

**New York State Department of Health
Wadsworth Center**

Proficiency Testing Program

27-Apr-05

**DIAGNOSTIC IMMUNOLOGY &
HUMAN IMMUNODEFICIENCY VIRUS
SUMMARY ANALYSIS**

**Proficiency Test Event
27-Apr-05**

**Diagnostic Immunology & Human Immunodeficiency Virus
Summary Report**

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The data summarized in this report were tabulated from test results and accompanying information submitted by laboratories that participated in the April 27, 2005 Diagnostic Immunology and Human Immunodeficiency Virus proficiency test events. Participants are encouraged to review the data and to compare results and test kit performances.

Laboratories were evaluated on the basis of their responses for each analyte and on overall performance for all the analytes tested in the permit category. Appropriate responses were determined by participant consensus requiring 80% agreement in each test.

Qualitative/ quantitative results were graded in relation to results given by participants for specific test kits. When the number of participants that used a specific test kit was less than 6, results were graded considering results given for the method used. Target values and acceptable ranges were determined as indicated in Page 5.

Grading Criteria

- > When both qualitative and quantitative results were reported ten points were deducted for each incorrect result. When only qualitative OR quantitative results were reported twenty points were deducted for each incorrect result.
- > For **Diagnostic Services** failure to attain an overall testing score of at least 80% is unsatisfactory performance
- > For **Donor Services** failure to attain an overall testing score of 100% is unsatisfactory performance.
- > For **HIV** failure to attain an overall testing score of 100% is unsatisfactory performance.
- > Laboratories failing two out of three consecutive proficiency test events for an analyte or for the permit category will fail the proficiency testing program for the analyte or for the permit category and may be required to cease patient testing for that analyte/category.

Summary Tables

Test kit manufacturer names are in italics. In some tables, test kits are grouped under test methods shown in bold letters. In all tables, test methods and test kit manufacturer names are listed in alphabetic order. Only the testing systems used by 6 or more laboratories are listed in this report.

For qualitative tests, results are summarized as the number of laboratories that reported a test sample as reactive to the number that reported it as non-reactive. In addition, where test results depend on a quantitative value (e.g. titer, IU/ml) the values reported are given in separate tables. They are expressed, where applicable, as the Mean \pm S.D. when six or more laboratories reported data.

For quantitative tests, values reported variously as mg/dl, IU/ml, Enzyme activity, etc. are given as the Mean \pm S.D. when six or more laboratories reported results. Titers are given as endpoint titers.

Disclaimer

The use of brand and/or trade names in this report does not constitute an endorsement of the products on the part of the Wadsworth Center or the New York State Department of Health.

Determination of Acceptable Responses

Analyte or Test	Criteria
Alpha-1 Antitrypsin	Target value \pm 3 S.D.
Antinuclear Antibody	Target value \pm 2 dilutions or positive or negative
Antistreptolysin O	Target value \pm 3 S.D. or Target value \pm 2 dilutions or positive or negative
Complement C'3, C'4	Target value \pm 3 S.D.
Cytomegalovirus Antibody	Target value \pm 3 S.D. or Reactive / nonreactive
Hepatitis (HbsAg, anti-HBc, HBeAg, and HCAb)	Reactive / nonreactive
HIV 1 Ab, Ag	Reactive / nonreactive
HTLV 1 Ab (EIA Ab, WB)	Reactive / nonreactive
Lyme Disease Ab, WB IgG, IgM	Reactive / nonreactive
Immunoglobulin A, E, M	Target value \pm 3 S.D.
Immunoglobulin G	Target value \pm 25 %
Infectious Mononucleosis	Target value \pm 2 dilutions or positive or negative
Rheumatoid Factor	Target value \pm 3 S.D. or Target value \pm 2 dilutions or positive or negative
Rubella Ab, IgM	Target value \pm 3 S.D. or Target value \pm 2 dilutions or positive or negative or Immune or nonimmune
Syphilis Reagin Antibody	Target value \pm 1 dilution
Syphilis Treponemal Antibody	Reactive / nonreactive

Antinuclear Antibody

		Participant Results/ Sample Number																	
Method	No. Labs	46			47			48			49			50					
		N	R	%	N	R	%	N	R	%	N	R	%	N	R	%			
EIA	48	1	47	98%	0	48	100%	48	100%	0	0%	0	0%	48	100%	48	100%	0	0%
Bio-Rad	12		12	100%		12	100%	12	100%		0%		12	100%	12	100%			0%
Diamedix	10		10	100%		10	100%	10	100%		0%		10	100%	10	100%			0%
The Binding Site	6		6	100%		6	100%	6	100%		0%		6	100%	6	100%			0%
Wampole/Zeus	10		10	100%		10	100%	10	100%		0%		10	100%	10	100%			0%
Others	10	1	9	90%		10	100%	10	100%		0%		10	100%	10	100%			0%
IFA	87	1	86	99%	2	85	98%	87	100%	0	0%	1	1%	86	99%	87	100%	0	0%
Bio-Rad	31	1	30	97%	1	30	97%	31	100%		0%	1	3%	30	97%	31	100%		0%
Immuno	6		6	100%		6	100%	6	100%		0%		6	100%	6	100%			0%
The Binding Site	12		12	100%		12	100%	12	100%		0%		12	100%	12	100%			0%
Wampole/Zeus	25		25	100%	1	24	96%	25	100%		0%		25	100%	25	100%			0%
Others	13		13	100%		13	100%	13	100%		0%		13	100%	13	100%			0%
Other Methods	11	2	9	82%	3	8	73%	11	100%		0%	2	18%	9	82%	11	100%		0%
Analyte Total	146	4	142	97%	5	141	97%	146	100%	0	0%	3	2%	143	98%	146	100%	0	0%

Note: Of the 119 laboratories reporting staining patterns: 97.5% found test sample 46 to stain Speckeled, 99.2% found test sample 47 to stain Homogenous and 98.3% found test sample 49 to stain Homogenous.

Antinuclear Antibody

The number of laboratories that reported titers is listed for positive test samples 46,47 and 49. Only testing systems with 6 or more laboratories reporting titers are listed in this table.

Method	No. Labs	Sample 46 Titers						Sample 47 Titers							
		40	80	160	320	640	1280	40	80	160	320	640	1280		
IFA															
	Bio-Rad ^[1]	1		2	4	12	6	1				7	16	7	
	Wampole/ Zeus ^{[2],[3]}			1	3	3	5	5	1			5	8	6	3
	The Binding site				1	5	4	2				4	4	4	
EIA															
	Bio-Rad ^[4]			1	3	4	1					1	2	6	2

Method	No. Labs	Sample 49 Titers					
		40	80	160	320	640	1280
IFA							
	Bio-Rad ^[1]	1	4	10	12	3	
	Wampole/ Zeus		3	9	7	3	1
	The Binding site		3	4	3	2	
EIA							
	Bio-Rad ^[2]	1	1	3	5	1	

^[1] Four laboratories did not report Sample 46 to the endpoint.

^[2] Five laboratories did not report Sample 46 to the endpoint.

^[3] One laboratory did not report Sample 47 to the endpoint.

^[4] Two laboratories did not report Sample 46 to the endpoint.

Antistreptolysin O

Method		Participant Results/ Sample Number																														
		16						17						18						19						20						
		N	%	R	%	N	%	N	%	R	%	N	%	N	%	R	%	N	%	N	%	R	%	N	%							
<i>Manufacturer</i>	No. Labs	11	0	0%	11	100%	11	100%	0	0%	0	0%	11	100%	11	100%	0	0%	0	0%	11	100%	11	100%	0	0%	11	100%	11	100%	0	0%
Hemagglutination		11	0	0%	11	100%	11	100%	0	0%	0	0%	11	100%	11	100%	0	0%	0	0%	11	100%	11	100%	0	0%	11	100%	11	100%	0	0%
<i>Wampole /Zues</i>	11			0%	11	100%			0%			0%	11	100%			0%		0%	11	100%			0%		11	100%			0%		
Latex Agglutination	89	0	0%	0%	89	100%	89	100%	0	0%	0	0%	89	100%	89	100%	0	0%	0	0%	89	100%	89	100%	0	0%	89	100%	89	100%	0	0%
<i>Behring</i>	23			0%	23	100%	23	100%			0%		23	100%	23	100%			0%	23	100%	23	100%			23	100%	23	100%			
<i>Fisher</i>	26			0%	26	100%	26	100%			0%		26	100%	26	100%			0%	26	100%	26	100%			26	100%	26	100%			
<i>Remel</i>	14			0%	14	100%	14	100%			0%		14	100%	14	100%			0%	14	100%	14	100%			14	100%	14	100%			
<i>Wampole/Zeus</i>	6			0%	6	100%	6	100%			0%		6	100%	6	100%			0%	6	100%	6	100%			6	100%	6	100%			
<i>Others</i>	20			0%	20	100%	20	100%			0%		20	100%	20	100%			0%	20	100%	20	100%			20	100%	20	100%			
Nephelometry	23	0	0%	0%	23	100%	23	100%	0	0%	0	0%	23	100%	23	100%	0	0%	0	0%	23	100%	23	100%	0	0%	23	100%	23	100%	0	0%
<i>Beckman</i>	11			0%	11	100%	11	100%			0%		11	100%	11	100%			0%	11	100%	11	100%			11	100%	11	100%			
<i>Behring</i>	12			0%	12	100%	12	100%			0%		12	100%	12	100%			0%	12	100%	12	100%			12	100%	12	100%			
Turbidimetry	24	0	0%	0%	24	100%	24	100%	0	0%	0	0%	24	100%	24	100%	0	0%	0	0%	24	100%	24	100%	0	0%	24	100%	24	100%	0	0%
<i>Beckman</i>	8			0%	8	100%	8	100%			0%		8	100%	8	100%			0%	8	100%	8	100%			8	100%	8	100%			
<i>Roche Diagnostics</i>	10			0%	10	100%	10	100%			0%		10	100%	10	100%			0%	10	100%	10	100%			10	100%	10	100%			
<i>Others</i>	6			0%	6	100%	6	100%			0%		6	100%	6	100%			0%	6	100%	6	100%			6	100%	6	100%			
Other Methods	3			0%	3	100%	3	100%			0%		3	100%	3	100%			0%	3	100%	3	100%			3	100%	3	100%			
Analyte Total	150	0	0%	0%	150	100%	150	100%	0	0%	0	0%	150	100%	150	100%	0	0%	0	0%	150	100%	150	100%	0	0%	150	100%	150	100%	0	0%

Antistreptolysin O Latex Agglutination Procedures

The number of laboratories that reported titers is listed for positive test samples 16 and 18. The dilution schemes used by the laboratories are represented by the letters A and B. Only testing systems with 6 or more laboratories reporting titers are listed in this table.

Method <i>Manufacturer</i>	No. Labs	Sample 16 Titers					Sample 18 Titers			
		A B	200 2	400 4	800 8	1600	200 2	400 4	800 8	1600
<i>Biokit/ Fisher</i>	19	A B	1 2	12 1	2 1			9 3	6	
<i>Dade Behring</i> ^[1]	22	A		12	8			9	10	1
<i>Remel</i>	12	A B	2 1	7	2		1	6 1	4	

^[1] Two laboratories did not report samples 16 and 18 to the endpoint.

Antistreptolysin O

Results are summarized for positive test samples 16 and 18. The Mean values \pm S.D. are given where 6 or more laboratories reported quantitative results. Outlier values are omitted.

Method	No. <i>Manufacturer</i>	IU/ml	Sample 16	Sample 18
Nephelometry				
	<i>Behring</i>	12	718 \pm 67	787 \pm 81
	<i>Beckman</i>	11	539 \pm 31	582 \pm 24
Turbidimetry				
	<i>Roche Diagnostics</i>	10	736 \pm 30	773 \pm 32
	<i>Beckman</i>	6	571 \pm 51	618 \pm 62

Cytomegalovirus Antibody

Method		Participant Results/ Sample Number															
		11			12			13			14			15			
		N	%	R	N	%	R	N	%	R	N	%	R	N	%	R	%
EIA	No. Labs	40	100%	0	0%	40	100%	40	100%	0	0%	40	100%	0	0%	40	100%
	Abbott	6	100%		0%	6	100%	6	100%		0%	6	100%		0%	6	100%
	Diamedix	10	100%		0%	10	100%	10	100%		0%	10	100%		0%	10	100%
	Wampole /Zeus	20	100%		0%	20	100%	20	100%		0%	20	100%		0%	20	100%
	Others	4	100%		0%	4	100%	4	100%		0%	4	100%		0%	4	100%
ELFA		22	100%	0	0%	21	95%	22	100%	0	0%	21	95%	1	5%	21	95%
	bioMérieux Vidas	22	100%		0%	21	95%	22	100%		0%	21	95%	1	5%	21	95%
Latex Agglutination		15	100%	0	0%	15	100%	15	100%	0	0%	15	100%	0	0%	15	100%
	Becton Dickinson	15	100%		0%	15	100%	15	100%		0%	15	100%		0%	15	100%
Chemiluminescence		12	100%	0	0%	11	92%	12	100%	0	0%	12	100%	0	0%	12	100%
	Diagnostic Products	12	100%		0%	11	92%	12	100%		0%	12	100%		0%	12	100%
Hemagglutination		10	100%	0	0%	10	100%	10	100%	0	0%	10	100%	0	0%	10	100%
	Olympus	10	100%		0%	10	100%	10	100%		0%	10	100%		0%	10	100%
Other Methods		6	100%		0%	6	100%	6	100%		0%	6	100%		0%	6	100%
	Analyte Total	105	100%	0	0%	103	98%	105	100%	0	0%	104	99%	1	1%	104	99%

Cytomegalovirus Antibody

Results are summarized for positive test samples 12,14 and 15. For the procedure indicated, the Mean values \pm S.D. are given where 6 or more laboratories reported quantitative results.

Method	Manufacturer	No. Labs	Units	Participant Results/ Sample Number		
				12	14	15
EIA						
	<i>Wampole/ Zeus Scientific</i>	15	ISR	2.70 \pm 0.46	2.53 \pm 0.48	2.84 \pm 0.47
ELFA						
	<i>bioMerieux Vidas</i>	13	AU/ml	84.62 \pm 12.64	78.31 \pm 14.63	51.92 \pm 6.55

Hepatitis B Core Antibody

Method		Participant Results/ Sample Number																													
		6						7						8						9						10					
		N	%	R	%	N	%	N	%	R	%	N	%	N	%	R	%	N	%	N	%	R	%	N	%						
Chemiluminescence	49	0	0%	49	100%	0	0%	49	100%	0	0%	1	2%	48	98%	0	0%	49	100%	48	98%	1	2%	48	98%	1	2%				
<i>Bayer</i>	6		0%	6	100%		0%	6	100%		0%		0%	6	100%		0%	6	100%		0%		0%	6	100%		0%				
<i>Diagnostic Products</i>	26		0%	26	100%		0%	26	100%		0%		0%	26	100%		0%	26	100%		0%		0%	25	96%	1	4%				
<i>Ortho</i>	17		0%	17	100%		0%	17	100%		0%	1	6%	16	94%		0%	17	100%		0%		0%	17	100%		0%				
EIA	106	0	0%	106	100%	0	0%	106	100%	0	0%	0	0%	106	100%	1	1%	104	98%	104	98%	2	2%	104	98%	2	2%				
<i>Abbott</i>	78		0%	78	100%		0%	78	100%		0%		0%	78	100%	1	1%	77	99%	76	97%	2	3%	76	97%	2	3%				
<i>DiaSorin</i> ^[1]	15		0%	15	100%		0%	15	100%		0%		0%	15	100%		0%	14	93%	15	100%		0%	15	100%		0%				
<i>Ortho</i>	13		0%	13	100%		0%	13	100%		0%		0%	13	100%		0%	13	100%		0%		0%	13	100%		0%				
Other Methods	1		0%	1	100%		0%	1	100%		0%		0%	1	100%		0%	1	100%	1	100%		0%	1	100%		0%				
Analyte Total	156	0	0%	156	100%	0	0%	156	100%	0	0%	1	1%	155	99%	1	1%	154	99%	153	98%	3	2%	153	98%	3	2%				

[1] One laboratory reported sample 9 as equivocal.

Hepatitis B Surface Antigen

Method		Participant Results/ Sample Number																		
		6			7			8			9			10						
Manufacturer		No. Labs	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%		
Chemiluminescence		56	0	0%	56	100%	55	98%	1	2%	0	0%	56	100%	0	0%	56	100%	1	2%
Diagnostic Products		30		0%	30	100%	29	97%	1	3%		0%	30	100%		0%	30	100%	1	3%
Ortho		26		0%	26	100%	26	100%		0%		0%	26	100%		0%	26	100%		0%
EIA		149	0	0%	149	100%	147	99%	2	1%	0	0%	149	100%	1	1%	148	99%	6	4%
Abbott		109		0%	109	100%	107	98%	2	2%		0%	109	100%	1	1%	108	99%	5	5%
Bio-Rad		10		0%	10	100%	10	100%		0%		0%	10	100%		0%	10	100%		0%
DiaSorin		9		0%	9	100%	9	100%		0%		0%	9	100%		0%	9	100%		0%
Ortho		10		0%	10	100%	10	100%		0%		0%	10	100%		0%	10	100%		0%
Roche		11		0%	11	100%	11	100%		0%		0%	11	100%		0%	11	100%	1	9%
Other Methods		3		0%	3	100%	3	100%		0%		0%	3	100%		0%	3	100%		0%
Analyte Total		208	0	0%	208	100%	205	99%	3	1%	0	0%	208	100%	1	0%	207	100%	7	3%

Hepatitis Be Antigen

Method		Participant Results/ Sample Number															
		66			67			68			69			70			
		N	%	R	N	%	R	N	%	R	N	%	R	N	%	R	
EIA		34	100%	0	0%	34	100%	0	0%	34	100%	0	0%	34	100%	0	0%
DiaSorin		34	100%		0%	34	100%		0%	34	100%		0%	34	100%		0%
Other Methods		4	100%		0%	4	100%		0%	4	100%		0%	4	100%		0%
Analyte Total		38	100%	0	0%	38	100%	0	0%	38	100%	0	0%	38	100%	0	0%

Hepatitis C Antibody

Method		Participant Results/ Sample Number															
		71			72			73			74			75			
		N	%	R	N	%	R	N	%	R	N	%	R	N	%	R	
Chemiluminescence		41	100%	0	0%	41	100%	0	0%	41	100%	0	0%	41	100%	0	0%
Bayer		13	100%		0%	13	100%		0%	13	100%		0%	13	100%		0%
Ortho		28	100%		0%	28	100%		0%	28	100%		0%	28	100%		0%
EIA		122	100%	0	0%	122	100%	0	0%	122	100%	0	0%	122	100%	0	0%
Abbott		89	100%		0%	89	100%		0%	89	100%		0%	89	100%		0%
Ortho		33	100%		0%	33	100%		0%	33	100%		0%	33	100%		0%
Other Methods		6	100%		0%	6	100%		0%	6	100%		0%	6	100%		0%
Analyte Total		169	100%	0	0%	169	100%	0	0%	169	100%	0	0%	169	100%	0	0%

HIV Antibody

Method		Participant Results/ Sample Number																				
		31				32				33				34				35				
		N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%	
EIA	134	100%	0	0%	134	100%	0	0%	134	100%	134	100%	0	0%	134	100%	0	0%	134	100%	0	0%
	74	100%		0%	74	100%		0%	74	100%	74	100%		0%	74	100%		0%	74	100%		0%
	21	100%		0%	21	100%		0%	21	100%	21	100%		0%	21	100%		0%	21	100%		0%
	39	100%		0%	39	100%		0%	39	100%	39	100%		0%	39	100%		0%	39	100%		0%
Rapid EIA	76	100%	0	0%	76	100%	0	0%	76	100%	76	100%	0	0%	76	100%	0	0%	76	100%	0	0%
	76	100%		0%	76	100%		0%	76	100%	76	100%		0%	76	100%		0%	76	100%		0%
Rapid Immunoassay	35	100%	0	0%	35	100%	0	0%	35	100%	35	100%	0	0%	35	100%	0	0%	35	100%	0	0%
	32	100%		0%	32	100%		0%	32	100%	32	100%		0%	32	100%		0%	32	100%		0%
	3	100%		0%	3	100%		0%	3	100%	3	100%		0%	3	100%		0%	3	100%		0%
Western Blot	44	100%	0	0%	44	100%	0	0%	44	100%	43	98%	0	0%	44	100%	0	0%	44	100%	0	0%
	37	100%		0%	37	100%		0%	37	100%	36	97%		0%	37	100%		0%	37	100%		0%
	7	100%		0%	7	100%		0%	7	100%	7	100%		0%	7	100%		0%	7	100%		0%
Other Methods	9	100%	0	0%	9	100%	0	0%	9	100%	9	100%	0	0%	9	100%	0	0%	9	100%	0	0%
	298	100%		0%	298	100%		0%	298	100%	297	100%		0%	298	100%		0%	298	100%		0%
Analyte Total	298	100%	0	0%	298	100%	0	0%	298	100%	297	100%	0	0%	298	100%	0	0%	298	100%	0	0%

^[1] One laboratory reported sample 34 as indeterminate.

HIV p24 Antigen

Method		Participant Results/ Sample Number																				
		61				62				63				64				65				
		N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%	
EIA	6	100%	0	0%	6	100%	0	0%	6	100%	6	100%	0	0%	6	100%	0	0%	6	100%	6	100%
	6	100%		0%	6	100%		0%	6	100%	6	100%		0%	6	100%		0%	6	100%		100%
Analyte Total	6	100%	0	0%	6	100%	0	0%	6	100%	6	100%	0	0%	6	100%	0	0%	6	100%	6	100%

Infectious Mononucleosis
Latex Agglutination Procedures

The number of laboratories that reported titers are summarized for positive test samples 26 and 29. The dilution schemes laboratories used are represented by the letter A and B. Only testing systems with 6 or more laboratories reporting titers are listed in this table.

Method	No.	Sample 26						Sample 29						
		A	Titers					B	Titers					
			4	8	16	32	64		7	14	28	56	32	64
	Labs	B	7	14	28	56		7	14	28	56			
Latex Agglutination ^[1]	14	B				2	3	1			1	4	3	1
		A	3		1				3	1				

[1] One laboratory incorrectly reported sample 29 as negative, and therefore did not report a titer.

Lyme Disease Antibody

Method		Participant Results/ Sample Number																			
		41			42			43			44			45							
		N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%				
	No. Labs	R = Reactive/ Positive; N = Non-Reactive/ Negative																			
	Manufacturer	7	0%	7	100%	0	0%	7	100%	0	0%	7	100%	0	0%	7	100%	5	71%	2	29%
	Wampole /Zeus	7	0%	7	100%	7	100%	7	100%	7	100%	7	100%	7	100%	7	100%	5	71%	2	29%
	EIA	75	0%	74	99%	0	0%	74	99%	0	0%	74	99%	0	0%	67	89%	1	1%	73	97%
	Diamedix ^[1]	15	0%	14	93%	14	93%	14	93%	14	93%	14	93%	14	93%	8	53%	6	40%	14	93%
	Immuneetrics	7	0%	7	100%	7	100%	7	100%	7	100%	7	100%	7	100%	6	86%	1	14%	6	86%
	MarDX	13	0%	13	100%	13	100%	13	100%	13	100%	13	100%	13	100%	13	100%	0	0%	13	100%
	Wampole /Zeus	31	0%	31	100%	31	100%	31	100%	31	100%	31	100%	31	100%	31	100%	0	0%	31	100%
	Others	9	0%	9	100%	9	100%	9	100%	9	100%	9	100%	9	100%	9	100%	0	0%	9	100%
	ELFA	31	0%	31	100%	0	0%	31	100%	0	0%	31	100%	0	0%	30	97%	0	0%	31	100%
	bioMérieux	31	0%	31	100%	31	100%	31	100%	31	100%	31	100%	31	100%	30	97%	1	3%	31	100%
	Other Methods	2	0%	2	100%	2	100%	2	100%	2	100%	2	100%	2	100%	2	100%	0	0%	2	100%
	Analyte Total	115	0%	114	99%	114	99%	114	99%	0	0%	114	99%	0	0%	106	92%	6	5%	108	94%

[1] One laboratory reported quantitative values, where qualitative results only are expected.

Note: The expected result for samples #44 & # 45 is reactive. Laboratories who reported these samples as non-reactive should critically examine their protocol and test kit/method.

Lyme Western Blot IgG

Method		Participant Results/ Sample Number																															
		41						42						43						44*						45							
		R = Reactive/ Positive;				N = Non-Reactive/ Negative;		E = Equivocal/ Indeterminate		R = Reactive/ Positive;				N = Non-Reactive/ Negative;		E = Equivocal/ Indeterminate		R = Reactive/ Positive;				N = Non-Reactive/ Negative;		E = Equivocal/ Indeterminate		R = Reactive/ Positive;				N = Non-Reactive/ Negative;		E = Equivocal/ Indeterminate	
No. Labs	Manufacturer	N	%	E	%	R	%	R	%	N	%	E	%	R	%	N	%	E	%	R	%	N	%	E	%	R	%	N	%	E	%	R	%
26	Western Blot - IgG	0	0%	0	0%	26	100%	0	0%	0	0%	26	100%	0	0%	0	0%	0	0%	0	0%	15	58%	5	19%	6	23%	1	4%	1	4%	24	92%
24	MarDx		0%		0%	24	100%		0%		0%	24	100%		0%		0%		0%		13	54%	5	21%	6	25%	1	4%	1	4%	22	92%	
2	Others		0%		0%	2	100%		0%		0%	2	100%		0%		0%		0%		2	100%		0%		0%		0%		0%	2	100%	
6	Other Methods		0%		0%	6	100%		0%		0%	6	100%		0%		0%		0%		3	50%		0%	3	50%	2	33%		0%	4	67%	
32	Analyte Total	0	0%	0	0%	32	100%	0	0%	0	0%	32	100%	0	0%	0	0%	0	0%	0	0%	18	56%	5	16%	9	28%	3	9%	1	3%	28	88%

* Test sample 44 IgG specific was not authenticated - A consensus of 80% agreement can not be reached among participants, by regulation requirement, the sample cannot be graded (scored) and all participating laboratories get credit for this sample.

Lyme Western Blot IgM

Method		Participant Results/ Sample Number																															
		41						42						43						44						45*							
		R = Reactive/ Positive;				N = Non-Reactive/ Negative;		E = Equivocal/ Indeterminate		R = Reactive/ Positive;				N = Non-Reactive/ Negative;		E = Equivocal/ Indeterminate		R = Reactive/ Positive;				N = Non-Reactive/ Negative;		E = Equivocal/ Indeterminate		R = Reactive/ Positive;				N = Non-Reactive/ Negative;		E = Equivocal/ Indeterminate	
No. Labs	Manufacturer	N	%	E	%	R	%	R	%	N	%	E	%	R	%	N	%	E	%	R	%	N	%	E	%	R	%	N	%	E	%	R	%
27	Western Blot - IgM	1	4%	0	0%	26	96%	0	0%	0	0%	27	100%	0	0%	0	0%	0	0%	0	0%	1	4%	0	0%	26	96%	22	81%	4	15%	1	4%
25	MarDx	1	4%		0%	24	96%		0%		0%	25	100%		0%		0%		0%		1	4%		0%	24	96%	20	80%	4	16%	1	4%	
2	Others		0%		0%	2	100%		0%		0%	2	100%		0%		0%		0%		2	100%		0%	2	100%	2	100%		0%		0%	
4	Other Methods		0%		0%	4	100%		0%		0%	4	100%		0%		0%		0%		4	100%		0%	4	100%	2	50%		0%		0%	
31	Analyte Total	1	3%	0	0%	30	97%	0	0%	0	0%	31	100%	0	0%	0	0%	0	0%	0	0%	1	3%	0	0%	30	97%	24	77%	6	19%	1	3%

* Test sample 45 IgM specific was not authenticated - A consensus of 80% agreement can not be reached among participants, by regulation requirement, the sample cannot be graded (scored) and all participating laboratories get credit for this sample.

Rheumatoid Factor

Method		Participant Results/ Sample Number																
		26			27			28			29			30				
Manufacturer		No. Labs	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%
EIA		11	0	0%	11	100%	0	0%	11	100%	0	0%	11	100%	0	0%	11	100%
Diamedix		7		0%	7	100%		0%	7	100%		0%	7	100%		0%	7	100%
Others		4		0%	4	100%		0%	4	100%		0%	4	100%		0%	4	100%
Latex Agglutination		139	0	0%	139	100%	1	1%	139	100%	0	0%	137	99%	2	1%	139	100%
Becton Dickinson		20		0%	20	100%		0%	20	100%		0%	20	100%		0%	20	100%
Behring		15		0%	15	100%		0%	15	100%		0%	15	100%		0%	15	100%
Fisher		50		0%	50	100%	1	2%	50	100%	1	2%	49	98%	1	2%	50	100%
Remel		6		0%	6	100%		0%	6	100%		0%	6	100%		0%	6	100%
Seradyn		15		0%	15	100%		0%	15	100%		0%	15	100%		0%	15	100%
True Medix		7		0%	7	100%		0%	7	100%		0%	7	100%		0%	7	100%
Wampole/Zeus		16		0%	16	100%		0%	16	100%		0%	15	94%	1	6%	16	100%
Others		10		0%	10	100%		0%	10	100%		0%	10	100%		0%	10	100%
Nephelometry		49	0	0%	49	100%	0	0%	49	100%	0	0%	48	98%	1	2%	48	98%
Beckman Coulter		26		0%	26	100%		0%	26	100%		0%	25	96%	1	4%	25	96%
Behring		23		0%	23	100%		0%	23	100%		0%	23	100%		0%	23	100%
Turbidimetry		33	0	0%	33	100%	0	0%	33	100%	0	0%	33	100%	0	0%	31	94%
Beckman Coulter		9		0%	9	100%		0%	9	100%		0%	9	100%		0%	7	78%
Roche		17		0%	17	100%		0%	17	100%		0%	17	100%		0%	17	100%
Others		7		0%	7	100%		0%	7	100%		0%	7	100%		0%	7	100%
Other Methods		4		0%	4	100%		0%	4	100%		0%	4	100%		0%	4	100%
Analyte Total		236	0	0%	236	100%	1	0%	236	100%	0	0%	233	99%	3	1%	233	99%

Rheumatoid Factor Latex Agglutination Procedure

The number of laboratories that reported titers is listed for positive test samples 26 and 30. The dilution schemes laboratories used are represented by the letter A and B. Only testing systems with 6 or more laboratories reporting titers are listed in this table.

Manufacturer	No. Labs	A B	Sample 26 Titers						Sample 30 Titers					
			20 4	40 8	80 16	160 32	320 64	640 128	40 8	80 16	160 32	320 64	640 128	1280 256
<i>Fisher</i> ^[1]	38	A B		4 1	17 5	1 3	1 2			1 2	6 3	11 5		2
<i>Becton Dickson</i>	16	A B		4	9	3			2	9	4	1		
<i>Seradyn</i>	11	A B				2 3	2 2			1 2	2 1	1 4		
<i>Dade Behring</i>	10	A B				1 3	4 1	1		1 1		3	1	
<i>Wampole</i>	8	A	1	6		1		1	4	2	1			

^[1] Four laboratories did not report sample 30 to the endpoint.

Rheumatoid Factor

Results are summarized for positive test samples 26 and 30. The Mean values \pm S.D. are given where 6 or more laboratories reported quantitative results. Outlier values are omitted.

Method	No.	IU/ml	
Manufacturer	Labs	Sample 26	Sample 30

Nephelometry

<i>Beckman Coulter Array</i>	9	211 \pm 14	570 \pm 25
<i>Beckman Coulter IMAGE</i>	17	205 \pm 15	671 \pm 78
<i>Behring PROSPEC</i>	9	258 \pm 24	640 \pm 73
<i>Behring Nephelometer</i>	9	261 \pm 28	642 \pm 78

Turbidimetry

<i>Roche Diagnostics</i>	12	140 \pm 12	341 \pm 12
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Rubella IgG Antibody

Method		Participant Results/ Sample Number																		
		11			12			13			14			15						
		N	%	R	N	%	R	N	%	R	N	%	R	N	%	R	%			
Chemiluminescence	58	100%	0	0%	1	2%	57	98%	57	98%	1	2%	0	0%	58	100%	0	0%	58	100%
<i>Bayer</i>	26	100%		0%		0%	26	100%	26	100%		0%		0%	26	100%		0%	26	100%
<i>Beckman</i>	15	100%		0%		0%	15	100%	14	93%	1	7%		0%	15	100%		0%	15	100%
<i>Diagnostic Products</i>	17	100%		0%	1	6%	16	94%	17	100%		0%		0%	17	100%		0%	17	100%
EIA	65	100%	0	0%	0	0%	65	100%	65	100%	0	0%	0	0%	65	100%	0	0%	65	100%
<i>Abbott</i>	27	100%		0%		0%	27	100%	27	100%		0%		0%	27	100%		0%	27	100%
<i>Diamedix</i>	13	100%		0%		0%	13	100%	13	100%		0%		0%	13	100%		0%	13	100%
<i>WampoleZeus</i>	20	100%		0%		0%	20	100%	20	100%		0%		0%	20	100%		0%	20	100%
<i>Others</i>	5	100%		0%		0%	5	100%	5	100%		0%		0%	5	100%		0%	5	100%
ELFA	35	100%	0	0%	0	0%	35	100%	35	100%	0	0%	0	0%	35	100%	0	0%	35	100%
<i>bioMérieux Vidas</i>	35	100%		0%		0%	35	100%	35	100%		0%		0%	35	100%		0%	35	100%
Latex Agglutination	45	100%	0	0%	0	0%	45	100%	44	98%	1	2%	0	0%	45	100%	0	0%	45	100%
<i>Becton Dickinson</i>	15	100%		0%		0%	15	100%	14	93%	1	7%		0%	15	100%		0%	15	100%
<i>Fisher</i>	12	100%		0%		0%	12	100%	12	100%		0%		0%	12	100%		0%	12	100%
<i>Murex</i>	8	100%		0%		0%	8	100%	8	100%		0%		0%	8	100%		0%	8	100%
<i>WampoleZeus</i>	7	100%		0%		0%	7	100%	7	100%		0%		0%	7	100%		0%	7	100%
<i>Others</i>	3	100%		0%		0%	3	100%	3	100%		0%		0%	3	100%		0%	3	100%
Other Methods	7	100%		0%		0%	7	100%	7	100%	1	14%	1	14%	7	100%	0	0%	7	100%
Analyte Total	210	100%	0	0%	1	0%	209	100%	208	99%	2	1%	1	0%	210	100%	0	0%	210	100%

Rubella IgG Antibody

Results are summarized for positive test samples 12, 14 and 15. The Mean values \pm S.D. are given where 6 or more laboratories reported quantitative results. Outlier values are omitted.

Method	Manufacturer	No. Labs	Unit	IU/ml		
				Sample 12	Sample 14	Sample 15
Chemiluminescence						
	<i>Bayer</i>	22	IU/ml	158.8 \pm 15	166 \pm 15.9	198.9 \pm 24.9
	<i>Beckman</i>	8	IU/ml	49.3 \pm 8	45.2 \pm 4.5	54.3 \pm 5.7
	<i>Diagnostic Products</i>	15	IU/ml	57.1 \pm 5.3	49.5 \pm 6	50.4 \pm 5.3
EIA						
	<i>Abbott</i>	9	IU/ml	40 \pm 6	35.3 \pm 5.2	48.9 \pm 6.4
	<i>Wampole</i>	7	ISR	3.27 \pm 0.18	3.24 \pm 0.19	2.97 \pm 0.19

Rubella IgM Specific

Method		Participant Results/ Sample Number																
		56			57			58			59			60				
		No. Labs	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%
EIA		16	16	100%	0	0%	16	100%	0	0%	16	100%	0	0%	16	100%	0	0%
Abbott		6	6	100%		0%	6	100%		0%	6	100%		0%	6	100%		0%
Wampole/Zeus		6	6	100%		0%	6	100%		0%	6	100%		0%	6	100%		0%
Others		4	4	100%		0%	4	100%		0%	4	100%		0%	4	100%		0%
Other Methods		8	8	100%		0%	8	100%		0%	7	88%	1	13%	7	88%	1	13%
Analyte Total		24	24	100%	0	0%	24	100%	0	0%	23	96%	1	4%	23	96%	1	4%

R = Reactive/ Positive; N = Non-Reactive/ Negative

Syphilis - Reagin Antibody

		Participant Results/ Sample Number																					
		R = Reactive/ Positive; N = Non-Reactive/ Negative																					
Method	No. Labs	1			2			3			4			5									
		N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%						
RPR	281	0	0%	281	100%	279	99%	2	1%	0	0%	281	100%	0	0%	281	100%	0	0%	281	100%	0	0%
	AS/		0%	38	100%	38	100%		0%		0%	38	100%		0%	38	100%		0%	38	100%		0%
	Becton Dickinson	147	0%	147	100%	147	100%		0%		0%	147	100%		0%	147	100%		0%	147	100%		0%
	Fisher	45	0%	45	100%	45	100%		0%		0%	45	100%		0%	45	100%		0%	45	100%		0%
	True Medix	13	0%	13	100%	13	100%		0%		0%	13	100%		0%	13	100%		0%	13	100%		0%
	Wampole/Zeus	22	0%	22	100%	22	100%		0%		0%	22	100%		0%	22	100%		0%	22	100%		0%
	Others	16	0%	16	100%	14	88%	2	13%		0%	16	100%		0%	16	100%		0%	16	100%		0%
Other Methods	3		0%	3	100%	3	100%		0%		0%	3	100%		0%	3	100%		0%	3	100%		0%
Analyte Total	284	0	0%	284	100%	282	99%	2	1%	0	0%	284	100%	0	0%	284	100%	0	0%	284	100%	0	0%

Syphilis - Reagin Antibody

RPR Procedures

The number of laboratories that reported titers is listed for positive test samples 1 and 3 for the RPR procedure. Only testing systems with 6 or more laboratories reporting titers are listed in this table.

Method Manufacturer	No. Labs	Sample 1 Titers					Sample 3 Titers					
		1	2	4	8	16	1	2	4	8	16	32
<i>Becton Dickinson</i>	133		41	84	7	1	2	65	61	5		
<i>Fisher</i>	45		22	23				22	21	5		
<i>Wampole/ Zeus</i>	22		14	6	2		5	12	5			
<i>ASI</i>	27		8	17	2		1	13	12		1	
<i>True Medix</i>	12		3	6	3		1	6	4	1		

Syphilis - Treponemal Antibody

		Participant Results/ Sample Number																	
		R = Reactive/ Positive; N = Non-Reactive/ Negative																	
Method	No. Labs	1			2			3			4			5					
		N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%		
GeI. Part. Agglut.	34	0	0%	34	100%	0	0%	0	0%	34	100%	34	100%	0	0%	34	100%	0	0%
<i>Fujirebio</i>	34		0%	34	100%		0%		0%	34	100%	34	100%		0%	34	100%		0%
IFA	34	0	0%	34	100%	0	0%	0	0%	34	100%	34	100%	0	0%	34	100%	0	0%
<i>Wampole/Zeus</i>	34		0%	34	100%		0%		0%	34	100%	34	100%		0%	34	100%		0%
MHA	9	0	0%	9	100%	0	0%	0	0%	9	100%	9	100%	0	0%	9	100%	0	0%
<i>Olympus</i>	9		0%	9	100%		0%		0%	9	100%	9	100%		0%	9	100%		0%
Other Methods	15		0%	15	100%		0%		0%	15	100%	15	100%		0%	15	100%		0%
Analyte Total	92	0	0%	92	100%	0	0%	0	0%	92	100%	92	100%	0	0%	92	100%	0	0%

AAT, C'3, and C'4

The Mean mg/dl \pm S.D. is given where 6 or more laboratories reported values. Outlier values are omitted.

Analytes	Sample NO.					
	No.					
Alpha-1-Antitrypsin	Labs	76	77	78	79	80
Nephelometry/Behring Nephelometer	18	292 \pm 25	248 \pm 17	< 20	194 \pm 14	< 20
Nephelometry/Beckman Coulter IMMAGE	12	286 \pm 7	179 \pm 6	< 10	147 \pm 5	< 10
Nephelometry/ Total	33	289 \pm 20	217 \pm 37	< 20	172 \pm 26	< 20
Turbidimetry/ Total	8	274 \pm 22	200 \pm 23	< 30	166 \pm 16	< 30
Complement C'3		76	77	78	79	80
Nephelometry/Beckman Coulter Array	13	111 \pm 3	235 \pm 8	31.9 \pm 1.4	346 \pm 11	39.9 \pm 1.8
Nephelometry/Beckman Coulter IMMAGE	21	112 \pm 4	236 \pm 7	34.5 \pm 2	333 \pm 13	42.3 \pm 1.2
Nephelometry/Behring BN PROSPEC	7	114 \pm 2	223 \pm 6	31.5 \pm 0.7	339 \pm 15	39.6 \pm 1
Nephelometry/Behring Dimension	7	115 \pm 6	242 \pm 11	35.4 \pm 2.9	369 \pm 14	44.7 \pm 2.9
Nephelometry/Behring Nephelometer	19	117 \pm 6	234 \pm 12	32.2 \pm 2.3	351 \pm 21	41 \pm 3.2
Turbidimetry/Olympus AU	6	109 \pm 9	214 \pm 14	36.7 \pm 6.5	339 \pm 7	47.4 \pm 5.9
Turbidimetry/Roche Cobas Integra	12	115 \pm 6.7	241 \pm 16	31.6 \pm 1.1	362 \pm 19	38.3 \pm 3.6
Nephelometry/ Total	68	113 \pm 6	234 \pm 11	33.1 \pm 2.5	345 \pm 19	41.4 \pm 2.8
Turbidimetry/ Total	29	114 \pm 8	237 \pm 20	34.1 \pm 4	361 \pm 22	41.8 \pm 5.5
Complement C'4		76	77	78	79	80
Nephelometry/Beckman Coulter Array	13	26.4 \pm 1.1	93.5 \pm 2.7	< 10	36.4 \pm 1.5	< 10
Nephelometry/Beckman Coulter IMMAGE	21	29.8 \pm 1.9	120 \pm 7	< 10	41 \pm 2.9	< 10
Nephelometry/Behring BN PROSPEC	7	27 \pm 0.7	112 \pm 7.2	< 10	35.7 \pm 0.7	< 10
Nephelometry/Behring Nephelometer	19	27.4 \pm 2.3	115 \pm 11	< 10	37.2 \pm 2.8	< 10
Turbidimetry/Olympus AU	6	30.7 \pm 4.9	120 \pm 9	< 13	40.7 \pm 5.2	< 13
Turbidimetry/Roche Cobas Integra	11	27.2 \pm 0.8	115 \pm 3.8	< 8	37.8 \pm .8	< 8
Nephelometry/ Total	61	28 \pm 2.2	111 \pm 13	< 10	38.2 \pm 3.2	< 10
Turbidimetry/ Total	31	27.5 \pm 3.1	115 \pm 9.9	< 13	37.6 \pm 3.7	< 13

IgA, IgE, IgG, and IgM

The Mean mg/dl (IU/ml for IgE) \pm S.D. is given for IgA, IgE, and IgM and Mean mg/dl \pm 25% is given for IgG where 6 or more laboratories reported values. Outlier values are omitted.

Analytes (Unit)	No.	Sample NO.				
		Labs	81	82	83	84
Immunoglobulin A (mg/dl)						
Nephelometry/Beckman Coulter Array	15	549 \pm 20	296 \pm 22	103 \pm 4	< 7	268 \pm 10
Nephelometry/Beckman Coulter IMMAGE	23	571 \pm 24	297 \pm 10	99.1 \pm 2.7	< 7	264 \pm 10
Nephelometry/Behring BN PROSPEC	8	633 \pm 31	281 \pm 10	99.2 \pm 5.9	< 25	250 \pm 12
Nephelometry/Behring Nephelometer	21	656 \pm 42	284 \pm 9	98.4 \pm 4.4	< 25	256 \pm 11
Turbidimetry/Behring Dimension	6	582 \pm 27	299 \pm 11	97.5 \pm 4.5	< 20	269 \pm 9
Turbidimetry/Roche Cobas Integra	11	525 \pm 20	286 \pm 11	90.8 \pm 4.8	< 20	250 \pm 10
Nephelometry/ Total	70	598 \pm 56	291 \pm 16	100 \pm 5	< 35	261 \pm 13
Turbidimetry/ Total	42	540 \pm 41	294 \pm 22	95.9 \pm 8.7	< 70	261 \pm 21
Immunoglobulin E (IU/ml)						
Chemiluminescence/Bayer	8	807 \pm 89	306 \pm 17	22.8 \pm 3.1	< 2	9897 \pm 782
Chemiluminescence/Diag. Prod. Co.	31	796 \pm 93	303 \pm 22	28.1 \pm 2.4	< 1	6818 \pm 838
FEIA/Pharmacia	8	783 \pm 45	300 \pm 21	31.5 \pm 1.6	< 2	6341 \pm 528
Nephelometry/Behring	7	1006 \pm 41	336 \pm 33	29.5 \pm 2.2	< 20	8367 \pm 519
Chemiluminescence/ Total	44	786 \pm 140	298 \pm 42	27 \pm 3.2	< 3	7585 \pm 1596
Nephelometry/ Total	15	893 \pm 145	320 \pm 36	27.1 \pm 3.7	< 20	7571 \pm 1269
FEIA/ Total	13	762 \pm 66	297 \pm 19	31 \pm 2.1	< 2	6314 \pm 473
EIA/ Total	6	709 \pm 50	273 \pm 29	29.3 \pm 1.4	< 7	5339 \pm 569
Immunoglobulin G (mg/dl)						
Nephelometry/Beckman Coulter Array	14	2273 \pm 568	1314 \pm 329	623 \pm 156	2668 \pm 667	1414 \pm 353
Nephelometry/Beckman Coulter IMMAGE	23	2308 \pm 577	1376 \pm 344	641 \pm 160	2681 \pm 670	1448 \pm 362
Nephelometry/Behring BN PROSPEC	8	2226 \pm 557	1300 \pm 325	639 \pm 160	2513 \pm 628	2912 \pm 728
Nephelometry/Behring Nephelometer	23	2347 \pm 587	1329 \pm 332	637 \pm 159	2608 \pm 652	1427 \pm 357
Turbidimetry/Behring Dimension	6	2370 \pm 592	1357 \pm 339	618 \pm 154	2707 \pm 677	1385 \pm 346
Turbidimetry/Roche Cobas Integra	11	2234 \pm 559	1318 \pm 330	615 \pm 154	2447 \pm 612	1392 \pm 348
Nephelometry/ Total	71	2313 \pm 578	1340 \pm 335	637 \pm 159	2634 \pm 658	1601 \pm 400
Turbidimetry/ Total	40	2260 \pm 565	1318 \pm 330	612 \pm 153	2645 \pm 661	1413 \pm 353
Immunoglobulin M (mg/dl)						
Nephelometry/Beckman Coulter Array	14	361 \pm 21	100 \pm 3	46.3 \pm 2	< 26	86.8 \pm 2.2
Nephelometry/Beckman Coulter IMMAGE	23	348 \pm 14	102 \pm 3	44.6 \pm 2.4	< 26	87.9 \pm 2.8
Nephelometry/Behring BN PROSPEC	8	390 \pm 15	96.7 \pm 3.5	42.8 \pm 2.5	< 20	85.1 \pm 3.3
Nephelometry/Behring Nephelometer	22	429 \pm 29	99.3 \pm 5.7	42.1 \pm 2.2	< 20	85.7 \pm 5
Turbidimetry/Behring Dimension	6	360 \pm 12	101 \pm 4	40.7 \pm 2.6	< 20	89 \pm 2.2
Turbidimetry/Roche Cobas Integra	11	320 \pm 8	96.5 \pm 1.9	34.9 \pm 1.2	< 12	80.2 \pm 1.5
Nephelometry/ Total	69	381 \pm 43	99.7 \pm 4.8	43.7 \pm 3.1	< 26	86.5 \pm 4
Turbidimetry/ Total	40	320 \pm 26	99.1 \pm 5.2	39.2 \pm 4.5	< 25	84.4 \pm 5.1

Acceptable Response (April 27, 2005 PT Event)
Quantitative Tests Results (Acceptable Range)

Analytes	Sample NO.				
Method/ Manufacture					
Alpha-1-Antitrypsin	76	77	78	79	80
Nephelometry/ <i>Beckman</i>	264 - 307	162 - 196	<10	132-162	<10
Nephelometry/ <i>Behring</i>	216 - 367	197 - 298	<20	151 - 236	<20
Nephelometry/ <i>Total</i>	230 - 348	105 - 327	<20	93 -251	<20
Turbidimetry/ <i>Total</i>	208 - 339	133 - 268	<30	118 - 214	<30
Complement C'3	76	77	78	79	80
Nephelometry/ <i>Beckman</i>	98 - 125	209 - 260	27 - 40	292 - 380	34 - 46
Nephelometry/ <i>Behring</i>	96 - 134	197 -275	25 - 44	287 - 414	31 - 54
Turbidimetry/ <i>Olympus</i>	81 - 137	173 - 255	17 - 56	318 - 360	29 - 65
Turbidimetry/ <i>Roche</i>	95 - 136	193 - 288	28 - 35	304 - 419	27 - 49
Nephelometry/ <i>Total</i>	96 -130	200 -267	25 - 41	289 - 400	33 - 50
Turbidimetry/ <i>Total</i>	89 - 139	178 - 295	22 -46	295 - 426	25 - 58
Complement C'4	76	77	78	79	80
Nephelometry/ <i>Beckman</i>	22 - 35	85 - 141	<10	32 - 50	<10
Nephelometry/ <i>Behring</i>	20 - 34	82 - 148	<10	28 - 46	<10
Turbidimetry/ <i>Olympus</i>	15 - 46	93 - 147	<13	25 - 56	<13
Turbidimetry/ <i>Roche</i>	24 - 30	103 - 126	<8	35 - 40	<8
Nephelometry/ <i>Total</i>	21 - 35	73 - 150	<10	28 - 48	<10
Turbidimetry/ <i>Total</i>	18 - 37	85 - 145	<13	27 - 49	<13
Immunoglobulin A	81	82	83	84	85
Nephelometry/ <i>Beckman</i>	488 - 644	229 - 362	90 - 114	<7	232 - 298
Nephelometry/ <i>Behring</i>	529 - 783	250 - 311	81 - 117	<25	214 -287
Turbidimetry/ <i>Behring</i>	502 - 662	264 - 333	83 - 111	<20	241 - 297
Turbidimetry/ <i>Roche</i>	465 - 584	253 - 318	76 - 105	<20	219 - 282
Nephelometry/ <i>Total</i>	431 - 765	243 - 339	85 - 114	<35	223 - 299
Turbidimetry/ <i>Total</i>	417 - 662	228 - 359	69 - 122	<70	197 - 324
Immunoglobulin E	81	82	83	84	85
Chemiluminescence/ <i>Bayer</i>	540 - 1074	253 - 358	13 - 32	<2	7552 - 12242
Chemiluminescence/ <i>Diag. Prod. Co.</i>	518 - 1074	237 - 368	20 - 35	<1	4310 - 9325
FEIA/ <i>Pharmacia</i>	648 - 918	237 - 364	26 - 36	<2	4757 -7924
Nephelometry/ <i>Behring</i>	883 - 1128	237 - 435	23 - 36	<20	6808 - 9925
Chemiluminescence/ <i>Total</i>	366 - 1205	172 - 423	17 - 37	<3	2796 - 12374
EIA/ <i>Total</i>	558 - 860	185 - 361	25 - 33	<7	3630 - 7047
FEIA/ <i>Total</i>	563 - 961	240 - 354	24 - 37	<2	4895 - 7732
Nephelometry/ <i>Total</i>	459 - 1327	211 - 427	15 - 38	<20	3764 - 11379
Immunoglobulin G	81	82	83	84	85
Nephelometry/ <i>Beckman</i>	1704 - 2886	985 - 1720	467 - 802	2000 - 3351	1060 - 1810
Nephelometry/ <i>Behring</i>	1669 -2934	975 - 1662	477 - 798	1884 - 3260	1070 - 3640
Turbidimetry/ <i>Behring</i>	1777 - 2962	1017 - 1696	463 - 772	2030 - 3384	1038 - 1731
Turbidimetry/ <i>Roche</i>	1675 - 2792	988 - 1648	461 - 769	1835 - 3059	1044 - 1740
Nephelometry/ <i>Total</i>	1734 - 2891	1004 - 1674	477 - 796	1975 - 3292	1200 - 2001
Turbidimetry/ <i>Total</i>	1695 - 2825	988 - 1648	458 - 765	1983 - 3306	1059 - 1766
Immunoglobulin M	81	82	83	84	85
Nephelometry/ <i>Beckman</i>	297 - 425	90 - 112	37 - 52	<26	79 - 96
Nephelometry/ <i>Behring</i>	341 - 516	82 - 116	35 - 50	<20	70 - 101
Turbidimetry/ <i>Roche</i>	295 - 344	90 - 102	31 - 39	<12	75 - 85
Nephelometry/ <i>Total</i>	251 - 510	85 - 114	34 - 53	<26	74 - 98
Turbidimetry/ <i>Total</i>	243 - 397	83 - 115	25 - 53	<25	69 - 100

**Acceptable Response (April 27, 2005 PT Event)
Qualitative / Quantitative Tests Results**

Analytes	Sample NO.				
	1	2	3	4	5
Syphilis - Reagin Ab	R	N	R	N	N
<i>RPR Titer</i>	2 - 8		1-8		
Syphilis - Treponemal	R	N	R	N	N
	6	7	8	9	10
HBcAb	R	N	R	R	N
HBsAg	R	N	R	R	N
	11	12	13	14	15
CMV	N	R	N	R	R
Rubella Ab	N	R	N	R	R
	16	17	18	19	20
ASO	R	N	R	N	N
<i>Latex Agglutination Titer</i>	1-8		1-16		
<i>Latex Agglutination as IU/ml</i>	100-1600		100-1600		
	26	27	28	29	30
Infectious Mono.	R	N	N	R	N
<i>Latex Agglutination Titer</i>	4-64			4-64	
Rheumatoid Factor	R	N	N	N	R
<i>Latex Agglutination Titer</i>	4-64				8-256
<i>Latex Agglutination as IU/ml</i>	40-640				40-1280
	31	32	33	34	35
HIV Ab Screening/Confirmator	N	R	R	N	N
	36	37	38	39	40
HTLV 1 Ab	N	N	R	N	N
	41	42	43	44	45
LYME Disease Ab	R	N	N	R	R
LYME Disease Ab WB IgG	R	N	N	R*	R
LYME Disease Ab WB IgM	R	N	N	R	N*
	46	47	48	49	50
ANA	R	R	N	R	N
<i>EIA/ IFA Titer</i>	160-5120	40-640		40-1280	
	56	57	58	59	60
Rubella IgM	N	N	R	R	N
	61	62	63	64	65
HIV p24 Ag	N	N	N	N	R
	66	67	68	69	70
HBeAg	N	R	R	N	N
	71	72	73	74	75
Hepatitis C Ab	N	R	R	R	N

Note: R = Reactive/ Positive; I = Indeterminate; N = Non-Reactive/ Negative

* Test sample was not authenticated - because a consensus of 80% agreement was not reached all participating laboratories received credit for this sample.