LABQUALITY

External Quality Assessment Scheme

Measles 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
Measles virus IgG
Measles virus IgM
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). 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. 5668
LQ774523011-013/FI

Subcontracting: Sample pretesting

If the kit is incomplete or contains damaged specimens, please report immediately to info@labquality.fi.

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

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

Inquiries
EQA Coordinator
Mira Saarinen
mira.h.saarinen@labquality.fi

Labquality Oy
Kumpulantie 15
FI-00520 HELSINKI
Finland

Tel. + 358 9 8566 8200
Fax + 358 9 8566 8280

info@labquality.fi
www.labquality.com

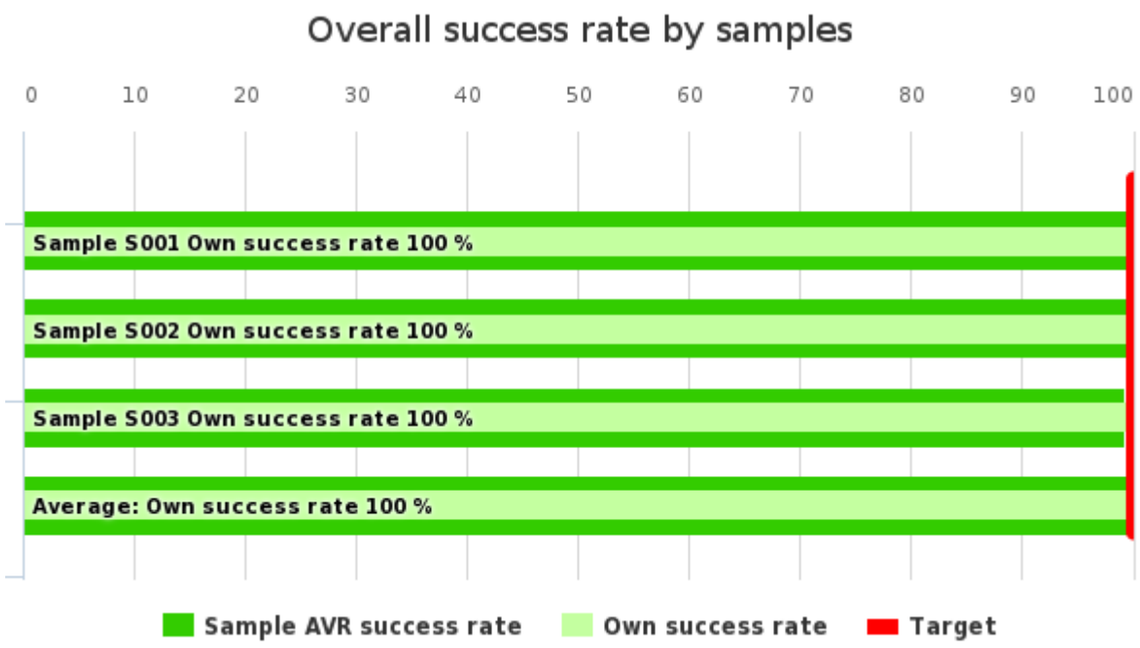
FINAS
Finnish Accreditation Service
PT02 (EN ISO/IEC 17043)

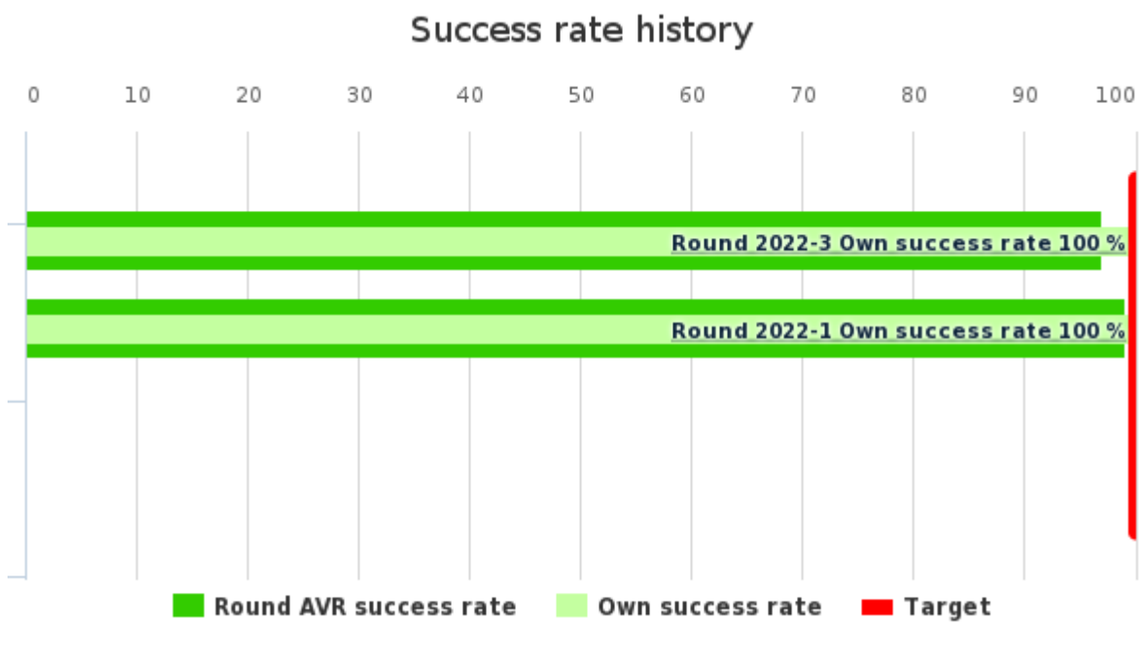
Quality Management
ISO 9001:2015

Client report

	No of participants	No of responded participants	Response percentage
Measles virus, antibodies, January, 1-2023	40	37	92.5 %

Summary

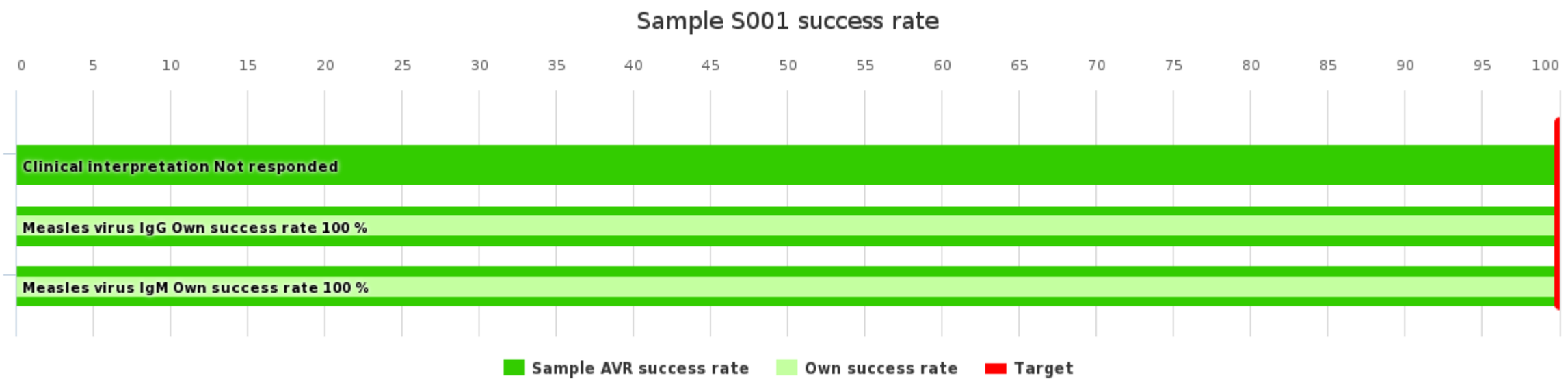




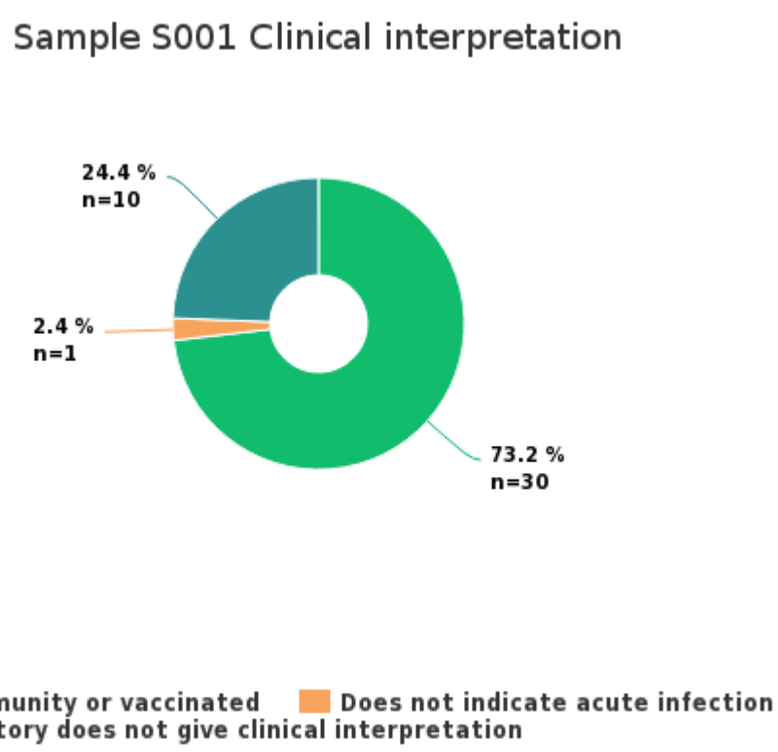
Summary	Own score	Max score	Own success rate	Difference	AVR success rate
Sample S001	4	4	100 %	0 %	100 %
Sample S002	2	2	100 %	0 %	100 %
Sample S003	4	4	100 %	0.7 %	99.3 %
Average:			100 %	0.2 %	99.8 %

History	Test nr.	Own success rate	Difference	AVR success rate
Round 2022-3	1-1	100 %	2.9 %	97.1 %
Round 2022-1	1-1	100 %	0.8 %	99.2 %

Sample S001



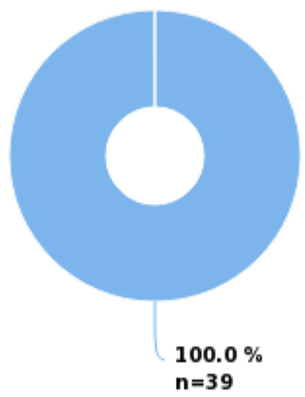
Sample S001 results	Responded	Own score	Max score	Own success rate	Difference	AVR success rate	Count
	Clinical interpretation	-	-	-	-	100 %	41
	Measles virus IgG	2	2	100 %	0 %	100 %	39
	Measles virus IgM	2	2	100 %	0 %	100 %	39
Total:		4	4	100 %	0 %	100 %	119



Clinical interpretation	Interpretation	Further action	Interpretation count	Further action count	Own score	Max score	Own success rate	Difference	AVR success rate
	Old immunity or vaccinated		30		-				100 %
	Does not indicate acute infection		1		-				100 %
	◉ Laboratory does not give clinical interpretation		10		-				-
	Total:		41		-	-	-	-	100 %

Sample S001 Measles virus IgG

Sample S001 Measles virus IgM



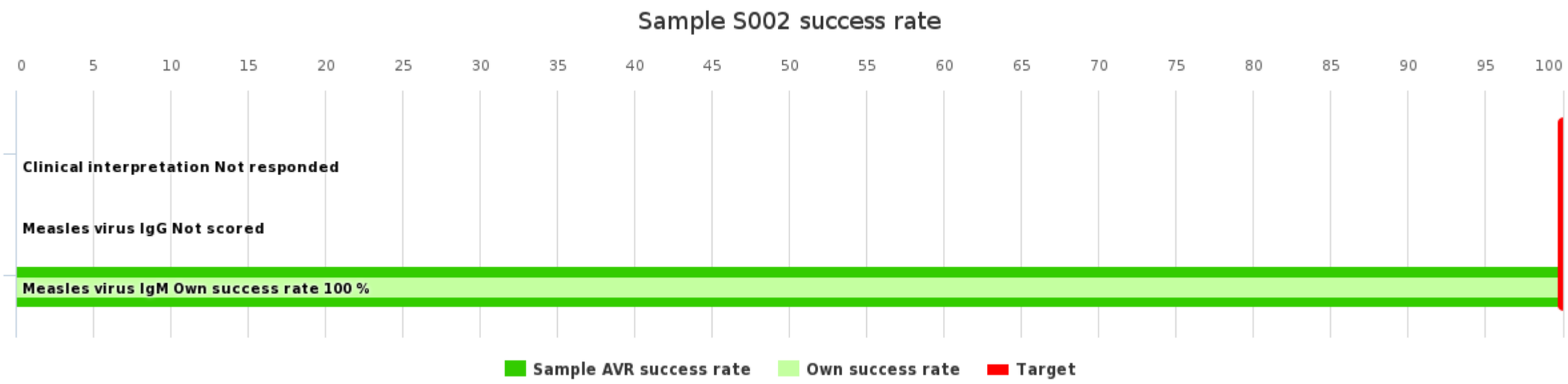
OWN DEVICE: LIAISON

Measles virus IgG	Interpretation	Method	Interpretation count	Method count	Own score	Max score	Own success rate	Difference	AVR success rate
	◉ Positive		39		2	2	100 %	0 %	100 %
		bioMerieux VIDAS Measles IgG		2					
		◉ DiaSorin LIAISON Measles IgG		23					
		Euroimmun Measles IgG EIA		5					
		In-house EIA		2					
		Orgentec Anti-Measles Virus IgG		1					
		TestLine Clinical Diagnostics EIA Measles IgG		2					
		Vircell VirClia Measles IgG		1					
		Virion/Serion ELISA classic Measles IgG		3					
	Total:		39		2	2	100 %	0 %	100 %

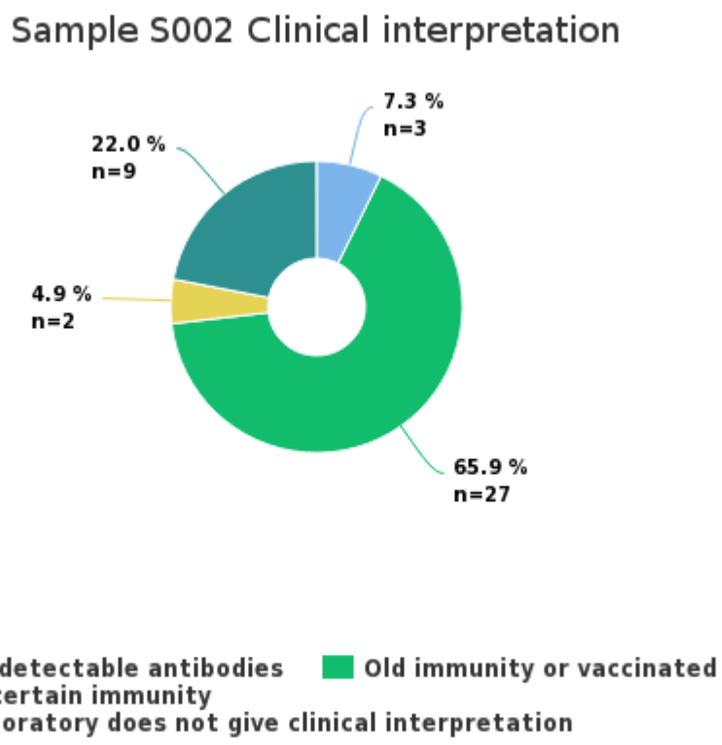
OWN DEVICE: LIAISON

Measles virus IgM	Interpretation	Method	Interpretation count	Method count	Own score	Max score	Own success rate	Difference	AVR success rate
	◉ Negative		39		2	2	100 %	0 %	100 %
		◉ DiaSorin LIAISON Measles IgM		23					
		Diesse Chorus Measles IgM ELISA		1					
		Euroimmun Measles IgM EIA		4					
		In-house EIA		3					
		Microimmune Measles IgM Capture EIA		1					
		Orgentec Anti-Measles Virus IgM		1					
		TestLine Clinical Diagnostics EIA Measles IgM		2					
		Vircell VirClia Measles IgM		1					
		Virion/Serion ELISA classic Measles IgM		3					
	Total:		39		2	2	100 %	0 %	100 %

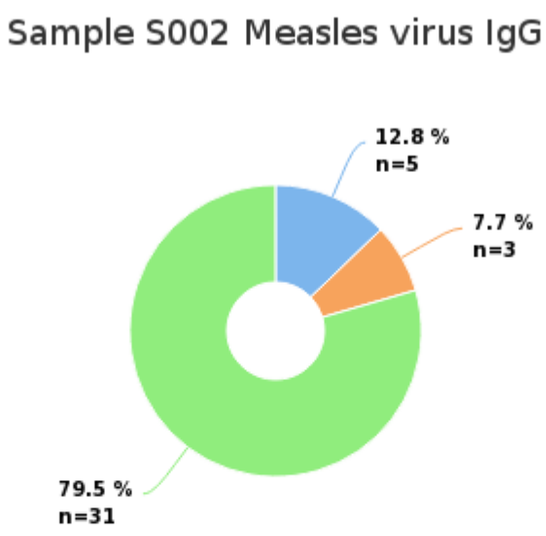
Sample S002

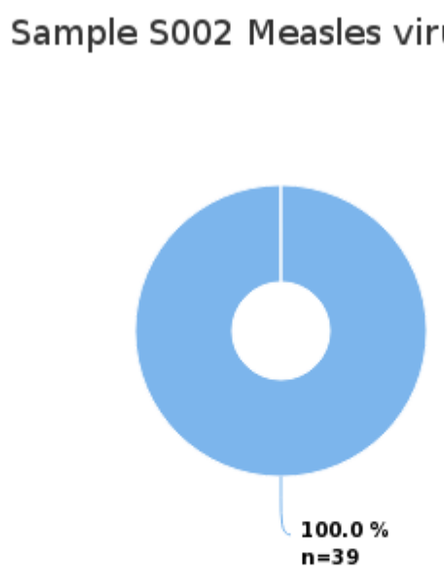


Sample S002 results	Responded	Own score	Max score	Own success rate	Difference	AVR success rate	Count
	Clinical interpretation	-	-	-	-	-	41
	Measles virus IgG	-	-	-	-	-	39
	Measles virus IgM	2	2	100 %	0 %	100 %	39
Total:		2	2	100 %	0 %	100 %	119



Clinical interpretation	Interpretation	Further action	Interpretation count	Further action count	Own score	Max score	Own success rate	Difference	AVR success rate
	No detectable antibodies		3		-				-
	Old immunity or vaccinated		27		-				-
	Uncertain immunity		2		-				-
		New sample requested		1	-	-			
	◉ Laboratory does not give clinical interpretation		9		-				-
		Referred to confirmation		1	-	-			
	Total:		41		-	-	-	-	





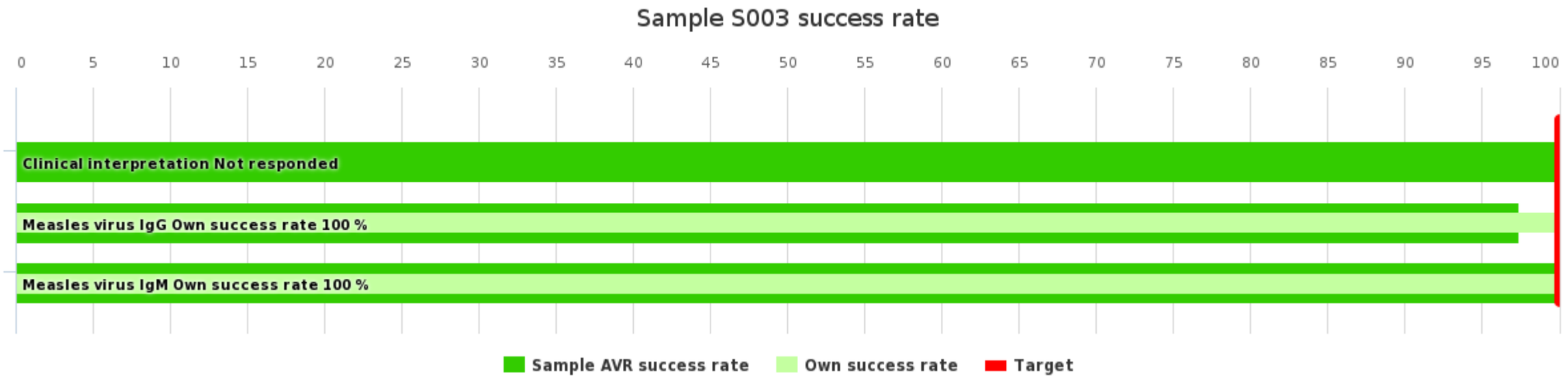
OWN DEVICE: LIAISON

Measles virus IgG	Interpretation	Method	Interpretation count	Method count	Own score	Max score	Own success rate	Difference	AVR success rate
	Negative		5		-				-
		Euroimmun Measles IgG EIA		4					
		Orgentec Anti-Measles Virus IgG		1					
	Borderline		3		-				-
		bioMerieux VIDAS Measles IgG		1					
		Euroimmun Measles IgG EIA		1					
		Vircell VirClia Measles IgG		1					
	◉ Positive		31		-				-
		bioMerieux VIDAS Measles IgG		1					
		◉ DiaSorin LIAISON Measles IgG		23					
		In-house EIA		2					
		TestLine Clinical Diagnostics EIA Measles IgG		2					
		Virion/Serion ELISA classic Measles IgG		3					
	Total:		39		-	-	-	-	

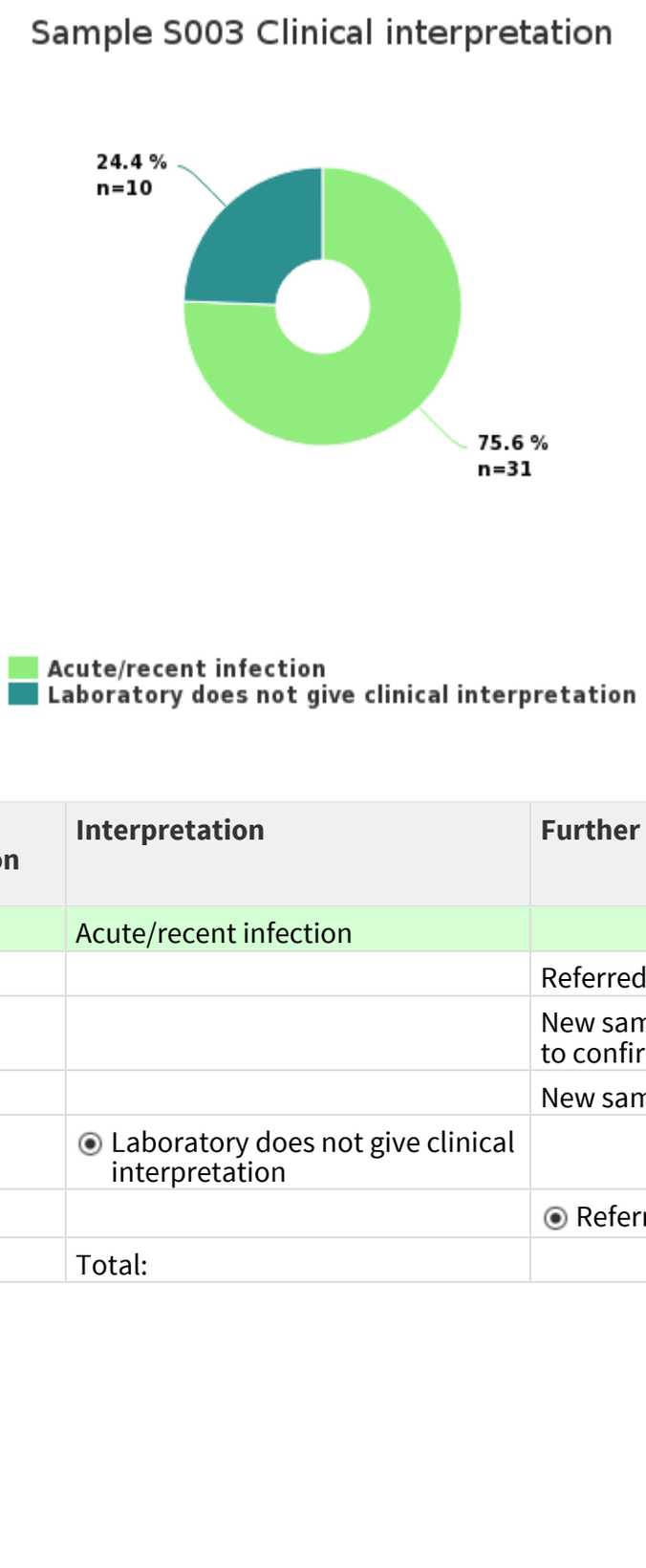
OWN DEVICE: LIAISON

Measles virus IgM	Interpretation	Method	Interpretation count	Method count	Own score	Max score	Own success rate	Difference	AVR success rate
	◉ Negative		39		2	2	100 %	0 %	100 %
		◉ DiaSorin LIAISON Measles IgM		23					
		Diesse Chorus Measles IgM ELISA		1					
		Euroimmun Measles IgM EIA		4					
		In-house EIA		3					
		Microimmune Measles IgM Capture EIA		1					
		Orgentec Anti-Measles Virus IgM		1					
		TestLine Clinical Diagnostics EIA Measles IgM		2					
		Vircell VirClia Measles IgM		1					
		Virion/Serion ELISA classic Measles IgM		3					
	Total:		39		2	2	100 %	0 %	100 %

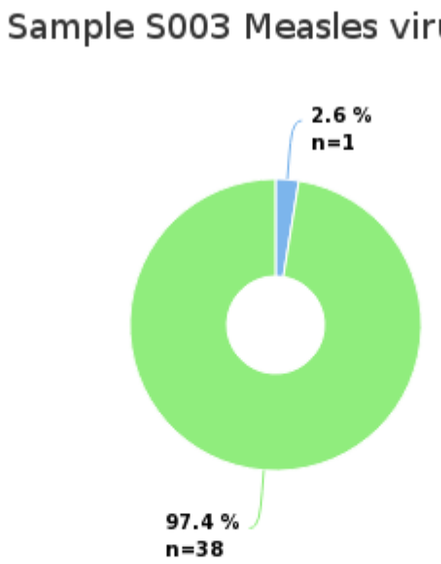
Sample S003

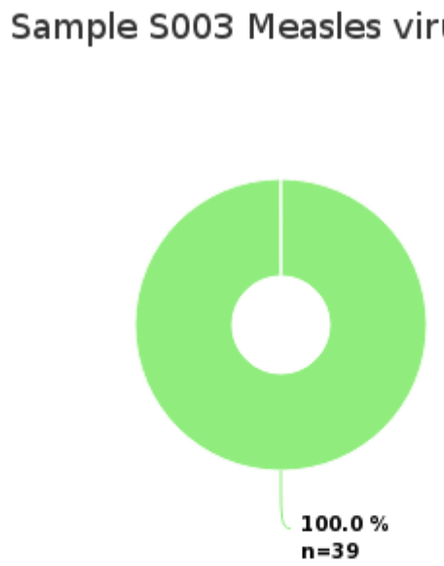


Sample S003 results	Responded	Own score	Max score	Own success rate	Difference	AVR success rate	Count
	Clinical interpretation	-	-	-	-	100 %	41
	Measles virus IgG	2	2	100 %	2.6 %	97.4 %	39
	Measles virus IgM	2	2	100 %	0 %	100 %	39
Total:		4	4	100 %	0.7 %	99.3 %	119



Clinical interpretation	Interpretation	Further action	Interpretation count	Further action count	Own score	Max score	Own success rate	Difference	AVR success rate
	Acute/recent infection		31		-				100 %
		Referred to confirmation		4	-	-			
		New sample requested and referred to confirmation		4	-	-			
		New sample requested		1	-	-			
	◉ Laboratory does not give clinical interpretation		10		-				-
		◉ Referred to confirmation		1	-	-			
	Total:		41		-	-	-	-	100 %





OWN DEVICE: LIAISON

Measles virus IgG	Interpretation	Method	Interpretation count	Method count	Own score	Max score	Own success rate	Difference	AVR success rate
	Negative		1		-				0 %
		Vircell VirClia Measles IgG		1					
	◉ Positive		38		2	2	100 %	0 %	100 %
		bioMerieux VIDAS Measles IgG		2					
		◉ DiaSorin LIAISON Measles IgG		23					
		Euroimmun Measles IgG EIA		5					
		In-house EIA		2					
		Orgentec Anti-Measles Virus IgG		1					
		TestLine Clinical Diagnostics EIA Measles IgG		2					
		Virion/Serion ELISA classic Measles IgG		3					
	Total:		39		2	2	100 %	2.6 %	97.4 %

OWN DEVICE: LIAISON

Measles virus IgM	Interpretation	Method	Interpretation count	Method count	Own score	Max score	Own success rate	Difference	AVR success rate
	◉ Positive		39		2	2	100 %	0 %	100 %
		◉ DiaSorin LIAISON Measles IgM		23					
		Diesse Chorus Measles IgM ELISA		1					
		Euroimmun Measles IgM EIA		4					
		In-house EIA		3					
		Microimmune Measles IgM Capture EIA		1					
		Orgentec Anti-Measles Virus IgM		1					
		TestLine Clinical Diagnostics EIA Measles IgM		2					
		Vircell VirClia Measles IgM		1					
		Virion/Serion ELISA classic Measles IgM		3					
	Total:		39		2	2	100 %	0 %	100 %

Report Info

PARTICIPANTS

Altogether 40 laboratories from 19 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.

Measles virus, antibodies, January, 1-2023

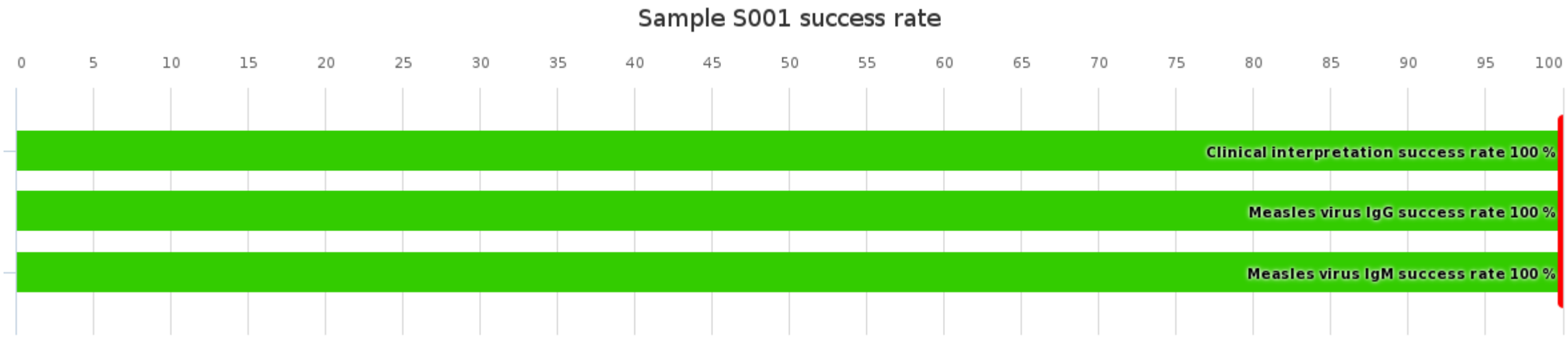
GLOBAL REPORT

	No of participants	No of responded participants	Response percentage
Measles virus, antibodies, January, 1-2023	40	37	92.5 %

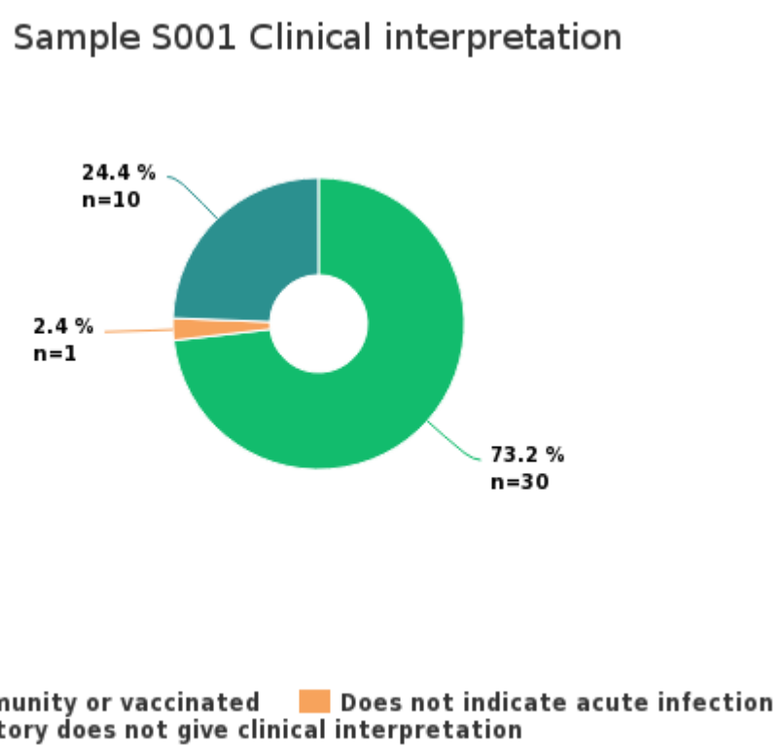
Summary

Summary	AVR success rate
Sample S001	100 %
Sample S002	100 %
Sample S003	99.3 %
Average:	99.8 %

Sample S001



Sample S001 results	Responded	AVR success rate	Count
	Clinical interpretation	100 %	41
	Measles virus IgG	100 %	39
	Measles virus IgM	100 %	39
Total:		100 %	119

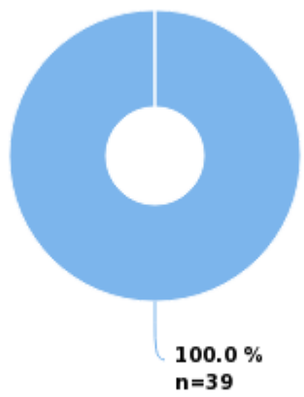


Clinical interpretation	Interpretation	Further action	Interpretation count	Further action count	AVR success rate	Interpretation Score	Further action Score
	Old immunity or vaccinated		30		100 %	4	
	Does not indicate acute infection		1		100 %	4	
	Laboratory does not give clinical interpretation		10		-	-	
	Total:		41		100 %		

Measles virus, antibodies, January, 1-2023

Sample S001 Measles virus IgG

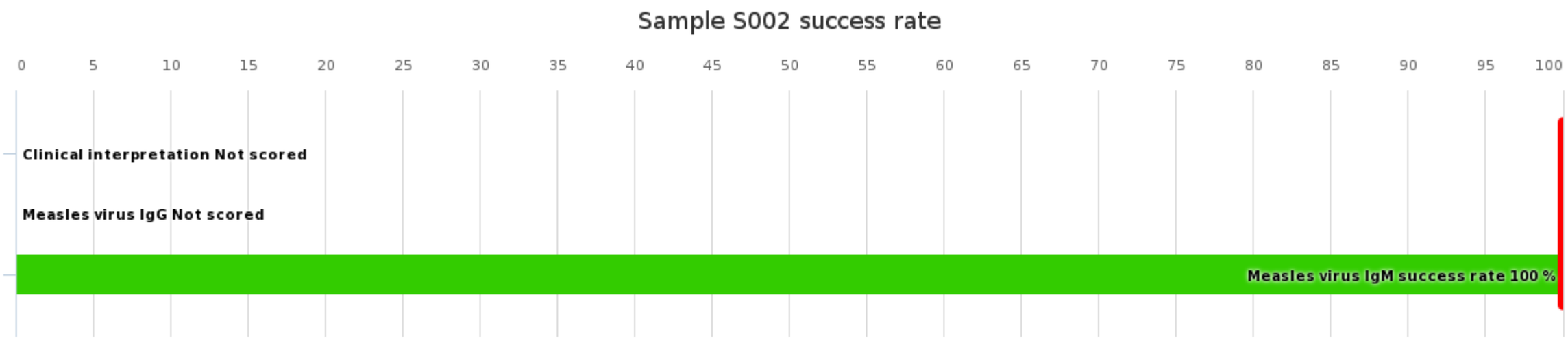
Sample S001 Measles virus IgM



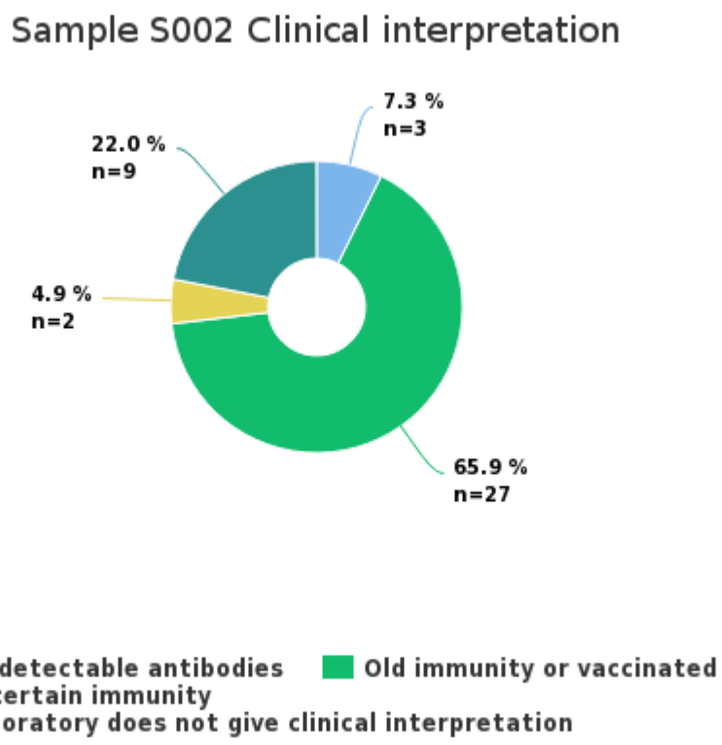
Measles virus IgG	Interpretation	Method	Interpretation count	Method count	AVR success rate	Interpretation Score
	Positive		39		100 %	2
		bioMerieux VIDAS Measles IgG		2		
		DiaSorin LIAISON Measles IgG		23		
		Euroimmun Measles IgG EIA		5		
		In-house EIA		2		
		Orgentec Anti-Measles Virus IgG		1		
		TestLine Clinical Diagnostics EIA Measles IgG		2		
		Vircell VirClia Measles IgG		1		
		Virion/Serion ELISA classic Measles IgG		3		
	Total:		39		100 %	

Measles virus IgM	Interpretation	Method	Interpretation count	Method count	AVR success rate	Interpretation Score
	Negative		39		100 %	2
		DiaSorin LIAISON Measles IgM		23		
		Diesse Chorus Measles IgM ELISA		1		
		Euroimmun Measles IgM EIA		4		
		In-house EIA		3		
		Microimmune Measles IgM Capture EIA		1		
		Orgentec Anti-Measles Virus IgM		1		
		TestLine Clinical Diagnostics EIA Measles IgM		2		
		Vircell VirClia Measles IgM		1		
		Virion/Serion ELISA classic Measles IgM		3		
	Total:		39		100 %	

Sample S002



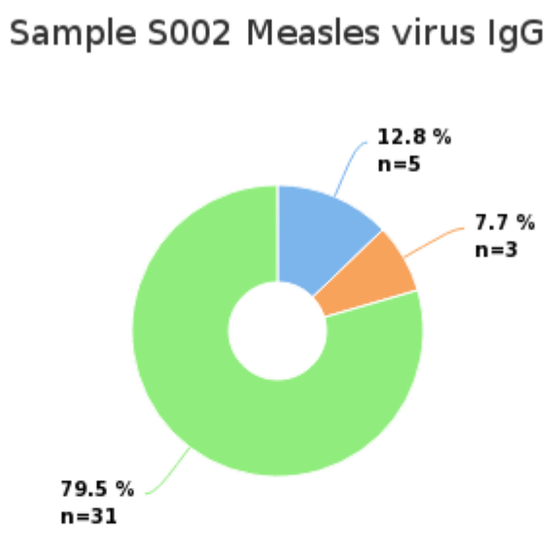
Sample S002 results	Responded	AVR success rate	Count
	Clinical interpretation	-	41
	Measles virus IgG	-	39
	Measles virus IgM	100 %	39
Total:		100 %	119

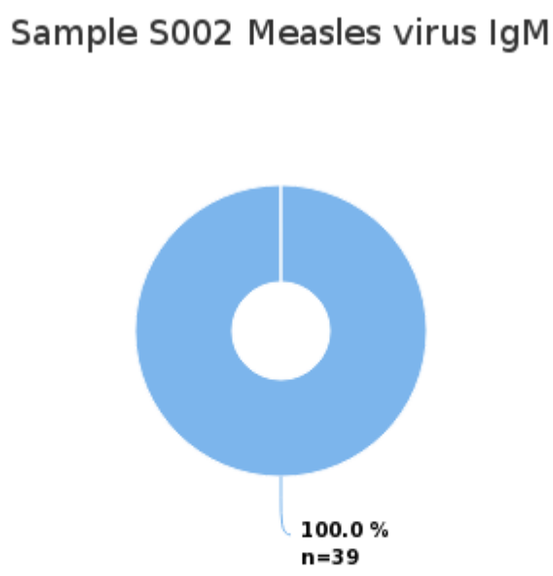


Clinical interpretation	Interpretation	Further action	Interpretation count	Further action count	AVR success rate	Interpretation Score	Further action Score
	No detectable antibodies		3		-	-	
	Old immunity or vaccinated		27		-	-	
	Uncertain immunity		2		-	-	
		New sample requested		1	-		-
	Laboratory does not give clinical interpretation		9		-	-	
		Referred to confirmation		1	-		-
	Total:		41				

LABQUALITY

Measles virus, antibodies, January, 1-2023

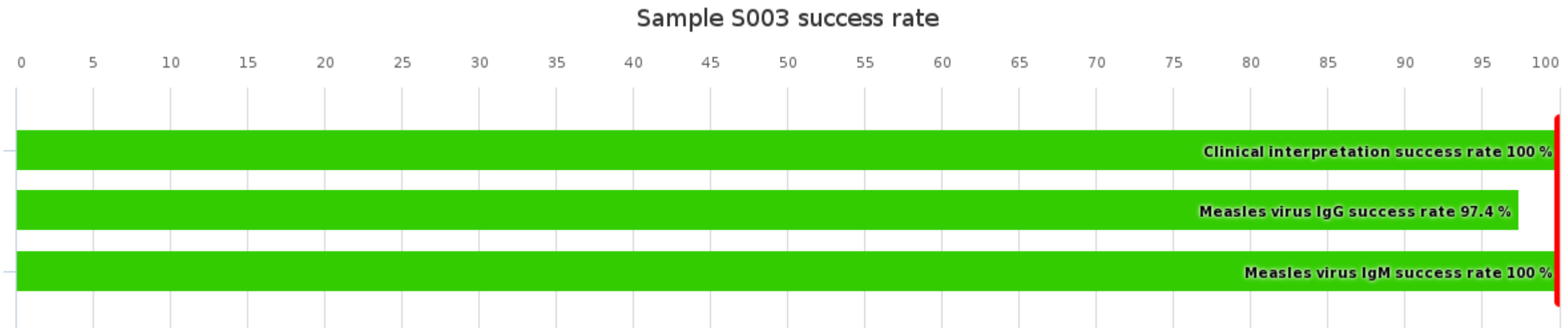




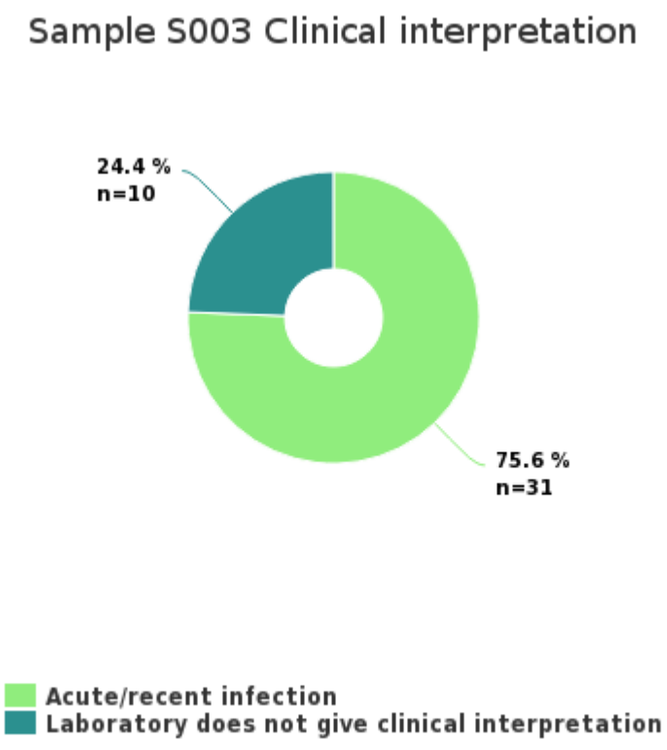
Measles virus IgG	Interpretation	Method	Interpretation count	Method count	AVR success rate	Interpretation Score
	Negative		5		-	-
		Euroimmun Measles IgG EIA		4		
		Orgentec Anti-Measles Virus IgG		1		
	Borderline		3		-	-
		bioMerieux VIDAS Measles IgG		1		
		Euroimmun Measles IgG EIA		1		
		Vircell VirClia Measles IgG		1		
	Positive		31		-	-
		bioMerieux VIDAS Measles IgG		1		
		DiaSorin LIAISON Measles IgG		23		
		In-house EIA		2		
		TestLine Clinical Diagnostics EIA Measles IgG		2		
		Virion/Serion ELISA classic Measles IgG		3		
	Total:		39			

Measles virus IgM	Interpretation	Method	Interpretation count	Method count	AVR success rate	Interpretation Score
	Negative		39		100 %	2
		DiaSorin LIAISON Measles IgM		23		
		Diesse Chorus Measles IgM ELISA		1		
		Euroimmun Measles IgM EIA		4		
		In-house EIA		3		
		Microimmune Measles IgM Capture EIA		1		
		Orgentec Anti-Measles Virus IgM		1		
		TestLine Clinical Diagnostics EIA Measles IgM		2		
		Vircell VirClia Measles IgM		1		
		Virion/Serion ELISA classic Measles IgM		3		
	Total:		39		100 %	

Sample S003



Sample S003 results	Responded	AVR success rate	Count
	Clinical interpretation	100 %	41
	Measles virus IgG	97.4 %	39
	Measles virus IgM	100 %	39
Total:		99.3 %	119

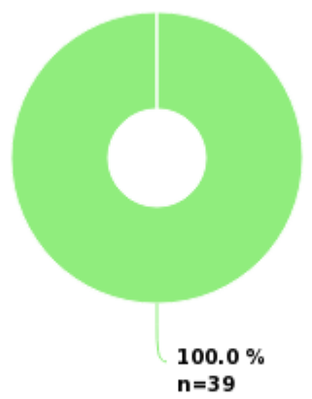


Clinical interpretation	Interpretation	Further action	Interpretation count	Further action count	AVR success rate	Interpretation Score	Further action Score
	Acute/recent infection		31		100 %	4	
		Referred to confirmation		4	-		-
		New sample requested and referred to confirmation		4	-		-
		New sample requested		1	-		-
	Laboratory does not give clinical interpretation		10		-	-	
		Referred to confirmation		1	-		-
	Total:		41		100 %		

Measles virus, antibodies, January, 1-2023

Sample S003 Measles virus IgG

Sample S003 Measles virus IgM



Measles virus IgG	Interpretation	Method	Interpretation count	Method count	AVR success rate	Interpretation Score
	Negative		1		0 %	0
		Vircell VirClia Measles IgG		1		
	Positive		38		100 %	2
		bioMerieux VIDAS Measles IgG		2		
		DiaSorin LIAISON Measles IgG		23		
		Euroimmun Measles IgG EIA		5		
		In-house EIA		2		
		Orgentec Anti-Measles Virus IgG		1		
		TestLine Clinical Diagnostics EIA Measles IgG		2		
		Virion/Serion ELISA classic Measles IgG		3		
	Total:		39		97.4 %	

Measles virus IgM	Interpretation	Method	Interpretation count	Method count	AVR success rate	Interpretation Score
	Positive		39		100 %	2
		DiaSorin LIAISON Measles IgM		23		
		Diesse Chorus Measles IgM ELISA		1		
		Euroimmun Measles IgM EIA		4		
		In-house EIA		3		
		Microimmune Measles IgM Capture EIA		1		
		Orgentec Anti-Measles Virus IgM		1		
		TestLine Clinical Diagnostics EIA Measles IgM		2		
		Vircell VirClia Measles IgM		1		
		Virion/Serion ELISA classic Measles IgM		3		
	Total:		39		100 %	

Report Info

PARTICIPANTS

Altogether 40 laboratories from 19 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.

LABQUALITY

External Quality Assessment Scheme

Measles 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 (LQ774523011)

Measles IgG	Positive
Measles IgM	Negative
Clinical interpretation	Old immunity or vaccinated

Sample S002 (LQ774523012)

Measles IgG	Negative
Measles IgM	Negative
Clinical interpretation	No detectable antibodies

Sample S003 (LQ774523013)

Measles IgG	Positive
Measles IgM	Positive
Clinical interpretation	Acute/recent infection

Pre-test methods: Euroimmun Measles IgG/IgM EIA and Microimmune Measles 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 positive and IgM antibody negative. The sample was previously on round 3, 2020 (S001). All reported IgG and IgM antibody results as well as clinical interpretations were correct/as expected. One deviating IgG antibody result was reported for the same sample on the previous round.

Sample S002 was IgG and IgM antibody negative. The sample was previously on round 3, 2021 (S001). There was some scattering in the reported measles IgG antibody results. Pre-testing gave negative IgG results. Even though 79.5% of the reported results were positive, the IgG and clinical interpretations will not be scored because of the majority of test being done with one method. The distribution between different results was the same for the same sample on the previous round. However, this time the Orgentec test that previously gave an expected positive result, gave a deviating negative result and the TestLine test which previously gave a deviating borderline result gave an expected positive result. All reported IgM antibody results were correct/as expected.

Sample S003 was IgG and IgM antibody positive. The sample was previously on round 1, 2021 (S002). All reported IgG and IgM antibody results were correct/as expected except for one deviating negative IgG antibody result. On the previous round one deviating IgG result was also reported but with a different test. All reported clinical interpretations were correct/as expected.

2023-03-03

FINAL REPORT

Product no. 5668

Subcontracting: Sample pretesting

Samples sent	2023-01-23
Round closed	2023-02-16
Expected results	2023-02-17
Final report	2022-03-03

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
mira.h.saarinen@labquality.fi

Expert
Chief specialist
Mia Kontio,
Finnish Institute for Health and Welfare,
Helsinki, Finland

Labquality Oy
Kumpulantie 15
FI-00520 HELSINKI
Finland

Tel. + 358 9 8566 8200
Fax + 358 9 8566 8280

info@labquality.fi
www.labquality.com

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Quality Management
ISO 9001:2015

Exceptions in scoring
IgG test results and clinical interpretations were not scored in sample S002.

End of report