

**PCR-/NAT MRSA / cMRSA
 (RV 539) Mai 2013**



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

	<i>Erwartet / expected</i>		<i>Probenzusammensetzung / Sample composition</i>
1315391	+++	61 / 72	MRSA (<i>S. aureus</i> , oxa ^R , PVL-neg) (~ 1x10 ⁴ CFU/mL)
1315392	∅	62	<i>Escherichia coli</i> K12
1315393	+	61 / 72	LaMRSA (<i>S. aureus</i> , oxa ^R , PVL-neg) (~ 1x10 ³ CFU/mL)
1315394	∅	62 / 74	CoNS (<i>S. haemolyticus</i> , oxa ^R) (~ 1x10 ⁴ CFU/mL)

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

<i>n = 259</i>	<i>Probennummer (Sample no.)</i>				<i>Inhibition</i>				
	<i>1315391</i>	<i>1315392</i>	<i>1315393</i>	<i>1315394</i>	<i>1315391</i>	<i>1315392</i>	<i>1315393</i>	<i>1315394</i>	
Befund <i>Result</i>									
Positiv	256 ¹⁾	1	246 ¹⁾	7	n.d.	0	0	0	0
Negativ	2	257	10 ²⁾	252	nein <i>no</i>	258	258	259	259
Fraglich <i>Questionable</i>	1	1	3 ²⁾	0	ja <i>yes</i>	1	1	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>	%
BD GeneOhm MRSA [20] (n=29)	57	57 / 58	98	57	57 / 58	98
GT MRSA Direct / GQ MRSA [21] (n=39)	77	77 / 78	99	78	78 / 78	100
Hyplex <i>StaphyloResist</i> [22] (n=5)	10	10 / 10	100	10	10 / 10	100
LightCycler Kits [23] (n=5)	10	10 / 10	100	10	10 / 10	100
Cepheid Xpert / GeneXpert [24] (n=85)	169	169/169 [§]	100	167	167 / 169 [§]	99
LC MRSA Advanced (Roche) [25] (n=28)	54	54 / 54 [§]	100	56	56 / 56	100
TIB Molbiol LightMix MRSA [26] (n=1)	1	1 / 2	50	2	2 / 2	100
Commercial assay kit [27] (n=27)	52	52 / 53 [§]	98	53	53 / 54	98
<i>In house</i> PCR assay [28] (n=39)	73	73 / 78	94	74	74 / 78	95
Andere / k.A. / other [29] (n=16)	29	29 / 32	91	32	32 / 32	100

Legende zu Tabelle 3:

* **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 some laboratories, but obviously only positive results (if observed) were reported. With the exception of 1 laboratory, all reported results for cMRSA were correct.

²⁾ As sample #1315393 contained this time a low number of MRSA target organisms, negative PCR results were not rated as “false negative”, but the participants may consider to improve the analytical sensitivity of their corresponding PCR assays.