

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

# **Proficiency Testing Program**

**28-Sep-05**

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



**Proficiency Test Event  
28-Sep-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 September 28, 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
- ⊖ 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, ratio, 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 $\pm$ 2 dilutions or positive or negative
Complement C'3, C'4	Target value $\pm$ 3 S.D.
Cytomegalovirus Antibody	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 $\pm$ 2 dilutions or positive or negative
Rubella Ab, IgM	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																					
R = Reactive/ Positive; N = Non-Reactive/ Negative																					
Method	No.	46				47				48				49				50			
		Manufacturer	Labs	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%	N	%
<b>EIA</b>	<b>52</b>	<b>52</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>52</b>	<b>100%</b>	<b>1</b>	<b>2%</b>	<b>51</b>	<b>98%</b>	<b>52</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>52</b>	<b>100%</b>	<b>0</b>	<b>0%</b>
<i>Bio-Rad</i>	17	17	100%		0%		0%	17	100%		0%	17	100%	17	100%		0%	17	100%		0%
<i>Diamedix</i>	10	10	100%		0%		0%	10	100%		0%	10	100%	10	100%		0%	10	100%		0%
<i>The Binding Site</i>	6	6	100%		0%		0%	6	100%	1	17%	5	83%	6	100%		0%	6	100%		0%
<i>Wampole/Zeus</i>	9	9	100%		0%		0%	9	100%		0%	9	100%	9	100%		0%	9	100%		0%
<i>Others</i>	10	10	100%		0%		0%	10	100%		0%	10	100%	10	100%		0%	10	100%		0%
<b>IFA</b>	<b>80</b>	<b>78</b>	<b>98%</b>	<b>2</b>	<b>3%</b>	<b>0</b>	<b>0%</b>	<b>80</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>80</b>	<b>100%</b>	<b>80</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>80</b>	<b>100%</b>	<b>0</b>	<b>0%</b>
<i>Bio-Rad</i>	26	25	96%	1	4%		0%	26	100%		0%	26	100%	26	100%		0%	26	100%		0%
<i>Immuno</i>	6	5	83%	1	17%		0%	6	100%		0%	6	100%	6	100%		0%	6	100%		0%
<i>The Binding Site</i>	11	11	100%		0%		0%	11	100%		0%	11	100%	11	100%		0%	11	100%		0%
<i>Wampole/Zeus</i>	24	24	100%		0%		0%	24	100%		0%	24	100%	24	100%		0%	24	100%		0%
<i>Others</i>	13	13	100%		0%		0%	13	100%		0%	13	100%	13	100%		0%	13	100%		0%
<b>Other Methods</b>	<b>10</b>	<b>10</b>	<b>100%</b>		<b>0%</b>	<b>1</b>	<b>10%</b>	<b>9</b>	<b>90%</b>	<b>1</b>	<b>10%</b>	<b>9</b>	<b>90%</b>	<b>10</b>	<b>100%</b>		<b>0%</b>	<b>10</b>	<b>100%</b>		<b>0%</b>
<b>Analyte Total</b>	<b>142</b>	<b>140</b>	<b>99%</b>	<b>2</b>	<b>1%</b>	<b>1</b>	<b>1%</b>	<b>141</b>	<b>99%</b>	<b>2</b>	<b>1%</b>	<b>140</b>	<b>99%</b>	<b>142</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>142</b>	<b>100%</b>	<b>0</b>	<b>0%</b>

Note: Of the 115 laboratories reporting staining patterns: 93% found test sample 47 to stain Speckled, and 97.4% found test sample 48 to stain Homogenous.

## Antinuclear Antibody

The number of laboratories that reported titers is listed for positive test samples 47 and 48. Only testing systems with 6 or more laboratories reporting titers are listed in this table.

Method	No. Labs	Sample 47								Sample 48						
		160	320	640	1280	2560	5120	10240	20	40	80	160	320	640	1280	2560
<b>IFA</b>																
<i>Bio-Rad</i>	25	2	7	9	2	1			1		4	9	6	2		
<i>Wampole/ Zeus</i>	21	3	3	4	2	4	1	1		2	6	6	4	2		1
<i>The Binding site</i>	11	1		2	4	2					1	1	4	3		
<b>EIA</b>																
<i>Bio-Rad</i>	10	1	1	3	2	1					2	3	4			

**Note:** The number of labs reporting specific titers may not add up to the total number of labs for that system because some labs are not reporting endpoint titers.

# Antistreptolysin O

Participant Results/ Sample Number																					
R = Reactive/ Positive; N = Non-Reactive/ Negative																					
Method	No. Labs	16				17				18				19				20			
		N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%
<b>Hemagglutination</b>	<b>10</b>	<b>10</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>10</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>10</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>10</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>10</b>	<b>100%</b>
<i>Wampole /Zues</i>	10	10	100%		0%	10	100%		0%	10	100%		0%		0%	10	100%		0%	10	100%
<b>Latex Agglutination</b>	<b>88</b>	<b>88</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>88</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>88</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>88</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>88</b>	<b>100%</b>
<i>Behring</i>	21	21	100%		0%	21	100%		0%	21	100%		0%		0%	21	100%		0%	21	100%
<i>Fisher</i>	29	29	100%		0%	29	100%		0%	29	100%		0%		0%	29	100%		0%	29	100%
<i>Remel</i>	14	14	100%		0%	14	100%		0%	14	100%		0%		0%	14	100%		0%	14	100%
<i>True Medix</i>	6	6	100%		0%	6	100%		0%	6	100%		0%		0%	6	100%		0%	6	100%
<i>Others</i>	18	18	100%		0%	18	100%		0%	18	100%		0%		0%	18	100%		0%	18	100%
<b>Nephelometry</b>	<b>29</b>	<b>29</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>29</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>29</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>29</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>29</b>	<b>100%</b>
<i>Beckman</i>	17	17	100%		0%	17	100%		0%	17	100%		0%		0%	17	100%		0%	17	100%
<i>Behring</i>	12	12	100%		0%	12	100%		0%	12	100%		0%		0%	12	100%		0%	12	100%
<b>Turbidimetry</b>	<b>18</b>	<b>18</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>18</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>18</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>18</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>18</b>	<b>100%</b>
<i>Roche Diagnostics</i>	13	13	100%		0%	13	100%		0%	13	100%		0%		0%	13	100%		0%	13	100%
<i>Others</i>	5	5	100%		0%	5	100%		0%	5	100%		0%		0%	5	100%		0%	5	100%
<b>Other Methods</b>	<b>3</b>	<b>3</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>3</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>3</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>3</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>3</b>	<b>100%</b>
<b>Analyte Total</b>	<b>148</b>	<b>148</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>148</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>148</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>148</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>148</b>	<b>100%</b>

## Antistreptolysin O Latex Agglutination Procedures

The number of laboratories that reported titers is listed for positive test samples 19 and 20. Only testing systems with 6 or more laboratories reporting titers are listed in this table.

Method <i>Manufacturer</i>	No. Labs	Sample 19 Titers					Sample 20 Titers				
		100	200	400	800	1600	100	200	400	800	1600
<i>Biokit/ Fisher</i>	17		1	13	3				13	4	
<i>Dade Behring</i> <sup>[1]</sup>	18			10	4	1			9	5	1
<i>Remel</i>	12		1	10	1		1		8	3	

**Note:** The number of labs reporting specific titers may not add up to the total number of labs for that system because some labs are not reporting endpoint titers.

### Antistreptolysin O

Results are summarized for positive test samples 19 and 20. The Mean values  $\pm$  S.D. are given where 6 or more laboratories reported quantitative results. Outlier values are omitted.

Method	No.	IU/ml	
<i>Manufacturer</i>	Labs	Sample 19	Sample 20
<b>Nephelometry</b>			
<i>Behring</i>	12	658 $\pm$ 57	711 $\pm$ 85
<i>Beckman</i>	11	535 $\pm$ 32	575 $\pm$ 26
<b>Turbidimetry</b>			
<i>Roche Diagnostics</i>	10	751 $\pm$ 35	771 $\pm$ 42

## Cytomegalovirus Antibody

Participant Results/ Sample Number																					
R = Reactive/ Positive; N = Non-Reactive/ Negative																					
Method	No. Labs	11				12				13				14				15			
		N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%
<b>EIA</b>	<b>40</b>	<b>1</b>	<b>3%</b>	<b>39</b>	<b>98%</b>	<b>40</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>40</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>40</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>1</b>	<b>3%</b>	<b>39</b>	<b>98%</b>
<i>Abbott</i>	7		0%	7	100%	7	100%		0%	7	100%		0%	7	100%		0%		0%	7	100%
<i>Diamedix</i>	10	1	10%	9	90%	10	100%		0%	10	100%		0%	10	100%		0%	1	10%	9	90%
<i>Wampole /Zeus</i>	19		0%	19	100%	19	100%		0%	19	100%		0%	19	100%		0%		0%	19	100%
<i>Others</i>	4		0%	4	100%	4	100%		0%	4	100%		0%	4	100%		0%		0%	4	100%
<b>ELFA</b>	<b>22</b>	<b>0</b>	<b>0%</b>	<b>22</b>	<b>100%</b>	<b>22</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>22</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>22</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>22</b>	<b>100%</b>
<i>bioMérieux Vidas</i>	22		0%	22	100%	22	100%		0%	22	100%		0%	22	100%		0%		0%	22	100%
<b>Latex Agglutination</b>	<b>14</b>	<b>0</b>	<b>0%</b>	<b>14</b>	<b>100%</b>	<b>14</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>14</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>14</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>14</b>	<b>100%</b>
<i>Becton Dickinson</i>	14		0%	14	100%	14	100%		0%	14	100%		0%	14	100%		0%		0%	14	100%
<b>Chemiluminescence</b>	<b>13</b>	<b>0</b>	<b>0%</b>	<b>13</b>	<b>100%</b>	<b>13</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>13</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>13</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>13</b>	<b>100%</b>
<i>Diagnostic Products</i>	13		0%	13	100%	13	100%		0%	13	100%		0%	13	100%		0%		0%	13	100%
<b>Hemagglutination</b>	<b>9</b>	<b>0</b>	<b>0%</b>	<b>9</b>	<b>100%</b>	<b>9</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>9</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>9</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>9</b>	<b>100%</b>
<i>Olympus</i>	9		0%	9	100%	9	100%		0%	9	100%		0%	9	100%		0%		0%	9	100%
<b>Other Methods</b>	<b>4</b>		<b>0%</b>	<b>4</b>	<b>100%</b>	<b>4</b>	<b>100%</b>		<b>0%</b>	<b>4</b>	<b>100%</b>		<b>0%</b>	<b>3</b>	<b>75%</b>	<b>1</b>	<b>25%</b>		<b>0%</b>	<b>4</b>	<b>100%</b>
<b>Analyte Total</b>	<b>102</b>	<b>1</b>	<b>1%</b>	<b>101</b>	<b>99%</b>	<b>102</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>102</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>101</b>	<b>99%</b>	<b>1</b>	<b>1%</b>	<b>1</b>	<b>1%</b>	<b>101</b>	<b>99%</b>

### Cytomegalovirus Antibody

Results are summarized for positive test samples 11 and 15. For the procedure indicated, the Mean values  $\pm$  S.D. are given where 6 or more laboratories reported quantitative results.

<i>Manufacturer</i>	No. Labs	Units	Participant Results/ Sample Number	
			11	15
<b>Chemiluminescence</b>				
<i>Diagnostic Products</i>	7	Ratio	9.17 $\pm$ 0.79	3.35 $\pm$ 0.23
<b>EIA</b>				
<i>Wampole/ Zeus Scientific</i>	15	Ratio	2.44 $\pm$ 0.26	1.96 $\pm$ 0.23
<b>ELFA</b>				
<i>bioMerieux Vidas</i>	13	AU/ml	77.23 $\pm$ 10.8	28.23 $\pm$ 1.83

## Hepatitis B Core Antibody

		Participant Results/ Sample Number																			
		R = Reactive/ Positive; N = Non-Reactive/ Negative																			
Method	No. Labs	6				7				8				9				10			
		N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%
<b>Chemiluminescence</b>	<b>58</b>	<b>58</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>58</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>58</b>	<b>100%</b>	<b>58</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>58</b>	<b>100%</b>
<i>Bayer</i>	11	11	100%		0%		0%	11	100%		0%	11	100%	11	100%		0%		0%	11	100%
<i>Diagnostic Products</i>	25	25	100%		0%		0%	25	100%		0%	25	100%	25	100%		0%		0%	25	100%
<i>Ortho</i>	22	22	100%		0%		0%	22	100%		0%	22	100%	22	100%		0%		0%	22	100%
<b>EIA</b>	<b>95</b>	<b>95</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>95</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>95</b>	<b>100%</b>	<b>95</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>95</b>	<b>100%</b>
<i>Abbott</i>	71	71	100%		0%		0%	71	100%		0%	71	100%	71	100%		0%		0%	71	100%
<i>DiaSorin <sup>[1]</sup></i>	12	12	100%		0%		0%	12	100%		0%	12	100%	12	100%		0%		0%	12	100%
<i>Ortho</i>	12	12	100%		0%		0%	12	100%		0%	12	100%	12	100%		0%		0%	12	100%
<b>Other Methods</b>	<b>3</b>	<b>3</b>	<b>100%</b>		<b>0%</b>		<b>0%</b>	<b>3</b>	<b>100%</b>		<b>0%</b>	<b>3</b>	<b>100%</b>	<b>3</b>	<b>100%</b>		<b>0%</b>		<b>0%</b>	<b>3</b>	<b>100%</b>
<b>Analyte Total</b>	<b>156</b>	<b>156</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>156</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>156</b>	<b>100%</b>	<b>156</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>156</b>	<b>100%</b>

# Hepatitis B Surface Antigen

		Participant Results/ Sample Number																			
		R = Reactive/ Positive; N = Non-Reactive/ Negative																			
Method	No. Labs	6				7				8				9				10			
		N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%
<b>Chemiluminescence</b>	<b>68</b>	<b>56</b>	<b>82%</b>	<b>6</b>	<b>9%</b>	<b>0</b>	<b>0%</b>	<b>68</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>68</b>	<b>100%</b>	<b>63</b>	<b>93%</b>	<b>5</b>	<b>7%</b>	<b>0</b>	<b>0%</b>	<b>68</b>	<b>100%</b>
<i>Bayer</i>	10	10	100%		0%		0%	10	100%		0%	10	100%	10	100%		0%		0%	10	100%
<i>Diagnostic Products</i>	28	28	100%		0%		0%	28	100%		0%	28	100%	27	96%	1	4%		0%	28	100%
<i>Ortho</i> <sup>[1]</sup>	30	18	60%	6	20%		0%	30	100%		0%	30	100%	26	87%	4	13%		0%	30	100%
<b>EIA</b>	<b>132</b>	<b>132</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>132</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>132</b>	<b>100%</b>	<b>124</b>	<b>94%</b>	<b>8</b>	<b>6%</b>	<b>0</b>	<b>0%</b>	<b>132</b>	<b>100%</b>
<i>Abbott</i>	95	95	100%		0%		0%	95	100%		0%	95	100%	90	95%	5	5%		0%	95	100%
<i>Bio-Rad</i>	9	9	100%		0%		0%	9	100%		0%	9	100%	8	89%	1	11%		0%	9	100%
<i>DiaSorin</i>	8	8	100%		0%		0%	8	100%		0%	8	100%	8	100%		0%		0%	8	100%
<i>Ortho</i>	9	9	100%		0%		0%	9	100%		0%	9	100%	8	89%	1	11%		0%	9	100%
<i>Roche</i>	11	11	100%		0%		0%	11	100%		0%	11	100%	10	91%	1	9%		0%	11	100%
<b>Other Methods</b>	<b>4</b>	<b>4</b>	<b>100%</b>		<b>0%</b>		<b>0%</b>	<b>4</b>	<b>100%</b>		<b>0%</b>	<b>4</b>	<b>100%</b>	<b>4</b>	<b>100%</b>		<b>0%</b>		<b>0%</b>	<b>4</b>	<b>100%</b>
<b>Analyte Total</b>	<b>204</b>	<b>192</b>	<b>94%</b>	<b>6</b>	<b>3%</b>	<b>0</b>	<b>0%</b>	<b>204</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>204</b>	<b>100%</b>	<b>191</b>	<b>94%</b>	<b>13</b>	<b>6%</b>	<b>0</b>	<b>0%</b>	<b>204</b>	<b>100%</b>

<sup>[1]</sup> An equivocal or borderline result was reported by 6 labs.

**Note:** The expected result for samples #6 and #9 is nonreactive. Laboratories who reported any other result than nonreactive for these samples should critically examine their protocol and test kit/method.

## Hepatitis Be Antigen

		Participant Results/ Sample Number																			
		R = Reactive/ Positive; N = Non-Reactive/ Negative																			
Method	No. Labs	66				67				68				69				70			
		N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%
EIA	33	0	0%	33	100%	33	100%	0	0%	33	100%	0	0%	33	100%	0	0%	0	0%	33	100%
	<i>DiaSorin</i>	33	0%	33	100%	33	100%		0%	33	100%		0%	33	100%		0%		0%	33	100%
Other Methods	5		0%	5	100%	5	100%		0%	5	100%		0%	5	100%		0%		0%	5	100%
Analyte Total	38	0	0%	38	100%	38	100%	0	0%	38	100%	0	0%	38	100%	0	0%	0	0%	38	100%

## Hepatitis C Antibody

		Participant Results/ Sample Number																			
		R = Reactive/ Positive; N = Non-Reactive/ Negative																			
Method	No. Labs	71				72				73				74				75			
		N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%
Chemiluminescence	53	0	0%	53	100%	53	100%	0	0%	0	0%	53	100%	53	100%	0	0%	53	100%	0	0%
	<i>Bayer</i>	23	0%	23	100%	23	100%		0%		0%	23	100%	23	100%		0%	23	100%		0%
	<i>Ortho</i>	30	0%	30	100%	30	100%		0%		0%	30	100%	30	100%		0%	30	100%		0%
EIA	112	0	0%	112	100%	111	99%	1	1%	0	0%	112	100%	112	100%	0	0%	112	100%	0	0%
	<i>Abbott</i>	81	0%	81	100%	80	99%	1	1%	0	0%	81	100%	81	100%		0%	81	100%		0%
	<i>Ortho</i>	31	0%	31	100%	31	100%		0%		0%	31	100%	31	100%		0%	31	100%		0%
Other Methods	1		0%	1	100%	1	100%		0%		0%	1	100%	1	100%		0%	1	100%		0%
Analyte Total	166	0	0%	166	100%	165	99%	1	1%	0	0%	166	100%	166	100%	0	0%	166	100%	0	0%

## HIV Antibody

Participant Results/ Sample Number																					
R = Reactive/ Positive; N = Non-Reactive/ Negative																					
Method	No. Labs	31				32				33				34				35			
		N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%
<b>EIA</b>	<b>130</b>	<b>0</b>	<b>0%</b>	<b>130</b>	<b>100%</b>	<b>130</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>130</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>130</b>	<b>100%</b>	<b>129</b>	<b>99%</b>	<b>1</b>	<b>1%</b>
<i>Abbott</i>	71		0%	71	100%	71	100%		0%	71	100%		0%		0%	71	100%	71	100%		0%
<i>bioMérieux</i>	20		0%	20	100%	20	100%		0%	20	100%		0%		0%	20	100%	20	100%		0%
<i>Bio-Rad</i>	39		0%	39	100%	39	100%		0%	39	100%		0%		0%	39	100%	38	97%	1	3%
<b>Rapid EIA</b>	<b>87</b>	<b>1</b>	<b>1%</b>	<b>86</b>	<b>99%</b>	<b>86</b>	<b>99%</b>	<b>1</b>	<b>1%</b>	<b>87</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>87</b>	<b>100%</b>	<b>86</b>	<b>99%</b>	<b>1</b>	<b>1%</b>
<i>Orasure</i>	87	1	1%	86	99%	86	99%	1	1%	87	100%		0%		0%	87	100%	86	99%	1	1%
<b>Rapid Immunoassay</b>	<b>40</b>	<b>0</b>	<b>0%</b>	<b>40</b>	<b>100%</b>	<b>40</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>40</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>40</b>	<b>100%</b>	<b>40</b>	<b>100%</b>	<b>0</b>	<b>0%</b>
<i>Medmira</i>	32		0%	32	100%	32	100%		0%	32	100%		0%		0%	32	100%	32	100%		0%
<i>Trinity</i>	8		0%	8	100%	8	100%		0%	8	100%		0%		0%	8	100%	8	100%		0%
<b>Western Blot</b>	<b>44</b>	<b>0</b>	<b>0%</b>	<b>44</b>	<b>100%</b>	<b>43</b>	<b>98%</b>	<b>0</b>	<b>0%</b>	<b>44</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>44</b>	<b>100%</b>	<b>44</b>	<b>100%</b>	<b>0</b>	<b>0%</b>
<i>Bio-Rad <sup>[1]</sup></i>	36		0%	36	100%	35	97%		0%	36	100%		0%		0%	36	100%	36	100%		0%
<i>Calypte Biomedical</i>	8		0%	8	100%	8	100%		0%	8	100%		0%		0%	8	100%	8	100%		0%
<b>Other Methods</b>	<b>7</b>		<b>0%</b>	<b>7</b>	<b>100%</b>	<b>7</b>	<b>100%</b>		<b>0%</b>	<b>7</b>	<b>100%</b>		<b>0%</b>		<b>0%</b>	<b>7</b>	<b>100%</b>	<b>7</b>	<b>100%</b>		<b>0%</b>
<b>Analyte Total</b>	<b>308</b>	<b>1</b>	<b>0%</b>	<b>307</b>	<b>100%</b>	<b>306</b>	<b>99%</b>	<b>1</b>	<b>0%</b>	<b>308</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>308</b>	<b>100%</b>	<b>306</b>	<b>99%</b>	<b>2</b>	<b>1%</b>

<sup>[1]</sup> One laboratory reported sample #32 as "non-specific staining".

## HIV p24 Antigen

Participant Results/ Sample Number																					
R = Reactive/ Positive; N = Non-Reactive/ Negative																					
Method	No. Labs	61				62				63				64				65			
		N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%
<b>EIA</b>	<b>4</b>	<b>4</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>4</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>4</b>	<b>100%</b>	<b>4</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>4</b>	<b>100%</b>	<b>0</b>	<b>0%</b>
<i>Beckman Coulter</i>	4	4	100%		0%	4	100%		0%		0%	4	100%	4	100%		0%	4	100%		0%
<b>Analyte Total</b>	<b>4</b>	<b>4</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>4</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>4</b>	<b>100%</b>	<b>4</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>4</b>	<b>100%</b>	<b>0</b>	<b>0%</b>

## HTLV Antibody

		Participant Results/ Sample Number																			
		R = Reactive/ Positive; N = Non-Reactive/ Negative																			
Method	No. Labs	36				37				38				39				40			
		N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%
<b>EIA</b>	<b>46</b>	<b>0</b>	<b>0%</b>	<b>46</b>	<b>100%</b>	<b>46</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>46</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>46</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>46</b>	<b>100%</b>	<b>0</b>	<b>0%</b>
<i>Abbott</i>	28		0%	28	100%	28	100%		0%	28	100%		0%	28	100%		0%	28	100%		0%
<i>bioMérieux</i>	18		0%	18	100%	18	100%		0%	18	100%		0%	18	100%		0%	18	100%		0%
<b>Analyte Total</b>	<b>46</b>	<b>0</b>	<b>0%</b>	<b>46</b>	<b>100%</b>	<b>46</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>46</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>46</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>46</b>	<b>100%</b>	<b>0</b>	<b>0%</b>

# Infectious Mononucleosis

Participant Results/ Sample Number																					
R = Reactive/ Positive; N = Non-Reactive/ Negative																					
Method	No. Labs	26				27				28				29				30			
		N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%
<b>CICA</b>	<b>25</b>	<b>25</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>25</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>25</b>	<b>100%</b>	<b>25</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>25</b>	<b>100%</b>	<b>0</b>	<b>0%</b>
<i>Polymedco</i>	10	10	100%		0%	10	100%		0%		0%	10	100%	10	100%		0%	10	100%		0%
<i>Others <sup>[1]</sup></i>	15	15	100%		0%	15	100%		0%		0%	15	100%	15	100%		0%	15	100%		0%
<b>Hemagglutination</b>	<b>56</b>	<b>55</b>	<b>98%</b>	<b>1</b>	<b>2%</b>	<b>55</b>	<b>98%</b>	<b>1</b>	<b>2%</b>	<b>0</b>	<b>0%</b>	<b>56</b>	<b>100%</b>	<b>56</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>56</b>	<b>100%</b>	<b>0</b>	<b>0%</b>
<i>Becton Dickinson</i>	6	6	100%		0%	6	100%		0%		0%	6	100%	6	100%		0%	6	100%		0%
<i>Fisher</i>	17	17	100%		0%	17	100%		0%		0%	17	100%	17	100%		0%	17	100%		0%
<i>Wampole/Zeus</i>	29	28	97%	1	3%	28	97%	1	3%		0%	29	100%	29	100%		0%	29	100%		0%
<i>Others</i>	4	4	100%		0%	4	100%		0%		0%	4	100%	4	100%		0%	4	100%		0%
<b>Latex Agglutination</b>	<b>155</b>	<b>155</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>155</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>1</b>	<b>1%</b>	<b>154</b>	<b>99%</b>	<b>154</b>	<b>99%</b>	<b>1</b>	<b>1%</b>	<b>155</b>	<b>100%</b>	<b>0</b>	<b>0%</b>
<i>Fisher</i>	53	53	100%		0%	53	100%		0%		0%	53	100%	53	100%		0%	53	100%		0%
<i>Remel</i>	21	21	100%		0%	21	100%		0%		0%	21	100%	21	100%		0%	21	100%		0%
<i>True Medix</i>	8	8	100%		0%	8	100%		0%		0%	8	100%	8	100%		0%	8	100%		0%
<i>Wampole/Zeus</i>	57	57	100%		0%	57	100%		0%	1	2%	56	98%	56	98%	1	2%	57	100%		0%
<i>Others</i>	16	16	100%		0%	16	100%		0%		0%	16	100%	16	100%		0%	16	100%		0%
<b>Solid Phase IA</b>	<b>53</b>	<b>53</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>52</b>	<b>98%</b>	<b>1</b>	<b>2%</b>	<b>0</b>	<b>0%</b>	<b>53</b>	<b>100%</b>	<b>53</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>53</b>	<b>100%</b>	<b>0</b>	<b>0%</b>
<i>Remel</i>	6	6	100%		0%	6	100%		0%		0%	6	100%	6	100%		0%	6	100%		0%
<i>Seradyn</i>	21	21	100%		0%	21	100%		0%		0%	21	100%	21	100%		0%	21	100%		0%
<i>Wampole/Zeus</i>	22	22	100%		0%	22	100%		0%		0%	22	100%	22	100%		0%	22	100%		0%
<i>Others</i>	4	4	100%		0%	3	75%	1	25%		0%	4	100%	4	100%		0%	4	100%		0%
<b>Other Methods</b>	<b>4</b>	<b>4</b>	<b>100%</b>		<b>0%</b>	<b>4</b>	<b>100%</b>		<b>0%</b>		<b>0%</b>	<b>4</b>	<b>100%</b>	<b>4</b>	<b>100%</b>		<b>0%</b>	<b>4</b>	<b>100%</b>		<b>0%</b>
<b>Analyte Total</b>	<b>293</b>	<b>292</b>	<b>100%</b>	<b>1</b>	<b>0%</b>	<b>291</b>	<b>99%</b>	<b>2</b>	<b>1%</b>	<b>1</b>	<b>0%</b>	<b>292</b>	<b>100%</b>	<b>292</b>	<b>100%</b>	<b>1</b>	<b>0%</b>	<b>293</b>	<b>100%</b>	<b>0</b>	<b>0%</b>

<sup>[1]</sup> Two laboratories reported sample #26 as invalid.

### Infectious Mononucleosis Latex Agglutination Procedures

The number of laboratories that reported titers are summarized for positive test sample 28. The dilution schemes laboratories used are represented by the letter A and B. Only methods with 6 or more laboratories reporting titers are listed in this table.

Method	No. Labs	Sample 28 Titers					
		A	4	8	16	32	64
		B	7	14	28	56	
Latex Agglutination	14	A			2	5	5
		B	2				

## Lyme Disease Antibody

		Participant Results/ Sample Number																			
		R = Reactive/ Positive; N = Non-Reactive/ Negative																			
Method	No. Labs	41				42				43				44				45			
		N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%
<b>CICA</b>	<b>6</b>	<b>0</b>	<b>0%</b>	<b>6</b>	<b>100%</b>	<b>6</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>2</b>	<b>33%</b>	<b>4</b>	<b>67%</b>	<b>0</b>	<b>0%</b>	<b>6</b>	<b>100%</b>	<b>6</b>	<b>100%</b>	<b>0</b>	<b>0%</b>
<i>Wampole /Zeus</i>	6		0%	6	100%	6	100%		0%	2	33%	4	67%		0%	6	100%	6	100%		0%
<b>EIA</b>	<b>71</b>	<b>12</b>	<b>17%</b>	<b>58</b>	<b>82%</b>	<b>71</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>71</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>71</b>	<b>100%</b>	<b>71</b>	<b>100%</b>	<b>0</b>	<b>0%</b>
<i>Diamedix <sup>[1]</sup></i>	17	11	65%	5	29%	17	100%		0%		0%	17	100%		0%	17	100%	17	100%		0%
<i>Immunetics</i>	10		0%	10	100%	10	100%		0%		0%	10	100%		0%	10	100%	10	100%		0%
<i>MarDx</i>	12		0%	12	100%	12	100%		0%		0%	12	100%		0%	12	100%	12	100%		0%
<i>Wampole /Zeus</i>	26		0%	26	100%	26	100%		0%		0%	26	100%		0%	26	100%	26	100%		0%
<i>Others</i>	6	1	17%	5	83%	6	100%		0%		0%	6	100%		0%	6	100%	6	100%		0%
<b>ELFA</b>	<b>30</b>	<b>0</b>	<b>0%</b>	<b>30</b>	<b>100%</b>	<b>30</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>30</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>30</b>	<b>100%</b>	<b>30</b>	<b>100%</b>	<b>0</b>	<b>0%</b>
<i>bioMérieux</i>	30		0%	30	100%	30	100%		0%		0%	30	100%		0%	30	100%	30	100%		0%
<b>Other Methods</b>	<b>2</b>		<b>0%</b>	<b>2</b>	<b>100%</b>	<b>2</b>	<b>100%</b>		<b>0%</b>		<b>0%</b>	<b>2</b>	<b>100%</b>		<b>0%</b>	<b>2</b>	<b>100%</b>	<b>2</b>	<b>100%</b>		<b>0%</b>
<b>Analyte Total</b>	<b>109</b>	<b>12</b>	<b>11%</b>	<b>96</b>	<b>88%</b>	<b>109</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>2</b>	<b>2%</b>	<b>107</b>	<b>98%</b>	<b>0</b>	<b>0%</b>	<b>109</b>	<b>100%</b>	<b>109</b>	<b>100%</b>	<b>0</b>	<b>0%</b>

<sup>[1]</sup> One laboratory reported equivocal on #41.

**Note:** The expected result for samples #41 and #43 is reactive. Laboratories who reported any other result than reactive for these samples should critically examine their protocol and test kit/method.

### Lyme Western Blot IgG

		Participant Results/ Sample Number																																			
		R = Reactive/ Positive; N = Non-Reactive/ Negative; E = Equivocal/ Indeterminate																																			
Method	No. Labs	41*						42						43						44						45											
		N	%	E	%	R	%	N	%	E	%	R	%	N	%	E	%	R	%	N	%	E	%	R	%	N	%	E	%	R	%						
Western Blot - IgG	27	9	33%	3	11%	15	56%	27	100%	0	0%	0	0%	0	0%	0	0%	27	100%	27	100%	0	0%	0	0%	27	100%	0	0%	0	0%	27	100%	0	0%	0	0%
<i>MarDx</i>	25	9	36%	3	12%	13	52%	25	100%		0%		0%		0%		0%	25	100%	25	100%		0%		0%	25	100%		0%		0%	25	100%		0%		0%
<i>Others</i>	2		0%		0%	2	100%	2	100%		0%		0%		0%		0%	2	100%	2	100%		0%		0%	2	100%		0%		0%	2	100%		0%		0%
Other Methods	4	2	50%	1	25%	1	25%	4	100%		0%		0%		0%	1	25%	3	75%	4	100%		0%		0%	4	100%		0%		0%	4	100%		0%		0%
Analyte Total	31	11	35%	4	13%	16	52%	31	100%	0	0%	0	0%	0	0%	1	3%	30	97%	31	100%	0	0%	0	0%	31	100%	0	0%	0	0%	31	100%	0	0%	0	0%

\* Test sample 41 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

		Participant Results/ Sample Number																																			
		R = Reactive/ Positive; N = Non-Reactive/ Negative; E = Equivocal/ Indeterminate																																			
Method	No. Labs	41						42						43						44						45											
		N	%	E	%	R	%	N	%	E	%	R	%	N	%	E	%	R	%	N	%	E	%	R	%	N	%	E	%	R	%						
Western Blot - IgM	27	0	0%	0	0%	27	100%	27	100%	0	0%	0	0%	25	93%	2	7%	0	0%	0	0%	1	4%	26	96%	27	100%	0	0%	0	0%	27	100%	0	0%	0	0%
<i>MarDx</i>	25		0%		0%	25	100%	25	100%		0%		0%	23	92%	2	8%		0%		0%	1	4%	24	96%	25	100%		0%		0%	25	100%		0%		0%
<i>Others</i>	2		0%		0%	2	100%	2	100%		0%		0%	2	100%		0%		0%		0%		0%	2	100%	2	100%		0%		0%	2	100%		0%		0%
Other Methods	3		0%		0%	3	100%	3	100%		0%		0%	2	67%	1	33%		0%		0%		0%	3	100%	3	100%		0%		0%	3	100%		0%		0%
Analyte Total	30	0	0%	0	0%	30	100%	30	100%	0	0%	0	0%	27	90%	3	10%	0	0%	0	0%	1	3%	29	97%	30	100%	0	0%	0	0%	30	100%	0	0%	0	0%

# Rheumatoid Factor

Method <i>Manufacturer</i>		Participant Results/ Sample Number																			
		R = Reactive/ Positive; N = Non-Reactive/ Negative																			
		26				27				28				29				30			
No. Labs	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%	
<b>EIA</b>	<b>10</b>	<b>10</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>10</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>10</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>10</b>	<b>100%</b>	<b>10</b>	<b>100%</b>	<b>0</b>	<b>0%</b>
<i>Diamedix</i>	7	7	100%		0%	7	100%		0%	7	100%		0%		0%	7	100%	7	100%		0%
<i>Others</i>	3	3	100%		0%	3	100%		0%	3	100%		0%		0%	3	100%	3	100%		0%
<b>Latex Agglutination</b>	<b>134</b>	<b>133</b>	<b>99%</b>	<b>1</b>	<b>1%</b>	<b>134</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>133</b>	<b>99%</b>	<b>1</b>	<b>1%</b>	<b>2</b>	<b>1%</b>	<b>132</b>	<b>99%</b>	<b>133</b>	<b>99%</b>	<b>1</b>	<b>1%</b>
<i>Becton Dickinson</i>	20	20	100%		0%	20	100%		0%	19	95%	1	5%	1	5%	19	95%	20	100%		0%
<i>Behring</i>	12	12	100%		0%	12	100%		0%	12	100%		0%		0%	12	100%	12	100%		0%
<i>Fisher</i>	46	46	100%		0%	46	100%		0%	46	100%		0%		0%	46	100%	46	100%		0%
<i>Remel</i>	6	6	100%		0%	6	100%		0%	6	100%		0%		0%	6	100%	6	100%		0%
<i>Seradyn</i>	15	14	93%	1	7%	15	100%		0%	15	100%		0%	1	7%	14	93%	14	93%	1	7%
<i>True Medix</i>	8	8	100%		0%	8	100%		0%	8	100%		0%		0%	8	100%	8	100%		0%
<i>Wampole/Zeus</i>	15	15	100%		0%	15	100%		0%	15	100%		0%		0%	15	100%	15	100%		0%
<i>Others</i>	12	12	100%		0%	12	100%		0%	12	100%		0%		0%	12	100%	12	100%		0%
<b>Nephelometry</b>	<b>46</b>	<b>46</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>46</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>46</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>46</b>	<b>100%</b>	<b>46</b>	<b>100%</b>	<b>0</b>	<b>0%</b>
<i>Beckman Coulter</i>	25	25	100%		0%	25	100%		0%	25	100%		0%		0%	25	100%	25	100%		0%
<i>Behring</i>	21	21	100%		0%	21	100%		0%	21	100%		0%		0%	21	100%	21	100%		0%
<b>Turbidimetry</b>	<b>34</b>	<b>34</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>34</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>33</b>	<b>97%</b>	<b>1</b>	<b>3%</b>	<b>0</b>	<b>0%</b>	<b>34</b>	<b>100%</b>	<b>34</b>	<b>100%</b>	<b>0</b>	<b>0%</b>
<i>Beckman Coulter</i>	9	9	100%		0%	9	100%		0%	9	100%		0%		0%	9	100%	9	100%		0%
<i>Roche</i>	20	20	100%		0%	20	100%		0%	19	95%	1	5%		0%	20	100%	20	100%		0%
<i>Others</i>	5	5	100%		0%	5	100%		0%	5	100%		0%		0%	5	100%	5	100%		0%
<b>Other Methods</b>	<b>5</b>	<b>5</b>	<b>100%</b>		<b>0%</b>	<b>5</b>	<b>100%</b>		<b>0%</b>	<b>5</b>	<b>100%</b>		<b>0%</b>	<b>1</b>	<b>20%</b>	<b>4</b>	<b>80%</b>	<b>4</b>	<b>80%</b>	<b>1</b>	<b>20%</b>
<b>Analyte Total</b>	<b>229</b>	<b>228</b>	<b>100%</b>	<b>1</b>	<b>0%</b>	<b>229</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>227</b>	<b>99%</b>	<b>2</b>	<b>1%</b>	<b>3</b>	<b>1%</b>	<b>226</b>	<b>99%</b>	<b>227</b>	<b>99%</b>	<b>2</b>	<b>1%</b>

## Rheumatoid Factor Latex Agglutination Procedure

The number of laboratories that reported titers is listed for positive test sample 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.

<i>Manufacturer</i>	No. Labs	A B	Sample 29 Titers									
			40 4	80 8	160 16	320 32	640 64	1280 128	2560 256			
<i>Fisher</i>	34	A B			1 1	3 2		12 8		1		2
<i>Becton Dickson</i>	15	A B			9	3	2					
<i>Seradyn</i>	10	A B			2 1	1 3	1					
<i>Dade Behring</i>	8	A B						2 2		1		1
<i>Wampole</i>	7	A	2	2	1	1	1					

**Note:** The number of labs reporting specific titers may not add up to the total number of labs for that system because some labs are not reporting endpoint titers.

## Rheumatoid Factor

Results are summarized for positive test sample 29. The Mean values  $\pm$  S.D. are given where 6 or more laboratories reported quantitative results. Outlier values are omitted.

<b>Method</b> <i>Manufacturer</i>	<b>No.</b> <b>Labs</b>	<b>IU/ml</b> <b>Sample 29</b>
<b>Nephelometry</b>		
<i>Beckman Coulter Array</i>	8	649 $\pm$ 75
<i>Beckman Coulter IMMAGE</i>	17	646 $\pm$ 76
<i>Behring PROSPEC</i>	8	623 $\pm$ 41
<i>Behring Nephelometer</i>	8	668 $\pm$ 36
<b>Turbidimetry</b>		
<i>Roche Diag. Cobas</i>	11	342 $\pm$ 10
<i>Roche Diag. Modular P</i>	6	323 $\pm$ 31

## Rubella IgG Antibody

		Participant Results/ Sample Number																			
		R = Reactive/ Positive; N = Non-Reactive/ Negative																			
Method	No. Labs	11				12				13				14				15			
		N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%
<b>Chemiluminescence</b>	<b>57</b>	<b>0</b>	<b>0%</b>	<b>57</b>	<b>100%</b>	<b>57</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>57</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>57</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>2</b>	<b>4%</b>	<b>55</b>	<b>96%</b>
<i>Bayer</i>	26		0%	26	100%	26	100%		0%	26	100%		0%	26	100%		0%		0%	26	100%
<i>Beckman</i>	14		0%	14	100%	14	100%		0%	14	100%		0%	14	100%		0%	2	14%	12	86%
<i>Diagnostic Products</i>	17		0%	17	100%	17	100%		0%	17	100%		0%	17	100%		0%		0%	17	100%
<b>EIA</b>	<b>64</b>	<b>0</b>	<b>0%</b>	<b>64</b>	<b>100%</b>	<b>63</b>	<b>98%</b>	<b>1</b>	<b>2%</b>	<b>63</b>	<b>98%</b>	<b>1</b>	<b>2%</b>	<b>63</b>	<b>98%</b>	<b>1</b>	<b>2%</b>	<b>3</b>	<b>5%</b>	<b>61</b>	<b>95%</b>
<i>Abbott</i>	27		0%	27	100%	27	100%		0%	27	100%		0%	27	100%		0%	1	4%	26	96%
<i>Diamedix</i>	13		0%	13	100%	12	92%	1	8%	12	92%	1	8%	12	92%	1	8%	1	8%	12	92%
<i>Wampole/Zeus</i>	17		0%	17	100%	17	100%		0%	17	100%		0%	17	100%		0%	1	6%	16	94%
<i>Others</i>	7		0%	7	100%	7	100%		0%	7	100%		0%	7	100%		0%		0%	7	100%
<b>ELFA</b>	<b>35</b>	<b>0</b>	<b>0%</b>	<b>35</b>	<b>100%</b>	<b>35</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>35</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>35</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>35</b>	<b>100%</b>
<i>bioMérieux Vidas</i>	35		0%	35	100%	35	100%		0%	35	100%		0%	35	100%		0%		0%	35	100%
<b>Latex Agglutination</b>	<b>44</b>	<b>1</b>	<b>2%</b>	<b>43</b>	<b>98%</b>	<b>43</b>	<b>98%</b>	<b>1</b>	<b>2%</b>	<b>44</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>43</b>	<b>98%</b>	<b>1</b>	<b>2%</b>	<b>0</b>	<b>0%</b>	<b>44</b>	<b>100%</b>
<i>Becton Dickinson</i>	15		0%	15	100%	15	100%		0%	15	100%		0%	15	100%		0%		0%	15	100%
<i>Fisher</i>	12		0%	12	100%	12	100%		0%	12	100%		0%	12	100%		0%		0%	12	100%
<i>Murex</i>	8		0%	8	100%	8	100%		0%	8	100%		0%	8	100%		0%		0%	8	100%
<i>Wampole/Zeus</i>	7	1	14%	6	86%	6	86%	1	14%	7	100%		0%	6	86%	1	14%		0%	7	100%
<i>Others</i>	2		0%	2	100%	2	100%		0%	2	100%		0%	2	100%		0%		0%	2	100%
<b>Other Methods</b>	<b>6</b>		<b>0%</b>	<b>6</b>	<b>100%</b>	<b>6</b>	<b>100%</b>		<b>0%</b>	<b>6</b>	<b>100%</b>		<b>0%</b>	<b>6</b>	<b>100%</b>		<b>0%</b>		<b>0%</b>	<b>6</b>	<b>100%</b>
<b>Analyte Total</b>	<b>206</b>	<b>1</b>	<b>0%</b>	<b>205</b>	<b>100%</b>	<b>204</b>	<b>99%</b>	<b>2</b>	<b>1%</b>	<b>205</b>	<b>100%</b>	<b>1</b>	<b>0%</b>	<b>204</b>	<b>99%</b>	<b>2</b>	<b>1%</b>	<b>5</b>	<b>2%</b>	<b>201</b>	<b>98%</b>

## Rubella IgG Antibody

Results are summarized for positive test samples 11 and 15. The Mean values  $\pm$  S.D. are given where 6 or more laboratories reported quantitative results. Outlier values are omitted.

Method	No.	Unit	Sample 11	Sample 15
<i>Manufacturer</i>	<i>Labs</i>			
<b>Chemiluminescence</b>				
<i>Bayer</i>	22	IU/ml	$144 \pm 16$	$41.1 \pm 4.7$
<i>Beckman</i>	8	IU/ml	$47.9 \pm 7.6$	$14.8 \pm 1.3$
<i>Diagnostic Products</i>	15	IU/ml	$56.5 \pm 7.2$	$14.1 \pm 1.9$
<b>EIA</b>				
<i>Abbott AxSYM</i>	11	IU/ml	$43.6 \pm 5.4$	$14.7 \pm 2.0$
<i>Abbott IMX</i>	6	IU/ml	$40.3 \pm 3.6$	$12.4 \pm 1.8$
<i>Wampole</i>	8	ISR	$2.9 \pm 0.27$	$1.9 \pm 0.16$
<b>ELFA</b>				
<i>bioMerieux VIDAS</i>	6	Ratio	$2.5 \pm 0.23$	$1.1 \pm 0.16$

## Rubella IgM Specific

		Participant Results/ Sample Number																			
		R = Reactive/ Positive; N = Non-Reactive/ Negative																			
Method	No. Labs	56				57				58				59				60			
		N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%
<b>EIA</b>	<b>14</b>	<b>0</b>	<b>0%</b>	<b>14</b>	<b>100%</b>	<b>14</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>14</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>14</b>	<b>100%</b>	<b>14</b>	<b>100%</b>	<b>0</b>	<b>0%</b>
<i>Abbott</i>	6		0%	6	100%	6	100%		0%	6	100%		0%		0%	6	100%	6	100%		0%
<i>Others</i>	8		0%	8	100%	8	100%		0%	8	100%		0%		0%	8	100%	8	100%		0%
<b>Other Methods</b>	<b>7</b>		<b>0%</b>	<b>7</b>	<b>100%</b>	<b>7</b>	<b>100%</b>		<b>0%</b>	<b>7</b>	<b>100%</b>		<b>0%</b>		<b>0%</b>	<b>7</b>	<b>100%</b>	<b>7</b>	<b>100%</b>		<b>0%</b>
<b>Analyte Total</b>	<b>21</b>	<b>0</b>	<b>0%</b>	<b>21</b>	<b>100%</b>	<b>21</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>21</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>21</b>	<b>100%</b>	<b>21</b>	<b>100%</b>	<b>0</b>	<b>0%</b>

## 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	%	N	%	R	%
<b>RPR</b>	<b>276</b>	<b>274</b>	<b>99%</b>	<b>2</b>	<b>1%</b>	<b>1</b>	<b>0%</b>	<b>275</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>276</b>	<b>100%</b>	<b>275</b>	<b>100%</b>	<b>1</b>	<b>0%</b>	<b>276</b>	<b>100%</b>	<b>0</b>	<b>0%</b>
<i>ASI</i>	36	36	100%		0%		0%	36	100%		0%	36	100%	36	100%		0%	36	100%		0%
<i>Becton Dickinson</i>	145	143	99%	2	1%	1	1%	144	99%		0%	145	100%	144	99%	1	1%	145	100%		0%
<i>Fisher</i>	43	43	100%		0%		0%	43	100%		0%	43	100%	43	100%		0%	43	100%		0%
<i>True Medix</i>	15	15	100%		0%		0%	15	100%		0%	15	100%	15	100%		0%	15	100%		0%
<i>Wampole/Zeus</i>	21	21	100%		0%		0%	21	100%		0%	21	100%	21	100%		0%	21	100%		0%
<i>Others</i>	16	16	100%		0%		0%	16	100%		0%	16	100%	16	100%		0%	16	100%		0%
<b>Other Methods</b>	<b>3</b>	<b>3</b>	<b>100%</b>		<b>0%</b>		<b>0%</b>	<b>3</b>	<b>100%</b>		<b>0%</b>	<b>3</b>	<b>100%</b>	<b>3</b>	<b>100%</b>		<b>0%</b>	<b>3</b>	<b>100%</b>		<b>0%</b>
<b>Analyte Total</b>	<b>279</b>	<b>277</b>	<b>99%</b>	<b>2</b>	<b>1%</b>	<b>1</b>	<b>0%</b>	<b>278</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>279</b>	<b>100%</b>	<b>278</b>	<b>100%</b>	<b>1</b>	<b>0%</b>	<b>279</b>	<b>100%</b>	<b>0</b>	<b>0%</b>

## Syphilis - Reagin Antibody

### RPR Procedures

The number of laboratories that reported titers is listed for positive test samples 2 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 2 Titers					Sample 3 Titers					
		1	2	4	8	16	1	2	4	8	16	32
<i>Becton Dickinson</i>	130	1	37	83	8		3	96	30	1		
<i>Fisher</i>	43	2	16	24	1		2	27	14			
<i>Wampole/ Zeus</i>	20	1	7	10	2		1	17	1	1		
<i>ASI</i>	21		8	13				14	6	1		
<i>True Medix</i>	12		2	9	3			7	7			

**Note:** The number of labs reporting specific titers may not add up to the total number of labs for that system because some labs are not reporting endpoint titers.

## 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	%	N	%	R	%
<b>Gel. Part. Agglut.</b>	<b>33</b>	<b>33</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>33</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>33</b>	<b>100%</b>	<b>33</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>33</b>	<b>100%</b>	<b>0</b>	<b>0%</b>
<i>Fujirebio</i>	33	33	100%		0%		0%	33	100%		0%	33	100%	33	100%		0%	33	100%		0%
<b>IFA</b>	<b>30</b>	<b>30</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>30</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>30</b>	<b>100%</b>	<b>30</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>30</b>	<b>100%</b>	<b>0</b>	<b>0%</b>
<i>Wampole/Zeus</i>	30	30	100%		0%		0%	30	100%		0%	30	100%	30	100%		0%	30	100%		0%
<b>MHA</b>	<b>10</b>	<b>10</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>10</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>10</b>	<b>100%</b>	<b>10</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>10</b>	<b>100%</b>	<b>0</b>	<b>0%</b>
<i>Olympus</i>	10	10	100%		0%		0%	10	100%		0%	10	100%	10	100%		0%	10	100%		0%
<b>Other Methods</b>	<b>16</b>	<b>16</b>	<b>100%</b>		<b>0%</b>		<b>0%</b>	<b>16</b>	<b>100%</b>		<b>0%</b>	<b>16</b>	<b>100%</b>	<b>16</b>	<b>100%</b>		<b>0%</b>	<b>16</b>	<b>100%</b>		<b>0%</b>
<b>Analyte Total</b>	<b>89</b>	<b>89</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>89</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>89</b>	<b>100%</b>	<b>89</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>89</b>	<b>100%</b>	<b>0</b>	<b>0%</b>

## 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	No.	Sample NO.				
		Labs	76	77	78	79
<b>Alpha-1-Antitrypsin</b>						
Nephelometry/Beckman Coulter IMMAGE	12	< 10	< 10	274 $\pm$ 21	171 $\pm$ 15	137 $\pm$ 15
Nephelometry/Behring Nephelometer	17	< 17	< 17	322 $\pm$ 27	257 $\pm$ 16	192 $\pm$ 14
Nephelometry/ Total	32	< 17	< 17	302 $\pm$ 33	218 $\pm$ 45	167 $\pm$ 31
Turbidimetry/ Total	8	< 36	< 36	269 $\pm$ 12	199 $\pm$ 7.0	161 $\pm$ 9.5
<b>Complement C'3</b>						
Nephelometry/Beckman Coulter Array	11	34 $\pm$ 3.7	39 $\pm$ 0.85	109 $\pm$ 3.1	236 $\pm$ 7.4	335 $\pm$ 12
Nephelometry/Beckman Coulter IMMAGE	21	34 $\pm$ 2.5	42 $\pm$ 1.5	109 $\pm$ 301	228 $\pm$ 10	327 $\pm$ 18
Nephelometry/Behring Nephelometer	19	32 $\pm$ 2.2	40 $\pm$ 2.6	122 $\pm$ 6.2	231 $\pm$ 9.1	337 $\pm$ 18
Nephelometry/Behring Dimension	6	36 $\pm$ 3.0	44 $\pm$ 2.1	114 $\pm$ 4.0	239 $\pm$ 11	359 $\pm$ 18
Turbidimetry/Roche Cobas Integra	12	32 $\pm$ 1.9	40 $\pm$ 1.8	116 $\pm$ 7.2	235 $\pm$ 11	353 $\pm$ 19
Nephelometry/ Total	57	33 $\pm$ 2.8	40 $\pm$ 2.8	114 $\pm$ 8.3	230 $\pm$ 9.6	331 $\pm$ 17
Turbidimetry/ Total	38	34 $\pm$ 2.8	43 $\pm$ 2.9	115 $\pm$ 6.2	238 $\pm$ 16	353 $\pm$ 43
<b>Complement C'4</b>						
Nephelometry/Beckman Coulter Array	11	< 16	< 16	27 $\pm$ 1.6	95 $\pm$ 6.5	35 $\pm$ 2.2
Nephelometry/Beckman Coulter IMMAGE	21	< 16	< 16	31 $\pm$ 1.3	122 $\pm$ 5.4	40 $\pm$ 0.94
Nephelometry/Behring BN PROSPEC	6	< 10	< 10	26 $\pm$ 1.4	105 $\pm$ 4.4	34 $\pm$ 1.6
Nephelometry/Behring Nephelometer	18	< 10	< 10	28 $\pm$ 2.0	116 $\pm$ 12	36 $\pm$ 2.0
Turbidimetry/Roche Cobas Integra	11	< 6	< 6	26 $\pm$ 1.4	109 $\pm$ 5.7	35 $\pm$ 1.7
Nephelometry/ Total	57	< 16	< 16	29 $\pm$ 2.4	113 $\pm$ 13	37 $\pm$ 2.81
Turbidimetry/ Total	34	< 13	< 13	26 $\pm$ 2.3	110 $\pm$ 11	35 $\pm$ 3.2

## 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. Labs	Sample NO.				
		81	82	83	84	85
<b>Immunoglobulin A (mg/dl)</b>						
Nephelometry/Beckman Coulter Array	13	186 $\pm$ 6.0	530 $\pm$ 23	563 $\pm$ 26	217 $\pm$ 10	102 $\pm$ 2.8
Nephelometry/Beckman Coulter IMMAGE	24	186 $\pm$ 7.1	550 $\pm$ 24	598 $\pm$ 22.5	218 $\pm$ 7.6	99 $\pm$ 3.8
Nephelometry/Behring BN PROSPEC	7	184 $\pm$ 5.2	651 $\pm$ 51	697 $\pm$ 63	215 $\pm$ 7.6	102 $\pm$ 2.5
Nephelometry/Behring Nephelometer	21	187 $\pm$ 6.6	665 $\pm$ 42	684 $\pm$ 65	219 $\pm$ 8.1	103 $\pm$ 3.8
Turbidimetry/Roche Cobas Integra	15	174 $\pm$ 8.6	536 $\pm$ 36	564 $\pm$ 40	209 $\pm$ 13	89 $\pm$ 4.6
Turbidimetry/Roche Hitachi	6	190 $\pm$ 5.9	559 $\pm$ 9.5	591 $\pm$ 17	228 $\pm$ 5.5	97 $\pm$ 4.2
Nephelometry/ Total	68	186 $\pm$ 6.6	591 $\pm$ 69	629 $\pm$ 68	218 $\pm$ 8.8	101 $\pm$ 3.8
Turbidimetry/ Total	45	182 $\pm$ 12.8	547 $\pm$ 39	577 $\pm$ 44	219 $\pm$ 19	94 $\pm$ 7.0
<b>Immunoglobulin E (IU/ml)</b>						
Chemiluminescence/Bayer	9	6405 $\pm$ 882	793 $\pm$ 62	440 $\pm$ 37	234 $\pm$ 13	23 $\pm$ 2.4
Chemiluminescence/Diag. Prod. Co.	29	4792 $\pm$ 302	763 $\pm$ 57	403 $\pm$ 24	224 $\pm$ 14	28 $\pm$ 1.9
FEIA/Pharmacia	7	4538 $\pm$ 155	808 $\pm$ 38	452 $\pm$ 12	231 $\pm$ 9.0	32 $\pm$ 1.6
Nephelometry/Behring	7	5350 $\pm$ 587	941 $\pm$ 93	503 $\pm$ 61	237 $\pm$ 29	28 $\pm$ 2.6
Chemiluminescence/ Total	43	5308 $\pm$ 905	779 $\pm$ 64	415 $\pm$ 32	226 $\pm$ 14	27 $\pm$ 2.7
FEIA/ Total	16	4427 $\pm$ 523	801 $\pm$ 57	439 $\pm$ 36	226 $\pm$ 14	32 $\pm$ 2.1
Nephelometry/ Total	14	5434 $\pm$ 750	903 $\pm$ 116	483 $\pm$ 64	229 $\pm$ 41	28 $\pm$ 3.8
<b>Immunoglobulin G (mg/dl)</b>						
Nephelometry/Beckman Coulter Array	13	1752 $\pm$ 438	2210 $\pm$ 552	2429 $\pm$ 607	1641 $\pm$ 410	619 $\pm$ 155
Nephelometry/Beckman Coulter IMMAGE	23	1768 $\pm$ 442	2243 $\pm$ 561	2390 $\pm$ 598	1695 $\pm$ 424	630 $\pm$ 158
Nephelometry/Behring BN PROSPEC	8	1777 $\pm$ 444	2348 $\pm$ 587	2840 $\pm$ 710	1666 $\pm$ 417	649 $\pm$ 162
Nephelometry/Behring Nephelometer	22	1811 $\pm$ 453	2398 $\pm$ 600	2902 $\pm$ 725	1709 $\pm$ 427	665 $\pm$ 166
Turbidimetry/Roche Cobas Integra	14	1791 $\pm$ 448	2211 $\pm$ 553	2544 $\pm$ 636	1656 $\pm$ 414	608 $\pm$ 152
Turbidimetry/Roche Hitachi	7	1809 $\pm$ 452	2256 $\pm$ 564	2496 $\pm$ 624	1707 $\pm$ 427	633 $\pm$ 158
Nephelometry/ Total	69	1787 $\pm$ 447	2299 $\pm$ 575	2625 $\pm$ 656	1695 $\pm$ 424	643 $\pm$ 161
Turbidimetry/ Total	43	1825 $\pm$ 456	2270 $\pm$ 567	2551 $\pm$ 638	1697 $\pm$ 424	609 $\pm$ 152
<b>Immunoglobulin M (mg/dl)</b>						
Nephelometry/Beckman Coulter Array	12	59 $\pm$ 2.1	346 $\pm$ 22	239 $\pm$ 9.8	72 $\pm$ 2.6	48 $\pm$ 1.7
Nephelometry/Beckman Coulter IMMAGE	24	64 $\pm$ 2.9	334 $\pm$ 13	214 $\pm$ 8.6	78 $\pm$ 3.6	45 $\pm$ 2.7
Nephelometry/Behring BN PROSPEC	7	62 $\pm$ 2.9	406 $\pm$ 9.0	280 $\pm$ 5.5	73 $\pm$ 2.2	41 $\pm$ 2.3
Nephelometry/Behring Nephelometer	21	63 $\pm$ 3.6	442 $\pm$ 30	303 $\pm$ 23	77 $\pm$ 4.7	44 $\pm$ 2.7
Nephelometry/Behring Dimension	6	63 $\pm$ 3.0	361 $\pm$ 28	257 $\pm$ 11	74 $\pm$ 2.3	43 $\pm$ 4.1
Turbidimetry/Roche Cobas Integra	13	51 $\pm$ 3.7	313 $\pm$ 8.1	159 $\pm$ 6.4	65 $\pm$ 4.2	34 $\pm$ 2.8
Turbidimetry/Roche Hitachi	6	61 $\pm$ 2.5	314 $\pm$ 16	202 $\pm$ 15	73 $\pm$ 2.5	41 $\pm$ 1.2
Nephelometry/ Total	66	62 $\pm$ 3.5	378 $\pm$ 54	253 $\pm$ 42	75 $\pm$ 4.7	45 $\pm$ 3.1
Turbidimetry/ Total	43	61 $\pm$ 9.2	320 $\pm$ 29	196 $\pm$ 38	72 $\pm$ 6.1	40 $\pm$ 5.5

**Acceptable Response (September 28, 2005 PT Event)**  
**Quantitative Tests Results (Acceptable Range)**

Analytes Method/ Manufacture	Sample NO.				
	76	77	78	79	80
<b>Alpha-1-Antitrypsin</b>	76	77	78	79	80
Nephelometry/Beckman	< 10	< 10	209 - 339	125 - 217	92 - 182
Nephelometry/Behring	< 17	< 17	239 - 405	209 - 305	150 - 235
Nephelometry/ Total	< 17	< 17	203 - 401	83 - 353	75 - 259
Turbidimetry/ Total	< 36	< 36	234 - 305	177 - 220	132 - 190
<b>Complement C'3</b>	76	77	78	79	80
Nephelometry/Beckman	22 - 46	36 - 47	99 - 119	196 - 260	274 - 381
Nephelometry/Behring	25 - 39	31 - 48	103 - 141	203 - 259	290 - 385
Turbidimetry/Behring	27 - 45	37 - 51	102 - 127	206 - 272	306 - 412
Turbidimetry/Roche	25 - 38	34 - 46	94 - 138	201 - 270	295 - 410
Nephelometry/ Total	24 - 41	31 - 49	89 - 140	201 - 260	280 - 382
Turbidimetry/ Total	25 - 43	33 - 52	96 - 134	188 - 288	274 - 432
<b>Complement C'4</b>	76	77	78	79	80
Nephelometry/Beckman	< 16	< 16	22 - 35	75 - 139	28 - 43
Nephelometry/Behring	< 10	< 10	21 - 34	80 - 151	28 - 42
Turbidimetry/Roche	< 6	< 6	22 - 31	92 - 127	30 - 41
Nephelometry/ Total	< 16	< 16	31 - 35	73 - 152	28 - 45
Turbidimetry/ Total	< 13	< 13	19 - 34	77 - 143	25 - 45
<b>Immunoglobulin A</b>	81	82	83	84	85
Nephelometry/Beckman	165 - 208	460 - 623	485 - 666	185 - 249	87 - 111
Nephelometry/Behring	166 - 207	497 - 805	487 - 886	192 - 243	91 - 115
Turbidimetry/Roche	148 - 208	427 - 645	443 - 683	169 - 249	75 - 110
Nephelometry/ Total	166 - 206	384 - 798	423 - 834	191 - 245	89 - 113
Turbidimetry/ Total	144 - 221	429 - 665	443 - 711	161 - 277	73 - 115
<b>Immunoglobulin E</b>	81	82	83	84	85
Chemiluminescence/Bayer	3758 - 9054	606 - 980	328 - 552	196 - 272	16 - 31
Chemiluminescence/Diag.Prod.Co.	3885 - 5700	590 - 936	330 - 475	181 - 267	22 - 34
FEIA/Pharmacia	4072 - 5005	694 - 923	415 - 489	204 - 259	27 - 38
Nephelometry/Behring	3589 - 7111	662 - 1219	320 - 685	149 - 326	21 - 37
Chemiluminescence/ Total	2593 - 8022	587 - 971	318 - 511	182 - 269	18 - 35
FEIA/ Total	2857 - 5998	628 - 973	331 - 547	184 - 269	25 - 38
Nephelometry/ Total	3184 - 7683	555 - 1252	291 - 675	106 - 351	16 - 40
<b>Immunoglobulin G</b>	81	82	83	84	85
Nephelometry/Beckman	1313 - 2210	1657 - 2804	1793 - 3037	1230 - 2120	464 - 788
Nephelometry/Behring	1333 - 2265	1761 - 2998	2130 - 3628	1249 - 2135	486 - 832
Turbidimetry/Roche	1343 - 2261	1658 - 2821	1871 - 3180	1241 - 2134	456 - 792
Nephelometry/ Total	1340 - 2234	1724 - 2874	1968 - 3281	1271 - 2119	482 - 805
Turbidimetry/ Total	1368 - 2281	1702 - 2838	1913 - 3189	1272 - 2122	456 - 761
<b>Immunoglobulin M</b>	81	82	83	84	85
Nephelometry/Beckman	52 - 73	278 - 413	188 - 269	64 - 89	37 - 54
Nephelometry/Behring	52 - 74	352 - 532	235 - 372	62 - 91	34 - 53
Turbidimetry/Behring	54 - 73	277 - 445	222 - 292	66 - 81	30 - 55
Turbidimetry/Roche	39 - 69	266 - 363	139 - 248	52 - 81	25 - 45
Nephelometry/ Total	51 - 73	215 - 542	126 - 380	61 - 90	35 - 55
Turbidimetry/ Total	33 - 90	233 - 406	81 - 310	53 - 90	23 - 57

**Acceptable Response (September 28, 2005 PT Event)  
Qualitative / Quantitative Tests Results**

Analytes	Sample NO.				
	1	2	3	4	5
<b>Syphilis - Reagin Ab</b>	N	R	R	N	N
<i>RPR Titer</i>		2 - 8	1 - 4		
<b>Syphilis - Treponemal</b>	N	R	R	N	N
	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
<b>HBcAb</b>	N	R	R	N	R
<b>HBsAg</b>	N	R	R	N	R
	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>
<b>CMV</b>	R	N	N	N	R
<b>Rubella Ab</b>	R	N	N	N	R
	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>
<b>ASO</b>	N	N	N	R	R
<i>Latex Agglutination as IU/ml</i>				100 - 1600	100 - 1600
	<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b>	<b>30</b>
<b>Infectious Mono.</b>	N	N	R	N	N
<i>Latex Agglutination Titer</i>			4 - 64		
<b>Rheumatoid Factor</b>	N	N	N	R	N
<i>Latex Agglutination Titer</i>				4 - 256	
<i>Latex Agglutination as IU/ml</i>				40 - 2560	
	<b>31</b>	<b>32</b>	<b>33</b>	<b>34</b>	<b>35</b>
<b>HIV Ab Screening/Confirmation</b>	R	N	N	R	N
	<b>36</b>	<b>37</b>	<b>38</b>	<b>39</b>	<b>40</b>
<b>HTLV 1 Ab</b>	R	N	N	N	N
	<b>41</b>	<b>42</b>	<b>43</b>	<b>44</b>	<b>45</b>
<b>LYME Disease Ab</b>	R	N	R	R	N
<b>LYME Disease Ab WB IgG</b>	R*	N	R	R	N
<b>LYME Disease Ab WB IgM</b>	R	N	N	R	N
	<b>46</b>	<b>47</b>	<b>48</b>	<b>49</b>	<b>50</b>
<b>ANA</b>	N	R	R	N	N
<i>EIA/ IFA Titer</i>		160 - 2560	40 - 1280		
	<b>56</b>	<b>57</b>	<b>58</b>	<b>59</b>	<b>60</b>
<b>Rubella IgM</b>	R	N	N	R	N
	<b>61</b>	<b>62</b>	<b>63</b>	<b>64</b>	<b>65</b>
<b>HIV p24 Ag</b>	N	N	R	N	N
	<b>66</b>	<b>67</b>	<b>68</b>	<b>69</b>	<b>70</b>
<b>HBeAg</b>	R	N	N	N	R
	<b>71</b>	<b>72</b>	<b>73</b>	<b>74</b>	<b>75</b>
<b>Hepatitis C Ab</b>	R	N	R	N	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