LABQUALITY

External Quality Assessment Scheme

Cytomegalovirus, antibodies
Round 1, 2023

Specimens
Please find enclosed 3 human plasma samples S001, S002 and S003, each 0.7 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
CMVAb
CMVAbG
CMVAbM
CMV 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). If you cannot find your instrument or reagent from the registry, please contact the EQA Coordinator. Report only the results of examinations that are in use in your laboratory. All reported examinations will be scored.

S001
LQ774423011

S002
LQ774423012

S003
LQ774423013

2023-02-13

INSTRUCTIONS

Product no. 5650
LQ774423011-013/FI

Subcontracting: Sample preparation, 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 **March 8, 2023**.

The expected results of the round are published in LabScala in the View Reports section by March 13, 2023.

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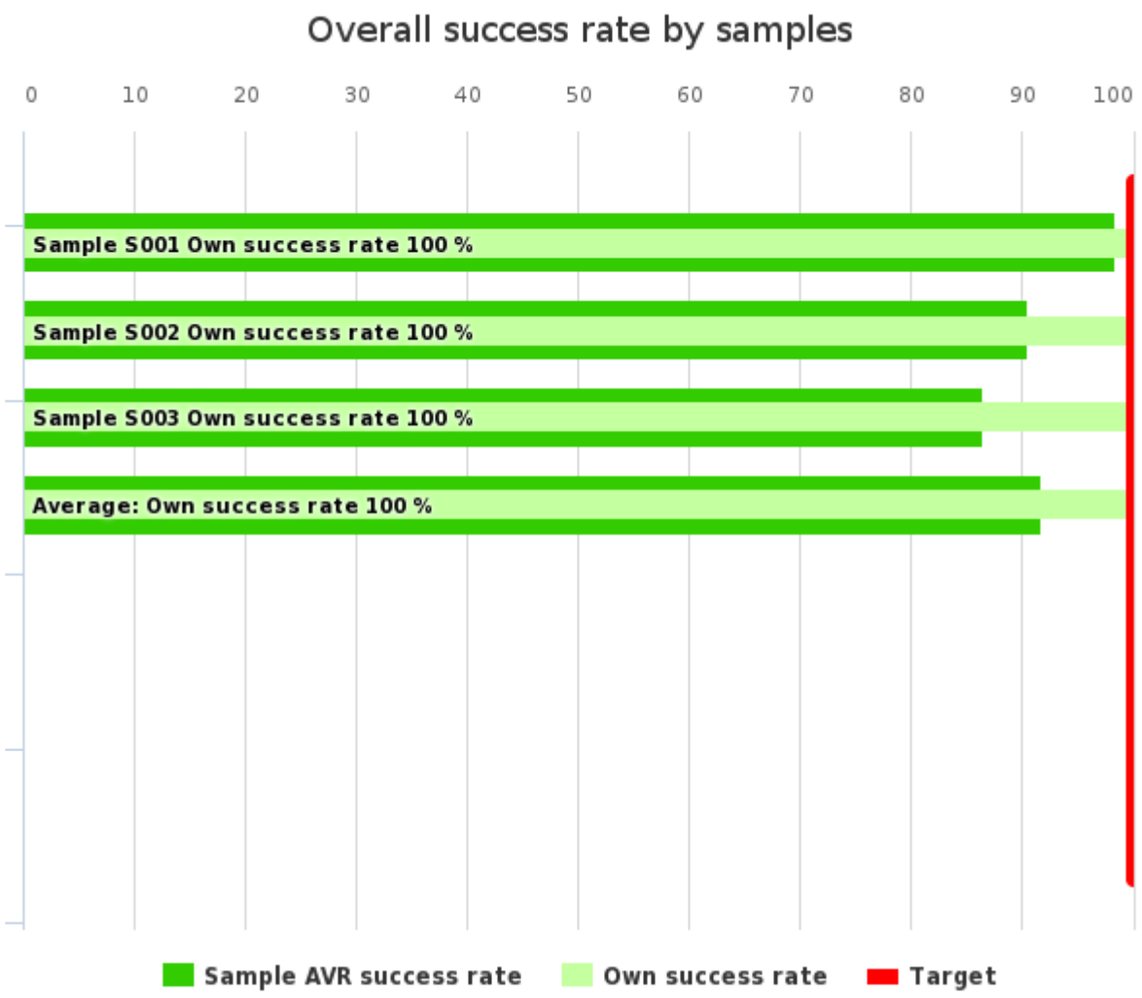
FINAS
Finnish Accreditation Service
PT02 (EN ISO/IEC 17043)

Quality Management
ISO 9001:2015

Client report

	No of participants	No of responded participants	Response percentage
Cytomegalovirus, antibodies, February, 1-2023	161	153	95 %

Summary



Summary	Own score	Max score	Own success rate	Difference	AVR success rate
Sample S001	8	8	100 %	1.5 %	98.5 %
Sample S002	4	4	100 %	9.5 %	90.5 %
Sample S003	8	8	100 %	13.5 %	86.5 %
Average:			100 %	8.2 %	91.8 %

History	Test nr.	Own success rate	Difference	AVR success rate
Round 2022-4	1-1	100 %	1.5 %	98.5 %
Round 2022-3	1-1	100 %	4.7 %	95.3 %
Round 2022-2	1-1	100 %	2.5 %	97.5 %
Round 2022-1	1-1	100 %	0.5 %	99.5 %
Round 2021-4	1-1	100 %	2.3 %	97.7 %
Round 2021-3	1-1	100 %	1.6 %	98.4 %
Round 2021-2	1-1	100 %	2.1 %	97.9 %
Round 2021-1	1-1	100 %	5.4 %	94.6 %

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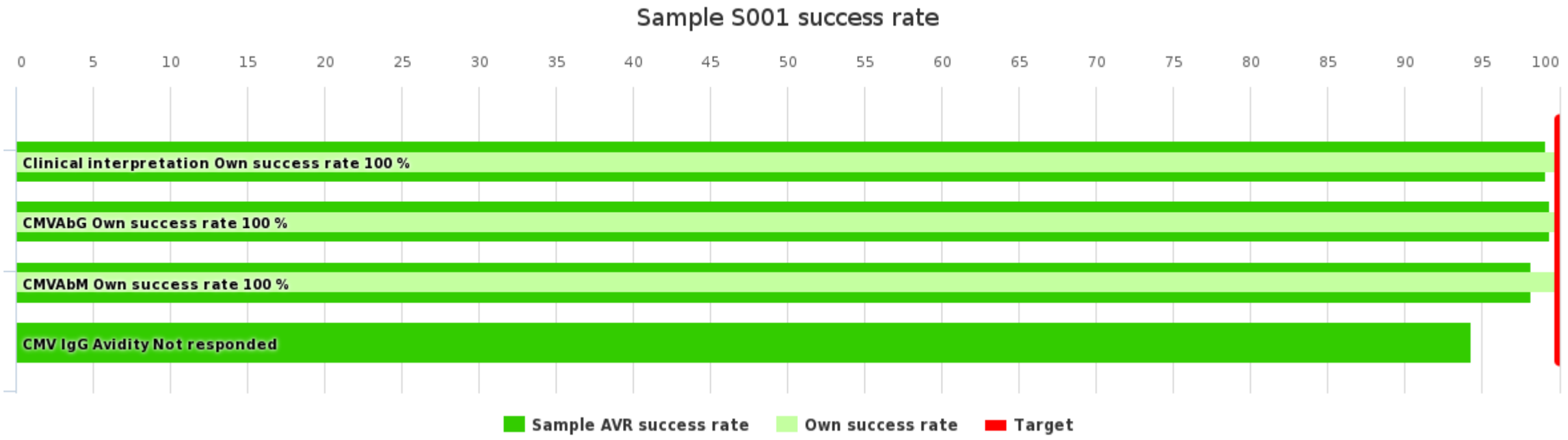
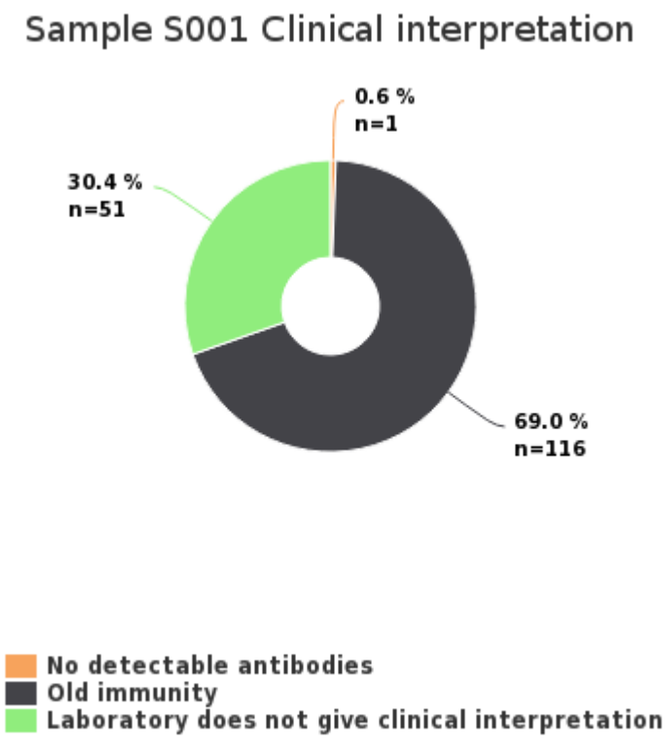
Sample S001



Sample S001 results	Responded	Own score	Max score	Own success rate	Difference	AVR success rate	Count
	Clinical interpretation	4	4	100 %	0.9 %	99.1 %	168
	CMVAbG	2	2	100 %	0.6 %	99.4 %	164
	CMVAbM	2	2	100 %	1.8 %	98.2 %	164
	CMV IgG Avidity	-	-	-	-	94.3 %	53
Total:		8	8	100 %	1.5 %	98.5 %	549



Clinical interpretation	Clinical interpretation	Further handling	Clinical interpretation count	Further handling count	Own score	Max score	Own success rate	Difference	AVR success rate
	No detectable antibodies		1		-				0 %
	Old immunity		116		4	4	100 %	0 %	100 %
		New sample requested		5	-	-			
		Would be referred to another laboratory for further examination		6	-	-			
	Laboratory does not give clinical interpretation		51		-				-
		New sample requested		1	-	-			
		Would be referred to another laboratory for further examination		3	-	-			
	Total:		168		4	4	100 %	0.9 %	99.1 %

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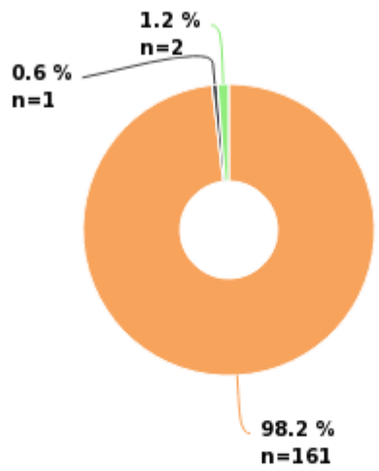
Sample S001 CMVAbG

Sample S001 CMVAbM



Sample S001 CMV IgG Avidity

OWN DEVICE: LIAISON XL

CMVAbG	Result	Methodics	Result count	Methodics count	Own score	Max score	Own success rate	Difference	AVR success rate
	Negative		1		-				0 %
		Abbott Alinity i CMV IgG		1					
	◉ Positive		163		2	2	100 %	0 %	100 %
		Abbott Alinity i CMV IgG		21					
		Abbott Architect CMV IgG		24					
		Beckman Access CMV IgG		2					
		Bio-Rad Platelia CMV IgG		3					
		bioMerieux VIDAS CMV IgG		22					
		Chorus CMV IgG		1					
		Diasorin Liaison CMV IgG		2					
		◉ Diasorin Liaison CMV IgG II		37					
		Euroimmun CMV IgG ELISA		4					
		Maglumi CMV IgG		1					
		NovaLisa Cytomegalovirus (CMV) ELISA		1					
		Roche cobas CMV IgG		35					
		Shenzhen YHLO iFlash CMV IgG		1					
		Siemens Atellica CMV IgG		2					
		Siemens Immulite CMV IgG		5					
		Vircell Virclia Cytomegalovirus IgG		1					
		VITROS CMV IgG		1					
	Total:		164		2	2	100 %	0.6 %	99.4 %

OWN DEVICE: LIAISON XL

CMVAbM	Result	Methodics	Result count	Methodics count	Own score	Max score	Own success rate	Difference	AVR success rate
	◉ Negative		161		2	2	100 %	0 %	100 %
		Abbott Alinity i CMV IgM		21					
		Abbott Architect CMV IgM		24					
		Beckman Access CMV IgM		2					
		Bio-Rad Platelia CMV IgM		3					
		bioMerieux VIDAS CMV IgM		20					
		Chorus CMV IgM		1					
		Diasorin Liaison CMV IgM		1					
		◉ Diasorin Liaison CMV IgM II		37					
		Euroimmun CMV IgM ELISA		5					
		Maglumi CMV IgM		1					
		NovaLisa Cytomegalovirus (CMV) IgM ELISA		1					
		Roche cobas CMV IgM		36					
		Shenzhen YHLO iFlash CMV IgM		1					
		Siemens ADVIA Centaur CMV IgM		1					

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		Siemens Atellica CMV IgM		1					
		Siemens Immulite CMV IgM		5					
		VITROS CMV IgM		1					
	Borderline		1		-				0 %
		Vircell Virclia Cytomegalovirus IgM		1					
	Positive		2		-				0 %
		Abbott Alinity i CMV IgM		1					
		Diasorin Liaison CMV IgM II		1					
	Total:		164		2	2	100 %	1.8 %	98.2 %

CMV IgG Avidity	Result	Methodics	Result count	Methodics count	Own score	Max score	Own success rate	Difference	AVR success rate
	Weak avidity		1		-				0 %
		Chorus CMV IgG Avidity		1					
	Strong avidity		50		-				100 %
		Abbott Alinity i CMV IgG Avidity		2					
		Abbott Architect CMV IgG Avidity		3					
		bioMerieux VIDAS CMV IgG Avidity II		18					
		Diasorin Liaison CMV IgG Avidity II		22					
		Euroimmun CMV IgG Avidity ELISA		2					
		In-house ELISA		1					
		Roche cobas CMV IgG Avidity		2					
	Not measurable		2		-				0 %
		Abbott Alinity i CMV IgG Avidity		1					
		bioMerieux VIDAS CMV IgG Avidity II		1					
	Total:		53		-	-	-	-	94.3 %

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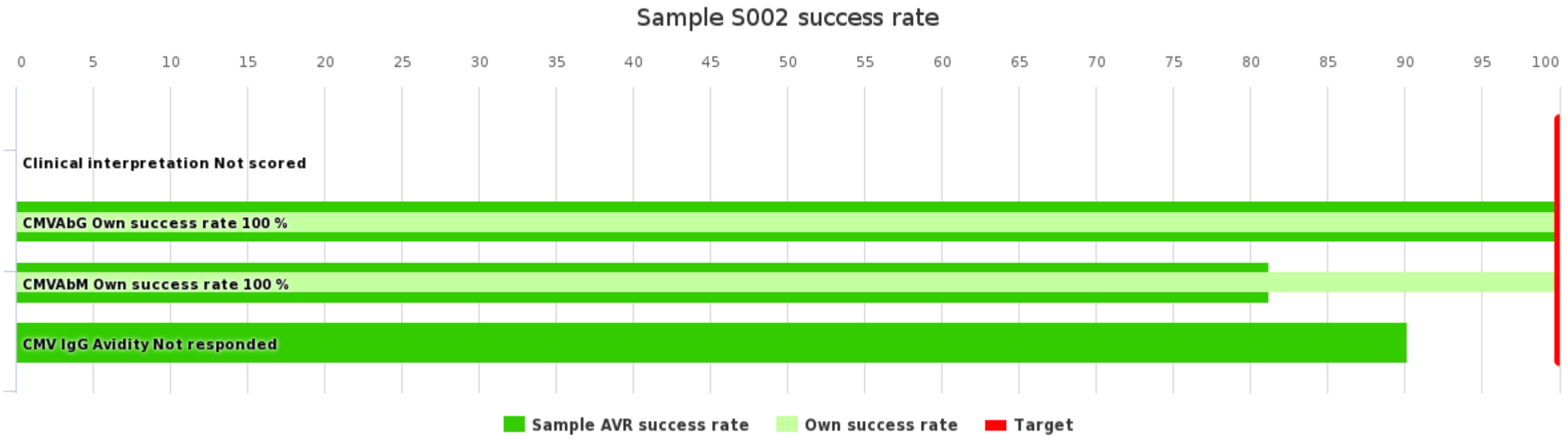
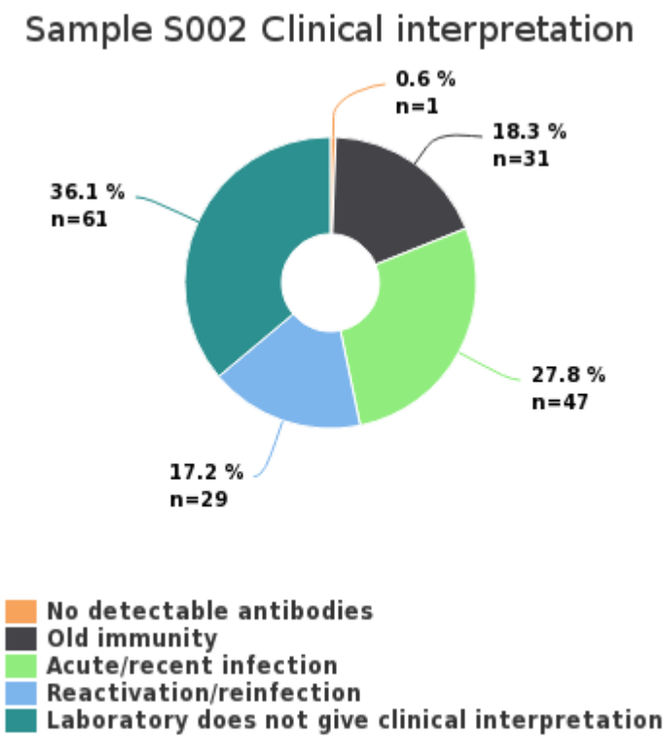
Sample S002



Sample S002 results	Responded	Own score	Max score	Own success rate	Difference	AVR success rate	Count
	Clinical interpretation	-	-	-	-	-	169
	CMVAbG	2	2	100 %	0 %	100 %	164
	CMVAbM	2	2	100 %	18.8 %	81.2 %	165
	CMV IgG Avidity	-	-	-	-	90.2 %	61
Total:		4	4	100 %	9.5 %	90.5 %	559



Clinical interpretation	Clinical interpretation	Further handling	Clinical interpretation count	Further handling count	Own score	Max score	Own success rate	Difference	AVR success rate
	No detectable antibodies		1		-				-
	Old immunity		31		-				-
		New sample requested		2	-	-			
		Would be referred to another laboratory for further examination		2	-	-			
	◉ Acute/recent infection		47		-				-
		New sample requested		12	-	-			
		Would be referred to another laboratory for further examination		10	-	-			
	Reactivation/reinfection		29		-				-
		New sample requested		8	-	-			
		Would be referred to another laboratory for further examination		2	-	-			
	Laboratory does not give clinical interpretation		61		-				-
		New sample requested		4	-	-			
		Would be referred to another laboratory for further examination		7	-	-			
	Total:		169		-	-	-	-	

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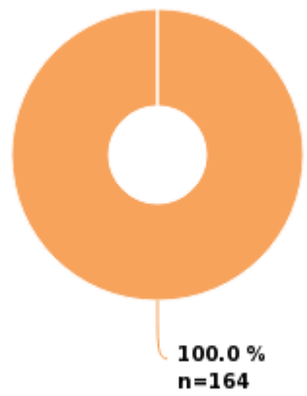
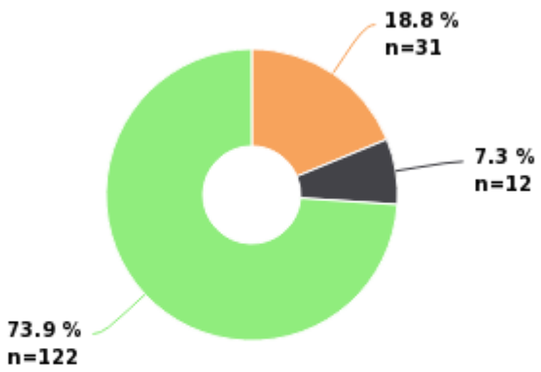
Sample S002 CMVAbG



Positive

Sample S002 CMVAbM



Negative Borderline Positive

Sample S002 CMV IgG Avidity

Weak avidity Strong avidity

OWN DEVICE: LIAISON XL

CMVAbG	Result	Methodics	Result count	Methodics count	Own score	Max score	Own success rate	Difference	AVR success rate
	◉ Positive		164		2	2	100 %	0 %	100 %
		Abbott Alinity i CMV IgG		22					
		Abbott Architect CMV IgG		24					
		Beckman Access CMV IgG		2					
		Bio-Rad Platelia CMV IgG		3					
		bioMerieux VIDAS CMV IgG		22					
		Chorus CMV IgG		1					
		Diasorin Liaison CMV IgG		2					
		◉ Diasorin Liaison CMV IgG II		37					
		Euroimmun CMV IgG ELISA		4					
		Maglumi CMV IgG		1					
		NovaLisa Cytomegalovirus (CMV) ELISA		1					
		Roche cobas CMV IgG		35					
		Shenzhen YHLO iFlash CMV IgG		1					
		Siemens Atellica CMV IgG		2					
		Siemens Immulite CMV IgG		5					
		Vircell Virclia Cytomegalovirus IgG		1					
		VITROS CMV IgG		1					
	Total:		164		2	2	100 %	0 %	100 %

OWN DEVICE: LIAISON XL

CMVAbM	Result	Methodics	Result count	Methodics count	Own score	Max score	Own success rate	Difference	AVR success rate
	Negative		31		-				0 %
		Bio-Rad Platelia CMV IgM		2					
		bioMerieux VIDAS CMV IgM		1					
		Chorus CMV IgM		1					
		Maglumi CMV IgM		1					
		Roche cobas CMV IgM		25					
		Vircell Virclia Cytomegalovirus IgM		1					
	Borderline		12		-				100 %
		Bio-Rad Platelia CMV IgM		1					
		Roche cobas CMV IgM		9					
		Shenzhen YHLO iFlash CMV IgM		1					
		Siemens Immulite CMV IgM		1					
	◉ Positive		122		2	2	100 %	0 %	100 %
		Abbott Alinity i CMV IgM		22					
		Abbott Architect CMV IgM		24					
		Beckman Access CMV IgM		2					
		bioMerieux VIDAS CMV IgM		21					
		Diasorin Liaison CMV IgM		1					

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		◉ Diasorin Liaison CMV IgM II		38					
		Euroimmun CMV IgM ELISA		5					
		NovaLisa Cytomegalovirus (CMV) IgM ELISA		1					
		Roche cobas CMV IgM		1					
		Siemens ADVIA Centaur CMV IgM		1					
		Siemens Atellica CMV IgM		1					
		Siemens Immulite CMV IgM		4					
		VITROS CMV IgM		1					
	Total:		165		2	2	100 %	18.8 %	81.2 %

CMV IgG Avidity	Result	Methodics	Result count	Methodics count	Own score	Max score	Own success rate	Difference	AVR success rate
	Weak avidity		6		-				0 %
		Abbott Alinity i CMV IgG Avidity		2					
		bioMerieux VIDAS CMV IgG Avidity II		1					
		Chorus CMV IgG Avidity		1					
		Diasorin Liaison CMV IgG Avidity II		1					
		Roche cobas CMV IgG Avidity		1					
	Strong avidity		55		-				100 %
		Abbott Alinity i CMV IgG Avidity		2					
		Abbott Architect CMV IgG Avidity		3					
		bioMerieux VIDAS CMV IgG Avidity II		23					
		Diasorin Liaison CMV IgG Avidity II		25					
		Euroimmun CMV IgG Avidity ELISA		2					
	Total:		61		-	-	-	-	90.2 %

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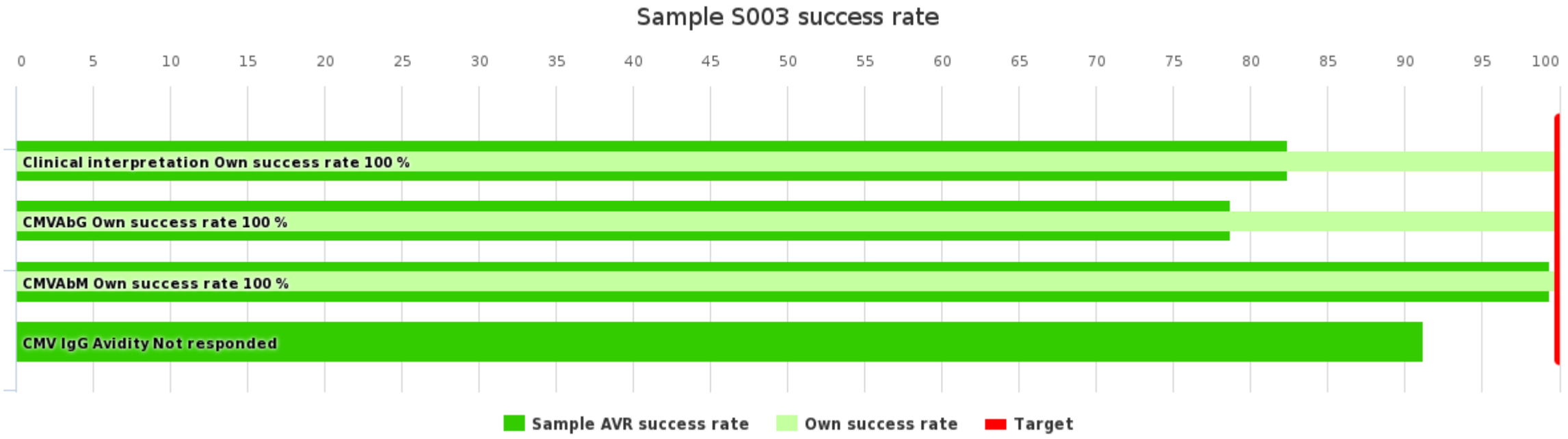
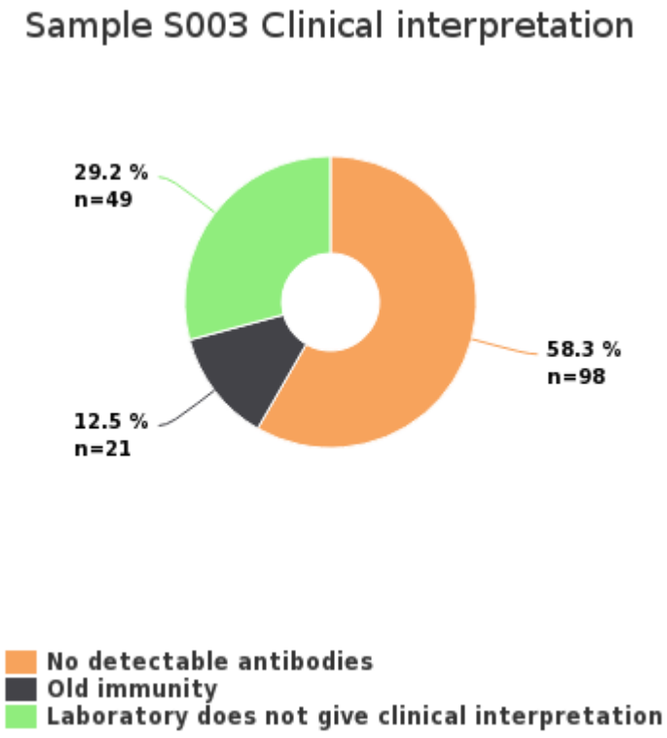
Sample S003



Sample S003 results	Responded	Own score	Max score	Own success rate	Difference	AVR success rate	Count
	Clinical interpretation	4	4	100 %	17.6 %	82.4 %	168
	CMVAbG	2	2	100 %	21.3 %	78.7 %	164
	CMVAbM	2	2	100 %	0.6 %	99.4 %	164
	CMV IgG Avidity	-	-	-	-	91.2 %	34
Total:		8	8	100 %	13.5 %	86.5 %	530



Clinical interpretation	Clinical interpretation	Further handling	Clinical interpretation count	Further handling count	Own score	Max score	Own success rate	Difference	AVR success rate
	◉ No detectable antibodies		98		4	4	100 %	0 %	100 %
		New sample requested		7	-	-			
		Would be referred to another laboratory for further examination		1	-	-			
	Old immunity		21		-				0 %
		New sample requested		2	-	-			
		Would be referred to another laboratory for further examination		3	-	-			
	Laboratory does not give clinical interpretation		49		-				-
		New sample requested		1	-	-			
	Total:		168		4	4	100 %	17.6 %	82.4 %

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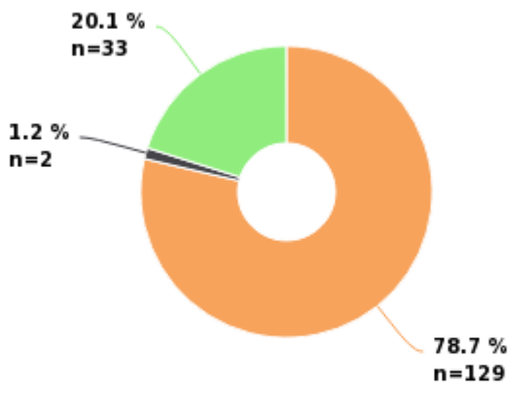
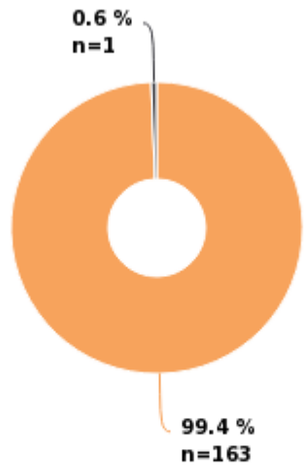
Sample S003 CMVAbG



Sample S003 CMVAbM



Sample S003 CMV IgG Avidity

Negative Borderline Positive

Negative Borderline

Strong avidity Not measurable

OWN DEVICE: LIAISON XL

CMVAbG	Result	Methodics	Result count	Methodics count	Own score	Max score	Own success rate	Difference	AVR success rate
	◉ Negative		129		2	2	100 %	0 %	100 %
		Abbott Alinity i CMV IgG		22					
		Abbott Architect CMV IgG		24					
		Beckman Access CMV IgG		2					
		Bio-Rad Platelia CMV IgG		3					
		bioMerieux VIDAS CMV IgG		22					
		Chorus CMV IgG		1					
		Diasorin Liaison CMV IgG		2					
		◉ Diasorin Liaison CMV IgG II		37					
		Euroimmun CMV IgG ELISA		4					
		Maglumi CMV IgG		1					
		NovaLisa Cytomegalovirus (CMV) ELISA		1					
		Shenzhen YHLO iFlash CMV IgG		1					
		Siemens Atellica CMV IgG		2					
		Siemens Immulite CMV IgG		5					
		Vircell Virclia Cytomegalovirus IgG		1					
		VITROS CMV IgG		1					
	Borderline		2		-				0 %
		Roche cobas CMV IgG		2					
	Positive		33		-				0 %
		Roche cobas CMV IgG		33					
	Total:		164		2	2	100 %	21.3 %	78.7 %

OWN DEVICE: LIAISON XL

CMVAbM	Result	Methodics	Result count	Methodics count	Own score	Max score	Own success rate	Difference	AVR success rate
	◉ Negative		163		2	2	100 %	0 %	100 %
		Abbott Alinity i CMV IgM		21					
		Abbott Architect CMV IgM		24					
		Beckman Access CMV IgM		2					
		Bio-Rad Platelia CMV IgM		3					
		bioMerieux VIDAS CMV IgM		20					
		Chorus CMV IgM		1					
		Diasorin Liaison CMV IgM		1					
		◉ Diasorin Liaison CMV IgM II		38					
		Euroimmun CMV IgM ELISA		5					
		Maglumi CMV IgM		1					
		NovaLisa Cytomegalovirus (CMV) IgM ELISA		1					
		Roche cobas CMV IgM		36					
		Shenzhen YHLO iFlash CMV IgM		1					

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		Siemens ADVIA Centaur CMV IgM		1					
		Siemens Atellica CMV IgM		1					
		Siemens Immulite CMV IgM		5					
		Vircell Virclia Cytomegalovirus IgM		1					
		VITROS CMV IgM		1					
	Borderline		1		-				0 %
		Abbott Alinity i CMV IgM		1					
	Total:		164		2	2	100 %	0.6 %	99.4 %

CMV IgG Avidity	Result	Methodics	Result count	Methodics count	Own score	Max score	Own success rate	Difference	AVR success rate
	Strong avidity		3		-				0 %
		Euroimmun CMV IgG Avidity ELISA		1					
		Roche cobas CMV IgG Avidity		2					
	Not measurable		31		-				100 %
		Abbott Alinity i CMV IgG Avidity		1					
		Abbott Architect CMV IgG Avidity		1					
		bioMerieux VIDAS CMV IgG Avidity II		12					
		Chorus CMV IgG Avidity		1					
		Diasorin Liaison CMV IgG Avidity II		15					
		Euroimmun CMV IgG Avidity ELISA		1					
	Total:		34		-	-	-	-	91.2 %

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Report Info

PARTICIPANTS

Altogether 161 laboratories from 24 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.

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Cytomegalovirus, antibodies, February, 1-2023

GLOBAL REPORT

	No of participants	No of responded participants	Response percentage
Cytomegalovirus, antibodies, February, 1-2023	161	153	95 %

Summary

Summary	AVR success rate
Sample S001	98.5 %
Sample S002	90.5 %
Sample S003	86.5 %
Average:	91.8 %

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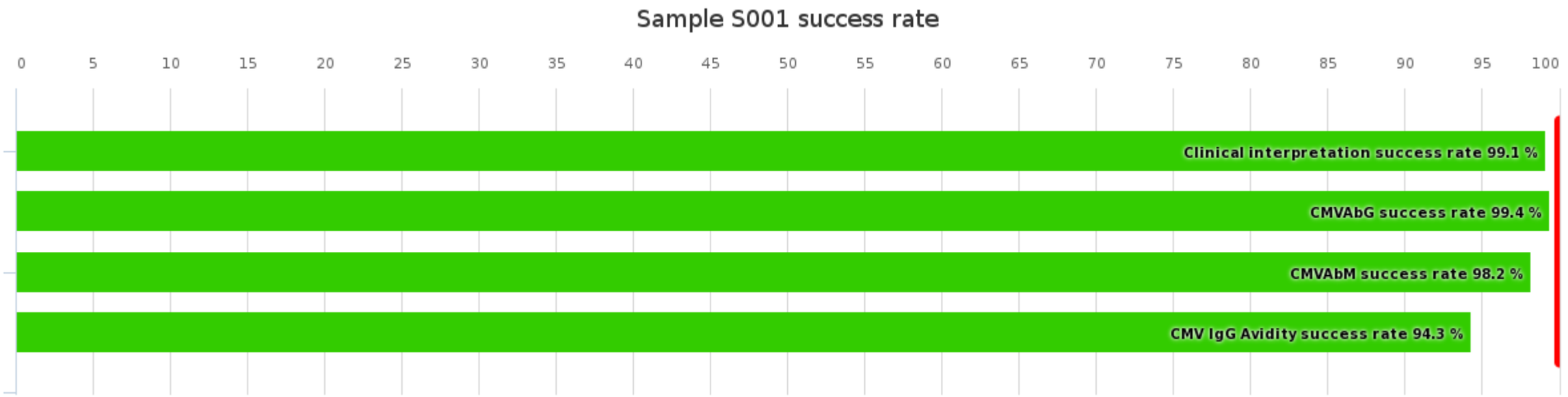
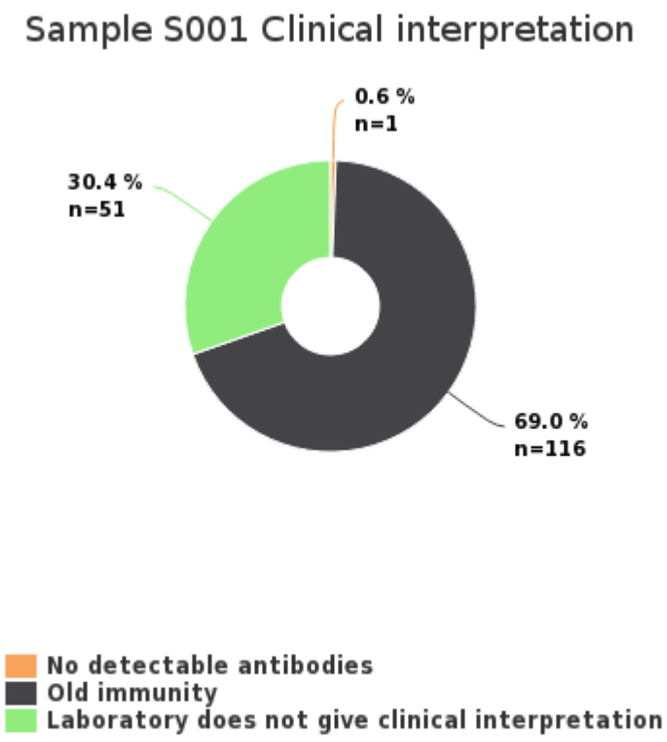
Sample S001



Sample S001 results	Responded	AVR success rate	Count
	Clinical interpretation	99.1 %	168
	CMVAbG	99.4 %	164
	CMVAbM	98.2 %	164
	CMV IgG Avidity	94.3 %	53
Total:		98.5 %	549



Clinical interpretation	Clinical interpretation	Further handling	Clinical interpretation count	Further handling count	AVR success rate	Clinical interpretation Score
	No detectable antibodies		1		0 %	0
	Old immunity		116		100 %	4
		New sample requested		5		
		Would be referred to another laboratory for further examination		6		
	Laboratory does not give clinical interpretation		51		-	-
		New sample requested		1		
		Would be referred to another laboratory for further examination		3		
	Total:		168		99.1 %	

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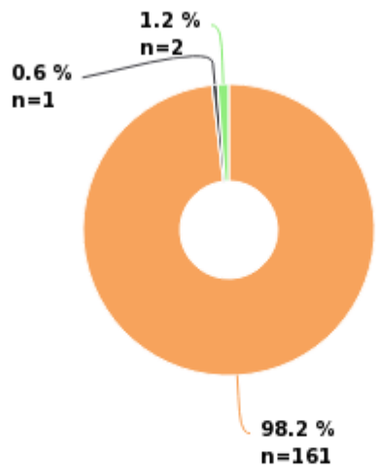
Cytomegalovirus, antibodies, February, 1-2023

Sample S001 CMVAbG

Sample S001 CMVAbM



Sample S001 CMV IgG Avidity

CMVAbG	Result	Methodics	Result count	Methodics count	AVR success rate	Result Score
	Negative		1		0 %	0
		Abbott Alinity i CMV IgG		1		
	Positive		163		100 %	2
		Abbott Alinity i CMV IgG		21		
		Abbott Architect CMV IgG		24		
		Beckman Access CMV IgG		2		
		Bio-Rad Platelia CMV IgG		3		
		bioMerieux VIDAS CMV IgG		22		
		Chorus CMV IgG		1		
		Diasorin Liaison CMV IgG		2		
		Diasorin Liaison CMV IgG II		37		
		Euroimmun CMV IgG ELISA		4		
		Maglumi CMV IgG		1		
		NovaLisa Cytomegalovirus (CMV) ELISA		1		
		Roche cobas CMV IgG		35		
		Shenzhen YHLO iFlash CMV IgG		1		
		Siemens Atellica CMV IgG		2		
		Siemens Immulite CMV IgG		5		
		Vircell Virclia Cytomegalovirus IgG		1		
		VITROS CMV IgG		1		
	Total:		164		99.4 %	

CMVAbM	Result	Methodics	Result count	Methodics count	AVR success rate	Result Score
	Negative		161		100 %	2
		Abbott Alinity i CMV IgM		21		
		Abbott Architect CMV IgM		24		
		Beckman Access CMV IgM		2		
		Bio-Rad Platelia CMV IgM		3		
		bioMerieux VIDAS CMV IgM		20		
		Chorus CMV IgM		1		
		Diasorin Liaison CMV IgM		1		
		Diasorin Liaison CMV IgM II		37		
		Euroimmun CMV IgM ELISA		5		
		Maglumi CMV IgM		1		
		NovaLisa Cytomegalovirus (CMV) IgM ELISA		1		
		Roche cobas CMV IgM		36		
		Shenzhen YHLO iFlash CMV IgM		1		
		Siemens ADVIA Centaur CMV IgM		1		
		Siemens Atellica CMV IgM		1		
		Siemens Immulite CMV IgM		5		
		VITROS CMV IgM		1		
	Borderline		1		0 %	0
		Vircell Virclia Cytomegalovirus IgM		1		
	Positive		2		0 %	0
		Abbott Alinity i CMV IgM		1		

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		Diasorin Liaison CMV IgM II		1		
	Total:		164		98.2 %	

CMV IgG Avidity	Result	Methodics	Result count	Methodics count	AVR success rate	Result Score
	Weak avidity		1		0 %	0
		Chorus CMV IgG Avidity		1		
	Strong avidity		50		100 %	2
		Abbott Alinity i CMV IgG Avidity		2		
		Abbott Architect CMV IgG Avidity		3		
		bioMerieux VIDAS CMV IgG Avidity II		18		
		Diasorin Liaison CMV IgG Avidity II		22		
		Euroimmun CMV IgG Avidity ELISA		2		
		In-house ELISA		1		
		Roche cobas CMV IgG Avidity		2		
	Not measurable		2		0 %	0
		Abbott Alinity i CMV IgG Avidity		1		
		bioMerieux VIDAS CMV IgG Avidity II		1		
	Total:		53		94.3 %	

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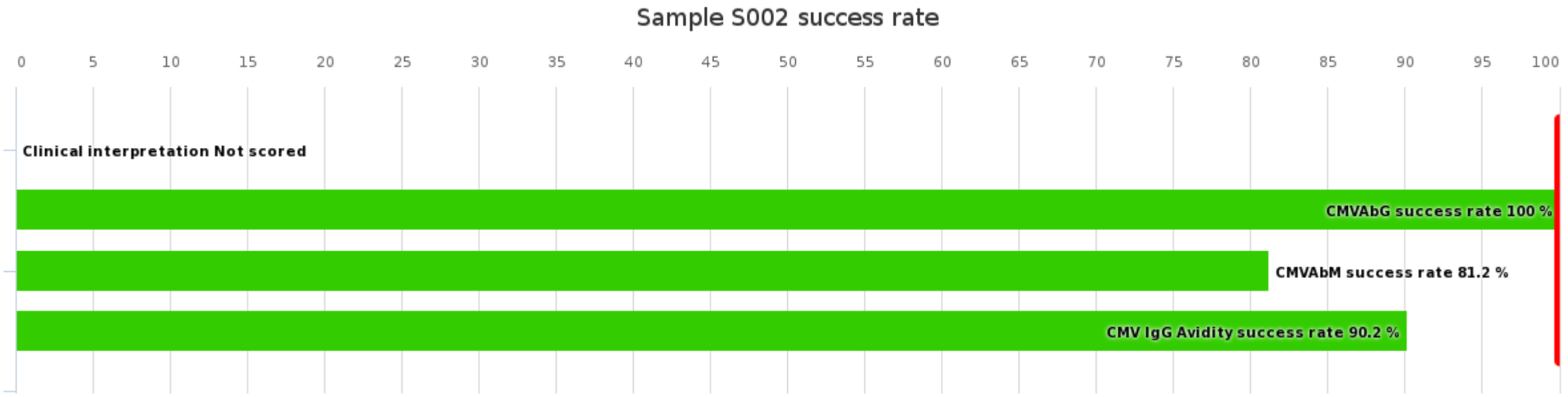
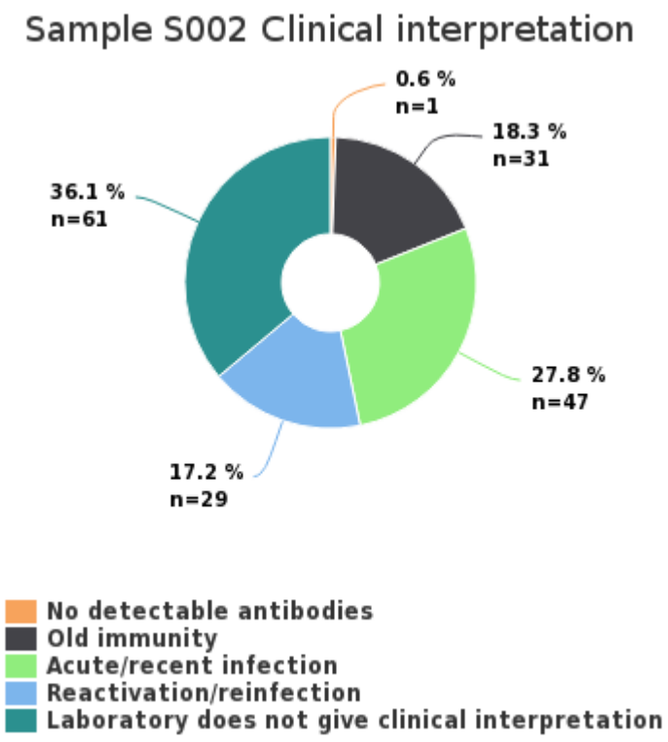
Sample S002



Sample S002 results	Responded	AVR success rate	Count
	Clinical interpretation	-	169
	CMVAbG	100 %	164
	CMVAbM	81.2 %	165
	CMV IgG Avidity	90.2 %	61
Total:		90.5 %	559



Clinical interpretation	Clinical interpretation	Further handling	Clinical interpretation count	Further handling count	AVR success rate	Clinical interpretation Score
	No detectable antibodies		1		-	-
	Old immunity		31		-	-
		New sample requested		2		
		Would be referred to another laboratory for further examination		2		
	Acute/recent infection		47		-	-
		New sample requested		12		
		Would be referred to another laboratory for further examination		10		
	Reactivation/reinfection		29		-	-
		New sample requested		8		
		Would be referred to another laboratory for further examination		2		
	Laboratory does not give clinical interpretation		61		-	-
		New sample requested		4		
		Would be referred to another laboratory for further examination		7		
	Total:		169			

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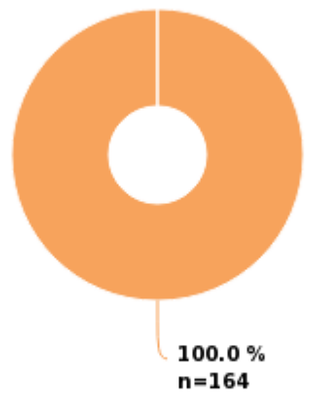
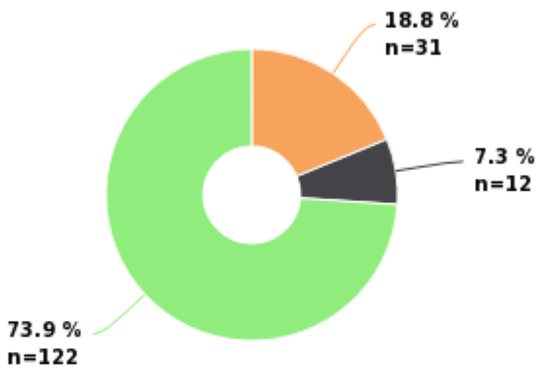
Cytomegalovirus, antibodies, February, 1-2023

Sample S002 CMVAbG



Positive

Sample S002 CMVAbM



Negative Borderline Positive

Sample S002 CMV IgG Avidity

Weak avidity Strong avidity

CMVAbG	Result	Methodics	Result count	Methodics count	AVR success rate	Result Score
	Positive		164		100 %	2
		Abbott Alinity i CMV IgG		22		
		Abbott Architect CMV IgG		24		
		Beckman Access CMV IgG		2		
		Bio-Rad Platelia CMV IgG		3		
		bioMerieux VIDAS CMV IgG		22		
		Chorus CMV IgG		1		
		Diasorin Liaison CMV IgG		2		
		Diasorin Liaison CMV IgG II		37		
		Euroimmun CMV IgG ELISA		4		
		Maglumi CMV IgG		1		
		NovaLisa Cytomegalovirus (CMV) ELISA		1		
		Roche cobas CMV IgG		35		
		Shenzhen YHLO iFlash CMV IgG		1		
		Siemens Atellica CMV IgG		2		
		Siemens Immulite CMV IgG		5		
		Vircell Virclia Cytomegalovirus IgG		1		
		VITROS CMV IgG		1		
	Total:		164		100 %	

CMVAbM	Result	Methodics	Result count	Methodics count	AVR success rate	Result Score
	Negative		31		0 %	0
		Bio-Rad Platelia CMV IgM		2		
		bioMerieux VIDAS CMV IgM		1		
		Chorus CMV IgM		1		
		Maglumi CMV IgM		1		
		Roche cobas CMV IgM		25		
		Vircell Virclia Cytomegalovirus IgM		1		
	Borderline		12		100 %	2
		Bio-Rad Platelia CMV IgM		1		
		Roche cobas CMV IgM		9		
		Shenzhen YHLO iFlash CMV IgM		1		
		Siemens Immulite CMV IgM		1		
	Positive		122		100 %	2
		Abbott Alinity i CMV IgM		22		
		Abbott Architect CMV IgM		24		
		Beckman Access CMV IgM		2		
		bioMerieux VIDAS CMV IgM		21		
		Diasorin Liaison CMV IgM		1		
		Diasorin Liaison CMV IgM II		38		
		Euroimmun CMV IgM ELISA		5		
		NovaLisa Cytomegalovirus (CMV) IgM ELISA		1		
		Roche cobas CMV IgM		1		
		Siemens ADVIA Centaur CMV IgM		1		
		Siemens Atellica CMV IgM		1		

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		Siemens Immulite CMV IgM		4		
		VITROS CMV IgM		1		
	Total:		165		81.2 %	

CMV IgG Avidity	Result	Methodics	Result count	Methodics count	AVR success rate	Result Score
	Weak avidity		6		0 %	0
		Abbott Alinity i CMV IgG Avidity		2		
		bioMerieux VIDAS CMV IgG Avidity II		1		
		Chorus CMV IgG Avidity		1		
		Diasorin Liaison CMV IgG Avidity II		1		
		Roche cobas CMV IgG Avidity		1		
	Strong avidity		55		100 %	2
		Abbott Alinity i CMV IgG Avidity		2		
		Abbott Architect CMV IgG Avidity		3		
		bioMerieux VIDAS CMV IgG Avidity II		23		
		Diasorin Liaison CMV IgG Avidity II		25		
		Euroimmun CMV IgG Avidity ELISA		2		
	Total:		61		90.2 %	

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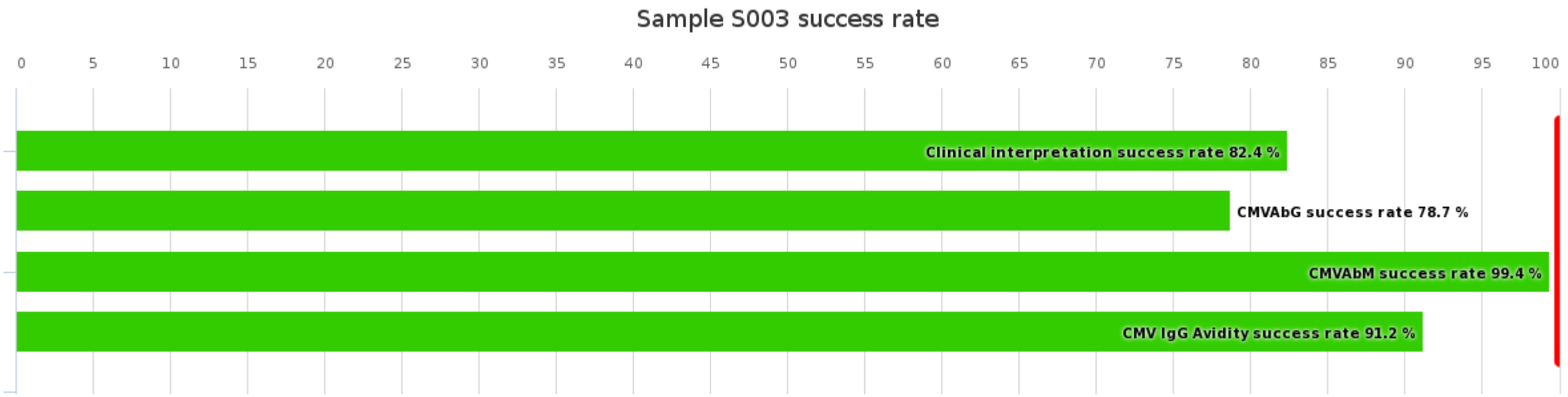
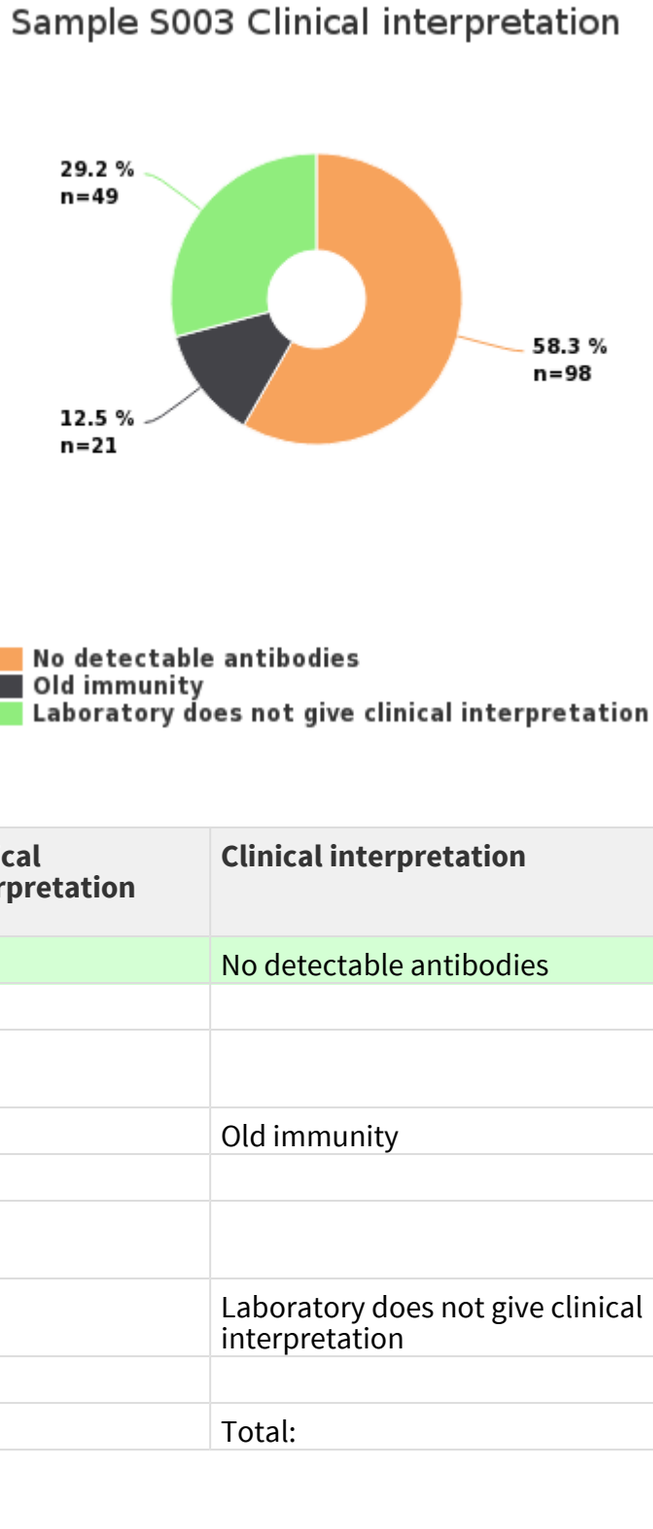
Sample S003



Sample S003 results	Responded	AVR success rate	Count
	Clinical interpretation	82.4 %	168
	CMVAbG	78.7 %	164
	CMVAbM	99.4 %	164
	CMV IgG Avidity	91.2 %	34
Total:		86.5 %	530



Clinical interpretation	Clinical interpretation	Further handling	Clinical interpretation count	Further handling count	AVR success rate	Clinical interpretation Score
	No detectable antibodies		98		100 %	4
		New sample requested		7		
		Would be referred to another laboratory for further examination		1		
	Old immunity		21		0 %	0
		New sample requested		2		
		Would be referred to another laboratory for further examination		3		
	Laboratory does not give clinical interpretation		49		-	-
		New sample requested		1		
	Total:		168		82.4 %	

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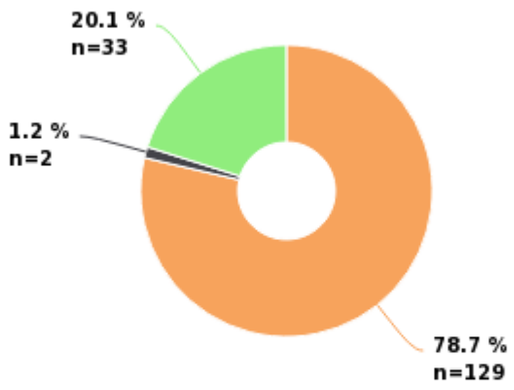
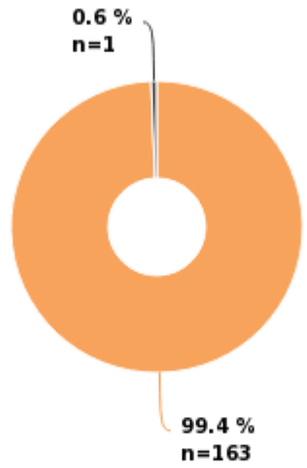
Cytomegalovirus, antibodies, February, 1-2023

Sample S003 CMVAbG



Negative Borderline Positive

Sample S003 CMVAbM



Negative Borderline

Sample S003 CMV IgG Avidity

Strong avidity Not measurable

CMVAbG	Result	Methodics	Result count	Methodics count	AVR success rate	Result Score
	Negative		129		100 %	2
		Abbott Alinity i CMV IgG		22		
		Abbott Architect CMV IgG		24		
		Beckman Access CMV IgG		2		
		Bio-Rad Platelia CMV IgG		3		
		bioMerieux VIDAS CMV IgG		22		
		Chorus CMV IgG		1		
		Diasorin Liaison CMV IgG		2		
		Diasorin Liaison CMV IgG II		37		
		Euroimmun CMV IgG ELISA		4		
		Maglumi CMV IgG		1		
		NovaLisa Cytomegalovirus (CMV) ELISA		1		
		Shenzhen YHLO iFlash CMV IgG		1		
		Siemens Atellica CMV IgG		2		
		Siemens Immulite CMV IgG		5		
		Vircell Virclia Cytomegalovirus IgG		1		
		VITROS CMV IgG		1		
	Borderline		2		0 %	0
		Roche cobas CMV IgG		2		
	Positive		33		0 %	0
		Roche cobas CMV IgG		33		
	Total:		164		78.7 %	

CMVAbM	Result	Methodics	Result count	Methodics count	AVR success rate	Result Score
	Negative		163		100 %	2
		Abbott Alinity i CMV IgM		21		
		Abbott Architect CMV IgM		24		
		Beckman Access CMV IgM		2		
		Bio-Rad Platelia CMV IgM		3		
		bioMerieux VIDAS CMV IgM		20		
		Chorus CMV IgM		1		
		Diasorin Liaison CMV IgM		1		
		Diasorin Liaison CMV IgM II		38		
		Euroimmun CMV IgM ELISA		5		
		Maglumi CMV IgM		1		
		NovaLisa Cytomegalovirus (CMV) IgM ELISA		1		
		Roche cobas CMV IgM		36		
		Shenzhen YHLO iFlash CMV IgM		1		
		Siemens ADVIA Centaur CMV IgM		1		
		Siemens Atellica CMV IgM		1		
		Siemens Immulite CMV IgM		5		
		Vircell Virclia Cytomegalovirus IgM		1		
		VITROS CMV IgM		1		
	Borderline		1		0 %	0
		Abbott Alinity i CMV IgM		1		

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	Total:		164		99.4 %	

CMV IgG Avidity	Result	Methodics	Result count	Methodics count	AVR success rate	Result Score
	Strong avidity		3		0 %	0
		Euroimmun CMV IgG Avidity ELISA		1		
		Roche cobas CMV IgG Avidity		2		
	Not measurable		31		100 %	2
		Abbott Alinity i CMV IgG Avidity		1		
		Abbott Architect CMV IgG Avidity		1		
		bioMerieux VIDAS CMV IgG Avidity II		12		
		Chorus CMV IgG Avidity		1		
		Diasorin Liaison CMV IgG Avidity II		15		
		Euroimmun CMV IgG Avidity ELISA		1		
	Total:		34		91.2 %	

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External Quality Assessment Scheme

Cytomegalovirus, antibodies
Round 1, 2023

Specimens
Samples of this EQA round were human plasma, 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 (LQ774423011)

CMVAb	Positive
CMVAbG	Positive
CMVAbM	Negative
CMV IgG Avidity	Strong avidity
Clinical interpretation	Old immunity

Sample S002 (LQ774423012)

CMVAb	Positive
CMVAbG	Positive
CMVAbM	Positive
CMV IgG Avidity	Strong avidity
Clinical interpretation	Reactivation/reinfection

Sample S003 (LQ774423013)

CMVAb	Negative
CMVAbG	Negative
CMVAbM	Negative
CMV IgG Avidity	Not measurable
Clinical interpretation	No detectable antibodies

Pre-test methods: Abbott Alinity CMV IgG/IgM/IgG Avidity, Abbott Architect CMV IgG/IgM/IgG Avidity and bioMérieux Vidas CMV IgG/IgM. CMV IgG positive samples were tested for IgG Avidity.

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
An impressive 161 laboratories participated in the first round of the year, of which 153 (95%) reported their results within the specified period. Some of the laboratories reported results from multiple testing methods.

For sample S001, the round went excellently. Regarding individual analytes, 98.2% of the laboratories had reported a negative CMVAbM result, and 99.4% had reported a positive CMVAbG result. 53 laboratories had measured CMV IgG avidity (CVMAvi), of which 94.3% had reported the result correctly as a strong avidity. The combination of individual analyte results indicated old immunity, which is how 99.1% of those who reported clinical interpretation had also provided the final interpretation.

Sample S002 was an educational sample. For the CMVAbG, all (100%) results were correctly reported as positive. For the CMVAbM, only 81.2% had reported the result as either positive or borderline.

2023-03-21

FINAL REPORT

Product no. 5650

Subcontracting: Sample preparation, sample pretesting

Samples sent	2023-02-13
Round closed	2023-03-08
Expected results	2023-03-13
Final report	2023-03-21

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
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Quality Management
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The majority (80.6%) of those who reported a negative CMVAbM result were users of the Roche cobas CMV IgM test, and conversely, the majority (71.4%) of those who used the Roche cobas CMV IgM test reported a negative CMVAbM result. This observed phenomenon was unusual compared to the other commonly used testing methods and was therefore highlighted in the report.

Of those who measured the CMVAvi, 90.2% reported a strong avidity result. Of those who reported clinical interpretation, only 26.8% correctly identified the outcome as a reactivation/reinfection. The majority of interpretations were either an acute/recent infection or old immunity. The reason for this is likely because the interpretation in these cases were based solely on the CMVAbG and CMVAbM results. Hence, the purpose of the sample was to demonstrate that primary infection and secondary infection (reactivation/reinfection) can be reliably distinguished only by using an IgG avidity test.

Antibodies were not detected in sample S003. The same sample had been used previously in 2020 (round 1, sample S003). Regarding the CMVAbM analyte, the results were consistent, and 99.4% reported the sample as negative. For the CMVAbG analyte, however, a deviation in the reported results was observed. Only 78.7% of the laboratories reported the result as expected, i.e., negative. All those who used the Roche cobas CMV IgG test reported a deviant reactive result. In 2020, when the same sample was analyzed, all the results obtained with the Roche cobas CMV IgG test were reported as expectedly negative.

Regarding CMVAvi, 91.2% of the results were as expected (not measurable). Again, those who used the Roche cobas CMV IgG Avidity test reported a deviant strong avidity result. Concerning clinical interpretation, only 82.4% of the responses were as expected (no antibodies detected). The remaining 17.6% had been reported as old immunity, presumably due to an erroneous reactive IgG result.

Exceptions in scoring
Sample S002 was not scored for clinical interpretation because less than 60% reported the expected result. The borderline IgM results were accepted as correct in sample S002

End of report

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