

External Quality Assessment Scheme

Meningitis-encephalitis multiplex, nucleic acid detection Round 1, 2023

Specimens

Please find enclosed 3 simulated cerebrospinal fluid samples S001, S002 and S003, each 1 mL.

Caution

Quality control samples must be handled with the same care as patient samples, i.e. as potential transmitters of serious diseases. According to the sample manufacturer the samples do not contain viable microbes and the samples are found to be HBsAg, HCVAb and HIVAb negative when tested with licensed reagents. However, no known test method can offer complete assurance that the samples will not transmit these or other infectious diseases.

Examinations

Please see page 2.

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. Perform the analysis according to the manufacturer's instructions for a liquid sample.

Result reporting

Please enter the results and methods via LabScala (www.labscala.com).

Report the measurement date, test selection (tick the box) and method in the "Test selection" tab on the Pre-analytics page. If a listed pathogen is not included in your test selection, please choose "not in test selection" for the analyte in question. This information is transferred automatically to each sample and to the next round. You can change the information sample-wise or return to this page in order to change the information for all samples. If your test method is missing from the list, please contact the EQA Coordinator.

First, report the number of pathogenic findings that were identified from the sample. This question concerns only the pathogens that are included in the panel of this EQA round and are in your test selection. Next, report the pos/neg interpretation of each pathogen separately and the test result (e.g. Ct value). If you wish, you may copy e.g. interpretation "negative" to all analytes and then change the deviating results. Please note that results which are in the "draft" mode are not accepted in the result processing.

The results are scored according to the participants' test selection. In general, only the positive findings are scored for each sample. It is expected that the pathogens indicated in the sample content are to be identified, whereas deviating findings will reduce the overall success rate. For those samples that are negative regarding all pathogens included in the panel of this scheme, the scoring is based on the answer given to the question "number of pathogenic findings" and the expected result would be "Negative sample, no pathogens detected". Answer "No test result" and "Invalid/unclear test result" will be excluded from the scoring.

2023-01-31

INSTRUCTIONS

Product no. 5303
LQ782723011-013/US

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 24, 2023.

The expected results of the round are published in LabScala in the View Reports section by February 28, 2023.

Inquiries

EQA Coordinator
Yvonne Björkman
yvonne.bjorkman@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



Examinations

The laboratory should examine the samples according to their routine protocol.

Bacteria:

Escherichia coli K1
Haemophilus influenzae
Listeria monocytogenes
Neisseria meningitidis
Streptococcus agalactiae
Streptococcus pneumoniae

Viruses:

Cytomegalovirus (CMV)
Enterovirus
Epstein-Barr virus (EBV)
Herpes simplex virus 1 (HSV1)
Herpes simplex virus 2 (HSV2)
Human herpesvirus 6 (HHV6)
Human parechovirus (HPeV)
Varicella zoster virus (VZV)

Fungi:

Cryptococcus neoformans
Cryptococcus neoformans/gattii

Meningitis-encephalitis multiplex, nucleic acid detection

S001



S002

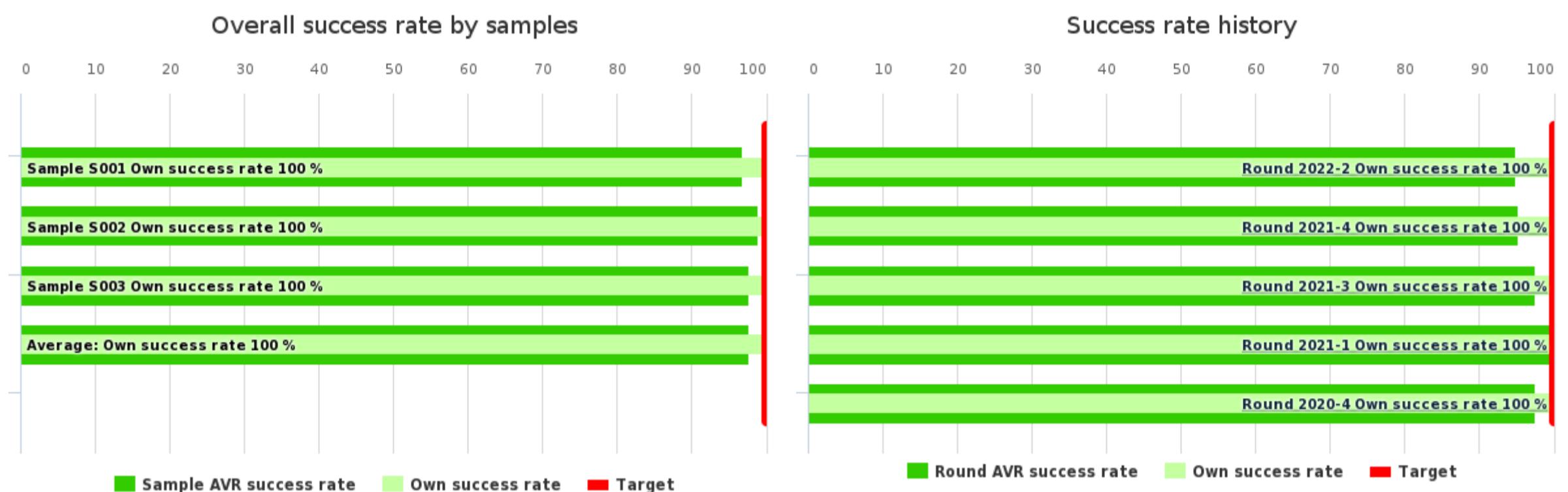


S003



Client report

	No of participants	No of responded participants	Response percentage
Meningitis-encephalitis multiplex, nucleic acid detection, February, 1-2023	91	90	98.9 %

Summary

Summary	Own score	Max score	Own success rate	Difference	AVR success rate
Sample S001	2	2	100 %	3.2 %	96.8 %
Sample S002	2	2	100 %	1.1 %	98.9 %
Sample S003	2	2	100 %	2.2 %	97.8 %
Average:			100 %	2.2 %	97.8 %

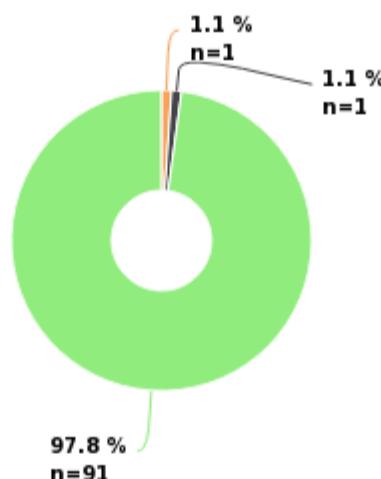
History	Test nr.	Own success rate	Difference	AVR success rate
Round 2022-2	1-1	100 %	5.1 %	94.9 %
Round 2021-4	1-1	100 %	4.7 %	95.3 %
Round 2021-3	1-1	100 %	2.5 %	97.5 %
Round 2021-1	1-1	100 %	0.6 %	99.4 %
Round 2020-4	1-1	100 %	2.5 %	97.5 %

Sample S001 | Enterovirus (Echovirus)



Sample S001 results	Responded	Own score	Max score	Own success rate	Difference	AVR success rate
Number of pathogenic findings	-	-	-	-	-	-
Cryptococcus neoformans	-	-	-	-	-	-
Cryptococcus neoformans/gattii	-	-	-	-	-	-
Cytomegalovirus (CMV)	-	-	-	-	-	-
Enterovirus	2	2	100 %	2.2 %	97.8 %	
Epstein-Barr virus (EBV)	-	-	-	-	-	-
Escherichia coli K1	-	-	-	-	-	-
Haemophilus influenzae	-	-	-	-	-	-
Herpes simplex virus 1 (HSV-1)	-	-	-	-	-	-
Herpes simplex virus 2 (HSV-2)	-	-	-	-	-	-
Human herpesvirus 6 (HHV-6)	-	-	-	-	-	0 %
Human parechovirus (HPeV)	-	-	-	-	-	-
Listeria monocytogenes	-	-	-	-	-	-
Neisseria meningitidis	-	-	-	-	-	-
Streptococcus agalactiae	-	-	-	-	-	-
Streptococcus pneumoniae	-	-	-	-	-	-
Varizella-zoster virus (VZV)	-	-	-	-	-	-
Total:		2	2	100 %	3.2 %	96.8 %

Sample S001 Number of pathogenic findings



■ Interpretation cannot be given
 ■ Negative sample, no pathogens detected
 ■ Positive sample, 1 pathogen detected

NUMBER OF PATHOGENIC FINDINGS

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
Interpretation cannot be given	1	-	-	-	-	-
Negative sample, no pathogens detected	1	-	-	-	-	-
Positive sample, 1 pathogen detected	91	-	-	-	-	-
Total:	93	-	-	-	-	-

CRYPTOCOCCUS NEOFORMANS

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
Negative	3	-	-	-	-	-
Not in test selection	90	-	-	-	-	-

Total:	93	-	-	-	-	-
Method	Negative		Not in test selection		Total:	
In house	3		-		3	
Total:	3		90		93	

CRYPTOCOCCUS NEOFORMANS/GATTII

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
● Negative	84	-				-
No test result	1	-				-
Not in test selection	8	-				-
Total:	93	-	-	-	-	

Method	Negative	No test result	Not in test selection	Total:
bioMerieux FilmArray Meningitis/Encephalitis Panel	● 80	-	-	80
In house	-	1	-	1
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Total:	84	1	8	93

CYTOMEGALOVIRUS (CMV)

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
● Negative	87	-				-
No test result	1	-				-
Not in test selection	5	-				-
Total:	93	-	-	-	-	

Method	Negative	No test result	Not in test selection	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	● 81	-	-	81
In house	1	1	-	2
Seegene Allplex Meningitis Panel 1 (Virus I)	2	-	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	2	-	-	2
Total:	87	1	5	93

ENTEROVIRUS

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
Negative	2	-				0 %
No test result	1	-				-
● Positive	90	2	2	100 %	0 %	100 %
Total:	93	2	2	100 %	2.2 %	97.8 %

Method	Negative	No test result	Positive	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	-	-	1	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	1	-	● 80	81
In house	1	1	-	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	-	-	4	4
Seegene Allplex Meningitis Panel 2 (Virus II)	-	-	2	2
Siemens Fast Track Diagnostics FTD Neuro 9	-	-	1	1
Siemens Fast Track Diagnostics FTD Viral meningitis	-	-	2	2
Total:	2	1	90	93

EPSTEIN-BARR VIRUS (EBV)

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
Negative	7	-				-
● Not in test selection	86	-				-
Total:	93	-	-	-	-	

Method	Negative	Not in test selection	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	1
In house	2	-	2
Seegene Allplex Meningitis Panel 1 (Virus I)	2	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	2	-	2
Total:	7	86	93

ESCHERICHIA COLI K1

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
● Negative	87	-	-	-	-	-
No test result	1	-	-	-	-	-
Not in test selection	5	-	-	-	-	-
Total:	93	-	-	-	-	-

Method	Negative	No test result	Not in test selection	Total:
bioMerieux FilmArray Meningitis/Encephalitis Panel	● 81	-	-	81
In house	-	1	-	1
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 3 (Bacteria)	2	-	-	2
Total:	87	1	5	93

HAEMOPHILUS INFLUENZAE

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
● Negative	88	-	-	-	-	-
No test result	1	-	-	-	-	-
Not in test selection	4	-	-	-	-	-
Total:	93	-	-	-	-	-

Method	Negative	No test result	Not in test selection	Total:
bioMerieux FilmArray Meningitis/Encephalitis Panel	● 81	-	-	81
In house	-	1	-	1
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 3 (Bacteria)	2	-	-	2
Siemens Fast Track Diagnostics FTD Bacterial meningitis	1	-	-	1
Total:	88	1	4	93

HERPES SIMPLEX VIRUS 1 (HSV-1)

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
● Negative	92	-	-	-	-	-
No test result	1	-	-	-	-	-
Total:	93	-	-	-	-	-

Method	Negative	No test result	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	● 81	-	81
In house	1	1	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	4
Seegene Allplex Meningitis Panel 1 (Virus I)	2	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	1	-	1
Siemens Fast Track Diagnostics FTD Viral meningitis	2	-	2
Total:	92	1	93

HERPES SIMPLEX VIRUS 2 (HSV-2)

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
● Negative	92	-	-	-	-	-
No test result	1	-	-	-	-	-
Total:	93	-	-	-	-	-

Method	Negative	No test result	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	● 81	-	81
In house	1	1	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	4
Seegene Allplex Meningitis Panel 1 (Virus I)	2	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	1	-	1
Siemens Fast Track Diagnostics FTD Viral meningitis	2	-	2
Total:	92	1	93

HUMAN HERPESVIRUS 6 (HHV-6)

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate

<input checked="" type="radio"/> Negative	89	-	-	-	-	-
No test result	1	-	-	-	-	-
Not in test selection	2	-	-	-	-	-
Positive	1	-	-	-	-	0 %
Total:	93	-	-	-	-	0 %

Method	Negative	No test result	Not in test selection	Positive	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	-	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	<input checked="" type="radio"/> 80	-	-	1	81
In house	-	1	-	-	1
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	-	4
Seegene Allplex Meningitis Panel 1 (Virus I)	2	-	-	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	2	-	-	-	2
Total:	89	1	2	1	93

HUMAN PARECHOVIRUS (HPEV)

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
<input checked="" type="radio"/> Negative	90	-	-	-	-	-
No test result	1	-	-	-	-	-
Not in test selection	2	-	-	-	-	-
Total:	93	-	-	-	-	-

Method	Negative	No test result	Not in test selection	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	<input checked="" type="radio"/> 80	-	-	80
In house	-	1	-	1
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 2 (Virus II)	2	-	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	1	-	-	1
Siemens Fast Track Diagnostics FTD Viral meningitis	2	-	-	2
Total:	90	1	2	93

LISTERIA MONOCYTOGENES

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
<input checked="" type="radio"/> Negative	88	-	-	-	-	-
No test result	1	-	-	-	-	-
Not in test selection	4	-	-	-	-	-
Total:	93	-	-	-	-	-

Method	Negative	No test result	Not in test selection	Total:
bioMerieux FilmArray Meningitis/Encephalitis Panel	<input checked="" type="radio"/> 81	-	-	81
In house	1	1	-	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 3 (Bacteria)	1	-	-	1
Seegene Seeplex Meningitis-B ACE Detection	1	-	-	1
Total:	88	1	4	93

NEISSERIA MENINGITIDIS

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
<input checked="" type="radio"/> Negative	88	-	-	-	-	-
No test result	1	-	-	-	-	-
Not in test selection	4	-	-	-	-	-
Total:	93	-	-	-	-	-

Method	Negative	No test result	Not in test selection	Total:
BioGX Bacterial Meningitis NSH	1	-	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	<input checked="" type="radio"/> 80	-	-	80
In house	1	1	-	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 3 (Bacteria)	2	-	-	2
Total:	88	1	4	93

STREPTOCOCCUS AGALACTIAE

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
● Negative	87	-				-
No test result	1	-				-
Not in test selection	5	-				-
Total:	93	-	-	-	-	

Method	Negative	No test result	Not in test selection	Total:
bioMerieux FilmArray Meningitis/Encephalitis Panel	● 81	-	-	81
In house	-	1	-	1
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 3 (Bacteria)	1	-	-	1
Seegene Seeplex Meningitis-B ACE Detection	1	-	-	1
Total:	87	1	5	93

STREPTOCOCCUS PNEUMONIAE

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
● Negative	89	-				-
No test result	1	-				-
Not in test selection	3	-				-
Total:	93	-	-	-	-	

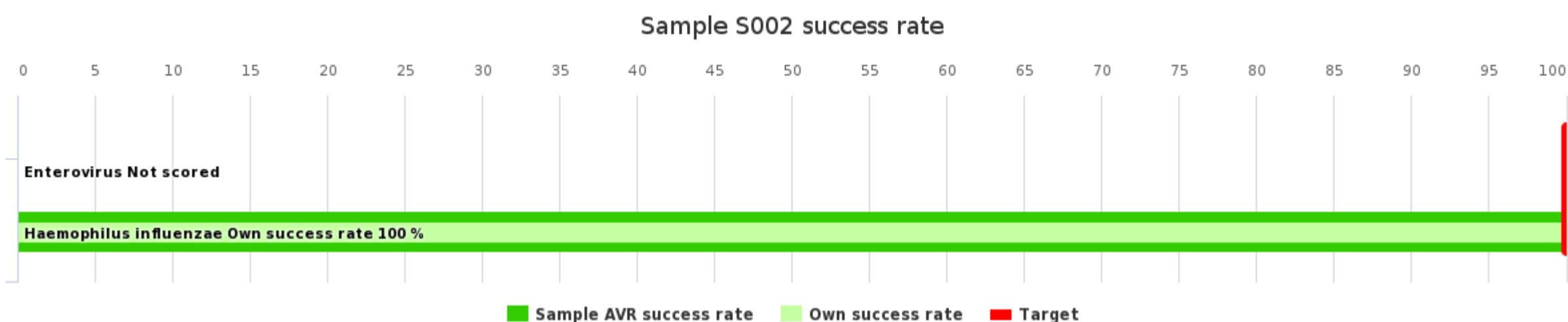
Method	Negative	No test result	Not in test selection	Total:
bioMerieux FilmArray Meningitis/Encephalitis Panel	● 81	-	-	81
In house	1	1	-	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 3 (Bacteria)	2	-	-	2
Siemens Fast Track Diagnostics FTD Bacterial meningitis	1	-	-	1
Total:	89	1	3	93

VARIZELLA-ZOSTER VIRUS (VZV)

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
● Negative	92	-				-
No test result	1	-				-
Total:	93	-	-	-	-	

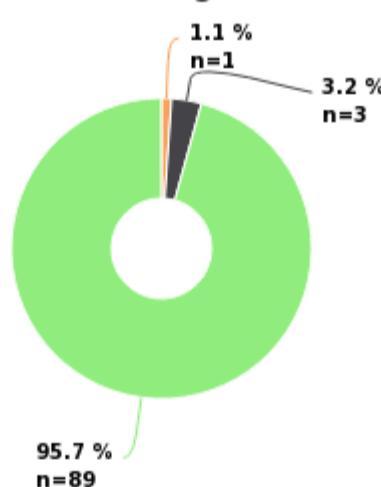
Method	Negative	No test result	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	● 81	-	81
In house	1	1	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	4
Seegene Allplex Meningitis Panel 1 (Virus I)	2	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	1	-	1
Siemens Fast Track Diagnostics FTD Viral meningitis	2	-	2
Total:	92	1	93

Sample S002 | Haemophilus influenzae



Sample S002 results	Responded	Own score	Max score	Own success rate	Difference	AVR success rate
	Number of pathogenic findings	-	-	-	-	-
	Cryptococcus neoformans	-	-	-	-	-
	Cryptococcus neoformans/gattii	-	-	-	-	-
	Cytomegalovirus (CMV)	-	-	-	-	-
	Enterovirus	-	-	-	-	0 %
	Epstein-Barr virus (EBV)	-	-	-	-	-
	Escherichia coli K1	-	-	-	-	-
	Haemophilus influenzae	2	2	100 %	0 %	100 %
	Herpes simplex virus 1 (HSV-1)	-	-	-	-	-
	Herpes simplex virus 2 (HSV-2)	-	-	-	-	-
	Human herpesvirus 6 (HHV-6)	-	-	-	-	-
	Human parechovirus (HPeV)	-	-	-	-	-
	Listeria monocytogenes	-	-	-	-	-
	Neisseria meningitidis	-	-	-	-	-
	Streptococcus agalactiae	-	-	-	-	-
	Streptococcus pneumoniae	-	-	-	-	-
	Varizella-zoster virus (VZV)	-	-	-	-	-
Total:		2	2	100 %	1.1 %	98.9 %

Sample S002 Number of pathogenic findings



■ Interpretation cannot be given
 ■ Negative sample, no pathogens detected
 ■ Positive sample, 1 pathogen detected

NUMBER OF PATHOGENIC FINDINGS

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
Interpretation cannot be given	1	-	-	-	-	-
Negative sample, no pathogens detected	3	-	-	-	-	-
Positive sample, 1 pathogen detected	89	-	-	-	-	-
Total:	93	-	-	-	-	-

CRYPTOCOCCUS NEOFORMANS

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
Negative	3	-	-	-	-	-
Not in test selection	90	-	-	-	-	-

Total:	93	-	-	-	-	-
Method	Negative		Not in test selection		Total:	
In house	3		-		3	
Total:	3		90		93	

CRYPTOCOCCUS NEOFORMANS/GATTII

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
● Negative	84	-				-
No test result	1	-				-
Not in test selection	8	-				-
Total:	93	-	-	-	-	

Method	Negative	No test result	Not in test selection	Total:
bioMerieux FilmArray Meningitis/Encephalitis Panel	● 80	-	-	80
In house	-	1	-	1
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Total:	84	1	8	93

CYTOMEGALOVIRUS (CMV)

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
● Negative	87	-				-
No test result	1	-				-
Not in test selection	5	-				-
Total:	93	-	-	-	-	

Method	Negative	No test result	Not in test selection	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	● 81	-	-	81
In house	1	1	-	2
Seegene Allplex Meningitis Panel 1 (Virus I)	2	-	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	2	-	-	2
Total:	87	1	5	93

ENTEROVIRUS

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
● Negative	91	-				-
No test result	1	-				-
Weak positive	1	-				0 %
Total:	93	-	-	-	-	0 %

Method	Negative	No test result	Weak positive	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	● 81	-	-	81
In house	-	1	1	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 2 (Virus II)	2	-	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	1	-	-	1
Siemens Fast Track Diagnostics FTD Viral meningitis	2	-	-	2
Total:	91	1	1	93

EPSTEIN-BARR VIRUS (EBV)

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
Negative	7	-				-
● Not in test selection	86	-				-
Total:	93	-	-	-	-	

Method	Negative	Not in test selection	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	1
In house	2	-	2
Seegene Allplex Meningitis Panel 1 (Virus I)	2	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	2	-	2
Total:	7	86	93

ESCHERICHIA COLI K1

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
● Negative	87	-				-
No test result	1	-				-
Not in test selection	5	-				-
Total:	93	-	-	-	-	

Method	Negative	No test result	Not in test selection	Total:
bioMerieux FilmArray Meningitis/Encephalitis Panel	● 81	-	-	81
In house	-	1	-	1
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 3 (Bacteria)	2	-	-	2
Total:	87	1	5	93

HAEMOPHILUS INFLUENZAE

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
No test result	1	-				-
Not in test selection	4	-				-
● Positive	88	2	2	100 %	0 %	100 %
Total:	93	2	2	100 %	0 %	100 %

Method	No test result	Not in test selection	Positive	Total:
bioMerieux FilmArray Meningitis/Encephalitis Panel	-	-	● 81	81
In house	1	-	-	1
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	-	-	4	4
Seegene Allplex Meningitis Panel 3 (Bacteria)	-	-	2	2
Siemens Fast Track Diagnostics FTD Bacterial meningitis	-	-	1	1
Total:	1	4	88	93

HERPES SIMPLEX VIRUS 1 (HSV-1)

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
● Negative	92	-				-
No test result	1	-				-
Total:	93	-	-	-	-	

Method	Negative	No test result	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	● 81	-	81
In house	1	1	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	4
Seegene Allplex Meningitis Panel 1 (Virus I)	2	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	1	-	1
Siemens Fast Track Diagnostics FTD Viral meningitis	2	-	2
Total:	92	1	93

HERPES SIMPLEX VIRUS 2 (HSV-2)

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
● Negative	92	-				-
No test result	1	-				-
Total:	93	-	-	-	-	

Method	Negative	No test result	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	● 81	-	81
In house	1	1	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	4
Seegene Allplex Meningitis Panel 1 (Virus I)	2	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	1	-	1
Siemens Fast Track Diagnostics FTD Viral meningitis	2	-	2
Total:	92	1	93

HUMAN HERPESVIRUS 6 (HHV-6)

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
● Negative	92	-				-

● Negative	90	-	-	-	-
No test result	1	-	-	-	-
Not in test selection	2	-	-	-	-
Total:	93	-	-	-	-

Method	Negative	No test result	Not in test selection	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	● 81	-	-	81
In house	-	1	-	1
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 1 (Virus I)	2	-	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	2	-	-	2
Total:	90	1	2	93

HUMAN PARECHOVIRUS (HPEV)

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
● Negative	90	-	-	-	-	-
No test result	1	-	-	-	-	-
Not in test selection	2	-	-	-	-	-
Total:	93	-	-	-	-	-

Method	Negative	No test result	Not in test selection	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	● 80	-	-	80
In house	-	1	-	1
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 2 (Virus II)	2	-	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	1	-	-	1
Siemens Fast Track Diagnostics FTD Viral meningitis	2	-	-	2
Total:	90	1	2	93

LISTERIA MONOCYTOGENES

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
● Negative	88	-	-	-	-	-
No test result	1	-	-	-	-	-
Not in test selection	4	-	-	-	-	-
Total:	93	-	-	-	-	-

Method	Negative	No test result	Not in test selection	Total:
bioMerieux FilmArray Meningitis/Encephalitis Panel	● 81	-	-	81
In house	1	1	-	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 3 (Bacteria)	1	-	-	1
Seegene Seeplex Meningitis-B ACE Detection	1	-	-	1
Total:	88	1	4	93

NEISSERIA MENINGITIDIS

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
● Negative	88	-	-	-	-	-
No test result	1	-	-	-	-	-
Not in test selection	4	-	-	-	-	-
Total:	93	-	-	-	-	-

Method	Negative	No test result	Not in test selection	Total:
BioGX Bacterial Meningitis NSH	1	-	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	● 80	-	-	80
In house	1	1	-	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 3 (Bacteria)	2	-	-	2
Total:	88	1	4	93

STREPTOCOCCUS AGALACTIAE

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
----------------	----------------------	-----------	-----------	------------------	------------	------------------

● Negative	87	-	-	-	-
No test result	1	-	-	-	-
Not in test selection	5	-	-	-	-
Total:	93	-	-	-	-

Method	Negative	No test result	Not in test selection	Total:
bioMerieux FilmArray Meningitis/Encephalitis Panel	● 81	-	-	81
In house	-	1	-	1
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 3 (Bacteria)	1	-	-	1
Seegene Seeplex Meningitis-B ACE Detection	1	-	-	1
Total:	87	1	5	93

STREPTOCOCCUS PNEUMONIAE

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
● Negative	89	-	-	-	-	-
No test result	1	-	-	-	-	-
Not in test selection	3	-	-	-	-	-
Total:	93	-	-	-	-	-

Method	Negative	No test result	Not in test selection	Total:
bioMerieux FilmArray Meningitis/Encephalitis Panel	● 81	-	-	81
In house	1	1	-	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 3 (Bacteria)	2	-	-	2
Siemens Fast Track Diagnostics FTD Bacterial meningitis	1	-	-	1
Total:	89	1	3	93

VARIZELLA-ZOSTER VIRUS (VZV)

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
● Negative	92	-	-	-	-	-
No test result	1	-	-	-	-	-
Total:	93	-	-	-	-	-

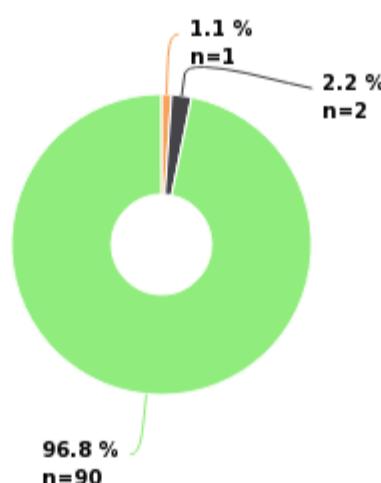
Method	Negative	No test result	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	● 81	-	81
In house	1	1	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	4
Seegene Allplex Meningitis Panel 1 (Virus I)	2	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	1	-	1
Siemens Fast Track Diagnostics FTD Viral meningitis	2	-	2
Total:	92	1	93

Sample S003 | Human herpesvirus 6 (HHV-6)



Sample S003 results	Responded	Own score	Max score	Own success rate	Difference	AVR success rate
Number of pathogenic findings	-	-	-	-	-	-
Cryptococcus neoformans	-	-	-	-	-	-
Cryptococcus neoformans/gattii	-	-	-	-	-	-
Cytomegalovirus (CMV)	-	-	-	-	-	-
Enterovirus	-	-	-	-	-	0 %
Epstein-Barr virus (EBV)	-	-	-	-	-	-
Escherichia coli K1	-	-	-	-	-	-
Haemophilus influenzae	-	-	-	-	-	-
Herpes simplex virus 1 (HSV-1)	-	-	-	-	-	-
Herpes simplex virus 2 (HSV-2)	-	-	-	-	-	-
Human herpesvirus 6 (HHV-6)	2	2	100 %	1.1 %	98.9 %	
Human parechovirus (HPeV)	-	-	-	-	-	-
Listeria monocytogenes	-	-	-	-	-	-
Neisseria meningitidis	-	-	-	-	-	-
Streptococcus agalactiae	-	-	-	-	-	-
Streptococcus pneumoniae	-	-	-	-	-	-
Varizella-zoster virus (VZV)	-	-	-	-	-	-
Total:		2	2	100 %	2.2 %	97.8 %

Sample S003 Number of pathogenic findings



■ Interpretation cannot be given
 ■ Negative sample, no pathogens detected
 ■ Positive sample, 1 pathogen detected

NUMBER OF PATHOGENIC FINDINGS

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
Interpretation cannot be given	1	-	-	-	-	-
Negative sample, no pathogens detected	2	-	-	-	-	-
Positive sample, 1 pathogen detected	90	-	-	-	-	-
Total:	93	-	-	-	-	-

CRYPTOCOCCUS NEOFORMANS

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
Negative	3	-	-	-	-	-
Not in test selection	90	-	-	-	-	-

Total:	93	-	-	-	-	-
Method	Negative		Not in test selection		Total:	
In house	3		-		3	
Total:	3		90		93	

CRYPTOCOCCUS NEOFORMANS/GATTII

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
● Negative	84	-				-
No test result	1	-				-
Not in test selection	8	-				-
Total:	93	-	-	-	-	

Method	Negative	No test result	Not in test selection	Total:
bioMerieux FilmArray Meningitis/Encephalitis Panel	● 80	-	-	80
In house	-	1	-	1
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Total:	84	1	8	93

CYTOMEGALOVIRUS (CMV)

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
● Negative	87	-				-
No test result	1	-				-
Not in test selection	5	-				-
Total:	93	-	-	-	-	

Method	Negative	No test result	Not in test selection	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	● 81	-	-	81
In house	1	1	-	2
Seegene Allplex Meningitis Panel 1 (Virus I)	2	-	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	2	-	-	2
Total:	87	1	5	93

ENTEROVIRUS

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
● Negative	91	-				-
No test result	1	-				-
Positive	1	-				0 %
Total:	93	-	-	-	-	0 %

Method	Negative	No test result	Positive	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	● 80	-	1	81
In house	1	1	-	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 2 (Virus II)	2	-	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	1	-	-	1
Siemens Fast Track Diagnostics FTD Viral meningitis	2	-	-	2
Total:	91	1	1	93

EPSTEIN-BARR VIRUS (EBV)

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
Negative	7	-				-
● Not in test selection	86	-				-
Total:	93	-	-	-	-	

Method	Negative	Not in test selection	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	1
In house	2	-	2
Seegene Allplex Meningitis Panel 1 (Virus I)	2	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	2	-	2
Total:	7	86	93

ESCHERICHIA COLI K1

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
● Negative	87	-	-	-	-	-
No test result	1	-	-	-	-	-
Not in test selection	5	-	-	-	-	-
Total:	93	-	-	-	-	-

Method	Negative	No test result	Not in test selection	Total:
bioMerieux FilmArray Meningitis/Encephalitis Panel	● 81	-	-	81
In house	-	1	-	1
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 3 (Bacteria)	2	-	-	2
Total:	87	1	5	93

HAEMOPHILUS INFLUENZAE

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
● Negative	88	-	-	-	-	-
No test result	1	-	-	-	-	-
Not in test selection	4	-	-	-	-	-
Total:	93	-	-	-	-	-

Method	Negative	No test result	Not in test selection	Total:
bioMerieux FilmArray Meningitis/Encephalitis Panel	● 81	-	-	81
In house	-	1	-	1
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 3 (Bacteria)	2	-	-	2
Siemens Fast Track Diagnostics FTD Bacterial meningitis	1	-	-	1
Total:	88	1	4	93

HERPES SIMPLEX VIRUS 1 (HSV-1)

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
● Negative	92	-	-	-	-	-
No test result	1	-	-	-	-	-
Total:	93	-	-	-	-	-

Method	Negative	No test result	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	● 81	-	81
In house	1	1	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	4
Seegene Allplex Meningitis Panel 1 (Virus I)	2	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	1	-	1
Siemens Fast Track Diagnostics FTD Viral meningitis	2	-	2
Total:	92	1	93

HERPES SIMPLEX VIRUS 2 (HSV-2)

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
● Negative	92	-	-	-	-	-
No test result	1	-	-	-	-	-
Total:	93	-	-	-	-	-

Method	Negative	No test result	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	● 81	-	81
In house	1	1	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	4
Seegene Allplex Meningitis Panel 1 (Virus I)	2	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	1	-	1
Siemens Fast Track Diagnostics FTD Viral meningitis	2	-	2
Total:	92	1	93

HUMAN HERPESVIRUS 6 (HHV-6)

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate

Negative	1	-				0 %
No test result	1	-				-
Not in test selection	2	-				-
● Positive	89	2	2	100 %	0 %	100 %
Total:	93	2	2	100 %	1.1 %	98.9 %

Method	Negative	No test result	Not in test selection	Positive	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	-	-	-	1	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	1	-	-	● 80	81
In house	-	1	-	-	1
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	-	-	-	4	4
Seegene Allplex Meningitis Panel 1 (Virus I)	-	-	-	2	2
Siemens Fast Track Diagnostics FTD Neuro 9	-	-	-	2	2
Total:	1	1	2	89	93

HUMAN PARECHOVIRUS (HPEV)

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
● Negative	90	-				-
No test result	1	-				-
Not in test selection	2	-				-
Total:	93	-	-	-	-	-

Method	Negative	No test result	Not in test selection	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	● 80	-	-	80
In house	-	1	-	1
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 2 (Virus II)	2	-	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	1	-	-	1
Siemens Fast Track Diagnostics FTD Viral meningitis	2	-	-	2
Total:	90	1	2	93

LISTERIA MONOCYTOGENES

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
● Negative	88	-				-
No test result	1	-				-
Not in test selection	4	-				-
Total:	93	-	-	-	-	-

Method	Negative	No test result	Not in test selection	Total:
bioMerieux FilmArray Meningitis/Encephalitis Panel	● 81	-	-	81
In house	1	1	-	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 3 (Bacteria)	1	-	-	1
Seegene Seeplex Meningitis-B ACE Detection	1	-	-	1
Total:	88	1	4	93

NEISSERIA MENINGITIDIS

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
● Negative	88	-				-
No test result	1	-				-
Not in test selection	4	-				-
Total:	93	-	-	-	-	-

Method	Negative	No test result	Not in test selection	Total:
BioGX Bacterial Meningitis NSH	1	-	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	● 80	-	-	80
In house	1	1	-	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 3 (Bacteria)	2	-	-	2
Total:	88	1	4	93

STREPTOCOCCUS AGALACTIAE

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
● Negative	87	-				-
No test result	1	-				-
Not in test selection	5	-				-
Total:	93	-	-	-	-	

Method	Negative	No test result	Not in test selection	Total:
bioMerieux FilmArray Meningitis/Encephalitis Panel	● 81	-	-	81
In house	-	1	-	1
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 3 (Bacteria)	1	-	-	1
Seegene Seeplex Meningitis-B ACE Detection	1	-	-	1
Total:	87	1	5	93

STREPTOCOCCUS PNEUMONIAE

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
● Negative	89	-				-
No test result	1	-				-
Not in test selection	3	-				-
Total:	93	-	-	-	-	

Method	Negative	No test result	Not in test selection	Total:
bioMerieux FilmArray Meningitis/Encephalitis Panel	● 81	-	-	81
In house	1	1	-	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 3 (Bacteria)	2	-	-	2
Siemens Fast Track Diagnostics FTD Bacterial meningitis	1	-	-	1
Total:	89	1	3	93

VARIZELLA-ZOSTER VIRUS (VZV)

Interpretation	Interpretation count	Own score	Max score	Own success rate	Difference	AVR success rate
● Negative	92	-				-
No test result	1	-				-
Total:	93	-	-	-	-	

Method	Negative	No test result	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	● 81	-	81
In house	1	1	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	4
Seegene Allplex Meningitis Panel 1 (Virus I)	2	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	1	-	1
Siemens Fast Track Diagnostics FTD Viral meningitis	2	-	2
Total:	92	1	93

Report Info**PARTICIPANTS**

Altogether 91 laboratories from 20 countries participated in this EQA round.

REPORT INFO

The reported results and the scores are presented in the same summary. Sample specific results are shown in the tables as counts. The expected results are indicated in the tables with green colour. The laboratory's own result is shown by a black radio button .

You can view the result distribution of each specimen and pathogen on screen one by one. The tables can be opened and closed by clicking the screen button at the right end of the row. The result tables of pathogens with a negative result expectation and for which no deviating results have been reported are by default closed for clarification of the report.

The participant's own success is shown both as scores and as success rates (%) generated from the score values. They are presented both in the summary and in the sample specific parts of the report. If you have no 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 participants are scored according to their test selection. The round is scored based on test results when 60% or more of the participants report the expected result and when at least three results are reported.

In general, only the positive findings are scored for each specimen. It is expected that the pathogens indicated in the sample content are to be identified, whereas other deviating findings will reduce the overall success rate. For those specimens that are negative regarding all pathogens included in the panel of this scheme, the scoring is based on the answer given to the question "number of pathogenic findings" and the expected result would be "Negative sample, no pathogens detected". Answer "No test result" and "Invalid/unclear test result" will be excluded from the scoring.

The scoring range is 0-2 points and the following general rules are followed:

2/2 points is given to results that are correct/accepted regarding the expected result
1/2 point can be given to results that are partly correct/insufficient regarding the expected result
0/2 point is given to results that are incorrect/false regarding the expected result

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.

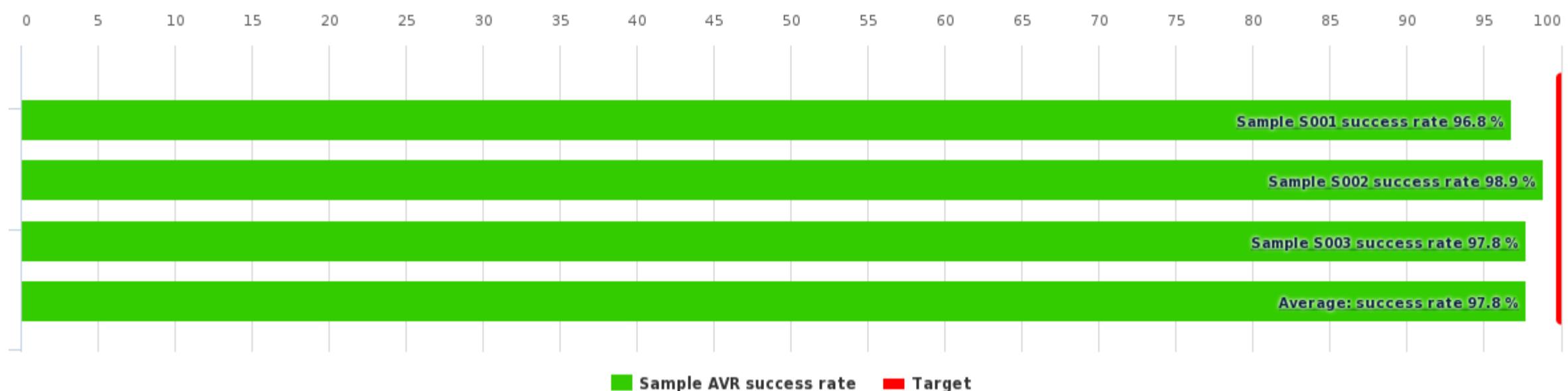
The success rate for the entire round (AVR success rate) is calculated from the total number of scores given to the results per sample (all scores/maximum scores*100). The AVG success rate of the entire round is the average of the sample success rates. The difference in the Laboratory's Own success rate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

GLOBAL REPORT

	No of participants	No of responded participants	Response percentage
Meningitis-encephalitis multiplex, nucleic acid detection, February, 1-2023	91	90	98.9 %

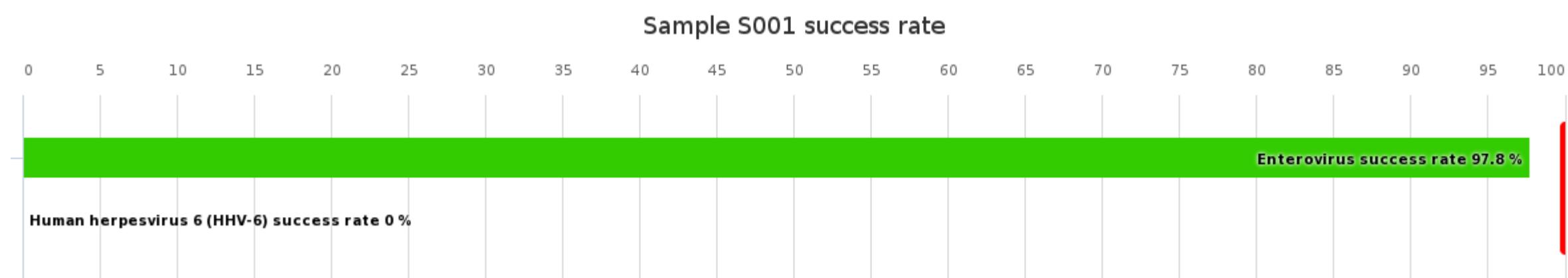
Summary

Overall success rate by samples



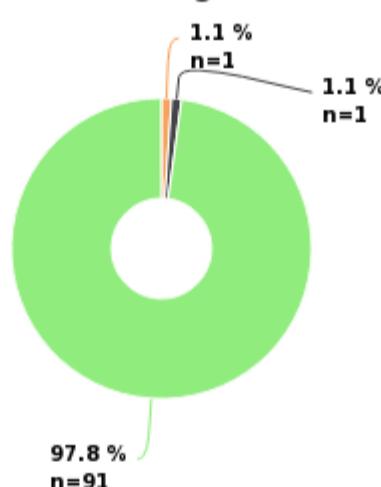
Summary	AVR success rate
Sample S001	96.8 %
Sample S002	98.9 %
Sample S003	97.8 %
Average:	97.8 %

Sample S001 | Enterovirus (Echovirus)



Sample S001 results	Responded	AVR success rate
	Number of pathogenic findings	-
	Cryptococcus neoformans	-
	Cryptococcus neoformans/gattii	-
	Cytomegalovirus (CMV)	-
	Enterovirus	97.8 %
	Epstein-Barr virus (EBV)	-
	Escherichia coli K1	-
	Haemophilus influenzae	-
	Herpes simplex virus 1 (HSV-1)	-
	Herpes simplex virus 2 (HSV-2)	-
	Human herpesvirus 6 (HHV-6)	0 %
	Human parechovirus (HPeV)	-
	Listeria monocytogenes	-
	Neisseria meningitidis	-
	Streptococcus agalactiae	-
	Streptococcus pneumoniae	-
	Varizella-zoster virus (VZV)	-
Total:		96.8 %

Sample S001 Number of pathogenic findings



■ Interpretation cannot be given
 ■ Negative sample, no pathogens detected
 ■ Positive sample, 1 pathogen detected

NUMBER OF PATHOGENIC FINDINGS

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Interpretation cannot be given	1	-	-
Negative sample, no pathogens detected	1	-	-
Positive sample, 1 pathogen detected	91	-	-
Total:	93		

CRYPTOCOCCUS NEOFORMANS

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	3	-	-
Not in test selection	90	-	-

Total:	93		
Method	Negative	Not in test selection	Total:
In house	3	-	3
Total:	3	90	93

CRYPTOCOCCUS NEOFORMANS/GATTII

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	84	-	-
No test result	1	-	-
Not in test selection	8	-	-
Total:	93		

Method	Negative	No test result	Not in test selection	Total:
bioMerieux FilmArray Meningitis/Encephalitis Panel	80	-	-	80
In house	-	1	-	1
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Total:	84	1	8	93

CYTOMEGALOVIRUS (CMV)

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	87	-	-
No test result	1	-	-
Not in test selection	5	-	-
Total:	93		

Method	Negative	No test result	Not in test selection	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	81	-	-	81
In house	1	1	-	2
Seegene Allplex Meningitis Panel 1 (Virus I)	2	-	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	2	-	-	2
Total:	87	1	5	93

ENTEROVIRUS

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	2	0 %	0
No test result	1	-	-
Positive	90	100 %	2
Total:	93	97.8 %	

Method	Negative	No test result	Positive	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	-	-	1	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	1	-	80	81
In house	1	1	-	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	-	-	4	4
Seegene Allplex Meningitis Panel 2 (Virus II)	-	-	2	2
Siemens Fast Track Diagnostics FTD Neuro 9	-	-	1	1
Siemens Fast Track Diagnostics FTD Viral meningitis	-	-	2	2
Total:	2	1	90	93

EPSTEIN-BARR VIRUS (EBV)

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	7	-	-
Not in test selection	86	-	-
Total:	93		

Method	Negative	Not in test selection	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	1
In house	2	-	2
Seegene Allplex Meningitis Panel 1 (Virus I)	2	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	2	-	2
Total:	7	86	93

ESCHERICHIA COLI K1

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	87	-	-
No test result	1	-	-
Not in test selection	5	-	-
Total:	93		

Method	Negative	No test result	Not in test selection	Total:
bioMerieux FilmArray Meningitis/Encephalitis Panel	81	-	-	81
In house	-	1	-	1
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 3 (Bacteria)	2	-	-	2
Total:	87	1	5	93

HAEMOPHILUS INFLUENZAE

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	88	-	-
No test result	1	-	-
Not in test selection	4	-	-
Total:	93		

Method	Negative	No test result	Not in test selection	Total:
bioMerieux FilmArray Meningitis/Encephalitis Panel	81	-	-	81
In house	-	1	-	1
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 3 (Bacteria)	2	-	-	2
Siemens Fast Track Diagnostics FTD Bacterial meningitis	1	-	-	1
Total:	88	1	4	93

HERPES SIMPLEX VIRUS 1 (HSV-1)

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	92	-	-
No test result	1	-	-
Total:	93		

Method	Negative	No test result	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	81	-	81
In house	1	1	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	4
Seegene Allplex Meningitis Panel 1 (Virus I)	2	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	1	-	1
Siemens Fast Track Diagnostics FTD Viral meningitis	2	-	2
Total:	92	1	93

HERPES SIMPLEX VIRUS 2 (HSV-2)

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	92	-	-
No test result	1	-	-
Total:	93		

Method	Negative	No test result	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	81	-	81
In house	1	1	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	4
Seegene Allplex Meningitis Panel 1 (Virus I)	2	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	1	-	1
Siemens Fast Track Diagnostics FTD Viral meningitis	2	-	2
Total:	92	1	93

HUMAN HERPESVIRUS 6 (HHV-6)

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	89	-	-
No test result	1	-	-

Not in test selection	2	-	-
Positive	1	0 %	0
Total:	93	0 %	

Method	Negative	No test result	Not in test selection	Positive	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	-	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	80	-	-	1	81
In house	-	1	-	-	1
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	-	4
Seegene Allplex Meningitis Panel 1 (Virus I)	2	-	-	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	2	-	-	-	2
Total:	89	1	2	1	93

HUMAN PARECHOVIRUS (HPEV)

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	90	-	-
No test result	1	-	-
Not in test selection	2	-	-
Total:	93		

Method	Negative	No test result	Not in test selection	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	80	-	-	80
In house	-	1	-	1
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 2 (Virus II)	2	-	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	1	-	-	1
Siemens Fast Track Diagnostics FTD Viral meningitis	2	-	-	2
Total:	90	1	2	93

LISTERIA MONOCYTOGENES

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	88	-	-
No test result	1	-	-
Not in test selection	4	-	-
Total:	93		

Method	Negative	No test result	Not in test selection	Total:
bioMerieux FilmArray Meningitis/Encephalitis Panel	81	-	-	81
In house	1	1	-	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 3 (Bacteria)	1	-	-	1
Seegene Seeplex Meningitis-B ACE Detection	1	-	-	1
Total:	88	1	4	93

NEISSERIA MENINGITIDIS

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	88	-	-
No test result	1	-	-
Not in test selection	4	-	-
Total:	93		

Method	Negative	No test result	Not in test selection	Total:
BioGX Bacterial Meningitis NSH	1	-	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	80	-	-	80
In house	1	1	-	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 3 (Bacteria)	2	-	-	2
Total:	88	1	4	93

STREPTOCOCCUS AGALACTIAE

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	87	-	-
No test result	1	-	-

Not in test selection	5	-	-
Total:	93		

Method	Negative	No test result	Not in test selection	Total:
bioMerieux FilmArray Meningitis/Encephalitis Panel	81	-	-	81
In house	-	1	-	1
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 3 (Bacteria)	1	-	-	1
Seegene Seeplex Meningitis-B ACE Detection	1	-	-	1
Total:	87	1	5	93

STREPTOCOCCUS PNEUMONIAE

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	89	-	-
No test result	1	-	-
Not in test selection	3	-	-
Total:	93		

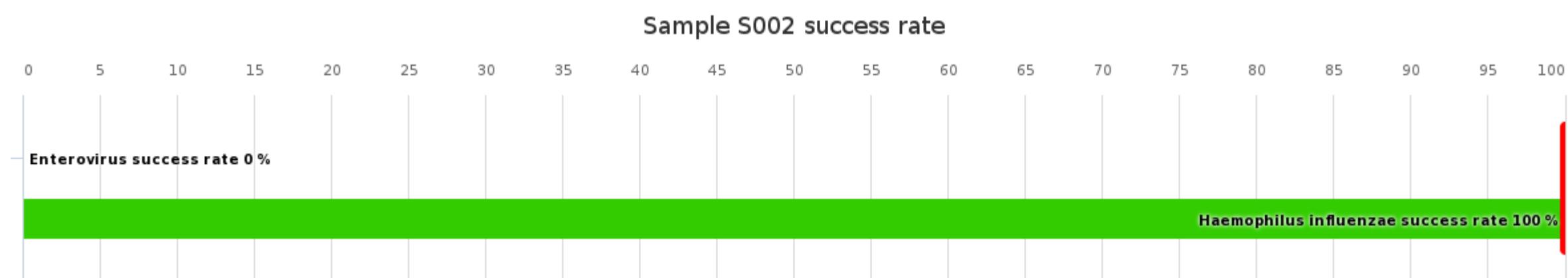
Method	Negative	No test result	Not in test selection	Total:
bioMerieux FilmArray Meningitis/Encephalitis Panel	81	-	-	81
In house	1	1	-	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 3 (Bacteria)	2	-	-	2
Siemens Fast Track Diagnostics FTD Bacterial meningitis	1	-	-	1
Total:	89	1	3	93

VARIZELLA-ZOSTER VIRUS (VZV)

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	92	-	-
No test result	1	-	-
Total:	93		

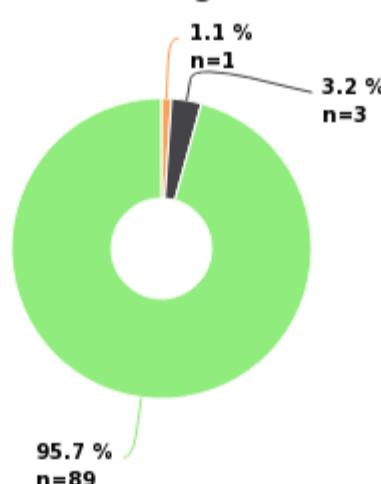
Method	Negative	No test result	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	81	-	81
In house	1	1	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	4
Seegene Allplex Meningitis Panel 1 (Virus I)	2	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	1	-	1
Siemens Fast Track Diagnostics FTD Viral meningitis	2	-	2
Total:	92	1	93

Sample S002 | Haemophilus influenzae



Sample S002 results	Responded	AVR success rate
	Number of pathogenic findings	-
	Cryptococcus neoformans	-
	Cryptococcus neoformans/gattii	-
	Cytomegalovirus (CMV)	-
	Enterovirus	0 %
	Epstein-Barr virus (EBV)	-
	Escherichia coli K1	-
	Haemophilus influenzae	100 %
	Herpes simplex virus 1 (HSV-1)	-
	Herpes simplex virus 2 (HSV-2)	-
	Human herpesvirus 6 (HHV-6)	-
	Human parechovirus (HPeV)	-
	Listeria monocytogenes	-
	Neisseria meningitidis	-
	Streptococcus agalactiae	-
	Streptococcus pneumoniae	-
	Varizella-zoster virus (VZV)	-
Total:		98.9 %

Sample S002 Number of pathogenic findings



■ Interpretation cannot be given
 ■ Negative sample, no pathogens detected
 ■ Positive sample, 1 pathogen detected

NUMBER OF PATHOGENIC FINDINGS

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Interpretation cannot be given	1	-	-
Negative sample, no pathogens detected	3	-	-
Positive sample, 1 pathogen detected	89	-	-
Total:	93		

CRYPTOCOCCUS NEOFORMANS

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	3	-	-
Not in test selection	90	-	-

Total:	93		
Method	Negative	Not in test selection	Total:
In house	3	-	3
Total:	3	90	93

CRYPTOCOCCUS NEOFORMANS/GATTII

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	84	-	-
No test result	1	-	-
Not in test selection	8	-	-
Total:	93		

Method	Negative	No test result	Not in test selection	Total:
bioMerieux FilmArray Meningitis/Encephalitis Panel	80	-	-	80
In house	-	1	-	1
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Total:	84	1	8	93

CYTOMEGALOVIRUS (CMV)

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	87	-	-
No test result	1	-	-
Not in test selection	5	-	-
Total:	93		

Method	Negative	No test result	Not in test selection	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	81	-	-	81
In house	1	1	-	2
Seegene Allplex Meningitis Panel 1 (Virus I)	2	-	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	2	-	-	2
Total:	87	1	5	93

ENTEROVIRUS

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	91	-	-
No test result	1	-	-
Weak positive	1	0 %	0
Total:	93	0 %	

Method	Negative	No test result	Weak positive	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	81	-	-	81
In house	-	1	1	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 2 (Virus II)	2	-	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	1	-	-	1
Siemens Fast Track Diagnostics FTD Viral meningitis	2	-	-	2
Total:	91	1	1	93

EPSTEIN-BARR VIRUS (EBV)

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	7	-	-
Not in test selection	86	-	-
Total:	93		

Method	Negative	Not in test selection	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	1
In house	2	-	2
Seegene Allplex Meningitis Panel 1 (Virus I)	2	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	2	-	2
Total:	7	86	93

ESCHERICHIA COLI K1

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	87	-	-
No test result	1	-	-
Not in test selection	5	-	-
Total:	93		

Method	Negative	No test result	Not in test selection	Total:
bioMerieux FilmArray Meningitis/Encephalitis Panel	81	-	-	81
In house	-	1	-	1
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 3 (Bacteria)	2	-	-	2
Total:	87	1	5	93

HAEMOPHILUS INFLUENZAE

Interpretation	Interpretation count	AVR success rate	Interpretation Score
No test result	1	-	-
Not in test selection	4	-	-
Positive	88	100 %	2
Total:	93	100 %	

Method	No test result	Not in test selection	Positive	Total:
bioMerieux FilmArray Meningitis/Encephalitis Panel	-	-	81	81
In house	1	-	-	1
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	-	-	4	4
Seegene Allplex Meningitis Panel 3 (Bacteria)	-	-	2	2
Siemens Fast Track Diagnostics FTD Bacterial meningitis	-	-	1	1
Total:	1	4	88	93

HERPES SIMPLEX VIRUS 1 (HSV-1)

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	92	-	-
No test result	1	-	-
Total:	93		

Method	Negative	No test result	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	81	-	81
In house	1	1	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	4
Seegene Allplex Meningitis Panel 1 (Virus I)	2	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	1	-	1
Siemens Fast Track Diagnostics FTD Viral meningitis	2	-	2
Total:	92	1	93

HERPES SIMPLEX VIRUS 2 (HSV-2)

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	92	-	-
No test result	1	-	-
Total:	93		

Method	Negative	No test result	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	81	-	81
In house	1	1	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	4
Seegene Allplex Meningitis Panel 1 (Virus I)	2	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	1	-	1
Siemens Fast Track Diagnostics FTD Viral meningitis	2	-	2
Total:	92	1	93

HUMAN HERPESVIRUS 6 (HHV-6)

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	90	-	-
No test result	1	-	-

Not in test selection	2	-	-	-
Total:	93			

Method	Negative	No test result	Not in test selection	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	81	-	-	81
In house	-	1	-	1
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 1 (Virus I)	2	-	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	2	-	-	2
Total:	90	1	2	93

HUMAN PARECHOVIRUS (HPEV)

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	90	-	-
No test result	1	-	-
Not in test selection	2	-	-
Total:	93		

Method	Negative	No test result	Not in test selection	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	80	-	-	80
In house	-	1	-	1
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 2 (Virus II)	2	-	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	1	-	-	1
Siemens Fast Track Diagnostics FTD Viral meningitis	2	-	-	2
Total:	90	1	2	93

LISTERIA MONOCYTOGENES

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	88	-	-
No test result	1	-	-
Not in test selection	4	-	-
Total:	93		

Method	Negative	No test result	Not in test selection	Total:
bioMerieux FilmArray Meningitis/Encephalitis Panel	81	-	-	81
In house	1	1	-	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 3 (Bacteria)	1	-	-	1
Seegene Seeplex Meningitis-B ACE Detection	1	-	-	1
Total:	88	1	4	93

NEISSERIA MENINGITIDIS

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	88	-	-
No test result	1	-	-
Not in test selection	4	-	-
Total:	93		

Method	Negative	No test result	Not in test selection	Total:
BioGX Bacterial Meningitis NSH	1	-	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	80	-	-	80
In house	1	1	-	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 3 (Bacteria)	2	-	-	2
Total:	88	1	4	93

STREPTOCOCCUS AGALACTIAE

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	87	-	-
No test result	1	-	-
Not in test selection	5	-	-

Total:	93			
Method	Negative	No test result	Not in test selection	Total:
bioMerieux FilmArray Meningitis/Encephalitis Panel	81	-	-	81
In house	-	1	-	1
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 3 (Bacteria)	1	-	-	1
Seegene Seeplex Meningitis-B ACE Detection	1	-	-	1
Total:	87	1	5	93

STREPTOCOCCUS PNEUMONIAE

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	89	-	-
No test result	1	-	-
Not in test selection	3	-	-
Total:	93		

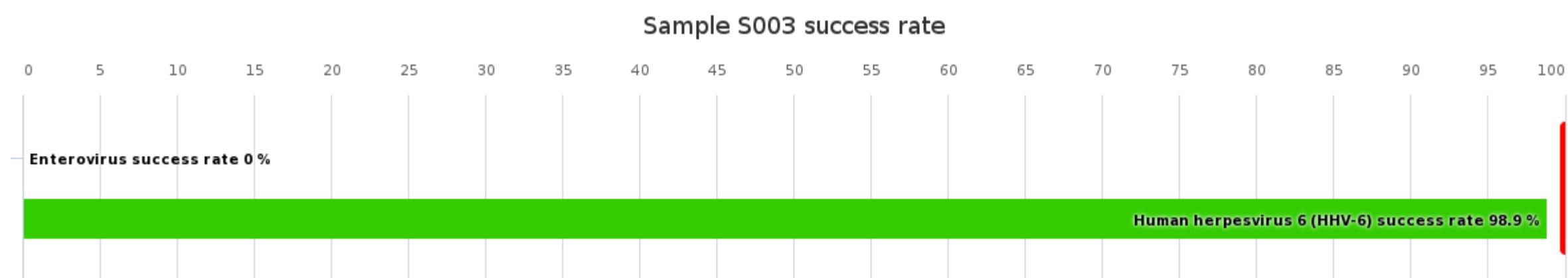
Method	Negative	No test result	Not in test selection	Total:
bioMerieux FilmArray Meningitis/Encephalitis Panel	81	-	-	81
In house	1	1	-	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 3 (Bacteria)	2	-	-	2
Siemens Fast Track Diagnostics FTD Bacterial meningitis	1	-	-	1
Total:	89	1	3	93

VARIZELLA-ZOSTER VIRUS (VZV)

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	92	-	-
No test result	1	-	-
Total:	93		

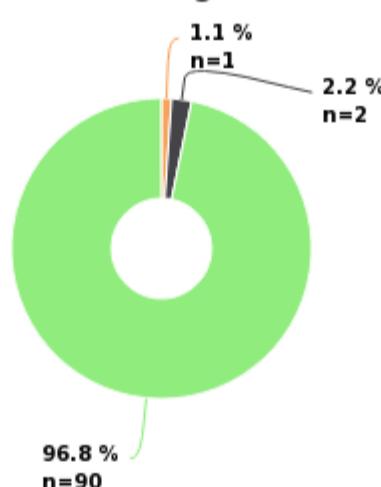
Method	Negative	No test result	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	81	-	81
In house	1	1	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	4
Seegene Allplex Meningitis Panel 1 (Virus I)	2	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	1	-	1
Siemens Fast Track Diagnostics FTD Viral meningitis	2	-	2
Total:	92	1	93

Sample S003 | Human herpesvirus 6 (HHV-6)



Sample S003 results	Responded	AVR success rate
	Number of pathogenic findings	-
	Cryptococcus neoformans	-
	Cryptococcus neoformans/gattii	-
	Cytomegalovirus (CMV)	-
	Enterovirus	0 %
	Epstein-Barr virus (EBV)	-
	Escherichia coli K1	-
	Haemophilus influenzae	-
	Herpes simplex virus 1 (HSV-1)	-
	Herpes simplex virus 2 (HSV-2)	-
	Human herpesvirus 6 (HHV-6)	98.9 %
	Human parechovirus (HPeV)	-
	Listeria monocytogenes	-
	Neisseria meningitidis	-
	Streptococcus agalactiae	-
	Streptococcus pneumoniae	-
	Varizella-zoster virus (VZV)	-
Total:		97.8 %

Sample S003 Number of pathogenic findings



■ Interpretation cannot be given
 ■ Negative sample, no pathogens detected
 ■ Positive sample, 1 pathogen detected

NUMBER OF PATHOGENIC FINDINGS

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Interpretation cannot be given	1	-	-
Negative sample, no pathogens detected	2	-	-
Positive sample, 1 pathogen detected	90	-	-
Total:	93		

CRYPTOCOCCUS NEOFORMANS

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	3	-	-
Not in test selection	90	-	-

Total:	93		
Method	Negative	Not in test selection	Total:
In house	3	-	3
Total:	3	90	93

CRYPTOCOCCUS NEOFORMANS/GATTII

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	84	-	-
No test result	1	-	-
Not in test selection	8	-	-
Total:	93		

Method	Negative	No test result	Not in test selection	Total:
bioMerieux FilmArray Meningitis/Encephalitis Panel	80	-	-	80
In house	-	1	-	1
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Total:	84	1	8	93

CYTOMEGALOVIRUS (CMV)

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	87	-	-
No test result	1	-	-
Not in test selection	5	-	-
Total:	93		

Method	Negative	No test result	Not in test selection	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	81	-	-	81
In house	1	1	-	2
Seegene Allplex Meningitis Panel 1 (Virus I)	2	-	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	2	-	-	2
Total:	87	1	5	93

ENTEROVIRUS

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	91	-	-
No test result	1	-	-
Positive	1	0 %	0
Total:	93	0 %	

Method	Negative	No test result	Positive	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	80	-	1	81
In house	1	1	-	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 2 (Virus II)	2	-	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	1	-	-	1
Siemens Fast Track Diagnostics FTD Viral meningitis	2	-	-	2
Total:	91	1	1	93

EPSTEIN-BARR VIRUS (EBV)

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	7	-	-
Not in test selection	86	-	-
Total:	93		

Method	Negative	Not in test selection	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	1
In house	2	-	2
Seegene Allplex Meningitis Panel 1 (Virus I)	2	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	2	-	2
Total:	7	86	93

ESCHERICHIA COLI K1

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	87	-	-
No test result	1	-	-
Not in test selection	5	-	-
Total:	93		

Method	Negative	No test result	Not in test selection	Total:
bioMerieux FilmArray Meningitis/Encephalitis Panel	81	-	-	81
In house	-	1	-	1
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 3 (Bacteria)	2	-	-	2
Total:	87	1	5	93

HAEMOPHILUS INFLUENZAE

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	88	-	-
No test result	1	-	-
Not in test selection	4	-	-
Total:	93		

Method	Negative	No test result	Not in test selection	Total:
bioMerieux FilmArray Meningitis/Encephalitis Panel	81	-	-	81
In house	-	1	-	1
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 3 (Bacteria)	2	-	-	2
Siemens Fast Track Diagnostics FTD Bacterial meningitis	1	-	-	1
Total:	88	1	4	93

HERPES SIMPLEX VIRUS 1 (HSV-1)

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	92	-	-
No test result	1	-	-
Total:	93		

Method	Negative	No test result	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	81	-	81
In house	1	1	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	4
Seegene Allplex Meningitis Panel 1 (Virus I)	2	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	1	-	1
Siemens Fast Track Diagnostics FTD Viral meningitis	2	-	2
Total:	92	1	93

HERPES SIMPLEX VIRUS 2 (HSV-2)

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	92	-	-
No test result	1	-	-
Total:	93		

Method	Negative	No test result	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	81	-	81
In house	1	1	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	4
Seegene Allplex Meningitis Panel 1 (Virus I)	2	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	1	-	1
Siemens Fast Track Diagnostics FTD Viral meningitis	2	-	2
Total:	92	1	93

HUMAN HERPESVIRUS 6 (HHV-6)

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	1	0 %	0
No test result	1	-	-

Not in test selection	2	-	-
Positive	89	100 %	2
Total:	93	98.9 %	

Method	Negative	No test result	Not in test selection	Positive	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	-	-	-	1	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	1	-	-	80	81
In house	-	1	-	-	1
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	-	-	-	4	4
Seegene Allplex Meningitis Panel 1 (Virus I)	-	-	-	2	2
Siemens Fast Track Diagnostics FTD Neuro 9	-	-	-	2	2
Total:	1	1	2	89	93

HUMAN PARECHOVIRUS (HPEV)

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	90	-	-
No test result	1	-	-
Not in test selection	2	-	-
Total:	93		

Method	Negative	No test result	Not in test selection	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	80	-	-	80
In house	-	1	-	1
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 2 (Virus II)	2	-	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	1	-	-	1
Siemens Fast Track Diagnostics FTD Viral meningitis	2	-	-	2
Total:	90	1	2	93

LISTERIA MONOCYTOGENES

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	88	-	-
No test result	1	-	-
Not in test selection	4	-	-
Total:	93		

Method	Negative	No test result	Not in test selection	Total:
bioMerieux FilmArray Meningitis/Encephalitis Panel	81	-	-	81
In house	1	1	-	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 3 (Bacteria)	1	-	-	1
Seegene Seeplex Meningitis-B ACE Detection	1	-	-	1
Total:	88	1	4	93

NEISSERIA MENINGITIDIS

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	88	-	-
No test result	1	-	-
Not in test selection	4	-	-
Total:	93		

Method	Negative	No test result	Not in test selection	Total:
BioGX Bacterial Meningitis NSH	1	-	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	80	-	-	80
In house	1	1	-	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 3 (Bacteria)	2	-	-	2
Total:	88	1	4	93

STREPTOCOCCUS AGALACTIAE

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	87	-	-
No test result	1	-	-

Not in test selection	5	-	-
Total:	93		

Method	Negative	No test result	Not in test selection	Total:
bioMerieux FilmArray Meningitis/Encephalitis Panel	81	-	-	81
In house	-	1	-	1
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 3 (Bacteria)	1	-	-	1
Seegene Seeplex Meningitis-B ACE Detection	1	-	-	1
Total:	87	1	5	93

STREPTOCOCCUS PNEUMONIAE

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	89	-	-
No test result	1	-	-
Not in test selection	3	-	-
Total:	93		

Method	Negative	No test result	Not in test selection	Total:
bioMerieux FilmArray Meningitis/Encephalitis Panel	81	-	-	81
In house	1	1	-	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	-	4
Seegene Allplex Meningitis Panel 3 (Bacteria)	2	-	-	2
Siemens Fast Track Diagnostics FTD Bacterial meningitis	1	-	-	1
Total:	89	1	3	93

VARIZELLA-ZOSTER VIRUS (VZV)

Interpretation	Interpretation count	AVR success rate	Interpretation Score
Negative	92	-	-
No test result	1	-	-
Total:	93		

Method	Negative	No test result	Total:
Anatolia Geneworks Bosphore CNS Panel Kit	1	-	1
bioMerieux FilmArray Meningitis/Encephalitis Panel	81	-	81
In house	1	1	2
Qiagen QIAstat-Dx Meningitis/Encephalitis Panel	4	-	4
Seegene Allplex Meningitis Panel 1 (Virus I)	2	-	2
Siemens Fast Track Diagnostics FTD Neuro 9	1	-	1
Siemens Fast Track Diagnostics FTD Viral meningitis	2	-	2
Total:	92	1	93

Report Info**PARTICIPANTS**

Altogether 91 laboratories from 20 countries participated in this EQA round.

REPORT INFO

The reported results and the scores are presented in the same summary. Sample specific results are shown in the tables as counts. The expected results are indicated in the tables with green colour. The laboratory's own result is shown by a black radio button .

You can view the result distribution of each specimen and pathogen on screen one by one. The tables can be opened and closed by clicking the screen button at the right end of the row. The result tables of pathogens with a negative result expectation and for which no deviating results have been reported are by default closed for clarification of the report.

The participant's own success is shown both as scores and as success rates (%) generated from the score values. They are presented both in the summary and in the sample specific parts of the report. If you have no 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 participants are scored according to their test selection. The round is scored based on test results when 60% or more of the participants report the expected result and when at least three results are reported.

In general, only the positive findings are scored for each specimen. It is expected that the pathogens indicated in the sample content are to be identified, whereas other deviating findings will reduce the overall success rate. For those specimens that are negative regarding all pathogens included in the panel of this scheme, the scoring is based on the answer given to the question "number of pathogenic findings" and the expected result would be "Negative sample, no pathogens detected". Answer "No test result" and "Invalid/unclear test result" will be excluded from the scoring.

The scoring range is 0-2 points and the following general rules are followed:

2/2 points is given to results that are correct/accepted regarding the expected result

1/2 point can be given to results that are partly correct/insufficient regarding the expected result

0/2 point is given to results that are incorrect/false regarding the expected result

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

Meningitis-encephalitis multiplex, nucleic acid detection Round 1, 2023

Specimens

The samples were artificial. Based on the quality controls conducted by the sample material manufacturer and the results obtained in the round, the sample lots are to be considered as homogeneous, stable, and suitable for external quality assessment. The materials were sent without temperature control packaging.

The sample material was tested by the manufacturer prior to the distribution by In-house and BioFire FilmArray ME Panel (bioMerieux) methods. The results were as expected for all three sample lots by both methods.

The expected results were as follows:

Sample S001 (LQ782723011)
Enterovirus (echovirus) positive
 C_t value by In-house method: 27.52

Sample S002 (LQ782723012)
Haemophilus influenzae positive
 C_t value by In-house method: 21.87

Sample S003 (LQ782723013)
Human herpesvirus 6 (HHV-6) positive
 C_t value by In-house method: 19.16

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, as it contains important information of the samples and results in each round.

Comments – EQA Coordinator

Altogether 90 out of 91 laboratories reported their results before closing date. A few participants reported results for multiple sample sets, and therefore the total number of results per analyte is 93. The vast majority of the laboratories reported the expected results, though some discrepancies were noted.

Two participants reported sample S001 falsely as enterovirus negative. In both cases the erroneous result was most probably due to a mix-up of samples. One reported sample S001 as HHV-6 positive and sample S003 as enterovirus positive, respectively. In the other case, sample S002 was reported as enterovirus positive.

All laboratories that included *Haemophilus influenzae* in their test selection, succeeded to report sample S002 correctly as positive.

All but one participant reported the HHV-6 positive sample S003 as expected. As previously mentioned, the erroneously reported result was probably due to a mix-up of samples S001 and S003.

Encouragingly, more participants than before had reported their C_t values, however the number is still too low to be able to present appropriate reference values.

2023-03-06

FINAL REPORT

Product no. 5303

Samples sent	2023-01-31
Round closed	2023-02-24
Expected results	2023-02-28
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
Yvonne Björkman
yvonne.bjorkman@labquality.fi

Expert

Ph.D., Clinical microbiologist,
Vesa Mäki-Koivisto
Nordlab, Oulu, 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



Exceptions in scoring

No exceptions.

End of report

Copyright © Labquality Oy

Labquality does not permit any reproduction for commercial purposes of any portion of the material subject to this copyright. Labquality prohibits any use of its name, or reference to Labquality EQA program, or material in this report in any advertising, brochures or other commercial publications. Labquality EQA data do not necessarily indicate the superiority of instruments, reagents, testing equipments or materials used by participating laboratories. Use of Labquality EQA data to suggest superiority or inferiority of equipments or materials may be deceptive and misleading. Proficiency test results are handled confidentially. Labquality will not issue any statements to third parties of the performance of laboratories in external quality assessment schemes unless otherwise agreed.