Labs</u>	<u>Percent</u>	<u>Performance</u>
Sperm present	543	99.82%	Acceptable
Sperm absent	1	0.18%	

Nasal Smear

Specimen PPM-10



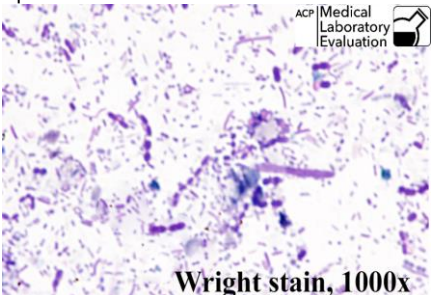
Eosinophils are present in this photograph of Wright-stained nasal mucus.

“Eos” have 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. To view another photo of eosinophils in a nasal smear, see 2014 M3 Specimen PPM-16.

<u>Identification</u>	<u>Labs</u>	<u>Percent</u>	<u>Performance</u>
Eosinophils present	164	98.20%	Acceptable
Eosinophis absent	3	1.80%	

Stool Preparation

Specimen PPM-11



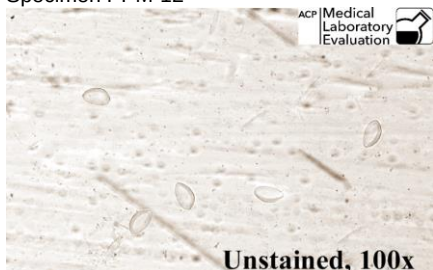
Leukocytes are absent in this photograph of a Wright stained stool preparation.

<u>Identification</u>	<u>Labs</u>	<u>Percent</u>	<u>Performance</u>
Leukocytes absent	176	87.56%	Acceptable
Leukocytes present	25	12.44%	

PROVIDER-PERFORMED MICROSCOPY (PPM)

Pinworm Preparation

Specimen PPM-12



<u>Identification</u>	<u>Labs</u>	<u>Percent</u>	<u>Performance</u>
Pinworms/eggs present	232	98.31%	Acceptable
Pinworms/eggs absent	4	1.69%	

Five pinworm eggs are present in this photograph of a perianal pinworm preparation.

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