

External Quality Assessment Scheme

## Rubella virus, antibodies Round 1, 2023

### Specimens

Please find enclosed 3 human plasma or serum samples S001, S002 and S003, each 0.5 mL.

### Caution

Quality control specimens derived from human blood must be handled with the same care as patient samples, i.e. as potential transmitters of serious diseases. The specimens are found to be HBsAg, HCVAb and HIVAgAb negative when tested with licensed reagents, but no known test method can offer complete assurance that the specimens will not transmit these or other infectious diseases.

### Examinations

Rubella virus IgG  
Rubella virus IgM  
Rubella virus IgG avidity  
Clinical interpretation

### Storage and use

After arrival, the samples should be stored at +2...8 °C, and used as soon as possible, preferably within a week. The samples are ready for use. Analyse as patient samples.

### Result reporting

Please enter the results and methods via LabScala ([www.labscala.com](http://www.labscala.com)). If you cannot find your instrument or reagent from the registry, please contact the EQA Coordinator. All reported examinations will be scored.

S001



S002



S003



2023-01-23

### INSTRUCTIONS

Product no. 5667  
LQ774723011-013/FI

Subcontracting: Sample pretesting

If the kit is incomplete or contains damaged specimens, please report immediately to [info@labquality.fi](mailto:info@labquality.fi).

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The results should be reported no later than **February 16, 2023.**

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The expected results of the round are published in LabScala in the View Reports section by February 20, 2023.

### Inquiries

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### Labquality Oy

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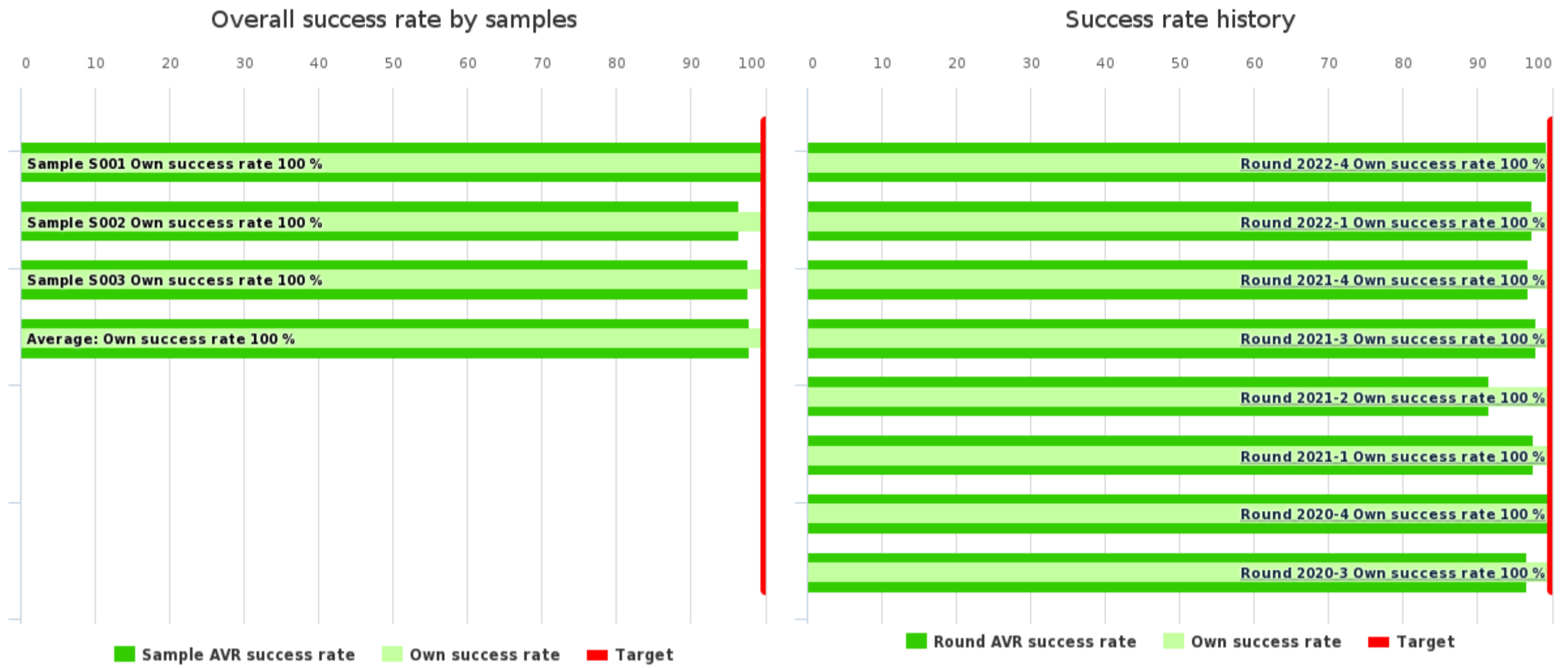
[info@labquality.fi](mailto:info@labquality.fi)  
[www.labquality.com](http://www.labquality.com)



Client report

	No of participants	No of responded participants	Response percentage
Rubella virus, antibodies, January, 1-2023	75	74	98.7 %

Summary

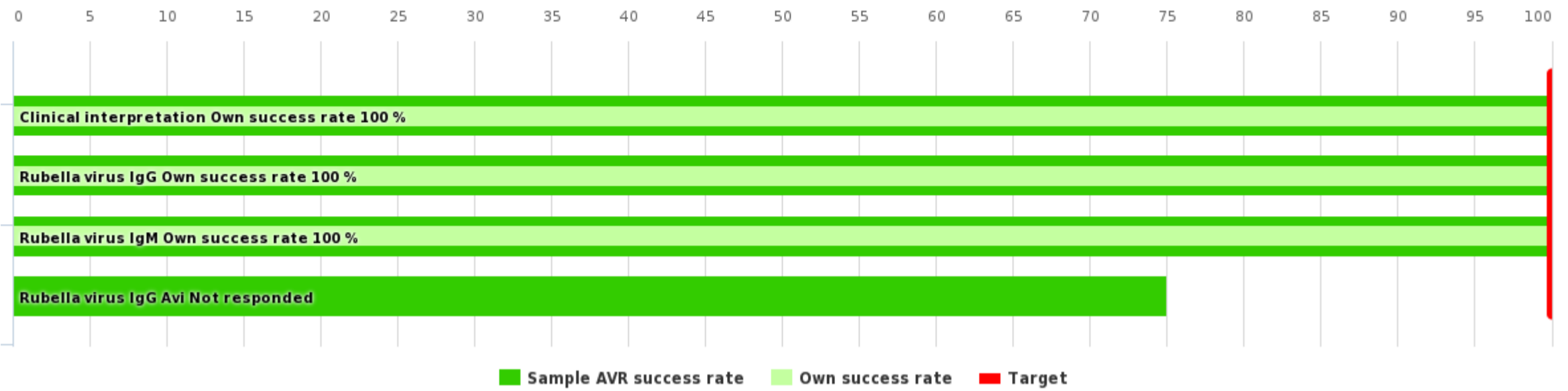


Summary	Own score	Max score	Own success rate	Difference	AVR success rate
Sample S001	8	8	100 %	0.4 %	99.6 %
Sample S002	8	8	100 %	3.5 %	96.5 %
Sample S003	8	8	100 %	2.3 %	97.7 %
Average:			100 %	2.1 %	97.9 %

History	Test nr.	Own success rate	Difference	AVR success rate
Round 2022-4	1-1	100 %	0.7 %	99.3 %
Round 2022-1	1-1	100 %	2.6 %	97.4 %
Round 2021-4	1-1	100 %	3.2 %	96.8 %
Round 2021-3	1-1	100 %	2.1 %	97.9 %
Round 2021-2	1-1	100 %	8.5 %	91.5 %
Round 2021-1	1-1	100 %	2.4 %	97.6 %
Round 2020-4	1-1	100 %	0.4 %	99.6 %
Round 2020-3	1-1	100 %	3.3 %	96.7 %

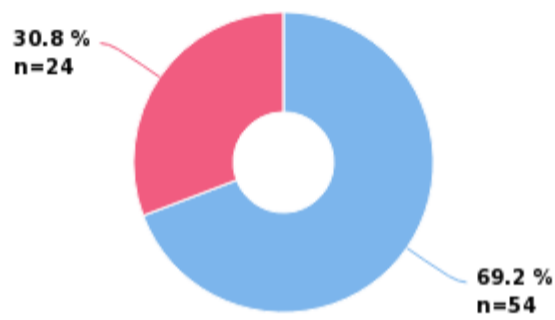
Sample S001

Sample S001 success rate



Sample S001 results	Responded	Own score	Max score	Own success rate	Difference	AVR success rate	Count
	Clinical interpretation	4	4	100 %	0 %	100 %	78
	Rubella virus IgG	2	2	100 %	0 %	100 %	76
	Rubella virus IgM	2	2	100 %	0 %	100 %	70
	Rubella virus IgG Avi	-	-	-	-	75 %	4
Total:		8	8	100 %	0.4 %	99.6 %	228

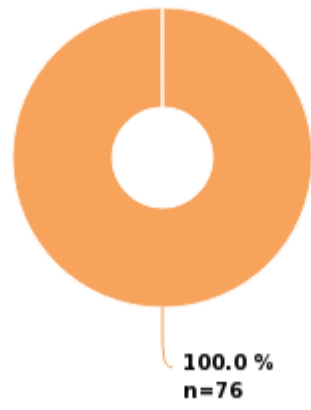
Sample S001 Clinical interpretation



■ No detectable antibodies  
■ Laboratory does not give clinical interpretation

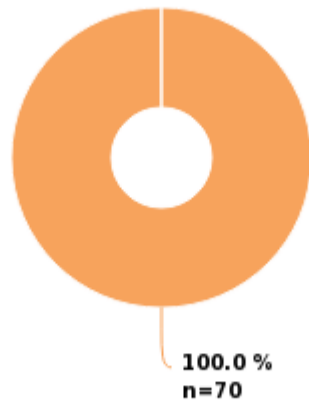
Clinical interpretation	Interpretation	Further action	Interpretation count	Further action count	Own score	Max score	Own success rate	Difference	AVR success rate
	<input checked="" type="radio"/> No detectable antibodies		54		4	4	100 %	0 %	100 %
		New sample requested		3	-	-			
	Laboratory does not give clinical interpretation		24		-				-
Total:			78		4	4	100 %	0 %	100 %

Sample S001 Rubella virus IgG



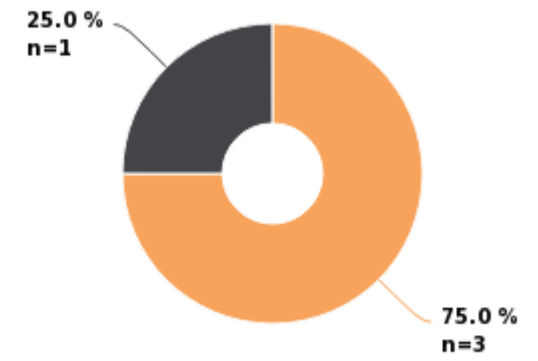
■ Negative

Sample S001 Rubella virus IgM



■ Negative

Sample S001 Rubella virus IgG Avi



■ Not measurable ■ Weak avidity

OWN DEVICE: LIAISON XL

Rubella virus IgG	Interpretation	Method	Interpretation count	Method count	Own score	Max score	Own success rate	Difference	AVR success rate
	<input checked="" type="radio"/> Negative		76		2	2	100 %	0 %	100 %
		Abbott Alinity Rubella IgG		9					
		Abbott Architect Rubella IgG		10					
		Bio-Rad Platelia Rubella IgG		3					
		bioMerieux VIDAS Rubella IgG		6					
		<input checked="" type="radio"/> DiaSorin LIAISON Rubella IgG		19					
		Diesse Chorus Rubella IgG		1					
		Euroimmun Rubella IgG EIA		4					
		NovaTec Rubella IgG ELISA		1					
		Roche cobas/Elecsys Rubella IgG		17					
		Siemens ADVIA Centaur Rubella IgG		1					
		Siemens Atellica Rubella IgG		2					
		TestLine Rubella IgG EIA		1					
		Vircell Rubella Virclia IgG Monotest		1					
		Virion/Serion ELISA classic Rubella IgG		1					
	Total:		76		2	2	100 %	0 %	100 %

OWN DEVICE: LIAISON XL

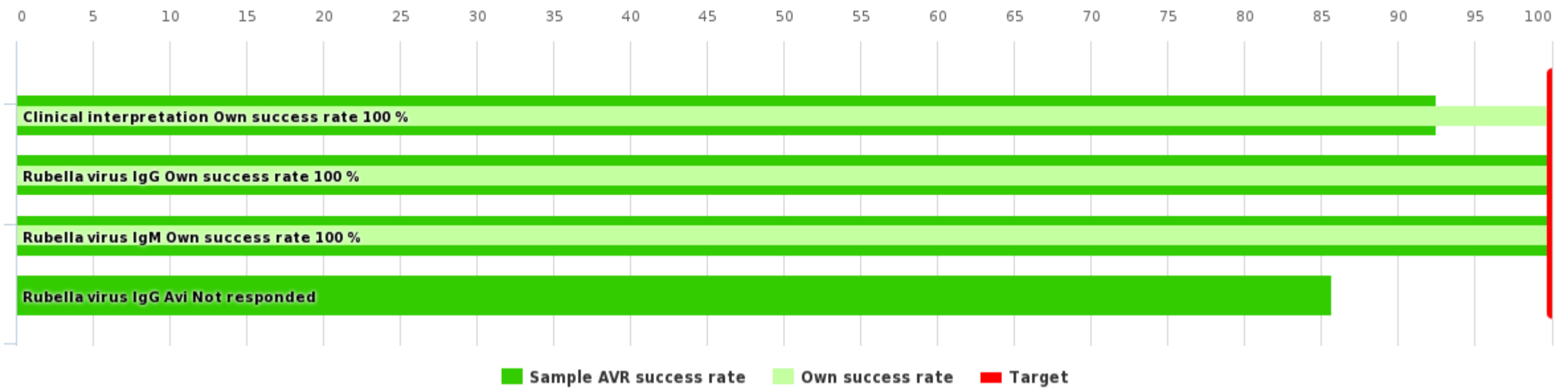
Rubella virus IgM	Interpretation	Method	Interpretation count	Method count	Own score	Max score	Own success rate	Difference	AVR success rate
	<input checked="" type="radio"/> Negative		70		2	2	100 %	0 %	100 %
		Abbott Alinity Rubella IgM		8					
		Abbott Architect Rubella IgM		6					
		Bio-Rad Platelia Rubella IgM		3					
		bioMerieux VIDAS Rubella IgM		6					
		<input checked="" type="radio"/> DiaSorin LIAISON Rubella IgM		20					
		Diesse Chorus Rubella IgM		1					
		Euroimmun Rubella IgM EIA		4					
		NovaTec Rubella IgM ELISA		1					
		Roche cobas/Elecsys Rubella IgM		14					
		Siemens ADVIA Centaur Rubella IgM		1					
		Siemens Atellica Rubella IgM		2					
		TestLine Rubella IgM EIA		1					
		Vircell Rubella Virclia IgM Monotest		2					
		Virion/Serion ELISA classic Rubella IgM		1					
	Total:		70		2	2	100 %	0 %	100 %

Rubella virus IgG Avi	Interpretation	Method	Interpretation count	Method count	Own score	Max score	Own success rate	Difference	AVR success rate
	Not measurable		3		-				100 %

		bioMerieux VIDAS Rubella IgG Avidity		1					
		Euroimmun Rubella IgG Avi EIA		1					
		TestLine Rubella IgG EIA		1					
	Weak avidity		1		-				0 %
		Diesse Chorus Rubella IgG Avi		1					
	Total:		4		-	-	-	-	75 %

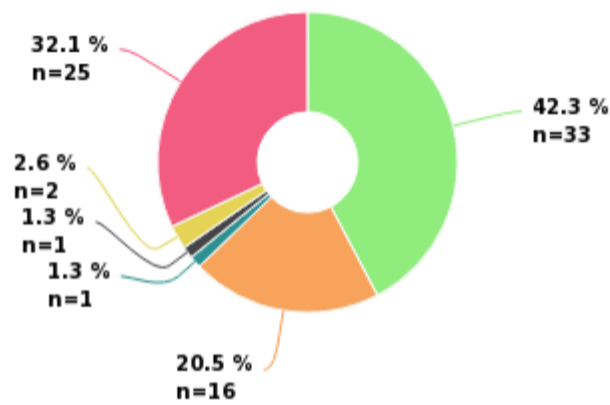
Sample S002

Sample S002 success rate



Sample S002 results	Responded	Own score	Max score	Own success rate	Difference	AVR success rate	Count
	Clinical interpretation	4	4	100 %	7.5 %	92.5 %	78
	Rubella virus IgG	2	2	100 %	0 %	100 %	76
	Rubella virus IgM	2	2	100 %	0 %	100 %	70
	Rubella virus IgG Avi	-	-	-	-	85.7 %	7
Total:		8	8	100 %	3.5 %	96.5 %	231

Sample S002 Clinical interpretation

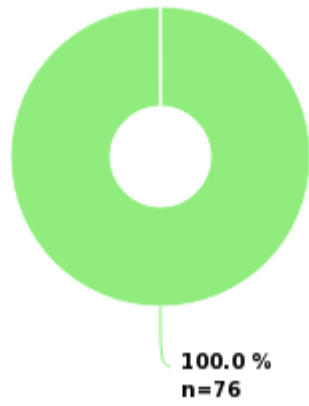


- Acute/recent infection
- Acute infection is possible
- Old immunity or vaccinated
- Does not indicate acute infection
- Reinfection/Reactivation
- Laboratory does not give clinical interpretation

Clinical interpretation	Interpretation	Further action	Interpretation count	Further action count	Own score	Max score	Own success rate	Difference	AVR success rate
	<input checked="" type="radio"/> Acute/recent infection		33		4	4	100 %	0 %	100 %
		New sample requested and referred to confirmation		3	-	-			
		Referred to confirmation		3	-	-			
	Acute infection is possible		16		-	-			100 %
		Referred to confirmation		7	-	-			
		New sample requested and referred to confirmation		3	-	-			
	Old immunity or vaccinated		1		-	-			0 %
	Does not indicate acute infection		1		-	-			0 %
		New sample requested and referred to confirmation		1	-	-			
	Reinfection/Reactivation		2		-	-			0 %
		New sample requested and referred to confirmation		1	-	-			
	Laboratory does not give clinical interpretation		25		-	-			-

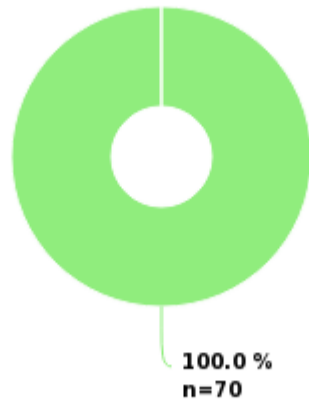
Total:		78	4	4	100 %	7.5 %	92.5 %
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Sample S002 Rubella virus IgG



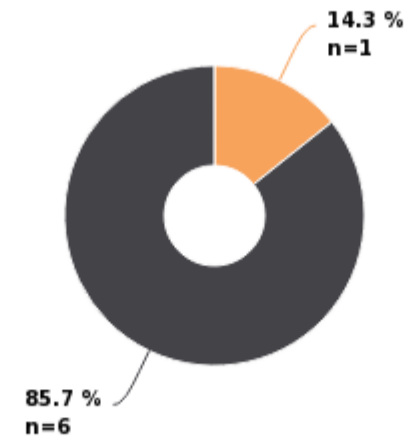
Positive

Sample S002 Rubella virus IgM



Positive

Sample S002 Rubella virus IgG Avi



Strong avidity Weak avidity

OWN DEVICE: LIAISON XL

Rubella virus IgG	Interpretation	Method	Interpretation count	Method count	Own score	Max score	Own success rate	Difference	AVR success rate
	<input checked="" type="radio"/> Positive		76		2	2	100 %	0 %	100 %
		Abbott Alinity Rubella IgG		9					
		Abbott Architect Rubella IgG		10					
		Bio-Rad Platelia Rubella IgG		3					
		bioMerieux VIDAS Rubella IgG		6					
		<input checked="" type="radio"/> DiaSorin LIAISON Rubella IgG		19					
		Diesse Chorus Rubella IgG		1					
		Euroimmun Rubella IgG EIA		4					
		NovaTec Rubella IgG ELISA		1					
		Roche cobas/Elecsys Rubella IgG		17					
		Siemens ADVIA Centaur Rubella IgG		1					
		Siemens Atellica Rubella IgG		2					
		TestLine Rubella IgG EIA		1					
		Vircell Rubella Virclia IgG Monotest		1					
		Virion/Serion ELISA classic Rubella IgG		1					
Total:			76		2	2	100 %	0 %	100 %

OWN DEVICE: LIAISON XL

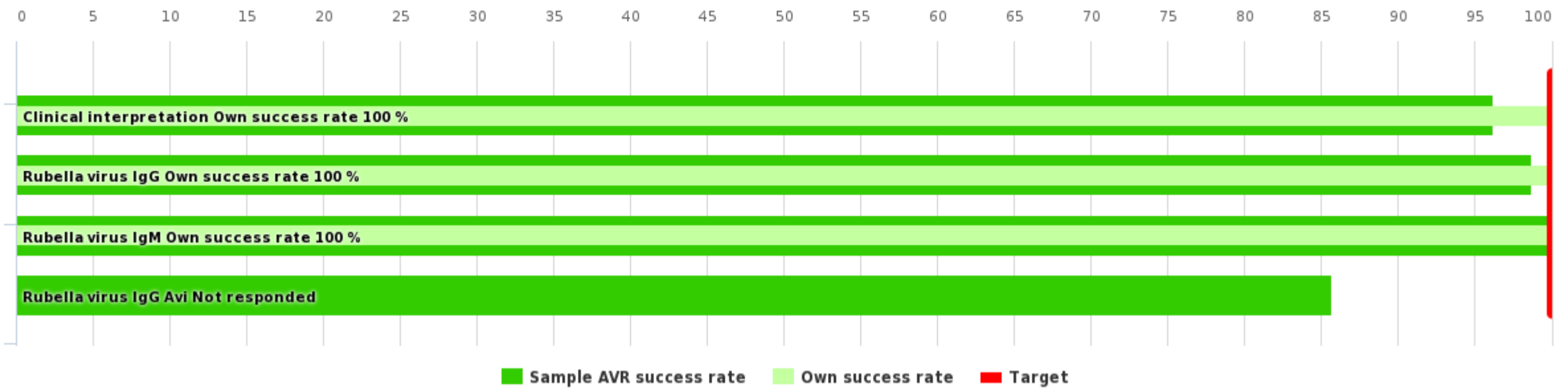
Rubella virus IgM	Interpretation	Method	Interpretation count	Method count	Own score	Max score	Own success rate	Difference	AVR success rate
	<input checked="" type="radio"/> Positive		70		2	2	100 %	0 %	100 %
		Abbott Alinity Rubella IgM		8					
		Abbott Architect Rubella IgM		6					
		Bio-Rad Platelia Rubella IgM		3					
		bioMerieux VIDAS Rubella IgM		6					
		<input checked="" type="radio"/> DiaSorin LIAISON Rubella IgM		20					
		Diesse Chorus Rubella IgM		1					
		Euroimmun Rubella IgM EIA		4					
		NovaTec Rubella IgM ELISA		1					
		Roche cobas/Elecsys Rubella IgM		14					
		Siemens ADVIA Centaur Rubella IgM		1					
		Siemens Atellica Rubella IgM		2					
		TestLine Rubella IgM EIA		1					
		Vircell Rubella Virclia IgM Monotest		2					
		Virion/Serion ELISA classic Rubella IgM		1					
Total:			70		2	2	100 %	0 %	100 %

Rubella virus IgG Avi	Interpretation	Method	Interpretation count	Method count	Own score	Max score	Own success rate	Difference	AVR success rate
	Strong avidity		1		-				0 %
		Diesse Chorus Rubella IgG Avi		1					
	Weak avidity		6		-				100 %
		bioMerieux VIDAS Rubella IgG Avidity		1					
		Euroimmun Rubella IgG Avi EIA		3					
		TestLine Rubella IgG EIA		1					
		Virion/Serion ELISA classic Rubella Avi		1					
	Total:		7		-	-	-	-	85.7 %



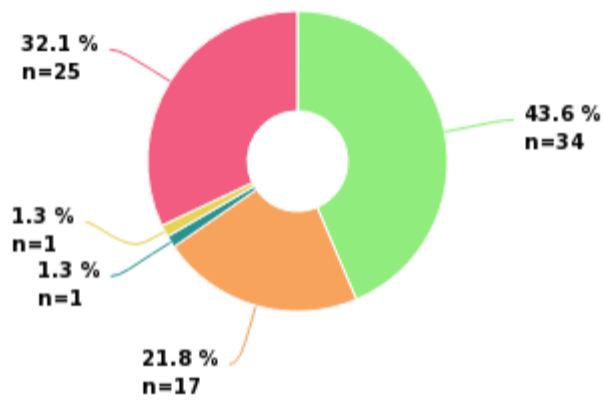
Sample S003

Sample S003 success rate



Sample S003 results	Responded	Own score	Max score	Own success rate	Difference	AVR success rate	Count
	Clinical interpretation	4	4	100 %	3.8 %	96.2 %	78
	Rubella virus IgG	2	2	100 %	1.3 %	98.7 %	76
	Rubella virus IgM	2	2	100 %	0 %	100 %	70
	Rubella virus IgG Avi	-	-	-	-	85.7 %	7
	Total:	8	8	100 %	2.3 %	97.7 %	231

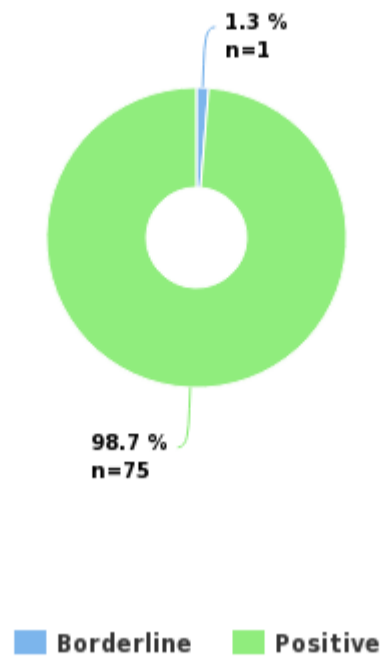
Sample S003 Clinical interpretation



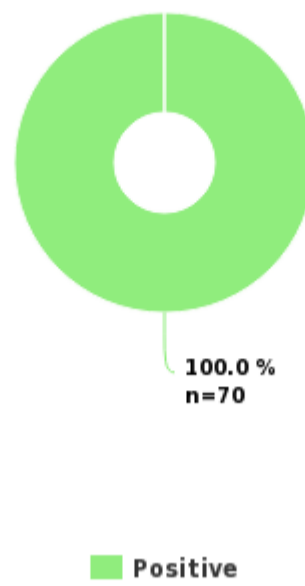
- Acute/recent infection
- Acute infection is possible
- Old immunity or vaccinated
- Reinfection/Reactivation
- Laboratory does not give clinical interpretation

Clinical interpretation	Interpretation	Further action	Interpretation count	Further action count	Own score	Max score	Own success rate	Difference	AVR success rate
	<input checked="" type="radio"/> Acute/recent infection		34		4	4	100 %	0 %	100 %
		Referred to confirmation		3	-	-			
		New sample requested and referred to confirmation		2	-	-			
		New sample requested		1	-	-			
	Acute infection is possible		17		-	-			100 %
		New sample requested and referred to confirmation		4	-	-			
		Referred to confirmation		7	-	-			
	Old immunity or vaccinated		1		-	-			0 %
	Reinfection/Reactivation		1		-	-			0 %
		New sample requested and referred to confirmation		1	-	-			
	Laboratory does not give clinical interpretation		25		-	-			-
	Total:		78		4	4	100 %	3.8 %	96.2 %

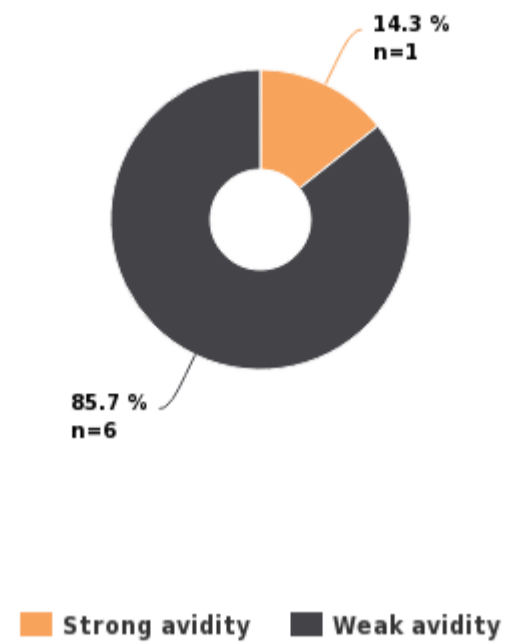
Sample S003 Rubella virus IgG



Sample S003 Rubella virus IgM



Sample S003 Rubella virus IgG Avi



OWN DEVICE: LIAISON XL

Rubella virus IgG	Interpretation	Method	Interpretation count	Method count	Own score	Max score	Own success rate	Difference	AVR success rate
	Borderline		1		-				0 %
	Positive	Roche cobas/Elecsys Rubella IgG	75	1	2	2	100 %	0 %	100 %
		Abbott Alinity Rubella IgG		9					
		Abbott Architect Rubella IgG		10					
		Bio-Rad Platelia Rubella IgG		3					
		bioMerieux VIDAS Rubella IgG		6					
		DiaSorin LIAISON Rubella IgG		19					
		Diesse Chorus Rubella IgG		1					
		Euroimmun Rubella IgG EIA		4					
		NovaTec Rubella IgG ELISA		1					
		Roche cobas/Elecsys Rubella IgG		16					
		Siemens ADVIA Centaur Rubella IgG		1					
		Siemens Atellica Rubella IgG		2					
		TestLine Rubella IgG EIA		1					
		Vircell Rubella Virclia IgG Monotest		1					
		Virion/Serion ELISA classic Rubella IgG		1					
	Total:		76		2	2	100 %	1.3 %	98.7 %

OWN DEVICE: LIAISON XL

Rubella virus IgM	Interpretation	Method	Interpretation count	Method count	Own score	Max score	Own success rate	Difference	AVR success rate
	Positive		70		2	2	100 %	0 %	100 %
		Abbott Alinity Rubella IgM		8					
		Abbott Architect Rubella IgM		6					
		Bio-Rad Platelia Rubella IgM		3					
		bioMerieux VIDAS Rubella IgM		6					
		DiaSorin LIAISON Rubella IgM		20					
		Diesse Chorus Rubella IgM		1					
		Euroimmun Rubella IgM EIA		4					
		NovaTec Rubella IgM ELISA		1					
		Roche cobas/Elecsys Rubella IgM		14					
		Siemens ADVIA Centaur Rubella IgM		1					
		Siemens Atellica Rubella IgM		2					
		TestLine Rubella IgM EIA		1					
		Vircell Rubella Virclia IgM Monotest		2					
		Virion/Serion ELISA classic Rubella IgM		1					
	Total:		70		2	2	100 %	0 %	100 %

Rubella virus IgG Avi	Interpretation	Method	Interpretation count	Method count	Own score	Max score	Own success rate	Difference	AVR success rate
	Strong avidity		1		-				0 %
		Diesse Chorus Rubella IgG Avi		1					
	Weak avidity		6		-				100 %
		bioMerieux VIDAS Rubella IgG Avidity		1					
		Euroimmun Rubella IgG Avi EIA		3					
		TestLine Rubella IgG EIA		1					
		Virion/Serion ELISA classic Rubella Avi		1					
	Total:		7		-	-	-	-	85.7 %

## Report Info

### PARTICIPANTS

Altogether 75 laboratories from 21 countries participated in this EQA round.

### REPORT INFO

The results are divided into groups according to the method stated by the laboratory and presented in laboratory-specific tables. Accepted results are marked with green color and laboratory's own result with a black radio button . In the scoring report you will find summaries of overall success rate and sample specific success rates (%). Sample specific interpretations are shown in pie diagrams as percentages and the total interpretation and methodic counts in the tables. If you have not reported any results you will get a note: "You have not responded in time, only global report is available."

For information on report interpretation and performance evaluation, please see the "EQAS Interpretation guidelines" in LabScala User instructions. In case you have any questions regarding the reports, please contact the EQA Coordinator.

### SCORING

The round is scored based on test results and clinical interpretations when 60% or more of the participants report the expected result and when at least three results are reported.

The following general rules are applied:

Correct/expected test result 2/2 points  
False/deviating test result 0/2 points  
Correct/expected clinical interpretation 4/4 points  
False/deviating clinical interpretation 0/4 points

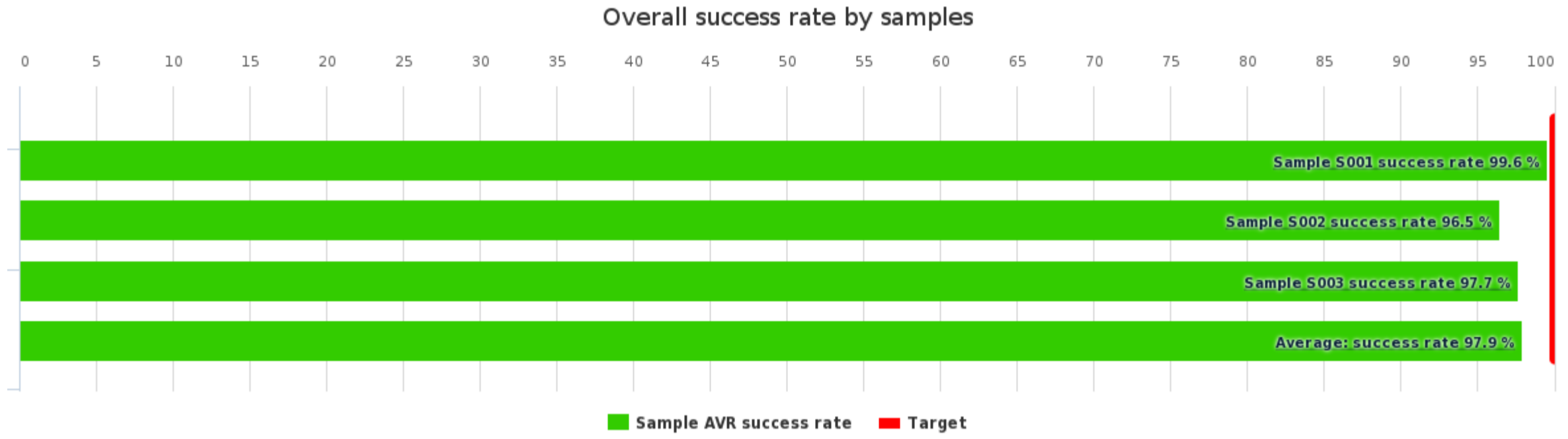
The performance of the laboratory is assessed by the Own success rate (%). The target is 100%. The examination-specific scores obtained by the laboratory in the round are converted to Own success rate per sample (scores/maximum scores\*100). The Laboratory's Own success rate is the average of the sample success rates.

The success rate for the entire round (AVR success rate) is calculated from the total number of scores given to the results per sample (all scores/maximum scores\*100). The AVG success rate of the entire round is the average of the sample success rates. The difference in the Laboratory's Own success rate (%) to the corresponding numbers for the entire round is shown in the table.

GLOBAL REPORT

	No of participants	No of responded participants	Response percentage
Rubella virus, antibodies, January, 1-2023	75	74	98.7 %

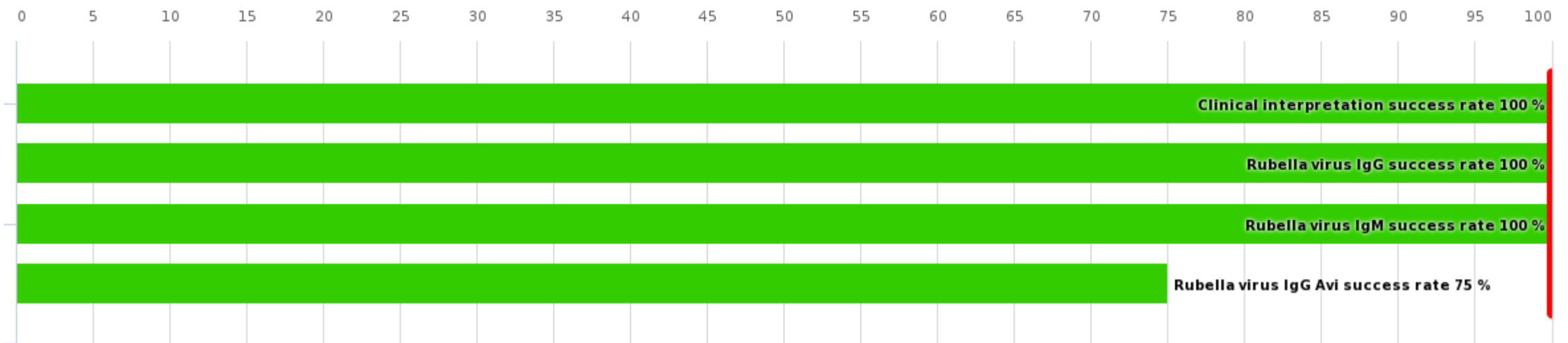
Summary



Summary	AVR success rate
Sample S001	99.6 %
Sample S002	96.5 %
Sample S003	97.7 %
Average:	97.9 %

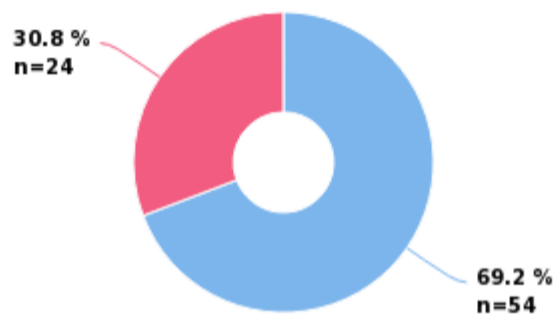
Sample S001

Sample S001 success rate



Sample S001 results	Responded	AVR success rate	Count
	Clinical interpretation	100 %	78
	Rubella virus IgG	100 %	76
	Rubella virus IgM	100 %	70
	Rubella virus IgG Avi	75 %	4
	Total:	99.6 %	228

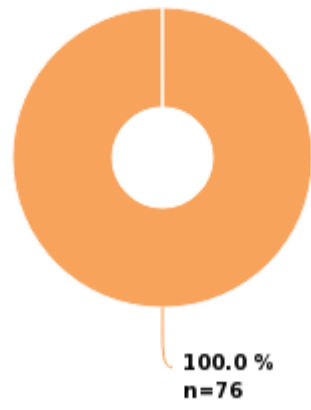
Sample S001 Clinical interpretation



■ No detectable antibodies  
■ Laboratory does not give clinical interpretation

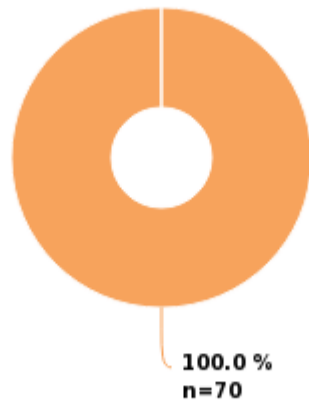
Clinical interpretation	Interpretation	Further action	Interpretation count	Further action count	AVR success rate	Interpretation Score	Further action Score
	No detectable antibodies		54		100 %	4	
		New sample requested		3	-		-
	Laboratory does not give clinical interpretation		24		-	-	
	Total:		78		100 %		

Sample S001 Rubella virus IgG



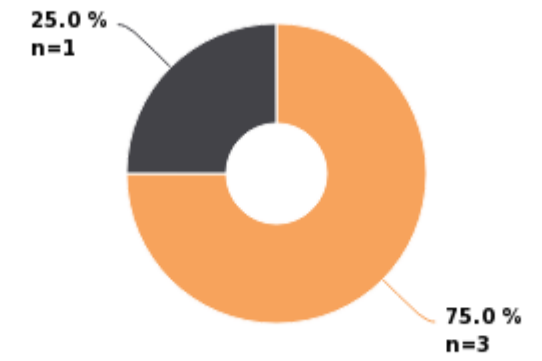
■ Negative

Sample S001 Rubella virus IgM



■ Negative

Sample S001 Rubella virus IgG Avi



■ Not measurable ■ Weak avidity

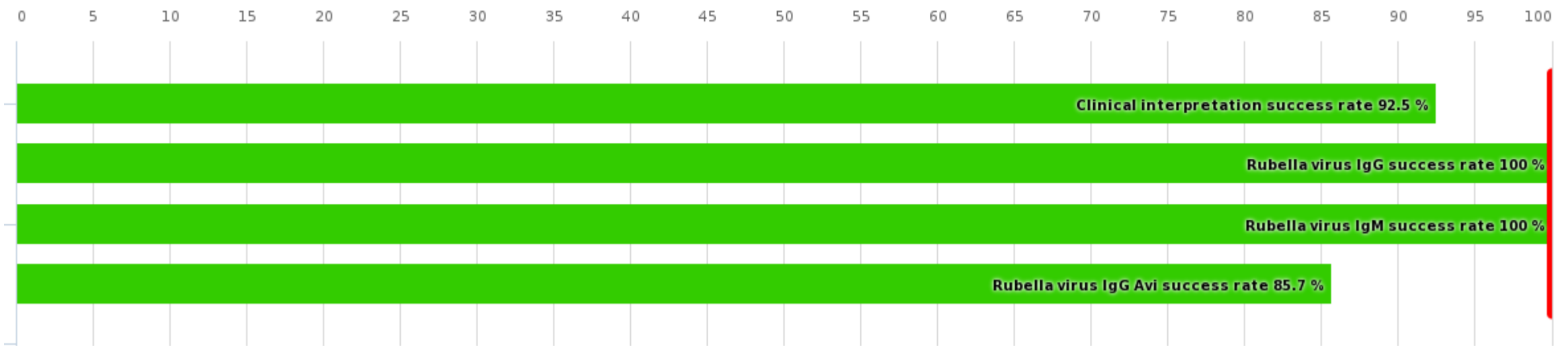
Rubella virus IgG	Interpretation	Method	Interpretation count	Method count	AVR success rate	Interpretation Score
	Negative		76		100 %	2
		Abbott Alinity Rubella IgG		9		
		Abbott Architect Rubella IgG		10		
		Bio-Rad Platelia Rubella IgG		3		
		bioMerieux VIDAS Rubella IgG		6		
		DiaSorin LIAISON Rubella IgG		19		
		Diesse Chorus Rubella IgG		1		
		Euroimmun Rubella IgG EIA		4		
		NovaTec Rubella IgG ELISA		1		
		Roche cobas/Elecsys Rubella IgG		17		
		Siemens ADVIA Centaur Rubella IgG		1		
		Siemens Atellica Rubella IgG		2		
		TestLine Rubella IgG EIA		1		
		Vircell Rubella Virclia IgG Monotest		1		
		Virion/Serion ELISA classic Rubella IgG		1		
	Total:		76		100 %	

Rubella virus IgM	Interpretation	Method	Interpretation count	Method count	AVR success rate	Interpretation Score
	Negative		70		100 %	2
		Abbott Alinity Rubella IgM		8		
		Abbott Architect Rubella IgM		6		
		Bio-Rad Platelia Rubella IgM		3		
		bioMerieux VIDAS Rubella IgM		6		
		DiaSorin LIAISON Rubella IgM		20		
		Diesse Chorus Rubella IgM		1		
		Euroimmun Rubella IgM EIA		4		
		NovaTec Rubella IgM ELISA		1		
		Roche cobas/Elecsys Rubella IgM		14		
		Siemens ADVIA Centaur Rubella IgM		1		
		Siemens Atellica Rubella IgM		2		
		TestLine Rubella IgM EIA		1		
		Vircell Rubella Virclia IgM Monotest		2		
		Virion/Serion ELISA classic Rubella IgM		1		
	Total:		70		100 %	

Rubella virus IgG Avi	Interpretation	Method	Interpretation count	Method count	AVR success rate	Interpretation Score
	Not measurable		3		100 %	2
		bioMerieux VIDAS Rubella IgG Avidity		1		
		Euroimmun Rubella IgG Avi EIA		1		
		TestLine Rubella IgG EIA		1		
	Weak avidity		1		0 %	0
		Diesse Chorus Rubella IgG Avi		1		
	Total:		4		75 %	

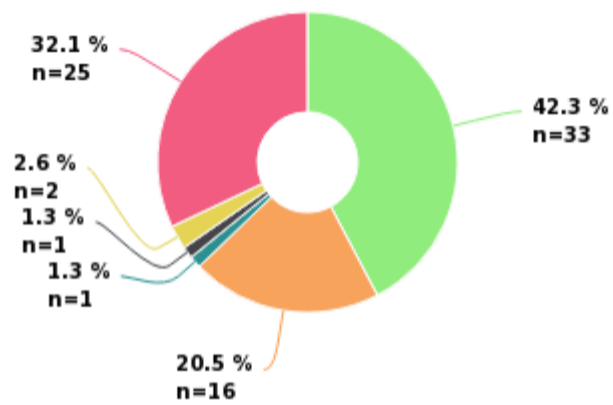
### Sample S002

Sample S002 success rate



Sample S002 results	Responded	AVR success rate	Count
	Clinical interpretation	92.5 %	78
	Rubella virus IgG	100 %	76
	Rubella virus IgM	100 %	70
	Rubella virus IgG Avi	85.7 %	7
	<b>Total:</b>	<b>96.5 %</b>	<b>231</b>

### Sample S002 Clinical interpretation



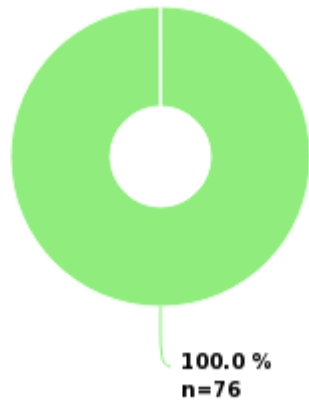
- Acute/recent infection
- Acute infection is possible
- Old immunity or vaccinated
- Does not indicate acute infection
- Reinfection/Reactivation
- Laboratory does not give clinical interpretation

Clinical interpretation	Interpretation	Further action	Interpretation count	Further action count	AVR success rate	Interpretation Score	Further action Score
	Acute/recent infection		33		100 %	4	
		New sample requested and referred to confirmation		3	-		-
		Referred to confirmation		3	-		-
	Acute infection is possible		16		100 %	4	
		Referred to confirmation		7	-		-
		New sample requested and referred to confirmation		3	-		-
	Old immunity or vaccinated		1		0 %	0	
	Does not indicate acute infection		1		0 %	0	
		New sample requested and referred to confirmation		1	-		-
	Reinfection/Reactivation		2		0 %	0	
		New sample requested and referred to confirmation		1	-		-
	Laboratory does not give clinical interpretation		25		-	-	



Total:		78	92.5 %	
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Sample S002 Rubella virus IgG



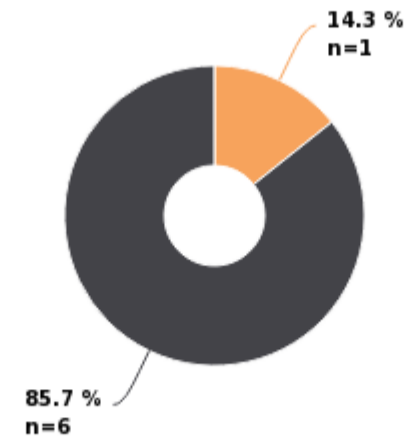
Positive

Sample S002 Rubella virus IgM



Positive

Sample S002 Rubella virus IgG Avi



Strong avidity Weak avidity

Rubella virus IgG	Interpretation	Method	Interpretation count	Method count	AVR success rate	Interpretation Score
	Positive		76		100 %	2
		Abbott Alinity Rubella IgG		9		
		Abbott Architect Rubella IgG		10		
		Bio-Rad Platelia Rubella IgG		3		
		bioMerieux VIDAS Rubella IgG		6		
		DiaSorin LIAISON Rubella IgG		19		
		Diesse Chorus Rubella IgG		1		
		Euroimmun Rubella IgG EIA		4		
		NovaTec Rubella IgG ELISA		1		
		Roche cobas/Elecsys Rubella IgG		17		
		Siemens ADVIA Centaur Rubella IgG		1		
		Siemens Atellica Rubella IgG		2		
		TestLine Rubella IgG EIA		1		
		Vircell Rubella Virclia IgG Monotest		1		
		Virion/Serion ELISA classic Rubella IgG		1		
	Total:		76		100 %	

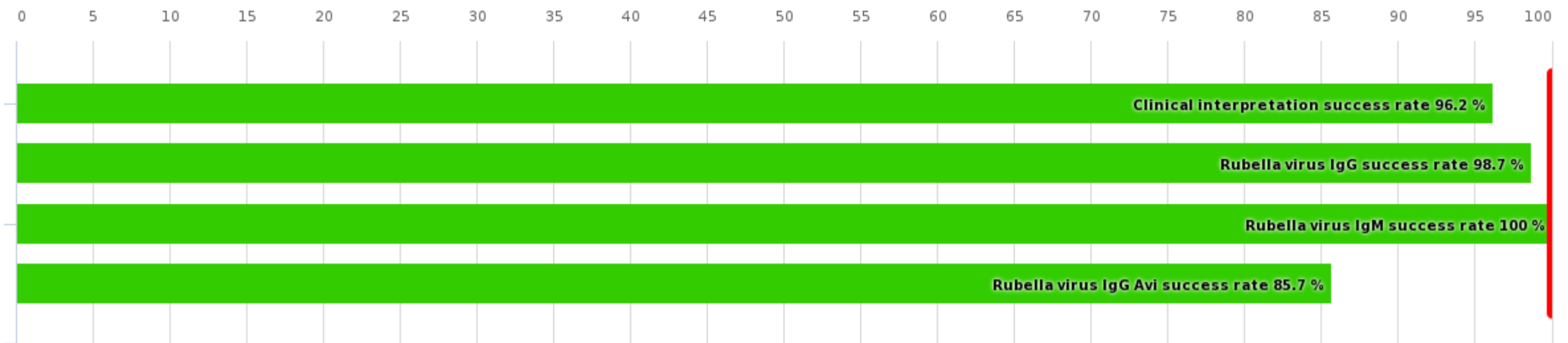
Rubella virus IgM	Interpretation	Method	Interpretation count	Method count	AVR success rate	Interpretation Score
	Positive		70		100 %	2
		Abbott Alinity Rubella IgM		8		
		Abbott Architect Rubella IgM		6		
		Bio-Rad Platelia Rubella IgM		3		
		bioMerieux VIDAS Rubella IgM		6		
		DiaSorin LIAISON Rubella IgM		20		
		Diesse Chorus Rubella IgM		1		
		Euroimmun Rubella IgM EIA		4		
		NovaTec Rubella IgM ELISA		1		
		Roche cobas/Elecsys Rubella IgM		14		
		Siemens ADVIA Centaur Rubella IgM		1		
		Siemens Atellica Rubella IgM		2		
		TestLine Rubella IgM EIA		1		
		Vircell Rubella Virclia IgM Monotest		2		
		Virion/Serion ELISA classic Rubella IgM		1		
	Total:		70		100 %	

Rubella virus IgG Avi	Interpretation	Method	Interpretation count	Method count	AVR success rate	Interpretation Score
	Strong avidity		1		0 %	0
		Diesse Chorus Rubella IgG Avi		1		
	Weak avidity		6		100 %	2
		bioMerieux VIDAS Rubella IgG Avidity		1		
		Euroimmun Rubella IgG Avi EIA		3		
		TestLine Rubella IgG EIA		1		

		Virion/Serion ELISA classic Rubella Avi		1		
	Total:		7		85.7 %	

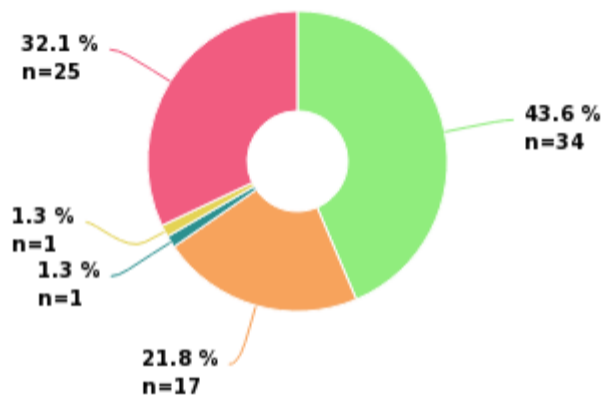
### Sample S003

Sample S003 success rate



Sample S003 results	Responded	AVR success rate	Count
	Clinical interpretation	96.2 %	78
	Rubella virus IgG	98.7 %	76
	Rubella virus IgM	100 %	70
	Rubella virus IgG Avi	85.7 %	7
	Total:	97.7 %	231

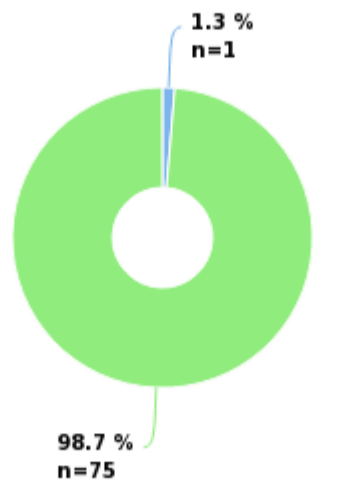
### Sample S003 Clinical interpretation



- Acute/recent infection
- Acute infection is possible
- Old immunity or vaccinated
- Reinfection/Reactivation
- Laboratory does not give clinical interpretation

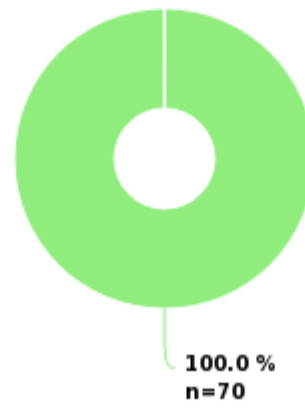
Clinical interpretation	Interpretation	Further action	Interpretation count	Further action count	AVR success rate	Interpretation Score	Further action Score
	Acute/recent infection		34		100 %	4	
		Referred to confirmation		3	-		-
		New sample requested and referred to confirmation		2	-		-
		New sample requested		1	-		-
	Acute infection is possible		17		100 %	4	
		New sample requested and referred to confirmation		4	-		-
		Referred to confirmation		7	-		-
	Old immunity or vaccinated		1		0 %	0	
	Reinfection/Reactivation		1		0 %	0	
		New sample requested and referred to confirmation		1	-		-
	Laboratory does not give clinical interpretation		25		-	-	
	Total:		78		96.2 %		

Sample S003 Rubella virus IgG



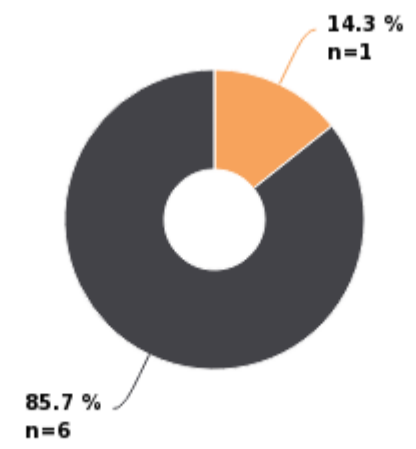
Borderline Positive

Sample S003 Rubella virus IgM



Positive

Sample S003 Rubella virus IgG Avi



Strong avidity Weak avidity

Rubella virus IgG	Interpretation	Method	Interpretation count	Method count	AVR success rate	Interpretation Score
	Borderline		1		0 %	0
		Roche cobas/Elecsys Rubella IgG		1		
	Positive		75		100 %	2
		Abbott Alinity Rubella IgG		9		
		Abbott Architect Rubella IgG		10		
		Bio-Rad Platelia Rubella IgG		3		
		bioMerieux VIDAS Rubella IgG		6		
		DiaSorin LIAISON Rubella IgG		19		
		Diesse Chorus Rubella IgG		1		
		Euroimmun Rubella IgG EIA		4		
		NovaTec Rubella IgG ELISA		1		
		Roche cobas/Elecsys Rubella IgG		16		
		Siemens ADVIA Centaur Rubella IgG		1		
		Siemens Atellica Rubella IgG		2		
		TestLine Rubella IgG EIA		1		
		Vircell Rubella Virclia IgG Monotest		1		
		Virion/Serion ELISA classic Rubella IgG		1		
	Total:		76		98.7 %	

Rubella virus IgM	Interpretation	Method	Interpretation count	Method count	AVR success rate	Interpretation Score
	Positive		70		100 %	2
		Abbott Alinity Rubella IgM		8		
		Abbott Architect Rubella IgM		6		
		Bio-Rad Platelia Rubella IgM		3		
		bioMerieux VIDAS Rubella IgM		6		
		DiaSorin LIAISON Rubella IgM		20		
		Diesse Chorus Rubella IgM		1		
		Euroimmun Rubella IgM EIA		4		
		NovaTec Rubella IgM ELISA		1		
		Roche cobas/Elecsys Rubella IgM		14		
		Siemens ADVIA Centaur Rubella IgM		1		
		Siemens Atellica Rubella IgM		2		
		TestLine Rubella IgM EIA		1		
		Vircell Rubella Virclia IgM Monotest		2		
		Virion/Serion ELISA classic Rubella IgM		1		
	Total:		70		100 %	

Rubella virus IgG Avi	Interpretation	Method	Interpretation count	Method count	AVR success rate	Interpretation Score
	Strong avidity		1		0 %	0
		Diesse Chorus Rubella IgG Avi		1		
	Weak avidity		6		100 %	2
		bioMerieux VIDAS Rubella IgG Avidity		1		
		Euroimmun Rubella IgG Avi EIA		3		

		TestLine Rubella IgG EIA		1		
		Virion/Serion ELISA classic Rubella Avi		1		
	Total:		7		85.7 %	

**Report Info****PARTICIPANTS**

Altogether 75 laboratories from 21 countries participated in this EQA round.

**REPORT INFO**

The results are divided into groups according to the method stated by the laboratory and presented in laboratory-specific tables. Accepted results are marked with green color and laboratory's own result with a black radio button . In the scoring report you will find summaries of overall success rate and sample specific success rates (%). Sample specific interpretations are shown in pie diagrams as percentages and the total interpretation and methodic counts in the tables. If you have not reported any results you will get a note: "You have not responded in time, only global report is available."

For information on report interpretation and performance evaluation, please see the "EQAS Interpretation guidelines" in LabScala User instructions. In case you have any questions regarding the reports, please contact the EQA Coordinator.

**SCORING**

The round is scored based on test results and clinical interpretations when 60% or more of the participants report the expected result and when at least three results are reported.

The following general rules are applied:

Correct/expected test result 2/2 points  
False/deviating test result 0/2 points  
Correct/expected clinical interpretation 4/4 points  
False/deviating clinical interpretation 0/4 points

The performance of the laboratory is assessed by the Own success rate (%). The target is 100%. The examination-specific scores obtained by the laboratory in the round are converted to Own success rate per sample (scores/maximum scores\*100). The Laboratory's Own success rate is the average of the sample success rates.

The success rate for the entire round (AVR success rate) is calculated from the total number of scores given to the results per sample (all scores/maximum scores\*100). The AVG success rate of the entire round is the average of the sample success rates. The difference in the Laboratory's Own success rate (%) to the corresponding numbers for the entire round is shown in the table.

External Quality Assessment Scheme

## Rubella virus, antibodies Round 1, 2023

### Specimens

Samples of this EQA round were human plasma or serum, each of which originated from a single donor. Based on the pre-testing and the results obtained in the round, the samples were homogeneous, stable and suitable for the external quality assessment scheme. The materials were sent without temperature control packaging.

The expected results were as follows:

#### Sample S001 (LQ774723011)

Rubella IgG	Negative
Rubella IgM	Negative
Rubella IgG avidity	Not measurable
Clinical interpretation	No detectable antibodies

#### Sample S002 (LQ774723012)

Rubella IgG	Positive
Rubella IgM	Positive
Rubella IgG avidity	Weak
Clinical interpretation	Acute/recent infection

#### Sample S003 (LQ774723013)

Rubella IgG	Positive
Rubella IgM	Positive
Rubella IgG avidity	Weak
Clinical interpretation	Acute/recent infection

Pre-test methods: Euroimmun Rubella IgG/IgM EIA and Microimmune Rubella IgM Capture EIA.

### Report info

Please see the description of the data analysis on the last page of the laboratory-specific reports and global reports. It is important to read the Final report first, because it contains important information of the samples and results in each round.

### Comments – Expert

Sample S001 was IgG and IgM antibody negative. IgG antibody avidity was not measurable. The sample was previously on round 4,2021 (S001). All reported IgG and IgM antibody results as well as clinical interpretations were correct/as expected. One deviating weak IgG avidity result was reported. On the previous round deviating antibody results were reported but no deviating IgG avidity results.

Sample S002 was IgG and IgM antibody positive. IgG antibody avidity was weak. The sample was previously on round 4,2021 (S003). All reported IgG and IgM antibody results were correct/as expected. One deviating strong IgG avidity result was reported as well as four incorrect clinical interpretations regardless of correct antibody results. One clinical interpretation was done based only on IgG antibody result. Also, on the previous round incorrect clinical interpretations were reported despite correct antibody results.

Sample S003 was IgG and IgM antibody positive. IgG antibody avidity was weak. The sample was previously on round 1,2022 (S002). One deviating IgG antibody result was reported. The Roche cobas/Elecsys test gave one deviating result also on the previous round for the same sample.

2023-03-06

### FINAL REPORT

Product no. 5667

Subcontracting: Sample pretesting

Samples sent	2023-01-23
Round closed	2023-02-16
Expected results	2023-02-17
Final report	2023-03-06

### Request for correction

Typing errors in laboratory's result forms are on laboratory's responsibility. Labquality accepts responsibility only for result processing. Requests must be notified by writing within three weeks from the date of this letter.

### Authorized by

EQA Coordinator  
Mira Saarinen  
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Two deviating clinical interpretations were made, one based only on the IgG antibody result. One deviating IgG avidity result was reported whereas none was reported on the previous round.

**Exceptions in scoring**

No exceptions.

**Annex**

Quantitative Rubella IgG results (Annex 1).

**End of report**

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**Annex 1. Quantitative Rubella IgG results.**

<b>Method</b>	<b><u>S001:</u></b> Rubella IgG Quantitative result	<b><u>S002:</u></b> Rubella IgG Quantitative result	<b><u>S003:</u></b> Rubella IgG Quantitative result
Abbott Alinity Rubella IgG	0.00 IU/mL	44.00 IU/mL	37.30 IU/mL
	0.00 IU/mL	46.60 IU/mL	41.70 IU/mL
	0.01 IU/mL	49.50 IU/mL	41.80 IU/mL
	0.01 IU/mL	49.60 IU/mL	43.00 IU/mL
	0.10 IU/mL	51.00 IU/mL	44.70 IU/mL
	0.10 IU/mL	52.00 IU/mL	46.00 IU/mL
	0.10 IU/mL	53.00 IU/mL	48.60 IU/mL
	0.10 IU/mL	55.10 IU/mL	49.80 IU/mL
Abbott Architect Rubella IgG	0.00 IU/mL	39.20 IU/mL	31.50 IU/mL
	0.00 IU/mL	49.10 IU/mL	41.20 IU/mL
	0.00 IU/mL	49.90 IU/mL	42.50 IU/mL
	0.00 IU/mL	51.00 IU/mL	43.90 IU/mL
	0.00 IU/mL	51.60 IU/mL	43.90 IU/mL
	0.10 IU/mL	51.60 IU/mL	44.20 IU/mL
	0.10 IU/mL	51.70 IU/mL	47.70 IU/mL
	0.10 IU/mL	52.00 IU/mL	51.00 IU/mL
	0.10 IU/mL	56.90 IU/mL	51.80 IU/mL
	0.00 S/CO	49.00 S/CO	47.00 S/CO
bioMerieux VIDAS Rubella IgG	0.00 IU/mL	51.00 IU/mL	44.00 IU/mL
	0.00 IU/mL	56.00 IU/mL	45.00 IU/mL
	0.00 IU/mL	58.00 IU/mL	48.00 IU/mL
	0.00 IU/mL	58.00 IU/mL	49.00 IU/mL
	0.00 IU/mL	58.00 IU/mL	51.00 IU/mL
	0.00 IU/mL	62.00 IU/mL	55.00 IU/mL
Bio-Rad Platelia Rubella IgG	0.08 IU/mL	36.80 IU/mL	25.81 IU/mL
	0.77 IU/mL	37.75 IU/mL	26.54 IU/mL
	0.86 IU/mL	40.45 IU/mL	27.64 IU/mL
DiaSorin LIAISON Rubella IgG	<0.20 IU/mL	51.90 IU/mL	36.40 IU/mL
	<0.20 IU/mL	53.00 IU/mL	58.30 IU/mL
	<0.20 IU/mL	53.20 IU/mL	58.60 IU/mL
	<0.20 IU/mL	55.00 IU/mL	59.00 U/mL
	<0.20 IU/mL	55.40 U/mL	59.00 IU/mL
	<0.20 IU/mL	55.70 IU/mL	59.30 IU/mL
	<0.20 IU/mL	55.90 IU/mL	59.80 IU/mL
	<0.20 IU/mL	56.80 IU/mL	60.40 IU/mL
	<0.20 IU/mL	57.10 IU/mL	61.00 IU/mL
	<0.20 IU/mL	57.90 IU/mL	61.00 IU/mL
	0.20 IU/mL	58.00 IU/mL	61.20 IU/mL
	0.20 U/mL	61.10 IU/mL	64.10 IU/mL
	0.20 IU/mL	62.10 U/mL	65.70 U/mL
	0.20 U/mL	63.60 IU/mL	73.90 IU/mL
	0.20 IU/mL	79.80 IU/mL	84.00 IU/mL
	<1.00 IU/mL	88.80 IU/mL	96.70 IU/mL
<10.00 IU/mL	94.50 IU/mL	112.00 IU/mL	
<0.20 AU/mL	54.30 AU/mL	57.00 AU/mL	
Diesse Chorus Rubella IgG	<5.00 IU/mL	79.00 IU/mL	97.00 IU/mL
Euroimmun Rubella IgG EIA	-	66.80 IU/mL	89.68 IU/mL
	0.001 IU/mL	82.29 IU/mL	100.00 IU/mL
	<1.00 IU/mL	87.00 IU/mL	103.78 IU/mL
	<1.00 IU/mL	99.00 IU/mL	114.00 IU/mL
NovaTec Rubella IgG ELISA	1.07 IU/mL	67.00 IU/mL	34.70 IU/mL
Roche cobas/Elecsys Rubella IgG	0.21 COI	20.30 COI	16.10 COI
	<0.17 IU/mL	16.84 IU/mL	13.58 IU/mL
	<0.17 IU/mL	16.92 IU/mL	14.41 IU/mL
	<0.17 IU/mL	17.10 IU/mL	14.48 IU/mL
	<0.17 IU/mL	17.27 IU/mL	14.60 IU/mL
	<0.17 IU/mL	17.40 IU/mL	14.80 IU/mL

	0.17 IU/mL	18.09 IU/mL	14.81 IU/mL
	0.17 IU/mL	18.20 IU/mL	15.03 IU/mL
	0.17 IU/mL	18.30 IU/mL	15.10 IU/mL
	<0.21 IU/mL	18.33 IU/mL	15.40 IU/mL
	0.21 IU/mL	18.53 IU/mL	15.50 IU/mL
	0.21 IU/mL	18.68 IU/mL	15.52 IU/mL
	0.21 IU/mL	18.90 IU/mL	15.70 IU/mL
	0.24 IU/mL	19.00 IU/mL	16.50 IU/mL
	0.25 IU/mL	19.77 IU/mL	17.22 IU/mL
	0.29 IU/mL	20.00 IU/mL	18.92 IU/mL
	<1.00 IU/mL	20.76 IU/mL	21.19 IU/mL
Siemens ADVIA Centaur Rubella IgG	<0.20 IU/mL	159.00 IU/mL	>500.00 IU/mL
Siemens Atellica Rubella IgG	<0.20 S/CO	212.90 S/CO	>500.00 S/CO