

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

# **Proficiency Testing Program**

**12-Sep-07**

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



**Proficiency Test Event  
12-Sep-07**

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

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## Table of Contents

<b>Review of Grading Policy</b>	Page 3
<b>Determination of Acceptable Responses</b>	Page 4
<b>Qualitative / Quantitative Test Analytes</b>	Page 5 - 27
Antinuclear Ab	Page 5 - 6
Antistreptolysin O	Page 7 - 9
Cytomegalovirus Ab	Page 10
Hepatitis B Core Ab	Page 11
Hepatitis B Surface Ag	Page 12
Hepatitis Be Ag	Page 13
Hepatitis C Ab	Page 13
HIV Ab Screening/ Confirmation	Page 14
HIV p24 Ag	Page 14
HTLV1 Ab	Page 15
Infectious Mononucleosis	Page 16
Lyme Disease ( <i>Borrelia burgdorferi</i> ) Ab	Page 17 - 18
Rheumatoid Factor	Page 19 - 21
Rubella IgG Ab	Page 22 - 23
Rubella IgM	Page 24
Syphilis-Reagin Ab	Page 25 - 26
Syphilis-Treponemal Ab	Page 27
<b>Quantitative Test Analytes</b>	Page 28 - 29
Alpha-1 Antitrypsin	Page 28
Complement C'3	Page 28
Complement C'4	Page 28
Immunoglobulin A	Page 29
Immunoglobulin E	Page 29
Immunoglobulin G	Page 29
Immunoglobulin M	Page 29
<b>Acceptable Responses</b>	Page 30 - 31

The data summarized in this report were tabulated from test results and accompanying information submitted by laboratories that participated in the September 12, 2007 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 10, 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 10 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 ten or more laboratories reported data.

For quantitative tests, values reported variously as mg/dl, IU/ml, etc. are given as the Mean  $\pm$  S.D. when ten 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 Target value $\pm$ 3 S.D. 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	Positive or negative
Rheumatoid Factor	Target value $\pm$ 2 dilutions or Target value $\pm$ 3 S.D. or positive or negative
Rubella Ab, IgM	Target value $\pm$ 2 dilutions or Target value $\pm$ 3 S.D. 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. Labs	46 N				47 N				48 R				49 N				50 R			
		Manufacturer	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R
<b>EIA</b>	<b>48</b>	<b>48</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>48</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>48</b>	<b>100%</b>	<b>48</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>1</b>	<b>2%</b>	<b>47</b>	<b>98%</b>
<i>Diamedix</i>	12	12	100%		0%	12	100%		0%		0%	12	100%	12	100%		0%		0%	12	100%
<i>Others</i>	36	36	100%		0%	36	100%		0%		0%	36	100%	36	100%		0%	1	3%	35	97%
<b>IFA</b>	<b>73</b>	<b>72</b>	<b>99%</b>	<b>1</b>	<b>1%</b>	<b>73</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>73</b>	<b>100%</b>	<b>72</b>	<b>99%</b>	<b>1</b>	<b>1%</b>	<b>0</b>	<b>0%</b>	<b>73</b>	<b>100%</b>
<i>Bio-Rad</i>	22	21	95%	1	5%	22	100%		0%		0%	22	100%	21	95%	1	5%		0%	22	100%
<i>The Binding Site</i>	11	11	100%		0%	11	100%		0%		0%	11	100%	11	100%		0%		0%	11	100%
<i>Wampole/Zeus</i>	21	21	100%		0%	21	100%		0%		0%	21	100%	21	100%		0%		0%	21	100%
<i>Others</i>	19	19	100%		0%	19	100%		0%		0%	19	100%	19	100%		0%		0%	19	100%
<b>Other Methods</b>	<b>12</b>	<b>12</b>	<b>100%</b>		<b>0%</b>	<b>12</b>	<b>100%</b>		<b>0%</b>		<b>0%</b>	<b>12</b>	<b>100%</b>	<b>12</b>	<b>100%</b>		<b>0%</b>		<b>0%</b>	<b>12</b>	<b>100%</b>
<b>Analyte Total</b>	<b>133</b>	<b>132</b>	<b>99%</b>	<b>1</b>	<b>1%</b>	<b>133</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>133</b>	<b>100%</b>	<b>132</b>	<b>99%</b>	<b>1</b>	<b>1%</b>	<b>1</b>	<b>1%</b>	<b>132</b>	<b>99%</b>

**Note:** Of the 86 laboratories reporting staining patterns: 2% found test samples 48 and 50 to stain speckled, and 98% found them to stain homogenous. The reporting of a staining pattern here is for informational purposes only and is not used for grading purposes.

## Antinuclear Antibody

The number of laboratories that reported titers is listed for positive test samples 48 and 50. Only testing systems with 10 or more laboratories reporting titers are listed in this table.

Method <i>Manufacturer</i>	No. Labs	Sample 48 Titer								Sample 50 Titer							
		40	80	160	320	640	1280	2560	5120	40	80	160	320	640	1280	2560	5120
<b>IFA</b> <b>Total</b>	70	1	8	21	19	15	1	2	2	8	29	16	9	2	2		
<i>Bio-Rad</i>	21		3	8	6	3			1	2	11	4	2	1			
<i>Wampole/ Zeus</i>	19		2	2	5	1				2	4	2	2				
<i>The Binding site</i>	11	1	2	6	5	4		1	1	1	11	4	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.

## Antistreptolysin O

Participant Results/ Sample Number																					
R = Reactive/ Positive; N = Non-Reactive/ Negative																					
Method	No. Labs	16 R				17 N				18 N				19 N				20 R			
		N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%
<b>Latex Agglutination</b>	<b>77</b>	<b>0</b>	<b>0%</b>	<b>77</b>	<b>100%</b>	<b>77</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>77</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>77</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>1</b>	<b>1%</b>	<b>76</b>	<b>99%</b>
<i>Behring</i>	19		0%	19	100%	19	100%		0%	19	100%		0%	19	100%		0%		0%	19	100%
<i>Fisher</i>	24		0%	24	100%	24	100%		0%	24	100%		0%	24	100%		0%		0%	24	100%
<i>Remel</i>	14		0%	14	100%	14	100%		0%	14	100%		0%	14	100%		0%	1	7%	13	93%
<i>Others</i>	20		0%	20	100%	20	100%		0%	20	100%		0%	20	100%		0%		0%	20	100%
<b>Nephelometry</b>	<b>26</b>	<b>0</b>	<b>0%</b>	<b>26</b>	<b>100%</b>	<b>25</b>	<b>96%</b>	<b>1</b>	<b>4%</b>	<b>26</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>26</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>1</b>	<b>4%</b>	<b>25</b>	<b>96%</b>
<i>Beckman</i>	12		0%	12	100%	11	92%	1	8%	12	100%		0%	12	100%		0%		0%	12	100%
<i>Behring</i>	14		0%	14	100%	14	100%		0%	14	100%		0%	14	100%		0%	1	7%	13	93%
<b>Turbidimetry</b>	<b>25</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>	<b>25</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>1</b>	<b>4%</b>	<b>24</b>	<b>96%</b>
<i>Roche Diagnostics</i>	15		0%	15	100%	15	100%		0%	15	100%		0%	15	100%		0%		0%	15	100%
<i>Others</i>	10		0%	10	100%	10	100%		0%	10	100%		0%	10	100%		0%	1	10%	9	90%
<b>Other Methods</b>	<b>10</b>		<b>0%</b>	<b>10</b>	<b>100%</b>	<b>10</b>	<b>100%</b>		<b>0%</b>	<b>10</b>	<b>100%</b>		<b>0%</b>	<b>10</b>	<b>100%</b>		<b>0%</b>		<b>0%</b>	<b>10</b>	<b>100%</b>
<b>Analyte Total</b>	<b>138</b>	<b>0</b>	<b>0%</b>	<b>138</b>	<b>100%</b>	<b>137</b>	<b>99%</b>	<b>1</b>	<b>1%</b>	<b>138</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>138</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>3</b>	<b>2%</b>	<b>135</b>	<b>98%</b>

## Antistreptolysin O Latex Agglutination Procedures

The number of laboratories that reported titers is listed for positive test samples 16 and 20. Only testing systems with 10 or more laboratories reporting titers are listed in this table.

Method <i>Manufacturer</i>	No. Labs	Sample 16 Titer						Sample 20 Titer					
		200	400	800	1600	3200	6400	200	400	800	1600	3200	6400
<b>Latex Total</b>	59	3	35	9	1			6	35	6			
<i>Dade Behring</i>	14		6	5	1				8	4			
<i>Fisher</i>	17		16	1				2	15				
<i>Remel</i>	11	1	7	3				1	7	2			

**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 16 and 20. The Mean values  $\pm$  S.D. are given where 10 or more laboratories reported quantitative results. Outlier values are omitted.

Method <i>Manufacturer</i>	No. Labs	Unit	Sample 16	Sample 20
<b>Nephelometry (total)</b> <i>Dade Behring Neph.</i>	26	IU/ml	$666 \pm 140$	$619 \pm 150$
	14	IU/ml	$778 \pm 72$	$754 \pm 49$
<b>Turbidimetry (total)</b> <i>Roche Diagnostics Cobas</i>	25	IU/ml	$667 \pm 111$	$631 \pm 106$
	11	IU/ml	$717 \pm 28$	$673 \pm 32$

## Cytomegalovirus Antibody

Participant Results/ Sample Number																					
R = Reactive/ Positive; N = Non-Reactive/ Negative																					
Method	No. Labs	11 R				12 N				13 N				14 N				15 N			
		N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%
<b>EIA</b>	<b>38</b>	<b>0</b>	<b>0%</b>	<b>38</b>	<b>100%</b>	<b>38</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>38</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>38</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>38</b>	<b>100%</b>	<b>0</b>	<b>0%</b>
<i>Wampole /Zeus</i>	18		0%	18	100%	18	100%		0%	18	100%		0%	18	100%		0%	18	100%		0%
<i>Others</i>	20		0%	20	100%	20	100%		0%	20	100%		0%	20	100%		0%	20	100%		0%
<b>ELFA</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>21</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>21</b>	<b>100%</b>	<b>0</b>	<b>0%</b>
<i>bioMérieux Vidas</i>	21		0%	21	100%	21	100%		0%	21	100%		0%	21	100%		0%	21	100%		0%
<b>Chemiluminescence</b>	<b>16</b>	<b>0</b>	<b>0%</b>	<b>16</b>	<b>100%</b>	<b>16</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>16</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>16</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>16</b>	<b>100%</b>	<b>0</b>	<b>0%</b>
<i>Diagnostic Products</i>	14		0%	14	100%	14	100%		0%	14	100%		0%	14	100%		0%	14	100%		0%
<i>Others</i>	2		0%	2	100%	2	100%		0%	2	100%		0%	2	100%		0%	2	100%		0%
<b>Hemagglutination</b>	<b>11</b>	<b>0</b>	<b>0%</b>	<b>11</b>	<b>100%</b>	<b>11</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>11</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>11</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>11</b>	<b>100%</b>	<b>0</b>	<b>0%</b>
<i>Olympus</i>	11		0%	11	100%	11	100%		0%	11	100%		0%	11	100%		0%	11	100%		0%
<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>5</b>	<b>83%</b>	<b>1</b>	<b>17%</b>
<b>Analyte Total</b>	<b>92</b>	<b>0</b>	<b>0%</b>	<b>92</b>	<b>100%</b>	<b>92</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>92</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>92</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>91</b>	<b>99%</b>	<b>1</b>	<b>1%</b>

## Hepatitis B Core Antibody

Participant Results/ Sample Number																					
R = Reactive/ Positive; N = Non-Reactive/ Negative																					
Method	No. Labs	6 N				7 N				8 R				9 R				10 N			
		Manufacturer	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R
<b>Chemiluminescence</b>	<b>92</b>	<b>92</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>92</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>92</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>92</b>	<b>100%</b>	<b>92</b>	<b>100%</b>	<b>0</b>	<b>0%</b>
<i>Abbott</i>	12	12	100%		0%	12	100%		0%		0%	12	100%		0%	12	100%	12	100%		0%
<i>Bayer</i>	31	31	100%		0%	31	100%		0%		0%	31	100%		0%	31	100%	31	100%		0%
<i>Diagnostic Products</i>	26	26	100%		0%	26	100%		0%		0%	26	100%		0%	26	100%	26	100%		0%
<i>Ortho</i>	23	23	100%		0%	23	100%		0%		0%	23	100%		0%	23	100%	23	100%		0%
<b>EIA</b>	<b>40</b>	<b>38</b>	<b>95%</b>	<b>2</b>	<b>5%</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>	<b>1</b>	<b>3%</b>	<b>39</b>	<b>98%</b>	<b>39</b>	<b>98%</b>	<b>1</b>	<b>3%</b>
<i>Abbott</i>	24	24	100%		0%	24	100%		0%		0%	24	100%		0%	24	100%	24	100%		0%
<i>DiaSorin</i>	10	9	90%	1	10%	10	100%		0%	1	10%	9	90%		0%	10	100%	9	90%	1	10%
<i>Other</i>	6	5	83%	1	17%	6	100%		0%		0%	6	100%	1	17%	5	83%	6	100%		0%
<b>MEIA</b> <i>Abbott AxSYM</i> <sup>1</sup>	17	12	71%	2	12%	11	65%	3	18%		0%	17	100%		0%	17	100%	11	65%	2	12%
<b>Analyte Total</b>	<b>149</b>	<b>142</b>	<b>95%</b>	<b>4</b>	<b>3%</b>	<b>143</b>	<b>96%</b>	<b>3</b>	<b>2%</b>	<b>1</b>	<b>1%</b>	<b>148</b>	<b>99%</b>	<b>1</b>	<b>1%</b>	<b>148</b>	<b>99%</b>	<b>142</b>	<b>95%</b>	<b>3</b>	<b>2%</b>

<sup>1</sup> Three labs reported a result of equivocal on #6, and #7 and four labs reported an equivocal on #10. The expected result for samples #6,7 and 10 was nonreactive, laboratories reporting any other result for these samples should critically examine their method or test kit/system protocol.

## Hepatitis B Surface Antigen

		Participant Results/ Sample Number																			
		R = Reactive/ Positive; N = Non-Reactive/ Negative																			
Method	No. Labs	6 N				7 N				8 R				9 R				10 N			
		N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%
<b>Chemiluminescence</b>	<b>105</b>	<b>101</b>	<b>96%</b>	<b>4</b>	<b>4%</b>	<b>98</b>	<b>93%</b>	<b>5</b>	<b>5%</b>	<b>0</b>	<b>0%</b>	<b>105</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>105</b>	<b>100%</b>	<b>101</b>	<b>96%</b>	<b>4</b>	<b>4%</b>
<i>Abbott</i>	11	11	100%		0%	11	100%		0%		0%	11	100%		0%	11	100%	11	100%		0%
<i>Bayer</i>	38	38	100%		0%	37	97%	1	3%		0%	38	100%		0%	38	100%	38	100%		0%
<i>Diagnostic Products</i>	25	25	100%		0%	25	100%		0%		0%	25	100%		0%	25	100%	25	100%		0%
<i>Ortho</i> <sup>1</sup>	31	27	87%	4	13%	25	81%	4	13%		0%	31	100%		0%	31	100%	27	87%	4	13%
<b>EIA</b>	<b>87</b>	<b>85</b>	<b>98%</b>	<b>2</b>	<b>2%</b>	<b>85</b>	<b>98%</b>	<b>2</b>	<b>2%</b>	<b>0</b>	<b>0%</b>	<b>87</b>	<b>100%</b>	<b>2</b>	<b>2%</b>	<b>85</b>	<b>98%</b>	<b>84</b>	<b>97%</b>	<b>3</b>	<b>3%</b>
<i>Abbott</i>	37	36	97%	1	3%	37	100%		0%		0%	37	100%	1	3%	36	97%	36	97%	1	3%
<i>Bio-Rad</i>	13	12	92%	1	8%	13	100%		0%		0%	13	100%	1	8%	12	92%	13	100%		0%
<i>Roche</i>	13	13	100%		0%	12	92%	1	8%		0%	13	100%		0%	13	100%	12	92%	1	8%
<i>Abbott AxSYM (MEIA)</i>	18	18	100%		0%	18	100%		0%		0%	18	100%		0%	18	100%	17	94%	1	6%
<i>Other</i>	6	6	100%		0%	5	83%	1	17%		0%	6	100%		0%	6	100%	6	100%		0%
<b>Other Methods</b>	<b>6</b>	<b>6</b>	<b>100%</b>		<b>0%</b>	<b>6</b>	<b>100%</b>		<b>0%</b>	<b>5</b>	<b>83%</b>	<b>6</b>	<b>100%</b>		<b>0%</b>	<b>6</b>	<b>100%</b>	<b>6</b>	<b>100%</b>		<b>0%</b>
<b>Analyte Total</b>	<b>198</b>	<b>192</b>	<b>97%</b>	<b>6</b>	<b>3%</b>	<b>189</b>	<b>95%</b>	<b>7</b>	<b>4%</b>	<b>5</b>	<b>3%</b>	<b>198</b>	<b>100%</b>	<b>2</b>	<b>1%</b>	<b>196</b>	<b>99%</b>	<b>191</b>	<b>96%</b>	<b>7</b>	<b>4%</b>

<sup>1</sup> Two labs reported a result of equivocal on sample #7. The expected result for samples #6,7 and 10 was nonreactive, laboratories reporting any other result for these samples should critically examine their method or test kit/system protocol.

## Hepatitis Be Antigen

Participant Results/ Sample Number																					
R = Reactive/ Positive; N = Non-Reactive/ Negative																					
Method	No. Labs	66 N				67 R				68 N				69 R				70 N			
		N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%
<b>EIA</b>	27	27	100%	0	0%	0	0%	27	100%	27	100%	0	0%	0	0%	27	100%	27	100%	0	0%
<i>DiaSorin</i>	27	27	100%		0%		0%	27	100%	27	100%		0%		0%	27	100%	27	100%		0%
<b>Other Methods</b>	5	5	100%		0%		0%	5	100%	5	100%		0%		0%	5	100%	5	100%		0%
<b>Analyte Total</b>	32	32	100%	0	0%	0	0%	32	100%	32	100%	0	0%	0	0%	32	100%	32	100%	0	0%

## Hepatitis C Antibody

Participant Results/ Sample Number																					
R = Reactive/ Positive; N = Non-Reactive/ Negative																					
Method	No. Labs	71 N				72 N				73 N				74 R				75 N			
		N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%
<b>Chemiluminescence</b>	71	71	100%	0	0%	71	100%	0	0%	71	100%	0	0%	0	0%	71	100%	70	99%	0	0%
<i>Bayer</i>	37	37	100%		0%	37	100%		0%	37	100%		0%		0%	37	100%	37	100%		0%
<i>Ortho</i> <sup>1</sup>	32	32	100%		0%	32	100%		0%	32	100%		0%		0%	32	100%	31	97%		0%
<i>Other</i>	2	2	100%		0%	2	100%		0%	2	100%		0%		0%	2	100%	2	100%		0%
<b>EIA</b>	72	72	100%	0	0%	72	100%	0	0%	72	100%	0	0%	0	0%	72	100%	72	100%	0	0%
<i>Abbott</i>	47	47	100%		0%	47	100%		0%	47	100%		0%		0%	47	100%	47	100%		0%
<i>Ortho</i>	24	24	100%		0%	24	100%		0%	24	100%		0%		0%	24	100%	24	100%		0%
<i>Other</i>	1	1	100%		0%	1	100%		0%	1	100%		0%		0%	1	100%	1	100%		0%
<b>MEIA</b>	22	22	100%	0	0%	22	100%	0	0%	22	100%	0	0%	1	5%	21	95%	21	95%	1	5%
<i>Abbott</i>	22	22	100%		0%	22	100%		0%	22	100%		0%	1	5%	21	95%	21	95%	1	5%
<b>Other Methods</b>	5	5	100%		0%	5	100%		0%	5	100%		0%		0%	5	100%	5	100%		0%
<b>Analyte Total</b>	170	170	100%	0	0%	170	100%	0	0%	170	100%	0	0%	1	1%	169	99%	168	99%	1	1%

1 One laboratory reported a result of equivocal on sample #75.

## HIV Antibody

		Participant Results/ Sample Number																			
		R = Reactive/ Positive; N = Non-Reactive/ Negative																			
Method	No. Labs	31 N				32 R				33 N				34 N				35 N			
		N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%
<b>Chemiluminescence</b>	<b>12</b>	<b>12</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>12</b>	<b>100%</b>	<b>12</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>12</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>11</b>	<b>92%</b>	<b>0</b>	<b>0%</b>
<i>Bayer</i> <sup>1</sup>	12	12	100%		0%		0%	12	100%	12	100%		0%	12	100%		0%	11	92%		0%
<b>EIA</b>	<b>118</b>	<b>118</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>118</b>	<b>100%</b>	<b>118</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>118</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>118</b>	<b>100%</b>	<b>0</b>	<b>0%</b>
<i>Abbott</i>	62	62	100%		0%		0%	62	100%	62	100%		0%	62	100%		0%	62	100%		0%
<i>Bio-Rad</i>	50	50	100%		0%		0%	50	100%	50	100%		0%	50	100%		0%	50	100%		0%
<i>Others</i>	6	6	100%		0%		0%	6	100%	6	100%		0%	6	100%		0%	6	100%		0%
<b>Rapid 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>95</b>	<b>100%</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>0</b>	<b>0%</b>
<i>Orasure</i>	95	95	100%		0%		0%	95	100%	95	100%		0%	95	100%		0%	95	100%		0%
<b>Rapid Immunoassay</b>	<b>40</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>	<b>40</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>40</b>	<b>100%</b>	<b>0</b>	<b>0%</b>
<i>Medmira</i>	16	16	100%		0%		0%	16	100%	16	100%		0%	16	100%		0%	16	100%		0%
<i>Trinity</i>	21	21	100%		0%		0%	21	100%	21	100%		0%	21	100%		0%	21	100%		0%
<i>Other</i>	3	3	100%		0%		0%	3	100%	3	100%		0%	3	100%		0%	3	100%		0%
<b>Western Blot</b>	<b>44</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>	<b>44</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>44</b>	<b>100%</b>	<b>0</b>	<b>0%</b>
<i>Bio-Rad</i>	41	41	100%		0%		0%	41	100%	41	100%		0%	41	100%		0%	41	100%		0%
<i>Others</i>	3	3	100%		0%		0%	3	100%	3	100%		0%	3	100%		0%	3	100%		0%
<b>Other Methods</b>	<b>4</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>	<b>4</b>	<b>100%</b>	<b>0</b>	<b>0%</b>
<b>Analyte Total</b>	<b>313</b>	<b>313</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>313</b>	<b>100%</b>	<b>313</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>313</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>312</b>	<b>100%</b>	<b>0</b>	<b>0%</b>

1 One laboratory reported an equivocal result on sample #35.

## HIV p24 Antigen

		Participant Results/ Sample Number																			
		R = Reactive/ Positive; N = Non-Reactive/ Negative																			
Method	No. Labs	61 N				62 R				63 N				64 N				65 N			
		N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%
<b>EIA</b>	<b>2</b>	<b>2</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</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>0%</b>	<b>2</b>	<b>100%</b>	<b>0</b>	<b>0%</b>
<i>Others</i>	2	2	100%		0%		0%	2	100%	2	100%		0%	2	100%		0%	2	100%		0%
<b>Analyte Total</b>	<b>2</b>	<b>2</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</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>0%</b>	<b>2</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 N				37 R				38 N				39 R				40 N			
		N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%
<b>EIA</b>	<b>45</b>	<b>45</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>45</b>	<b>100%</b>	<b>45</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>45</b>	<b>100%</b>	<b>45</b>	<b>100%</b>	<b>0</b>	<b>0%</b>
<i>Abbott</i>	30	30	100%		0%		0%	30	100%	30	100%		0%		0%	30	100%	30	100%		0%
<i>bioMérieux</i>	15	15	100%		0%		0%	15	100%	15	100%		0%		0%	15	100%	15	100%		0%
<b>Analyte Total</b>	<b>45</b>	<b>45</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>45</b>	<b>100%</b>	<b>45</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>45</b>	<b>100%</b>	<b>45</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 N				27 R				28 N				29 R				30 N			
		N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%
<b>CICA</b>	<b>26</b>	<b>26</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>26</b>	<b>100%</b>	<b>26</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>26</b>	<b>100%</b>	<b>25</b>	<b>96%</b>	<b>0</b>	<b>0%</b>
<i>Others</i> <sup>1</sup>	26	26	100%		0%		0%	26	100%	26	100%		0%		0%	26	100%	25	96%		0%
<b>Hemagglutination</b>	<b>45</b>	<b>45</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>45</b>	<b>100%</b>	<b>42</b>	<b>93%</b>	<b>3</b>	<b>7%</b>	<b>0</b>	<b>0%</b>	<b>45</b>	<b>100%</b>	<b>43</b>	<b>96%</b>	<b>2</b>	<b>4%</b>
<i>Fisher</i>	15	15	100%		0%		0%	15	100%	12	80%	3	20%		0%	15	100%	13	87%	2	13%
<i>Wampole/Zeus</i>	21	21	100%		0%		0%	21	100%	21	100%		0%		0%	21	100%	21	100%		0%
<i>Others</i>	9	9	100%		0%		0%	9	100%	9	100%		0%		0%	9	100%	9	100%		0%
<b>Latex Agglutination</b>	<b>146</b>	<b>146</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>146</b>	<b>100%</b>	<b>145</b>	<b>99%</b>	<b>1</b>	<b>1%</b>	<b>1</b>	<b>1%</b>	<b>145</b>	<b>99%</b>	<b>144</b>	<b>99%</b>	<b>1</b>	<b>1%</b>
<i>Fisher</i>	49	49	100%		0%		0%	49	100%	48	98%	1	2%	1	2%	48	98%	48	98%	1	2%
<i>Remel</i>	26	26	100%		0%		0%	26	100%	26	100%		0%		0%	26	100%	26	100%		0%
<i>Wampole/Zeus</i> <sup>2</sup>	52	52	100%		0%		0%	52	100%	52	100%		0%		0%	52	100%	51	98%		0%
<i>Others</i>	19	19	100%		0%		0%	19	100%	19	100%		0%		0%	19	100%	19	100%		0%
<b>Solid Phase IA</b>	<b>62</b>	<b>62</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>62</b>	<b>100%</b>	<b>62</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>62</b>	<b>100%</b>	<b>62</b>	<b>100%</b>	<b>0</b>	<b>0%</b>
<i>Inverness</i>	20	20	100%		0%		0%	20	100%	20	100%		0%		0%	20	100%	20	100%		0%
<i>Seradyn</i>	25	25	100%		0%		0%	25	100%	25	100%		0%		0%	25	100%	25	100%		0%
<i>Wampole/Zeus</i>	11	11	100%		0%		0%	11	100%	11	100%		0%		0%	11	100%	11	100%		0%
<i>Others</i>	6	6	100%		0%		0%	6	100%	6	100%		0%		0%	6	100%	6	100%		0%
<b>Other Methods</b>	<b>4</b>	<b>4</b>	<b>100%</b>		<b>0%</b>	<b>1</b>	<b>25%</b>	<b>3</b>	<b>75%</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>Analyte Total</b>	<b>283</b>	<b>283</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>1</b>	<b>0%</b>	<b>282</b>	<b>100%</b>	<b>279</b>	<b>99%</b>	<b>4</b>	<b>1%</b>	<b>1</b>	<b>0%</b>	<b>282</b>	<b>100%</b>	<b>278</b>	<b>98%</b>	<b>3</b>	<b>1%</b>

1 One laboratory reported an equivocal result on sample #30.

2 One laboratory reported N/A, not applicable, on sample #30.

## Lyme Disease Antibody

Participant Results/ Sample Number																					
R = Reactive/ Positive; N = Non-Reactive/ Negative																					
Method	No. Labs	41 N				42 N				43 N				44 N				45 R			
		Manufacturer	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R
<b>EIA</b>	<b>63</b>	<b>63</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>63</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>62</b>	<b>98%</b>	<b>1</b>	<b>2%</b>	<b>63</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>63</b>	<b>100%</b>
<i>Immunitics</i>	19	19	100%		0%	19	100%		0%	19	100%		0%	19	100%		0%		0%	19	100%
<i>Wampole /Zeus</i>	33	33	100%		0%	33	100%		0%	32	97%	1	3%	33	100%		0%		0%	33	100%
<i>Others</i>	11	11	100%		0%	11	100%		0%	11	100%		0%	11	100%		0%		0%	11	100%
<b>ELFA</b>	<b>31</b>	<b>31</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>31</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>31</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>31</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>31</b>	<b>100%</b>
<i>bioMérieux</i>	31	31	100%		0%	31	100%		0%	31	100%		0%	31	100%		0%		0%	31	100%
<b>Other Methods</b>	<b>8</b>	<b>8</b>	<b>100%</b>		<b>0%</b>	<b>8</b>	<b>100%</b>		<b>0%</b>	<b>8</b>	<b>100%</b>		<b>0%</b>	<b>8</b>	<b>100%</b>		<b>0%</b>		<b>0%</b>	<b>8</b>	<b>100%</b>
<b>Analyte Total</b>	<b>102</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>102</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>102</b>	<b>100%</b>

### Lyme Western Blot IgG

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

### Lyme Western Blot IgM

		Participant Results/ Sample Number																													
		R = Reactive/ Positive; N = Non-Reactive/ Negative; E = Equivocal/ Indeterminate																													
Method	No. Labs	41 N				42 N				43 N				44 N				45 N *													
		N	%	E	%	R	%	N	%	E	%	R	%	N	%	E	%	R	%	N	%	E	%	R	%						
Western Blot - IgM	27	27	100%	0	0%	0	0%	27	100%	0	0%	0	0%	27	100%	0	0%	0	0%	27	100%	0	0%	0	0%	20	74%	0	0%	7	26%
<i>MarDx</i>	25	25	100%		0%		0%	25	100%		0%		0%	25	100%		0%		0%	25	100%		0%		0%	18	72%		0%	7	28%
<i>Other</i>	2	2	100%		0%		0%	2	100%		0%		0%	2	100%		0%		0%	2	100%		0%		0%	2	100%		0%		0%
Other Methods	2	2	100%		0%		0%	2	100%		0%		0%	2	100%		0%		0%	2	100%		0%		0%	2	100%		0%		0%
Analyte Total	29	29	100%	0	0%	0	0%	29	100%	0	0%	0	0%	29	100%	0	0%	0	0%	29	100%	0	0%	0	0%	22	76%	0	0%	7	24%

\* Test sample #45 was not authenticated. When a consensus agreement cannot be reached among participants, by regulation requirements, the sample cannot be graded (scored) and all participating laboratories get credit for this sample.

## Rheumatoid Factor

		Participant Results/ Sample Number																			
		R = Reactive/ Positive; N = Non-Reactive/ Negative																			
Method	No. Labs	26 R				27 R				28 N				29 N				30 N			
		N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%
<b>Latex Agglutination</b>	<b>119</b>	<b>0</b>	<b>0%</b>	<b>119</b>	<b>100%</b>	<b>2</b>	<b>2%</b>	<b>117</b>	<b>98%</b>	<b>116</b>	<b>97%</b>	<b>2</b>	<b>2%</b>	<b>116</b>	<b>97%</b>	<b>3</b>	<b>3%</b>	<b>118</b>	<b>99%</b>	<b>1</b>	<b>1%</b>
<i>Becton Dickinson</i>	18		0%	18	100%		0%	18	100%	18	100%		0%	18	100%		0%	18	100%		0%
<i>Fisher</i>	43		0%	43	100%		0%	43	100%	43	100%		0%	43	100%		0%	43	100%		0%
<i>Seradyn</i>	10		0%	10	100%		0%	10	100%	10	100%		0%	10	100%		0%	10	100%		0%
<i>Wampole/Zeus</i>	12		0%	12	100%		0%	12	100%	12	100%		0%	9	75%	3	25%	12	100%		0%
<i>Others</i> <sup>1</sup>	36		0%	36	100%	2	6%	34	94%	33	92%	2	6%	36	100%		0%	35	97%	1	3%
<b>Nephelometry</b>	<b>39</b>	<b>0</b>	<b>0%</b>	<b>39</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>39</b>	<b>100%</b>	<b>33</b>	<b>85%</b>	<b>3</b>	<b>8%</b>	<b>38</b>	<b>97%</b>	<b>1</b>	<b>3%</b>	<b>33</b>	<b>85%</b>	<b>3</b>	<b>8%</b>
<i>Beckman Coulter</i> <sup>2</sup>	16		0%	16	100%		0%	16	100%	10	63%	3	19%	16	100%		0%	10	63%	3	19%
<i>Behring</i>	23		0%	23	100%		0%	23	100%	23	100%		0%	22	96%	1	4%	23	100%		0%
<b>Turbidimetry</b>	<b>47</b>	<b>0</b>	<b>0%</b>	<b>47</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>47</b>	<b>100%</b>	<b>38</b>	<b>81%</b>	<b>9</b>	<b>19%</b>	<b>46</b>	<b>98%</b>	<b>1</b>	<b>2%</b>	<b>37</b>	<b>79%</b>	<b>9</b>	<b>19%</b>
<i>Beckman Coulter</i> <sup>2</sup>	15		0%	15	100%		0%	15	100%	8	53%	7	47%	15	100%		0%	8	53%	7	47%
<i>Roche</i> <sup>3</sup>	27		0%	27	100%		0%	27	100%	26	96%	1	4%	27	100%		0%	25	93%	1	4%
<i>Others</i>	5		0%	5	100%		0%	5	100%	4	80%	1	20%	4	80%	1	20%	4	80%	1	20%
<b>Other Methods</b>	<b>11</b>		<b>0%</b>	<b>11</b>	<b>100%</b>		<b>0%</b>	<b>11</b>	<b>100%</b>	<b>11</b>	<b>100%</b>		<b>0%</b>	<b>11</b>	<b>100%</b>		<b>0%</b>	<b>11</b>	<b>100%</b>		<b>0%</b>
<b>Analyte Total</b>	<b>216</b>	<b>0</b>	<b>0%</b>	<b>216</b>	<b>100%</b>	<b>2</b>	<b>1%</b>	<b>214</b>	<b>99%</b>	<b>198</b>	<b>92%</b>	<b>14</b>	<b>6%</b>	<b>211</b>	<b>98%</b>	<b>5</b>	<b>2%</b>	<b>199</b>	<b>92%</b>	<b>13</b>	<b>6%</b>

1 One laboratory reported an equivocal result on sample #28.

2 Three laboratories reported an invalid or an equivocal result on samples #28 and 30. The expected result for samples #28 and 30 was negative, laboratories reporting any other result should critically examine their method or test kit/system protocol.

3 One laboratory reported N/A, not applicable on sample #30.

## Rheumatoid Factor Latex Agglutination Procedure

The number of laboratories that reported titers is listed for positive test samples 26 and 27. The dilution schemes laboratories used are represented by the letter A and B, testing systems with 10 or more laboratories reporting titers are listed in this table.

<i>Manufacturer</i>	<b>No. Labs</b>	<b>A B</b>	<b>Sample 26 Titer</b>							<b>Sample 27 Titer</b>						
			<b>20 2</b>	<b>40 4</b>	<b>80 8</b>	<b>160 16</b>	<b>320 32</b>	<b>640 64</b>	<b>1280 128</b>	<b>20 2</b>	<b>40 4</b>	<b>80 8</b>	<b>160 16</b>	<b>320 32</b>	<b>640 64</b>	<b>1280 128</b>
<b>Total</b>	89	A B	4 2	7 1	11 6	23 13	6 7		1	2	5	7	18	17	2	1
<i>Becton Dickenson</i>	14	A B	1	5	6	1				3	4	5	1			
<i>Fisher</i>	33	A B			2 3	16 7	2 2				1	8 4	10 8			

**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 samples 26 and 27. The Mean values  $\pm$  S.D. are given where 10 or more laboratories reported quantitative results. Outlier values are omitted.

<b>Method</b> <i>Manufacturer</i>	<b>No.</b> <b>Labs</b>	<b>Unit</b>	<b>Sample 26</b>	<b>Sample 27</b>
<b>Nephelometry (total)</b>	39	IU/ml	275 $\pm$ 31	204 $\pm$ 57
<i>Beckman Coulter IMMAGE</i>	13	IU/ml	278 $\pm$ 13	274 $\pm$ 12
<i>Dade Behring Nephelometer</i>	11	IU/ml	260 $\pm$ 38	164 $\pm$ 18
<b>Turbidimetry (total)</b>	45	IU/ml	254 $\pm$ 179	160 $\pm$ 64
<i>Beckman Coulter Synchron</i>	10	IU/ml	469 $\pm$ 157	235 $\pm$ 29
<i>Roche Diag. Cobas</i>	13	IU/ml	153 $\pm$ 9	115 $\pm$ 9

## Rubella IgG Antibody

		Participant Results/ Sample Number																			
		R = Reactive/ Positive; N = Non-Reactive/ Negative																			
Method	No. Labs	11 R				12 N				13 N				14 N				15 N			
		N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%
<b>Chemiluminescence</b>	<b>69</b>	<b>0</b>	<b>0%</b>	<b>69</b>	<b>100%</b>	<b>69</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>69</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>69</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>69</b>	<b>100%</b>	<b>0</b>	<b>0%</b>
<i>Bayer</i>	30		0%	30	100%	30	100%		0%	30	100%		0%	30	100%		0%	30	100%		0%
<i>Beckman</i>	16		0%	16	100%	16	100%		0%	16	100%		0%	16	100%		0%	16	100%		0%
<i>Diagnostic Products</i>	23		0%	23	100%	23	100%		0%	23	100%		0%	23	100%		0%	23	100%		0%
<b>EIA</b>	<b>55</b>	<b>0</b>	<b>0%</b>	<b>55</b>	<b>100%</b>	<b>55</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>55</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>55</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>55</b>	<b>100%</b>	<b>0</b>	<b>0%</b>
<i>Abbott</i>	22		0%	22	100%	22	100%		0%	22	100%		0%	22	100%		0%	22	100%		0%
<i>Diamedix</i>	10		0%	10	100%	10	100%		0%	10	100%		0%	10	100%		0%	10	100%		0%
<i>Wampole/Zeus</i>	12		0%	12	100%	12	100%		0%	12	100%		0%	12	100%		0%	12	100%		0%
<i>Others</i>	11		0%	11	100%	11	100%		0%	11	100%		0%	11	100%		0%	11	100%		0%
<b>ELFA</b>	<b>33</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>	<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>bioMérieux Vidas</i>	33		0%	33	100%	33	100%		0%	33	100%		0%	33	100%		0%	33	100%		0%
<b>Latex Agglutination</b>	<b>38</b>	<b>0</b>	<b>0%</b>	<b>38</b>	<b>100%</b>	<b>38</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>38</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>38</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>35</b>	<b>92%</b>	<b>3</b>	<b>8%</b>
<i>Fisher</i>	20		0%	20	100%	20	100%		0%	20	100%		0%	20	100%		0%	19	95%	1	5%
<i>Others</i>	18		0%	18	100%	18	100%		0%	18	100%		0%	18	100%		0%	16	89%	2	11%
<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>6</b>	<b>100%</b>		<b>0%</b>
<b>Analyte Total</b>	<b>201</b>	<b>0</b>	<b>0%</b>	<b>201</b>	<b>100%</b>	<b>201</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>201</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>201</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>198</b>	<b>99%</b>	<b>3</b>	<b>1%</b>

### Rubella IgG Antibody

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Results are summarized for positive test sample 11. The Mean values  $\pm$  S.D. are given where 10 or more laboratories reported quantitative results. Outlier values are omitted.

Method	No. Labs	Unit	Sample 11
<i>Manufacturer</i>			
<b>Chemiluminescence (total)</b>	52	IU/ml	84 $\pm$ 9
<i>Bayer</i>	23	IU/ml	486 $\pm$ 68
<i>Diagnostic Products</i>	19	IU/ml	82 $\pm$ 8

## Rubella IgM Specific

		Participant Results/ Sample Number																			
		R = Reactive/ Positive; N = Non-Reactive/ Negative																			
Method <i>Manufacturer</i>	No. Labs	56 R				57 N				58 N				59 N				60 N			
		N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%
<b>EIA</b>	<b>8</b>		0%	8	100%	8	100%		0%	8	100%		0%	8	100%		0%	8	100%		0%
<b>Chemiluminescence</b>	<b>11</b>		0%	11	100%	11	100%		0%	11	100%		0%	11	100%		0%	11	100%		0%
<b>Analyte Total</b>	<b>19</b>	<b>0</b>	<b>0%</b>	<b>19</b>	<b>100%</b>	<b>19</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>19</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>19</b>	<b>100%</b>	<b>0</b>	<b>0%</b>	<b>19</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 N				2 N				3 N				4 R				5 N			
		N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%
<b>RPR</b>	<b>268</b>	<b>264</b>	<b>99%</b>	<b>4</b>	<b>1%</b>	<b>264</b>	<b>99%</b>	<b>4</b>	<b>1%</b>	<b>265</b>	<b>99%</b>	<b>3</b>	<b>1%</b>	<b>1</b>	<b>0%</b>	<b>267</b>	<b>100%</b>	<b>261</b>	<b>97%</b>	<b>6</b>	<b>2%</b>
<i>ASI</i>	39	39	100%		0%	39	100%		0%	39	100%		0%		0%	39	100%	39	100%		0%
<i>Becton Dickenson</i> <sup>1</sup>	130	126	97%	4	3%	128	98%	2	2%	129	99%	1	1%	1	1%	129	99%	124	95%	5	4%
<i>Fisher</i>	50	50	100%		0%	49	98%	1	2%	50	100%		0%		0%	50	100%	50	100%		0%
<i>True Medix</i>	15	15	100%		0%	15	100%		0%	15	100%		0%		0%	15	100%	14	93%	1	7%
<i>Wampole/Zeus</i>	22	22	100%		0%	21	95%	1	5%	21	95%	1	5%		0%	22	100%	22	100%		0%
<i>Others</i>	12	12	100%		0%	12	100%		0%	11	92%	1	8%		0%	12	100%	12	100%		0%
<b>Other Methods</b>	<b>1</b>	<b>1</b>	<b>100%</b>		<b>0%</b>	<b>1</b>	<b>100%</b>		<b>0%</b>	<b>1</b>	<b>100%</b>		<b>0%</b>		<b>0%</b>	<b>1</b>	<b>100%</b>	<b>1</b>	<b>100%</b>		<b>0%</b>
<b>Analyte Total</b>	<b>269</b>	<b>265</b>	<b>99%</b>	<b>4</b>	<b>1%</b>	<b>265</b>	<b>99%</b>	<b>4</b>	<b>1%</b>	<b>266</b>	<b>99%</b>	<b>3</b>	<b>1%</b>	<b>1</b>	<b>0%</b>	<b>268</b>	<b>100%</b>	<b>262</b>	<b>97%</b>	<b>6</b>	<b>2%</b>

<sup>1</sup> One laboratory reported N/A, not applicable, on sample #5.

## Syphilis - Reagin Antibody

### RPR Procedures

The number of laboratories that reported titers is listed for positive test sample 4 for the RPR procedure. Only testing systems with 10 or more laboratories reporting titers are listed in this table.

Method <i>Manufacturer</i>	No. Labs	Sample 4 Titer					
		1	2	4	8	16	32
<i>Total</i>	236	33	172	27	2	1	
<i>ASI</i>	26	7	15	3		1	
<i>Becton Dickenson</i>	116	9	95	9	1		
<i>Fisher</i>	50	11	35	4			
<i>True Medix</i>	14	4	6	4			
<i>Wampole/ Zeus</i>	22		16	5	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.

## Syphilis - Treponemal Antibody

Participant Results/ Sample Number																					
R = Reactive/ Positive; N = Non-Reactive/ Negative																					
Method	No. Labs	1 N				2 N				3 N				4 R				5 N			
		<i>Manufacturer</i>	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R	%	N	%	R
<b>EIA</b>	14	13	93%	1	7%	13	93%	1	7%	13	93%	1	7%	1	7%	13	93%	13	93%	1	7%
<i>Others</i>	14	13	93%	1	7%	13	93%	1	7%	13	93%	1	7%	1	7%	13	93%	13	93%	1	7%
<b>Gel. Part. Agglut.</b>	32	32	100%	0	0%	32	100%	0	0%	32	100%	0	0%	1	3%	31	97%	31	97%	1	3%
<i>Fujirebio</i>	32	32	100%		0%	32	100%		0%	32	100%		0%	1	3%	31	97%	31	97%	1	3%
<b>IFA</b>	24	24	100%	0	0%	24	100%	0	0%	24	100%	0	0%	0	0%	24	100%	24	100%	0	0%
<i>Wampole/Zeus</i>	24	24	100%		0%	24	100%		0%	24	100%		0%		0%	24	100%	24	100%		0%
<b>Other Methods <sup>1</sup></b>	14	7	50%	7	50%	7	50%	7	50%	7	50%	7	50%	1	7%	13	93%	7	50%	7	50%
<b>Analyte Total</b>	84	76	90%	8	10%	76	90%	8	10%	76	90%	8	10%	3	4%	81	96%	75	89%	9	11%

1 The expected result for samples #1,2,3 and 5 is nonreactive. Laboratories reporting any other result should critically examine their method or test kit/system protocol.

## AAT, C'3, and C'4

The Mean mg/dl  $\pm$  S.D. is given where 10 or more laboratories reported values. Outlier values are omitted.

Analytes	No.	Sample NO.				
		Labs	76	77	78	79
<b>Alpha-1-Antitrypsin</b>						
Nephelometry/ <i>Behring Nephelometer</i>	18	< 16	222 $\pm$ 15	< 16	235 $\pm$ 12	210 $\pm$ 12
Nephelometry/ <i>Total</i>	27	< 16	211 $\pm$ 22	< 16	213 $\pm$ 34	189 $\pm$ 32
Turbidimetry/ <i>Total</i>	7	< 36	188 $\pm$ 12	< 36	189 $\pm$ 5.1	162 $\pm$ 3.9
<b>Complement C'3</b>		76	77	78	79	80
Nephelometry/ <i>Beckman Coulter IMMAGE</i>	16	38 $\pm$ 0.8	152 $\pm$ 6.4	35 $\pm$ 1.4	239 $\pm$ 7.8	323 $\pm$ 14
Nephelometry/ <i>Behring Nephelometer</i>	15	39 $\pm$ 1.7	167 $\pm$ 11	36 $\pm$ 2.0	248 $\pm$ 14	391 $\pm$ 30
Turbidimetry/ <i>Roche Cobas Integra</i>	12	37 $\pm$ 2.6	160 $\pm$ 6.8	35 $\pm$ 2.1	237 $\pm$ 6.9	379 $\pm$ 6.9
Nephelometry/ <i>Total</i>	45	39 $\pm$ 1.5	158 $\pm$ 10	36 $\pm$ 1.5	241 $\pm$ 11	358 $\pm$ 36
Turbidimetry/ <i>Total</i>	48	39 $\pm$ 4.0	156 $\pm$ 8.6	36 $\pm$ 3.3	237 $\pm$ 10	374 $\pm$ 23
<b>Complement C'4</b>		76	77	78	79	80
Nephelometry/ <i>Beckman Coulter IMMAGE</i>	16	4.1 $\pm$ 0.2	37 $\pm$ 1.5	4.0 $\pm$ 0.1	119 $\pm$ 7.9	41 $\pm$ 2.0
Nephelometry/ <i>Behring Nephelometer</i>	15	< 6	36 $\pm$ 1.3	< 6	114 $\pm$ 8.3	38 $\pm$ 1.4
Turbidimetry/ <i>Roche Cobas Integra</i>	11	< 6	34 $\pm$ 1.2	< 6	105 $\pm$ 7.0	38 $\pm$ 1.6
Nephelometry/ <i>Total</i>	45	4.1 $\pm$ 0.1	36 $\pm$ 1.8	4.0 $\pm$ 0.1	112 $\pm$ 11	39 $\pm$ 2.4
Turbidimetry/ <i>Total</i>	46	< 8	33 $\pm$ 2.7	< 8	103 $\pm$ 9.7	36 $\pm$ 2.7

## 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 10 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 IMMAGE	18	46 $\pm$ 1.9	306 $\pm$ 9.5	610 $\pm$ 28	47 $\pm$ 1.5	54 $\pm$ 1.9
Nephelometry/Behring Nephelometer	18	49 $\pm$ 2.8	302 $\pm$ 11	637 $\pm$ 55	51 $\pm$ 3.0	63 $\pm$ 3.9
Nephelometry/Behring BN Prospec	10	50 $\pm$ 0.8	298 $\pm$ 6.2	616 $\pm$ 47	50 $\pm$ 0.8	63 $\pm$ 1.6
Turbidimetry/ Beckman Coulter Synchron	11	50 $\pm$ 2.0	284 $\pm$ 4.0	563 $\pm$ 16	50 $\pm$ 2.4	57 $\pm$ 1.8
Turbidimetry/ Roche Cobas Integra	13	47 $\pm$ 3.0	298 $\pm$ 3.8	522 $\pm$ 5.0	47 $\pm$ 3.8	49 $\pm$ 3.9
Nephelometry/ Total	56	49 $\pm$ 2.8	304 $\pm$ 13	610 $\pm$ 42	49 $\pm$ 2.2	59 $\pm$ 5.3
Turbidimetry/ Total	54	49 $\pm$ 2.9	291 $\pm$ 12	529 $\pm$ 51	49 $\pm$ 3.4	55 $\pm$ 6.6
<b>Immunoglobulin E (IU/ml)</b>						
Chemiluminescence/Diag. Prod. Co.	31	28 $\pm$ 2.1	409 $\pm$ 35	387 $\pm$ 24	28 $\pm$ 2.1	3.2 $\pm$ 0.3
FEIA/ Pharmacia Immunocap	10	28 $\pm$ 2.6	390 $\pm$ 31	419 $\pm$ 35	29 $\pm$ 2.5	4.7 $\pm$ 0.6
Chemiluminescence/ Total	46	28 $\pm$ 2.1	405 $\pm$ 34	395 $\pm$ 29	29 $\pm$ 2.1	3.4 $\pm$ 0.6
FEIA/ Total	16	28 $\pm$ 2.5	389 $\pm$ 29	419 $\pm$ 29	29 $\pm$ 2.1	4.8 $\pm$ 0.6
<b>Immunoglobulin G (mg/dl)</b>						
Nephelometry/Beckman Coulter IMMAGE	17	252 $\pm$ 16	1035 $\pm$ 37	2325 $\pm$ 94	256 $\pm$ 17	290 $\pm$ 21
Nephelometry/Behring Nephelometer	19	265 $\pm$ 13	1097 $\pm$ 50	2884 $\pm$ 109	269 $\pm$ 13	317 $\pm$ 13
Nephelometry/Behring BN Prospec	10	265 $\pm$ 6.3	1083 $\pm$ 32	2858 $\pm$ 82	261 $\pm$ 8.1	311 $\pm$ 13
Turbidimetry/Beckman Coulter Synchron	10	237 $\pm$ 6.1	977 $\pm$ 37	2422 $\pm$ 127	237 $\pm$ 8.9	278 $\pm$ 16
Turbidimetry/Roche Cobas Integra	13	240 $\pm$ 13	985 $\pm$ 21	2410 $\pm$ 64	234 $\pm$ 9.0	264 $\pm$ 10
Nephelometry/ Total	56	260 $\pm$ 14	1066 $\pm$ 50	2646 $\pm$ 333	261 $\pm$ 15	303 $\pm$ 21
Turbidimetry/ Total	51	242 $\pm$ 19	983 $\pm$ 25	2359 $\pm$ 192	241 $\pm$ 23	279 $\pm$ 22
<b>Immunoglobulin M (mg/dl)</b>						
Nephelometry/Beckman Coulter IMMAGE	17	24 $\pm$ 1.1	142 $\pm$ 4.4	210 $\pm$ 7.3	24 $\pm$ 0.9	21 $\pm$ 0.9
Nephelometry/Behring Nephelometer	18	25 $\pm$ 1.2	164 $\pm$ 6.8	345 $\pm$ 13	26 $\pm$ 1.1	23 $\pm$ 2.0
Nephelometry/Behring BN Prospec	10	25 $\pm$ 1.7	159 $\pm$ 6.1	326 $\pm$ 18	25 $\pm$ 1.1	24 $\pm$ 1.7
Turbidimetry/Beckman Coulter Synchron	10	27 $\pm$ 0.8	139 $\pm$ 1.4	206 $\pm$ 4.8	27 $\pm$ 1.4	24 $\pm$ 1.4
Turbidimetry/Roche Cobas Integra	13	22 $\pm$ 2.5	144 $\pm$ 6.3	170 $\pm$ 9.7	22 $\pm$ 3.4	18 $\pm$ 2.1
Nephelometry/ Total	54	25 $\pm$ 1.7	154 $\pm$ 11	284 $\pm$ 63	25 $\pm$ 1.4	23 $\pm$ 2.1
Turbidimetry/ Total	51	26 $\pm$ 3.0	142 $\pm$ 7.1	190 $\pm$ 24	26 $\pm$ 3.0	23 $\pm$ 4.2

## Acceptable Response (September 12, 2007 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/Dade Behring Neph.	< 16	177 - 268	< 16	200 - 270	174 - 246
Nephelometry/ Total	< 16	145 - 276	< 16	109 - 316	92 - 285
Turbidimetry/ Total	< 36	153 - 223	< 36	173 - 204	150 - 174
<b>Complement C'3</b>	76	77	78	79	80
Nephelometry/Beckman Coulter Immage	35 - 41	132 - 172	31 - 40	216 - 263	281 - 365
Nephelometry/Dade Behring Neph.	34 - 45	133 - 200	30 - 42	206 - 291	300 - 482
Turbidimetry/Roche Cobas Integra	29 - 45	139 - 181	28 - 42	215 - 258	358 - 400
Nephelometry/ Total	34 - 43	127 - 190	31 - 42	208 - 273	249 - 467
Turbidimetry/ Total	27 - 51	130 - 182	26 - 47	206 - 268	303 - 445
<b>Complement C'4</b>	76	77	78	79	80
Nephelometry/Beckman Coulter Immage	3 - 5	32 - 42	3 - 5	95 - 143	35 - 48
Nephelometry/Dade Behring Neph.	< 6	31 - 40	< 6	89 - 140	34 - 43
Turbidimetry/Roche Cobas Integra	< 6	30 - 38	< 6	84 - 127	33 - 43
Nephelometry/ Total	< 10	30 - 42	< 10	79 - 145	32 - 47
Turbidimetry/ Total	< 8	24 - 42	< 8	74 - 133	28 - 45
<b>Immunoglobulin A</b>	81	82	83	84	85
Nephelometry/Beckman Coulter Immage	40 - 53	277 - 335	525 - 694	42 - 52	47 - 60
Nephelometry/Dade Behring Neph .	41 - 58	269 - 335	473 - 801	41 - 60	52 - 75
Nephelometry/Dade Behring BN P.	47 - 53	279 - 317	476 - 757	47 - 53	58 - 68
Turbidimetry/ Beckman Coulter Synch.	44 - 57	272 - 296	515 - 610	42 - 58	51 - 63
Turbidimetry/ Roche Cobas Integra	37 - 56	286 - 310	507 - 538	36 - 59	37 - 61
Nephelometry/ Total	40 - 58	265 - 343	484 - 736	42 - 56	43 - 76
Turbidimetry/ Total	40 - 58	254 - 329	375 - 682	38 - 59	35 - 75
<b>Immunoglobulin E</b>	81	82	83	84	85
Chemiluminescence/Diag.Prod. Immulite	22 - 35	302 - 515	314 - 460	22 - 35	2 - 5
FEIA/Pharmacia Immunocap	20 - 37	298 - 482	314 - 524	21 - 37	2 - 7
Chemiluminescence/ Total	21 - 35	303 - 508	309 - 481	21 - 35	1 - 6
FEIA/ Total	20 - 36	301 - 477	330 - 508	22 - 35	2 - 7
Nephelometry/ Total	24 - 31	315 - 468	333 - 470	22 - 32	2 - 7
<b>Immunoglobulin G</b>	81	82	83	84	85
Nephelometry/Beckman Coulter Immage	189 - 315	776 - 1294	1743 - 2907	192 - 320	217 - 363
Nephelometry/Dade Behring Neph .	198 - 331	823 - 1372	2163 - 3606	201 - 336	237 - 395
Nephelometry/Dade Behring BN P.	198 - 331	812 - 1354	2143 - 3572	195 - 327	233 - 389
Turbidimetry/Beckman Coulter Synchron	178 - 297	732 - 1222	1816 - 3028	177 - 297	208 - 348
Turbidimetry/Roche Cobas Integra	180 - 301	738 - 1231	1807 - 3012	175 - 292	198 - 331
Nephelometry/ Total	194 - 325	799 - 1333	1984 - 3308	195 - 327	227 - 380
Turbidimetry/ Total	181 - 303	737 - 1229	1769 - 2949	181 - 302	209 - 350
<b>Immunoglobulin M</b>	81	82	83	84	85
Nephelometry/Beckman Coulter Immage	21 - 28	128 - 155	187 - 232	21 - 28	17 - 24
Nephelometry/Dade Behring Neph .	21 - 30	143 - 185	305 - 384	22 - 29	17 - 29
Nephelometry/Dade Behring BN P.	20 - 31	140 - 178	272 - 381	21 - 29	18 - 29
Turbidimetry/Beckman Coulter Synchron	24 - 30	135 - 144	191 - 221	22 - 31	19 - 29
Turbidimetry/Roche Cobas Integra	14 - 30	124 - 163	141 - 200	11 - 32	11 - 24
Nephelometry/ Total	20 - 31	121 - 188	95 - 472	21 - 30	16 - 30
Turbidimetry/ Total	16 - 35	120 - 164	118 - 263	17 - 36	9 - 36

**Acceptable Response (September 12, 2007 PT Event)**  
**Qualitative / Quantitative Tests Results**

Analytes	Sample NO.				
	1	2	3	4	5
<b>Syphilis - Reagin Ab</b>	N	N	N	R	N
<i>RPR Titer</i>				1 - 4	
<b>Syphilis - Treponemal</b>	N	N	N	R	N
	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
<b>HBcAb</b>	N	N	R	R	N
<b>HBsAg</b>	N	N	R	R	N
	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>
<b>CMV</b>	R	N	N	N	N
<b>Rubella Ab</b>	R	N	N	N	N
	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>
<b>ASO</b>	R	N	N	N	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	R	N	R	N
<b>Rheumatoid Factor</b>	R	R	N	N	N
<i>Latex Agglutination Titer</i>	4 - 64	8 - 128			
<i>Latex Agglutination as IU/ml</i>	20 - 640	40 - 1280			
<i>Nephelometry IU/ml</i>	182 - 369	33 - 375			
	<b>31</b>	<b>32</b>	<b>33</b>	<b>34</b>	<b>35</b>
<b>HIV Ab Screening/Confirmation</b>	N	R	N	N	N
	<b>36</b>	<b>37</b>	<b>38</b>	<b>39</b>	<b>40</b>
<b>HTLV 1 Ab</b>	N	R	N	R	N
	<b>41</b>	<b>42</b>	<b>43</b>	<b>44</b>	<b>45</b>
<b>LYME Disease Ab</b>	N	N	N	N	R
<b>LYME Disease Ab WB IgG</b>	N	N	N	N	R
<b>LYME Disease Ab WB IgM</b>	N	N	N	N	N
	<b>46</b>	<b>47</b>	<b>48</b>	<b>49</b>	<b>50</b>
<b>ANA</b>	N	N	R	N	R
<i>IFA Titer</i>			40 - 1280		40 - 640
	<b>56</b>	<b>57</b>	<b>58</b>	<b>59</b>	<b>60</b>
<b>Rubella IgM</b>	R	N	N	N	N
	<b>61</b>	<b>62</b>	<b>63</b>	<b>64</b>	<b>65</b>
<b>HIV p24 Ag</b>	N	R	N	N	N
	<b>66</b>	<b>67</b>	<b>68</b>	<b>69</b>	<b>70</b>
<b>HBeAg</b>	N	R	N	R	N
	<b>71</b>	<b>72</b>	<b>73</b>	<b>74</b>	<b>75</b>
<b>Hepatitis C Ab</b>	N	N	N	R	N

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