

Anhang 1: Ergebnisse der Ringversuchsserie „Bakterien- und Pilzgenom-Nachweis (PCR/NAT)“ November 2014

Anhang 1 zu:

Reischl U, Schneider W, Holzmann T, Ehrenschwender M, Hiergeist A, Maaß M, Straube E, Frangoulidis D, Grass G, Splettstößer W, Fingerle V, Sing A, Jacobs E, Reiter-Owona I, Kaase M. Bakterien- und Pilzgenom-Nachweis PCR/NAT: Auswertung des Ringversuchs November 2014 von INSTAND e.V. zur externen Qualitätskontrolle molekularbiologischer Nachweisverfahren in der bakteriologischen Diagnostik. *GMS Z Forder Qualitätssich Med Lab.* 2014;5:Doc05. DOI: 10.3205/lab000015, URN: urn:nbn:de:0183-lab0000158

Attachment 1: Results of the proficiency testing scheme “Bacterial and Fungal Genome Detection (PCR/NAT)” November 2014

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PCR-/NAT *C. trachomatis* & GO (RV 530) November 2014



Tabelle 1: Probenzusammensetzung und erwartetes Ergebnis.
Sample composition and expected results.

	Erwartet / expected		Probenzusammensetzung / Sample composition
1425301	∅ / +	63	<i>Neisseria gonorrhoeae</i> (~ 1x10 ³ CFU/mL)
1425302	∅ / ++	63	<i>Neisseria gonorrhoeae</i> (~ 1x10 ⁴ CFU/mL)
1425303	+++ / +++	62	<i>Chlamydia trachomatis</i> (~ 1x10 ⁵ IFU/mL) <i>Neisseria gonorrhoeae</i> (~ 1x10 ⁵ CFU/mL)
1425304	++ / ∅	61	<i>Chlamydia trachomatis</i> (~ 1x10 ⁴ IFU/mL)

Tabelle 2: Häufigkeit der Mitteilung verschiedener Befunde.
Absolute numbers of reported individual results.

n = 169	Probennummer (Sample no.)				Inhibition				
	1425301	1425302	1425303	1425304	1425301	1425302	1425303	1425304	
Befund <i>Result</i>									
Positiv CT	0	0	3	161	n.d.	0	0	0	0
Positiv CT & GO	0	0	164	4	nein / no	169	169	169	169
Positiv GO	166	165	1	0	ja / yes	0	0	0	0
Negativ	3	4	0	4					
Fraglich / <i>questionable</i>	0	0	1	0					

Tabelle 3: Häufigkeit richtig positiver und richtig negativer NAT-Befunde bei Anwendern verschiedener Methoden.
Absolute numbers and relative frequency of reported true positive and true negative results among various NAT methods.

NAT-Methode [Code] (total number *)	NAT richtig positiv <i>True positive results</i>			NAT richtig negativ <i>True negative results</i>		
	Absolut <i>Absolute</i>	Relativ <i>Relative</i>	%	Absolut <i>Absolute</i>	Relativ <i>Relative</i>	%
GenProbe CT/NG [20] (n = 7)	25	25 / 28	89	0	0 / 0	0
LightMix CT/NG [21] (n = 8)	31	31 / 32	97	0	0 / 0	0
Roche COBAS [22] (n = 30)	114	114 / 120	95	0	0 / 0	0
Cepheid Xpert CT/NG [23] (n = 11)	44	44 / 44	100	0	0 / 0	0
BD ProbeTec [24] (n = 18)	72	72 / 72	100	0	0 / 0	0
Artus CT [25] (n = 2)	8	8 / 8	100	0	0 / 0	0
Abbott RealTime CT/NG [26] (n = 34)	136	136 / 136	100	0	0 / 0	0
Other commercial tests [27] (n = 49)	190	190 / 195 [§]	97	0	0 / 0	0
In house PCR assay [28] (n = 14)	56	56 / 56	100	0	0 / 0	0
Andere / k.A. / other [29] (n = 5)	20	20 / 20	100	0	0 / 0	0

* Durch Mehrfachnennung oder fehlende Angabe kann die absolute Zahl der Ergebnisse (Tab. 2) von der Anzahl der Teilnehmer abweichen.
Due to reporting results of multiple assay systems or missing specifications, the effective numbers are not correlating with the number of participants

[§] Due to reporting questionable results, the number of true results (denominator in the „relative“ column) has been reduced.

Tabelle 4: Häufigkeit der Mitteilung verschiedener Befunde. Anmerkung: in dieser Tabelle sind nur die Ergebnisse für *Chlamydia trachomatis* dargestellt.

Absolute numbers of reported individual results. Note: only the C. trachomatis-specific results are depicted in this table

<i>n</i> = 168	Probennummer (Sample no.)					Inhibition			
	1425301	1425302	1425303	1425304		1425301	1425302	1425303	1425304
Befund <i>Result</i>									
Positiv	0	0	168	165	n.d.	0	0	0	0
Negativ	168	168	0	3	nein <i>no</i>	168	168	168	168
Fraglich <i>Questionable</i>	0	0	0	0	ja <i>yes</i>	0	0	0	0

Tabelle 5: Häufigkeit richtig positiver und richtig negativer NAT-Befunde bei Anwendern verschiedener Methoden. Anmerkung: in dieser Tabelle sind nur die Ergebnisse für *Chlamydia trachomatis* dargestellt.

Absolute numbers and relative frequency of reported true positive and true negative results among various NAT methods. Note: only the C. trachomatis-specific results are depicted in this table.

NAT-Methode (nur CT) [Code] (total number *)	NAT richtig positiv <i>True positive results</i>			NAT richtig negativ <i>True negative results</i>		
	Absolut <i>Absolute</i>	Relativ <i>Relative</i>	%	Absolut <i>Absolute</i>	Relativ <i>Relative</i>	%
GenProbe CT/NG [20] (n = 7)	11	11 / 14	79	14	14 / 14	100
LightMix CT/NG [21] (n = 8)	16	16 / 16	100	16	16 / 16	100
Roche COBAS [22] (n = 30)	60	60 / 60	100	60	60 / 60	100
Cepheid Xpert CT/NG [23] (n = 11)	22	22 / 22	100	22	22 / 22	100
BD ProbeTec [24] (n = 18)	36	36 / 36	100	36	36 / 36	100
Artus CT [25] (n = 2)	4	4 / 4	100	4	4 / 4	100
Abbott RealTime CT/NG [26] (n = 34)	68	68 / 68	100	68	68 / 68	100
Other commercial tests [27] (n = 48)	94	94 / 96	98	96	96 / 96	100
In house PCR assay [28] (n = 14)	28	28 / 28	100	28	28 / 28	100
Andere / k.A. / other [29] (n = 5)	10	10 / 10	100	10	10 / 10	100

* Durch Mehrfachnennung oder fehlende Angabe kann die absolute Zahl der Ergebnisse (Tab. 2) von der Anzahl der Teilnehmer abweichen.
Due to reporting results of multiple assay systems or missing specifications, the effective numbers are not correlating with the number of participants

Tabelle 6: Häufigkeit der Mitteilung verschiedener Befunde. Anmerkung: in dieser Tabelle sind nur die Ergebnisse für *Neisseria gonorrhoeae* dargestellt.

Absolute numbers of reported individual results. Note: only the *N. gonorrhoeae*-specific results are depicted in this table

n = 166	Probennummer (Sample no.)					Inhibition			
	1425301	1425302	1425303	1425304		1425301	1425302	1425303	1425304
Befund Result									
Positiv	166	165	165	4	n.d.	0	0	0	0
Negativ	0	1	0	162	nein no	166	166	165	166
Fraglich Questionable	0	0	1	0	ja yes	0	0	1	0

Tabelle 7: Häufigkeit richtig positiver und richtig negativer NAT-Befunde bei Anwendern verschiedener Methoden. Anmerkung: in dieser Tabelle sind nur die Ergebnisse für *Neisseria gonorrhoeae* dargestellt.

Absolute numbers and relative frequency of reported true positive and true negative results among various NAT methods. Note: only the *N. gonorrhoeae*-specific results are depicted in this table.

NAT-Methode (nur GO) [Code] (total number *)	NAT richtig positiv True positive results			NAT richtig negativ True negative results		
	Absolut Absolute	Relativ Relative	%	Absolut Absolute	Relativ Relative	%
GenProbe CT/NG [20] (n = 7)	21	21 / 21	100	7	7 / 7	100
LightMix CT/NG [21] (n = 8)	23	23 / 24	96	8	8 / 8	100
Roche COBAS [22] (n = 28)	84	84 / 84	100	28	28 / 28	100
Cepheid Xpert CT/NG [23] (n = 11)	33	33 / 33	100	10	10 / 11	91
BD ProbeTec [24] (n = 18)	54	54 / 54	100	18	18 / 18	100
Artus CT [25] (n = 2)	6	6 / 6	100	2	2 / 2	100
Abbott RealTime CT/NG [26] (n = 34)	102	102 / 102	100	32	32 / 34	94
Other commercial tests [27] (n = 48)	143	143/ 143 [§]	100	47	47 / 48	98
In house PCR assay [28] (n = 14)	42	42 / 42	100	14	14 / 14	100
Andere / k.A. / other [29] (n = 5)	15	15 / 15	100	5	5 / 5	100

* Durch Mehrfachnennung oder fehlende Angabe kann die absolute Zahl der Ergebnisse (Tab. 2) von der Anzahl der Teilnehmer abweichen.
Due to reporting results of multiple assay systems or missing specifications, the effective numbers are not correlating with the number of participants

[§] Due to reporting questionable results, the number of true results (denominator in the „relative“ column) has been reduced.

Comments: ¹⁾ Three of the 169 participants performed only *C. trachomatis* detection. One of the 169 participants performed only *N. gonorrhoeae*-specific assays, whereas the other 165 laboratories detected both target organisms in a combined manner.

PCR-/NAT *Chlamydia trachomatis* (RV 531) November 2014



Tabelle 1: Probenzusammensetzung und erwartetes Ergebnis.
Sample composition and expected results.

	<i>Erwartet / expected</i>		<i>Probenzusammensetzung / Sample composition</i>
1425311	+	61	<i>Chlamydia trachomatis</i> (~ 5x10 ³ IFU/mL)
1425312	+++	61	<i>Chlamydia trachomatis</i> (~ 1x10 ⁵ IFU/mL)
1425313	∅	62	<i>Escherichia coli</i> K12
1425314	++	61	<i>Chlamydia trachomatis</i> (~ 1x10 ⁴ IFU/mL)

Tabelle 2: Häufigkeit der Mitteilung verschiedener Befunde.
Absolute numbers of reported individual results.

<i>n</i> = 103	<i>Probennummer (Sample no.)</i>					<i>Inhibition</i>			
	1425311	1425312	1425313	1425314		1425311	1425312	1425313	1425314
Befund <i>Result</i>									
Positiv	103	102	0	101	n.d.	0	0	0	0
Negativ	0	1	102	2	nein <i>no</i>	103	103	102	103
Fraglich <i>Questionable</i>	0	0	1	0	ja <i>yes</i>	0	0	1	0

Tabelle 3: Häufigkeit richtig positiver und richtig negativer NAT-Befunde bei Anwendern verschiedener Methoden.
Absolute numbers and relative frequency of reported true positive and true negative results among various NAT methods.

NAT-Methode [Code] (total number *)	NAT richtig positiv <i>True positive results</i>			NAT richtig negativ <i>True negative results</i>		
	Absolut <i>Absolute</i>	Relativ <i>Relative</i>	%	Absolut <i>Absolute</i>	Relativ <i>Relative</i>	%
Hain GenoQuick CT [20] (n = 13)	37	37 / 39	95	13	13 / 13	100
TIB Molbiol LightMix CT [21] (n = 3)	9	9 / 9	100	3	3 / 3	100
Roche COBAS CT [22] (n = 26)	77	77 / 78	99	26	26 / 26	100
Cepheid Xpert CT/NG [23] (n = 3)	9	9 / 9	100	3	3 / 3	100
BD ProbeTec [24] (n = 15)	45	45 / 45	100	15	15 / 15	100
Artus CT [25] (n = 10)	30	30 / 30	100	10	10 / 10	100
Abbott CT/NG [26] (n = 3)	9	9 / 9	100	3	3 / 3	100
Other commercial tests [27] (n = 22)	66	66 / 66	100	21	21 / 21 §	100
<i>In house</i> PCR assay [28] (n = 10)	30	30 / 30	100	10	10 / 10	100

* Durch Mehrfachnennung oder fehlende Angabe kann die absolute Zahl der Ergebnisse (Tab. 2) von der Anzahl der Teilnehmer abweichen.
Due to reporting results of multiple assay systems or missing specifications, the effective numbers are not correlating with the number of participants

§ Due to reporting questionable results, the number of true results (denominator in the „relative“ column) has been reduced.

PCR-/NAT *Bordetella pertussis* (RV 532) November 2014



Tabelle 1: Probenzusammensetzung und erwartetes Ergebnis.
Sample composition and expected results.

	<i>Erwartet / expected</i>		<i>Probenzusammensetzung / Sample composition</i>
1425321	∅	62	<i>Bordetella holmesii</i> (IS481-pos.) (~ 1x10 ⁵ CFU/mL)
1425322	∅	62	<i>Escherichia coli</i> K12
1425323	∅	62	<i>Bordetella parapertussis</i> (~ 1x10 ⁵ CFU/mL)
1425324	++	61	<i>Bordetella pertussis</i> (~ 1x10 ⁵ CFU/mL)

Tabelle 2: Häufigkeit der Mitteilung verschiedener Befunde.
Absolute numbers of reported individual results.

<i>n</i> = 137	<i>Probennummer (Sample no.)</i>					<i>Inhibition</i>			
	1425321	1425322	1425323	1425324		1425321	1425322	1425323	1425324
Befund <i>Result</i>									
Positiv	95	0	4	137	n.d.	3	3	3	3
Negativ	40	137	133	0	nein <i>no</i>	134	134	134	134
Fraglich <i>Questionable</i>	2	0	0	0	ja <i>yes</i>	0	0	0	0

Tabelle 3: Häufigkeit richtig positiver und richtig negativer NAT-Befunde bei Anwendern verschiedener Methoden.

Absolute numbers and relative frequency of reported true positive and true negative results among various NAT methods.

NAT-Methode [Code] (total number *)	NAT richtig positiv <i>True positive results</i>			NAT richtig negativ <i>True negative results</i>		
	Absolut <i>Absolute</i>	Relativ <i>Relative</i>	%	Absolut <i>Absolute</i>	Relativ <i>Relative</i>	%
TIB Molbiol LightMix BP [20] (n = 12)	12	12 / 12	100	25	25 / 36	69
Diagenode <i>B.pertussis</i> [21] (n = 9)	9	9 / 9	100	18	18 / 27	67
GenoQuick <i>Bordetella</i> [22] (n = 8)	8	8 / 8	100	17	17 / 24	71
RIDAGENE <i>Bordetella</i> [23] (n = 14)	14	14 / 14	100	41	41 / 42	98
Other commercial tests [27] (n = 34)	34	34 / 34	100	80	80 / 102	78
<i>In house</i> PCR assay [28] (n = 60)	60	60 / 60	100	131	131 / 178 [§]	74
Andere / k.A. / other [29] (n = 2)	2	2 / 2	100	4	4 / 6	67

* Durch Mehrfachnennung oder fehlende Angabe kann die absolute Zahl der Ergebnisse (Tab. 2) von der Anzahl der Teilnehmer abweichen.
Due to reporting results of multiple assay systems or missing specifications, the effective numbers are not correlating with the number of participants

[§] Due to reporting questionable results, the number of true results (denominator in the „relative“ column) has been reduced.

PCR-/NAT *Helicobacter pylori* (RV 533) November 2014



Tabelle 1: Probenzusammensetzung und erwartetes Ergebnis.
Sample composition and expected results.

	<i>Erwartet / expected</i>		<i>Probenzusammensetzung / Sample composition</i>
1425331	+++	61/71	<i>Helicobacter pylori</i> (~ 5x10 ⁵ CFU/mL) Clarithromycin resistant (GGA mut. in 23S rDNA)
1425332	++	61/71	<i>Helicobacter pylori</i> (~ 1x10 ⁵ CFU/mL) Clarithromycin resistant (GGA mut. in 23S rDNA)
1425333	∅	62	<i>Escherichia coli</i> K12
1425334	+	61/71	<i>Helicobacter pylori</i> (~ 1x10 ⁴ CFU/mL) Clarithromycin resistant (GGA mut. in 23S rDNA)

Tabelle 2: Häufigkeit der Mitteilung verschiedener Befunde.
Absolute numbers of reported individual results.

<i>n</i> = 38	<i>Probennummer (Sample no.)</i>					<i>Inhibition</i>			
	1425331	1425332	1425333	1425334		1425331	1425332	1425333	1425334
Befund <i>Result</i>									
Positiv	38 ¹⁾	38 ¹⁾	0	38	n.d.	1	1	1	1
Negativ	0	0	38	0	nein <i>no</i>	37	37	37	37
Fraglich <i>Questionable</i>	0	0	0	0	ja <i>yes</i>	0	0	0	0

Tabelle 3: Häufigkeit richtig positiver und richtig negativer NAT-Befunde bei Anwendern verschiedener Methoden.
Absolute numbers and relative frequency of reported true positive and true negative results among various NAT methods.

NAT-Methode [Code] (total number *)	NAT richtig positiv <i>True positive results</i>			NAT richtig negativ <i>True negative results</i>		
	Absolut <i>Absolute</i>	Relativ <i>Relative</i>	%	Absolut <i>Absolute</i>	Relativ <i>Relative</i>	%
Hain GenoType Helico [25] (n = 15)	45	45 / 45	100	15	15 / 15	100
Ingenetix ClariRes [26] (n = 3)	9	9 / 9	100	3	3 / 3	100
Commercial assay [27] (n = 1)	3	3 / 3	100	1	1 / 1	100
In house PCR assay [28] (n = 21)	63	63 / 63	100	21	21 / 21	100

* Durch Mehrfachnennung oder fehlende Angabe kann die absolute Zahl der Ergebnisse (Tab. 2) von der Anzahl der Teilnehmer abweichen.
Due to reporting results of multiple assay systems or missing specifications, the effective numbers are not correlating with the number of participants

Comments: ¹⁾ Thirty two of the 38 participants reported results for molecular Clarithromycin-susceptibility testing. All reported results were correct.

PCR-/NAT EHEC / STEC (RV 534) November 2014



Tabelle 1: Probenzusammensetzung und erwartetes Ergebnis.
Sample composition and expected results.

	<i>Erwartet / expected</i>		<i>Probenzusammensetzung / Sample composition</i>
1425341	∅	62 / 77	EPEC (~1x10 ⁴ CFU/mL) (<i>eae</i> positive)
1425342	∅	62	<i>Escherichia coli</i> K12 (negative for <i>eae</i> and <i>hlyA</i>)
1425343	+++	61 / 71,72,77,78	EHEC (~1x10 ⁵ CFU/mL) (<i>stx-1</i> , <i>stx-2</i> , <i>eae</i> , <i>hlyA</i> and O157 positive)
1425344	++	61 / 71,72,77,78	EHEC (~1x10 ⁴ CFU/mL) (<i>stx-1</i> , <i>stx-2</i> , <i>eae</i> , <i>hlyA</i> and O157 positive)

Tabelle 2: Häufigkeit der Mitteilung verschiedener Befunde.
Absolute numbers of reported individual results.

<i>n</i> = 116	Probennummer (Sample no.)				Inhibition				
Befund <i>Result</i>	1425341	1425342	1425343	1425344	1425341	1425342	1425343	1425344	
Positiv	0 ²⁾	0	116 ¹⁾	111 ¹⁾	n.d.	1	1	1	1
Negativ	115 ²⁾	116	0	5	nein <i>no</i>	115	115	115	115
Fraglich <i>Questionable</i>	1	0	0	0	ja <i>yes</i>	0	0	0	0

Tabelle 3: Häufigkeit richtig positiver und richtig negativer NAT-Befunde bei Anwendern verschiedener Methoden.

Absolute numbers and relative frequency of reported true positive and true negative results among various NAT methods.

NAT-Methode [Code] (total number *)	NAT richtig positiv <i>True positive results</i>			NAT richtig negativ <i>True negative results</i>		
	Absolut <i>Absolute</i>	Relativ <i>Relative</i>	%	Absolut <i>Absolute</i>	Relativ <i>Relative</i>	%
Hain GenoType EHEC [20] (n = 25)	48	48 / 50	96	50	50 / 50	100
Hyplex EHEC [21] (n = 5)	10	10 / 10	100	10	10 / 10	100
r-Biopharm RIDAGENE [22] (n = 25)	50	50 / 50	100	50	50 / 50	100
Other commercial tests [27] (n = 11)	21	21 / 22	95	22	22 / 22	100
<i>In house</i> PCR assay [28] (n = 49)	96	96 / 98	98	97	97 / 97 [§]	100
Anderer/ k.A. / other [29] (n = 1)	2	2 / 2	100	2	2 / 2	100

[§] Due to reporting questionable results, the number of true results (denominator in the „relative“ column) has been reduced.

Comments:

¹⁾ Partial or complete shiga toxin subtyping, *eae*-, and *hlyA*-detection was performed by 101 laboratories. With the exception of 2 laboratories, all reported results were correct.

²⁾ Nineteen of the 116 participants have reported a (false) positive result for sample # 1425341, but indicated the molecular detection of *eae* / intimin gene only. As this sample contained an EPEC isolate, the reported "eae-positive" results are theoretically correct. So we re-assigned the solely positive *eae* detection to EPEC and classified them "negative" for EHEC target organisms.

PCR-/NAT *Borrelia burgdorferi* (RV 535) November 2014



Tabelle 1: Probenzusammensetzung und erwartetes Ergebnis.
Sample composition and expected results.

	<i>Erwartet / expected</i>		<i>Probenzusammensetzung / Sample composition</i>
1425351	+	61	<i>Borrelia spielmanii</i> (~ 1x10 ³ organisms/mL)
1425352	∅	62	<i>Borrelia turicatae</i> (~ 1x10 ⁴ organisms/mL)
1425353	++	61	<i>Borrelia spielmanii</i> (~ 1x10 ⁴ organisms/mL)
1425354	+++	61	<i>Borrelia spielmanii</i> (~ 1x10 ⁵ organisms/mL)

Tabelle 2: Häufigkeit der Mitteilung verschiedener Befunde.
Absolute numbers of reported individual results.

<i>n</i> = 105	Probennummer (Sample no.)				Inhibition				
	1425351	1425352	1425353	1425354	1425351	1425352	1425353	1425354	
Befund <i>Result</i>									
Positiv	94	11	102	104	n.d.	1	1	1	1
Negativ	10	91	2	1	nein <i>no</i>	104	102	104	104
Fraglich <i>Questionable</i>	1	3	1	0	ja <i>yes</i>	0	2	0	0

Tabelle 3: Häufigkeit richtig positiver und richtig negativer NAT-Befunde bei Anwendern verschiedener Methoden.

Absolute numbers and relative frequency of reported true positive and true negative results among various NAT methods.

NAT-Methode [Code] (total number *)	NAT richtig positiv <i>True positive results</i>			NAT richtig negativ <i>True negative results</i>		
	Absolut <i>Absolute</i>	Relativ <i>Relative</i>	%	Absolut <i>Absolute</i>	Relativ <i>Relative</i>	%
artus <i>Borrelia</i> LC Kit [20] (n = 22)	66	66 / 66	100	19	19 / 21 [§]	90
Demeditec GenFlow [21] (n = 6)	16	16 / 18	89	6	6 / 6	100
LightMix <i>Borrelia</i> [22] (n = 6)	17	17 / 17 [§]	100	6	6 / 6	100
Other/commercial tests [27] (n = 17)	50	50 / 51	98	12	12 / 15 [§]	80
<i>In house</i> PCR assay [28] (n = 54)	151	151/ 161 [§]	94	48	48 / 54	89

[§] Due to reporting questionable results, the number of true results (denominator in the „relative“ column) has been reduced.

PCR-/NAT *Legionella pneumophila* (RV 536) November 2014



Tabelle 1: Probenzusammensetzung und erwartetes Ergebnis.
Sample composition and expected results.

	<i>Erwartet / expected</i>		<i>Probenzusammensetzung / Sample composition</i>
1425361	++	61	<i>Legionella pneumophila</i> SG5 (~ 1x10 ⁵ CFU/mL)
1425362	∅	62	<i>Legionella dumoffii</i> (~ 1x10 ⁵ CFU/mL)
1425363	∅	62	<i>Escherichia coli</i> K12
1425364	+++	61	<i>Legionella pneumophila</i> SG5 (~ 1x10 ⁶ CFU/mL)

Tabelle 2: Häufigkeit der Mitteilung verschiedener Befunde.
Absolute numbers of reported individual results.

<i>n</i> = 97	<i>Probennummer (Sample no.)</i>					<i>Inhibition</i>			
	1425361	1425362	1425363	1425364		1425361	1425362	1425363	1425364
Befund <i>Result</i>									
Positiv	96	8	0	96	n.d.	1	1	1	1
Negativ	0	88	97	0	nein <i>no</i>	96	96	96	96
Fraglich <i>Questionable</i>	1 ¹⁾	1 ¹⁾	0	1 ¹⁾	ja <i>yes</i>	0	0	0	0

Tabelle 3: Häufigkeit richtig positiver und richtig negativer NAT-Befunde bei Anwendern verschiedener Methoden.

Absolute numbers and relative frequency of reported true positive and true negative results among various NAT methods.

NAT-Methode [Code] (total number *)	NAT richtig positiv <i>True positive results</i>			NAT richtig negativ <i>True negative results</i>		
	Absolut <i>Absolute</i>	Relativ <i>Relative</i>	%	Absolut <i>Absolute</i>	Relativ <i>Relative</i>	%
LightMix <i>Legionella</i> [25] (n = 7)	14	14 / 14	100	14	14 / 14	100
GeneProof <i>L.pneumophila</i> [26] (n = 5)	10	10 / 10	100	10	10 / 10	100
Other commercial tests [27] (n= 35)	68	68 / 68 §	100	66	66 / 69 §	96
<i>In house</i> PCR assay [28] (n= 50)	100	100 / 100	100	95	95 / 100	95
Andere / k.A. / other [29] (n= 1)	2	2 / 2	100	2	2 / 2	100

§ Due to reporting questionable results, the number of true results (denominator in the „relative“ column) has been reduced.

* Durch Mehrfachnennung oder fehlende Angabe kann die absolute Zahl der Ergebnisse (Tab. 2) von der Anzahl der Teilnehmer abweichen.
Due to reporting results of multiple assay systems or missing specifications, the effective numbers are not correlating with the number of participants

Comments: ¹⁾ All three questionable results corresponded to one participant which reported the use of *Legionella* spp. detection.

PCR-/NAT *Salmonella enterica* (RV 537) November 2014



Tabelle 1: Probenzusammensetzung und erwartetes Ergebnis.
Sample composition and expected results.

	<i>Erwartet / expected</i>		<i>Probenzusammensetzung / Sample composition</i>
1425371	++	61	<i>S. enterica</i> ser. Typhi (~ 1x10 ⁵ CFU/mL)
1425372	++	61	<i>S. enterica</i> ser. Grumpensis (~ 1x10 ⁵ CFU/mL)
1425373	+	61	<i>S. enterica</i> ser. Typhi (~ 1x10 ⁴ CFU/mL)
1425374	∅	62	<i>Escherichia coli</i> K12

Tabelle 2: Häufigkeit der Mitteilung verschiedener Befunde.
Absolute numbers of reported individual results.

<i>n</i> = 15	Probennummer (Sample no.)				Inhibition				
Befund <i>Result</i>	1425371	1425372	1425373	1425374	1425371	1425372	1425373	1425374	
Positiv	15	15	14	0	n.d.	0	0	0	0
Negativ	0	0	1	15	nein <i>no</i>	15	15	15	15
Fraglich <i>Questionable</i>	0	0	0	0	ja <i>yes</i>	0	0	0	0

Tabelle 3: Häufigkeit richtig positiver und richtig negativer NAT-Befunde bei Anwendern verschiedener Methoden.

Absolute numbers and relative frequency of reported true positive and true negative results among various NAT methods.

NAT-Methode [Code] (total number *)	NAT richtig positiv <i>True positive results</i>			NAT richtig negativ <i>True negative results</i>		
	Absolut <i>Absolute</i>	Relativ <i>Relative</i>	%	Absolut <i>Absolute</i>	Relativ <i>Relative</i>	%
Biotecon foodproof Salm. [21] (n = 1)	3	3 / 3	100	1	1 / 1	100
Other commercial tests [27] (n = 9)	27	27 / 27	100	9	9 / 9	100
In house PCR assay [28] (n = 6)	17	17 / 18	94	6	6 / 6	100

* Durch Mehrfachnennung oder fehlende Angabe kann die absolute Zahl der Ergebnisse (Tab. 2) von der Anzahl der Teilnehmer abweichen.
Due to reporting results of multiple assay systems or missing specifications, the effective numbers are not correlating with the number of participants

**PCR-/NAT *Listeria* spp.
(RV 538) November 2014**



Tabelle 1: Probenzusammensetzung und erwartetes Ergebnis.
Sample composition and expected results.

	<i>Erwartet / expected</i>		<i>Probenzusammensetzung / Sample composition</i>
1425381	+++	61 /71	<i>Listeria monocytogenes</i> (~ 1x10 ⁵ CFU/mL)
1425382	+	61 /71	<i>Listeria monocytogenes</i> (~ 1x10 ³ CFU/mL)
1425383	∅	62	<i>Escherichia coli</i> K12
1425384	++	61 /71	<i>Listeria monocytogenes</i> (~ 1x10 ⁴ CFU/mL)

Tabelle 2: Häufigkeit der Mitteilung verschiedener Befunde.
Absolute numbers of reported individual results.

<i>n</i> = 31	Probennummer (Sample no.)				Inhibition				
Befund <i>Result</i>	1425381	1425382	1425383	1425384	1425381	1425382	1425383	1425384	
Positiv	31	26	0	31	n.d.	1	1	1	1
Negativ	0	5	31	0	nein <i>no</i>	30	30	30	30
Fraglich <i>Questionable</i>	0	0	0	0	ja <i>yes</i>	0	0	0	0

Tabelle 3: Häufigkeit richtig positiver und richtig negativer NAT-Befunde bei Anwendern verschiedener Methoden.

Absolute numbers and relative frequency of reported true positive and true negative results among various NAT methods.

NAT-Methode [Code] (total number *)	NAT richtig positiv <i>True positive results</i>			NAT richtig negativ <i>True negative results</i>		
	Absolut <i>Absolute</i>	Relativ <i>Relative</i>	%	Absolut <i>Absolute</i>	Relativ <i>Relative</i>	%
AmpliGnost LM [20] (n = 1)	3	3 / 3	100	1	1 / 1	100
TIB Molbiol LightMix LM [21] (n = 1)	3	3 / 3	100	1	1 / 1	100
Ingenetix BactoReal LM [22] (n = 2)	6	6 / 6	100	2	2 / 2	100
Other commercial tests [27] (n = 4)	12	12 / 12	100	4	4 / 4	100
<i>In house</i> PCR assay [28] (n = 23)	64	64 / 69	93	23	23 / 23	100

PCR-/NAT MRSA / cMRSA (RV 539) November 2014



Tabelle 1: Probenzusammensetzung und erwartetes Ergebnis.
Sample composition and expected results.

	<i>Erwartet / expected</i>		<i>Probenzusammensetzung / Sample composition</i>
1425391	+++	61 / 72	MRSA (<i>S. aureus</i> , oxa ^S , mecA pos., PVL neg., spa:t1613) Genotype: MRSA; Phenotype: MSSA (~ 1x10 ⁵ CFU/mL)
1425392	+++	61 / 71,72	cMRSA (<i>S. aureus</i> , oxa ^R , PVL-pos) (~1x10 ⁵ CFU/mL)
1425393	Ø	62 / 73	CoNS (<i>S. epidermidis</i> , oxa ^R) (~5x10 ⁵ CFU/mL)
1425394	Ø	62 / 73	CoNS (<i>S. epidermidis</i> , oxa ^S) (~1x10 ⁵ CFU/mL)

Tabelle 2: Häufigkeit der Mitteilung verschiedener Befunde.
Absolute numbers of reported individual results.

<i>n = 279</i>	<i>Probennummer (Sample no.)</i>					<i>Inhibition</i>			
	1425391	1425392	1425393	1425394		1425391	1425392	1425393	1425394
Befund <i>Result</i>									
Positiv	276	277 ¹⁾	3	1	n.d.	1	1	1	1
Negativ	2	2	276	277	nein <i>no</i>	278	278	278	277
Fraglich <i>Questionable</i>	1	0	0	1	ja <i>yes</i>	0	0	0	1

Tabelle 3: Häufigkeit richtig positiver und richtig negativer NAT-Befunde bei Anwendern verschiedener Methoden.

Absolute numbers and relative frequency of true positive and true negative results among various NAT methods.

NAT-Methode [Code] (total number *)	NAT richtig positiv <i>True positive results</i>			NAT richtig negativ <i>True negative results</i>		
	Absolut <i>Absolute</i>	Relativ <i>Relative</i>	%	Absolut <i>Absolute</i>	Relativ <i>Relative</i>	%
BD MAX / GeneOhm MRSA [20] (n=34)	68	68 / 68	100	68	68 / 68	100
GT MRSA Direct / GQ MRSA [21] (n=27)	53	53 / 54	98	53	53 / 54	98
RIDAGENE MRSA [22] (n=19)	38	38 / 38	100	37	37 / 38	97
Cepheid Xpert / GeneXpert [24] (n=115)	228	228 / 230	99	227	227 / 229 [§]	99
LC MRSA Advanced (Roche) [25] (n=29)	57	57 / 58	98	58	58 / 58	100
TIB Molbiol LightMix MRSA [26] (n=2)	4	4 / 4	100	4	4 / 4	100
Commercial assay kit [27] (n=28)	55	55 / 56	98	56	56 / 56	100
<i>In house</i> PCR assay [28] (n=30)	59	59 / 59 [§]	100	60	60 / 60	100
Andere / k.A. / other [29] (n=13)	26	26 / 26	100	26	26 / 26	100

* Durch Mehrfachnennung oder fehlende Angabe kann die absolute Zahl der Ergebnisse (Tab. 2) von der Anzahl der Teilnehmer abweichen.
Due to reporting results of multiple assay systems or missing specifications, the effective numbers are not correlating with the number of participants.

[§] Due to reporting questionable results, the number of true results (denominator in the „relative“ column) has been reduced.

Comments: ¹⁾ A dedicated cMRSA identification (*lukFS* gene detection) was performed by 61 laboratories, but obviously only positive results (if observed) were reported. All reported results for cMRSA were correct.

PCR-/NAT *Chlamydia pneumoniae* (RV 540) November 2014



Tabelle 1: Probenzusammensetzung und erwartetes Ergebnis.
Sample composition and expected results.

	<i>Erwartet / expected</i>		<i>Probenzusammensetzung / Sample composition</i>
1425401	+++	61	<i>Chlamydia pneumoniae</i> (~ 1x10 ⁵ IFU/mL)
1425402	∅	62	<i>Escherichia coli</i> K12
1425403	++	61	<i>Chlamydia pneumoniae</i> (~ 1x10 ⁴ IFU/mL)
1425404	∅	62	<i>Chlamydia trachomatis</i> A (~ 1x10 ⁵ IFU/mL)

Tabelle 2: Häufigkeit der Mitteilung verschiedener Befunde.
Absolute numbers of reported individual results.

<i>n</i> = 113	Probennummer (Sample no.)					Inhibition			
	1425401	1425402	1425403	1425404		1425401	1425402	1425403	1425404
Befund <i>Result</i>									
Positiv	113	1	112	2	n.d.	0	0	0	0
Negativ	0	112	1	111	nein <i>no</i>	113	113	113	113
Fraglich <i>Questionable</i>	0	0	0	0	ja <i>yes</i>	0	0	0	0

Tabelle 3: Häufigkeit richtig positiver und richtig negativer NAT-Befunde bei Anwendern verschiedener Methoden.

Absolute numbers and relative frequency of reported true positive and true negative results among various NAT methods.

NAT-Methode [Code] (total number *)	NAT richtig positiv <i>True positive results</i>			NAT richtig negativ <i>True negative results</i>		
	Absolut <i>Absolute</i>	Relativ <i>Relative</i>	%	Absolut <i>Absolute</i>	Relativ <i>Relative</i>	%
TIB Molbiol LightMix CP [21] (n = 11)	22	22 / 22	100	21	21 / 22	95
Diagenode MP/CP [22] (n = 8)	16	16 / 16	100	16	16 / 16	100
AmpliGnost CP PCR Kit [23] (n = 2)	4	4 / 4	100	4	4 / 4	100
Other commercial tests [27] (n = 43)	86	86 / 86	100	86	86 / 86	100
<i>In house</i> PCR assay [28] (n = 47)	93	93 / 94	99	92	92 / 94	98
Andere / k.A. / other [29] (n = 2)	4	4 / 4	100	4	4 / 4	100

PCR-/NAT *Mycoplasma pneumoniae* (RV 541) November 2014



Tabelle 1: Probenzusammensetzung und erwartetes Ergebnis.
Sample composition and expected results.

	<i>Erwartet / expected</i>		<i>Probenzusammensetzung / Sample composition</i>
1425411	++	61	<i>Mycoplasma pneumoniae</i> (~ 10 ⁵ genome copies/mL)
1425412	+++	61	<i>Mycoplasma pneumoniae</i> (~ 10 ⁶ genome copies/mL)
1425413	+	61	<i>Mycoplasma pneumoniae</i> (~ 10 ⁵ genome copies/mL)
1425414	∅	62	<i>Escherichia coli</i> K12

Tabelle 2: Häufigkeit der Mitteilung verschiedener Befunde.
Absolute numbers of reported individual results.

<i>n</i> = 128	Probennummer (Sample no.)					Inhibition			
	1425411	1425412	1425413	1425414		1425411	1425412	1425413	1425414
Befund <i>Result</i>									
Positiv	127	127	127	1	n.d.	1	1	1	1
Negativ	1	1	1	127	nein <i>no</i>	127	127	127	127
Fraglich <i>Questionable</i>	0	0	0	0	ja <i>yes</i>	0	0	0	0

Tabelle 3: Häufigkeit richtig positiver und richtig negativer NAT-Befunde bei Anwendern verschiedener Methoden.
Absolute numbers and relative frequency of reported true positive and true negative results among various NAT methods.

NAT-Methode [Code] (total number *)	NAT richtig positiv <i>True positive results</i>			NAT richtig negativ <i>True negative results</i>		
	Absolut <i>Absolute</i>	Relativ <i>Relative</i>	%	Absolut <i>Absolute</i>	Relativ <i>Relative</i>	%
LightMix <i>M.pneumoniae</i> [20] (n = 13)	37	37 / 39	95	13	13 / 13	100
Minerva Venor Mp [22] (n = 1)	3	3 / 3	100	1	1 / 1	100
AmpliGnost MP PCR Kit [23] (n = 2)	6	6 / 6	100	2	2 / 2	100
Diagenode MP/CP [24] (n = 9)	27	27 / 27	100	9	9 / 9	100
Commercial assay / kit [27] (n = 48)	143	143 / 144	99	47	47 / 48	98
<i>In house</i> PCR assay [28] (n = 54)	162	162 / 162	100	54	54 / 54	100
Andere / k.A. / other [29] (n = 1)	3	3 / 3	100	1	1 / 1	100

**PCR-/NAT *C. burnetii* & *B. anthracis*
(RV 542) November 2014**



Tabelle 1: Probenzusammensetzung und erwartetes Ergebnis.
Sample composition and expected results.

	<i>Erwartet / expected</i>		<i>Probenzusammensetzung / Sample composition</i>
1425421	∅ / ++	63	<i>Bacillus anthracis</i> (~ 1x10 ⁵ genome copies/mL)
1425422	∅ / ∅	64	<i>Escherichia coli</i> K12
1425423	++ / ∅	61	<i>Coxiella burnetii</i> (~ 1x10 ⁴ genome copies/mL)
1425424	+ / +	62	<i>Coxiella burnetii</i> (~ 1x10 ³ genome copies/mL) <i>Bacillus anthracis</i> (~ 1x10 ³ genome copies/mL)

Tabelle 2: Häufigkeit der Mitteilung verschiedener Befunde. Anmerkung: in dieser Tabelle sind nur die Ergebnisse für *Coxiella burnetii* dargestellt.

Absolute numbers of reported individual results.

*Note: only the **C. burnetii-specific results** are depicted in this table*

<i>n</i> = 22	<i>Probennummer (Sample no.)</i>					<i>Inhibition</i>			
	1425421	1425422	1425423	1425424		1425421	1425422	1425423	1425424
<i>Befund Result</i>									
Positiv	0	0	22	21	n.d.	0	0	0	0
Negativ	22	22	0	1	nein no	22	22	22	22
Fraglich Questionable	0	0	0	0	ja yes	0	0	0	0

Tabelle 3: Häufigkeit richtig positiver und richtig negativer NAT-Befunde bei Anwendern verschiedener Methoden. Anmerkung: in dieser Tabelle sind nur die Ergebnisse für *Coxiella burnetii* dargestellt.

Absolute numbers and relative frequency of reported true positive and true negative results among various NAT methods.

*Note: only the **C. burnetii-specific results** are depicted in this table.*

NAT-Methode [Code] (total number *)	NAT richtig positiv <i>True positive results</i>			NAT richtig negativ <i>True negative results</i>		
	Absolut <i>Absolute</i>	Relativ <i>Relative</i>	%	Absolut <i>Absolute</i>	Relativ <i>Relative</i>	%
LightMix <i>C. burnetii</i> [20] (n = 2)	4	4 / 4	100	4	4 / 4	100
Commercial assay / kit [27] (n = 3)	6	6 / 6	100	6	6 / 6	100
In house PCR assay [28] (n = 19)	37	37 / 38	97	38	38 / 38	100

* Durch Mehrfachnennung oder fehlende Angabe kann die absolute Zahl der Ergebnisse (Tab. 2) von der Anzahl der Teilnehmer abweichen.
Due to reporting results of multiple assay systems or missing specifications, the effective numbers are not correlating with the number of participants.

Tabelle 4: Häufigkeit der Mitteilung verschiedener Befunde. Anmerkung: in dieser Tabelle sind nur die Ergebnisse für *Bacillus anthracis* dargestellt.

Absolute numbers of reported individual results.

*Note: only the **B. anthracis-specific results** are depicted in this table*

<i>n</i> = 17	Probennummer (Sample no.)					Inhibition			
	1425421	1425422	1425423	1425424		1425421	1425422	1425423	1425424
Befund <i>Result</i>									
Positiv	17	0	0	17	n.d.	0	0	0	0
Negativ	0	17	17	0	nein <i>no</i>	17	17	17	17
Fraglich <i>Questionable</i>	0	0	0	0	ja <i>yes</i>	0	0	0	0

Tabelle 5: Häufigkeit richtig positiver und richtig negativer NAT-Befunde bei Anwendern verschiedener Methoden. Anmerkung: in dieser Tabelle sind nur die Ergebnisse für *Bacillus anthracis* dargestellt.

Absolute numbers and relative frequency of reported true positive and true negative results among various NAT methods.

*Note: only the **B. anthracis-specific results** are depicted in this table.*

NAT-Methode [Code] (total number *)	NAT richtig positiv <i>True positive results</i>			NAT richtig negativ <i>True negative results</i>		
	Absolut <i>Absolute</i>	Relativ <i>Relative</i>	%	Absolut <i>Absolute</i>	Relativ <i>Relative</i>	%
LightMix <i>B. anthracis</i> [21] (n = 4)	8	8 / 8	100	8	8 / 8	100
Commercial assay / kit [27] (n = 1)	2	2 / 2	100	2	2 / 2	100
In house PCR assay [28] (n = 13)	26	26 / 26	100	26	26 / 26	100

* Durch Mehrfachnennung oder fehlende Angabe kann die absolute Zahl der Ergebnisse (Tab. 2) von der Anzahl der Teilnehmer abweichen.
Due to reporting results of multiple assay systems or missing specifications, the effective numbers are not correlating with the number of participants

Comments: ¹⁾ Ten of the 27 participants performed only a *Coxiella burnetii* detection, five of the 27 participants performed only *Bacillus anthracis*-specific assays, whereas the other twelve laboratories detected both species.

PCR-/NAT *Francisella tularensis* (RV 543) November 2014



Tabelle 1: Probenzusammensetzung und erwartetes Ergebnis.
Sample composition and expected results.

	<i>Erwartet / expected</i>		<i>Probenzusammensetzung / Sample composition</i>
1425431	++	61	<i>Francisella tularensis holarctica</i> (~ 1x10 ⁵ CFU/mL)
1425432	++	61	<i>Francisella tularensis novicida</i> (~ 1x10 ⁵ CFU/mL)
1425433	+++	61	<i>Francisella tularensis holarctica</i> (~ 1x10 ⁶ CFU/mL)
1425434	∅	62	<i>Escherichia coli</i> K12

Tabelle 2: Häufigkeit der Mitteilung verschiedener Befunde.
Absolute numbers of reported individual results.

<i>n</i> = 19	Probennummer (Sample no.)				Inhibition				
Befund <i>Result</i>	1425431	1425432	1425433	1425434	1425431	1425432	1425433	1425434	
Positiv	18	18	19	0	n.d.	1	1	1	1
Negativ	1	1	0	19	nein <i>no</i>	18	18	18	18
Fraglich <i>Questionable</i>	0	0	0	0	ja <i>yes</i>	0	0	0	0

Tabelle 3: Häufigkeit richtig positiver und richtig negativer NAT-Befunde bei Anwendern verschiedener Methoden.
Absolute numbers and relative frequency of reported true positive and true negative results among various NAT methods.

NAT-Methode [Code] (total number *)	NAT richtig positiv <i>True positive results</i>			NAT richtig negativ <i>True negative results</i>		
	Absolut <i>Absolute</i>	Relativ <i>Relative</i>	%	Absolut <i>Absolute</i>	Relativ <i>Relative</i>	%
LightMix <i>F. tularensis</i> [20] (n = 5)	15	15 / 15	100	15	15 / 15	100
In house PCR assay [28] (n = 15)	43	43 / 45	96	15	15 / 15	100

* Durch Mehrfachnennung oder fehlende Angabe kann die absolute Zahl der Ergebnisse (Tab. 2) von der Anzahl der Teilnehmer abweichen.
Due to reporting results of multiple assay systems or missing specifications, the effective numbers are not correlating with the number of participants.

PCR-/NAT Carbapenemase-Gene (RV 544) November 2014



Tabelle 1: Probenzusammensetzung und erwartetes Ergebnis.
Sample composition and expected results.

	<i>Erwartet / expected</i>		<i>Probenzusammensetzung / Sample composition</i>
1425441	+++	61 / 71,72	<i>K. pneumoniae</i> KPC-2, VIM-26 (~ 1x10 ⁶ genome copies/mL)
1425442	∅	62	<i>Escherichia coli</i> K12
1425443	+++	61 / 75	<i>M. morgani</i> NDM-1 (~ 1x10 ⁷ genome copies/mL)
1425444	+++	61 / 73	<i>K. pneumoniae</i> OXA-48 (~ 1x10 ⁷ genome copies/mL)

Tabelle 2: Häufigkeit der Mitteilung verschiedener Befunde.
Absolute numbers of reported individual results.

<i>n = 22</i>	<i>Probennummer (Sample no.)</i>				<i>Inhibition</i>					
<i>Befund Result</i>	1425441	1425442	1425443	1425444	1425441	1425442	1425443	1425444		
Positiv	22 ¹⁾	0	22 ¹⁾	22 ¹⁾	n.d.	1	1	1	1	
Negativ	0	22	0	0	nein no	21	21	21	21	
Fraglich Questionable	0	0	0	0	ja yes	0	0	0	0	

Tabelle 3: Häufigkeit richtig positiver und richtig negativer NAT-Befunde bei Anwendern verschiedener Methoden.

Absolute numbers and relative frequency of reported true positive and true negative results among various NAT methods.

NAT-Methode [Code] (total number *)	NAT richtig positiv <i>True positive results</i>			NAT richtig negativ <i>True negative results</i>		
	Absolut <i>Absolute</i>	Relativ <i>Relative</i>	%	Absolut <i>Absolute</i>	Relativ <i>Relative</i>	%
Hyplex Superbug [22] (n=2)	6	6 / 6	100	2	2 / 2	100
LightMix (TIB Molbiol) [24] (n=3)	9	9 / 9	100	3	3 / 3	100
Commercial assay / kit [27] (n=6)	18	18 / 18	100	6	6 / 6	100
In house PCR assay [28] (n = 12)	36	36 / 36	100	12	12 / 12	100
Andere / k.A. / other [29] (n = 1)	3	3 / 3	100	1	1 / 1	100

* Durch Mehrfachnennung oder fehlende Angabe kann die absolute Zahl der Ergebnisse (Tab. 2) von der Anzahl der Teilnehmer abweichen.
Due to reporting results of multiple assay systems or missing specifications, the effective numbers are not correlating with the number of participants.

Comments: ¹⁾ All participants reported dedicated carbapenemase identification (carbapenemase genes). All reported results were correct.

PCR-/NAT *Pneumocystis jirovecii* (RV 560) November 2014



Tabelle 1: Probenzusammensetzung und erwartetes Ergebnis.
Sample composition and expected results.

	<i>Erwartet / expected</i>		<i>Probenzusammensetzung / Sample composition</i>
1425601	++	61	<i>Pneumocystis jirovecii</i> (~ 1x10 ⁴ genome copies/mL)
1425602	∅	62	<i>Escherichia coli</i> K12
1425603	∅	62	<i>Escherichia coli</i> K12
1425604	+	61	<i>Pneumocystis jirovecii</i> (~ 1x10 ³ genome copies/mL)

Tabelle 2: Häufigkeit der Mitteilung verschiedener Befunde.
Absolute numbers of reported individual results.

<i>n</i> = 81	Probennummer (Sample no.)				Inhibition				
Befund <i>Result</i>	1425601	1425602	1425603	1425604	1425601	1425602	1425603	1425604	
Positiv	80	2	3	78	n.d.	0	0	0	0
Negativ	1	79	78	3	nein <i>no</i>	81	81	81	81
Fraglich <i>Questionable</i>	0	0	0	0	ja <i>yes</i>	0	0	0	0

Tabelle 3: Häufigkeit richtig positiver und richtig negativer NAT-Befunde bei Anwendern verschiedener Methoden.

Absolute numbers and relative frequency of reported true positive and true negative results among various NAT methods.

NAT-Methode [Code] (total number *)	NAT richtig positiv <i>True positive results</i>			NAT richtig negativ <i>True negative results</i>		
	Absolut <i>Absolute</i>	Relativ <i>Relative</i>	%	Absolut <i>Absolute</i>	Relativ <i>Relative</i>	%
TIB Molbiol LightMix PJ [21] (n =12)	24	24 / 24	100	24	24 / 24	100
RIDAGENE <i>P. jirovecii</i> [22] (n =11)	22	22 / 22	100	22	22 / 22	100
AmpliGnost PJ PCR Kit [23] (n =5)	10	10 / 10	100	10	10 / 10	100
Sacace <i>P. jirovecii</i> Real TM [24] (n =2)	4	4 / 4	100	4	4 / 4	100
Commercial assay / kit [27] (n =8)	14	14 / 16	88	13	13 / 16	81
<i>In house</i> PCR assay [28] (n = 42)	82	82 / 84	98	82	82 / 84	98
Andere / k.A. / other [29] (n = 1)	2	2 / 2	100	2	2 / 2	100

* Durch Mehrfachnennung oder fehlende Angabe kann die absolute Zahl der Ergebnisse (Tab. 2) von der Anzahl der Teilnehmer abweichen.
Due to reporting results of multiple assay systems or missing specifications, the effective numbers are not correlating with the number of participants.