

PCR-/NAT Carbapenemasen (RV 544) November 2018



Tabelle 1: Probenzusammensetzung und erwartetes Ergebnis.

Sample composition and expected results.

	<i>Erwartet / expected</i>		<i>Probenzusammensetzung / Sample composition</i>
1825441	+++	61 / 73	<i>E.coli</i> OXA-244 (~ 1x10 ⁷ genome copies/mL)
1825442	+++	61 / 73,75	<i>K. pneumoniae</i> NDM-1, OXA-48 (~ 1x10 ⁷ genome copies/mL)
1825443	∅	62	<i>Escherichia coli</i> K12
1825444	+++	61 / 74	<i>Citrobacter freundii</i> - complex GES-5 (~ 1x10 ⁷ genome copies/mL)

Tabelle 2: Häufigkeit der Mitteilung verschiedener Befunde.

Absolute numbers of reported individual results.

<i>n = 88</i>	Probennummer (Sample no.)				Inhibition				
	1825441	1825442	1825443	1825444	1825441	1825442	1825443	1825444	
Befund <i>Result</i>									
Positiv	86	85	2 ⁴⁾	11 ⁵⁾	n.d.	0	0	0	0
Negativ	1 ¹⁾	3 ^{2) 3)}	86	76 ⁶⁾	nein <i>no</i>	88	88	88	88
Fraglich <i>Questionable</i>	1	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.

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>	%
Check direct CPE oder MDR [21] (n =4)	8	8 / 12	67	4	4 / 4	100
Hyplex Eazyplex [23] (n =8)	16	16 / 24	67	8	8 / 8	100
LightMix (TIB Molbiol) [24] (n =8)	18	18 / 24	75	6	6 / 8	75
GeneXpert CarbaR [25] (n =43)	86	86 / 129	67	43	43 / 43	100
Commercial assay / kit [27] (n = 9)	14	14 / 25 [§]	56	9	9 / 9	100
In house PCR assay [28] (n = 16)	41	41 / 48	85	15	15 / 16	94
Andere / k.A. / other [29] (n = 3)	6	6 / 9	67	3	3 / 3	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) One participant did not detect the OXA-244 gene in sample # 1825441.
 - 2) Two participants did not detect the OXA-48 gene in sample # 1825442.
 - 3) Two participants did not detect the NDM gene in sample # 1825442.
 - 4) One participant has wrongly reported detection of the OXA gene and an other participant detection of the NDM gene, in sample # 1825443.
 - 5) One participant has wrongly reported detection of the VIM gene in sample # 1825444.
 - 6) Seventy six participants missed to detect the GES gene in sample # 1825444.