

## PCR-/NAT Carbapenemasen (RV 544) November 2019



**Tabelle 1: Probenzusammensetzung und erwartetes Ergebnis.**

*Sample composition and expected results.*

	<i>Erwartet / expected</i>		<i>Probenzusammensetzung / Sample composition</i>
1925441	+++	61 / 71,72	<i>K. oxytoca</i> KPC-3, VIM-1 (~ 1x10 <sup>6</sup> genome copies/mL)
1925442	∅	62	<i>Escherichia coli</i> K12
1925443	+++	61 / 73	<i>K. pneumoniae</i> OXA-245 (~ 1x10 <sup>6</sup> genome copies/mL)
1925444	+++	61 / 75	<i>K. pneumoniae</i> NDM-9 (~ 1x10 <sup>6</sup> genome copies/mL)

**Tabelle 2: Häufigkeit der Mitteilung verschiedener Befunde.**

*Absolute numbers of reported individual results.*

<i>n = 86</i>	<i>Probennummer (Sample no.)</i>				<i>Inhibition</i>				
	<i>1925441</i>	<i>1925442</i>	<i>1925443</i>	<i>1925444</i>	<i>1925441</i>	<i>1925442</i>	<i>1925443</i>	<i>1925444</i>	
<b>Befund</b> <i>Result</i>									
<b>Positiv</b>	86	0	78	85	n.d.	1	1	1	1
<b>Negativ</b>	0	86	8	0	nein <i>no</i>	85	85	85	85
<b>Fraglich</b> <i>Questionable</i>	0	0	0	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.*

<b>NAT-Methode</b> [Code] (total number *)	<b>NAT richtig positiv</b> <i>True positive results</i>						<b>NAT richtig negativ</b>	
	<b>1925441</b>		<b>1925443</b>		<b>1925444</b>		<b>1925442</b>	
	<i>Absolut</i> <i>Absolute</i>	<i>%</i>	<i>Absolut</i> <i>Absolute</i>	<i>%</i>	<i>Absolut</i> <i>Absolute</i>	<i>%</i>	<i>Absolut</i> <i>Absolute</i>	<i>%</i>
Check direct CPE oder MDR [21] (n=2)	2	100	2	100	2	100	2	100
Hyplex Superbug (Amplex) [23] (n=1)	1	100	0	0	1	100	1	100
Eazyplex (Amplex) [23] (n=7)	7	100	1	14	7	100	7	100
LightMix (TIB Molbiol) [24] (n=8)	8	100	8	100	8	100	8	100
GeneXpert CarbaR [25] (n=44)	44	100	44	100	44	100	44	100
Commercial assay / kit [27] (n=13)	13	100	12	92	12 §	100	13	100
<i>In house</i> PCR assay [28] (n= 11)	11	100	11	100	11	100	11	100

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

**Comments:**

- 1) 87 participants reported dedicated carbapenemase identification (carbapenemase genes)
- 2) One participant did not detect the KPC-3 gene in sample # 1925441.
- 3) One participant did not detect the VIM-1 gene in sample # 1925441.
- 4) One participant has wrongly reported detection of the NDM gene and an other participant detection of the IMP gene, in sample 1925441.
- 5) Eight participants did not detect the OXA-48 gene in sample # 1925443.
- 6) One participant has wrongly reported detection of the OXA gene and an other participant detection of the VIM gene in sample # 1925444.
- 7) One participant did not detect the NDM-9 gene in sample # 1925444.