

**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
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.

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.