

PCR-/NAT EHEC / STEC (RV 534) Nov 2025



Tabelle 1: Probenzusammensetzung und erwartetes Ergebnis.

Sample composition and expected results.

Proben Nr.	Erwartet / expected		Probenzusammensetzung / Sample composition
534A 251014 01	++	61 / 71,77,78	EHEC (~5x10 ⁴ CFU/mL) (stx-1, eae and hlyA positive)
534A 251014 02	Ø	62	EIEC positive (~5x10 ⁵ CFU/mL)
534A 251014 03	Ø	62	<i>Escherichia coli</i> K12 (negative for eae and hlyA)
534A 251014 04	+++	61 / 71,72,77,78	EHEC (~5x10 ⁵ CFU/mL) (stx-1, stx-2, eae, hlyA and O157 positive)

Tabelle 2: Häufigkeit der Mitteilung verschiedener Befunde.

Absolute numbers of reported individual results.

<i>n</i> = 118		Proben Nr. (Sample no.)				Inhibition				
Befund Result		01	02	03	04		01	02	03	04
Positiv		112	5	3	118	n.d.	1	1	1	1
Negativ		6	113	115	0	nein no	117	117	117	117
Fraglich Questionable		0	0	0	0	ja yes	0	0	0	0

Tabelle 3: Häufigkeit richtig positiver und richtig negativer NAT-Befunde bei Anwenden 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 True positive results				NAT richtig negativ True negative results			
	01		04		02		03	
	Absolut Absolute	%	Absolut Absolute	%	Absolut Absolute	%	Absolut Absolute	%
Amplex eazypex EHEC basic (n = 1)	1	100	1	100	1	100	1	100
Amplex eazypex EHEC complete (n = 6)	6	100	6	100	6	100	6	100
BD MAX Enteric Bacterial Panel (n = 10)	8	80	10	100	10	100	10	100
BioFire FILMARRAY GI Panel (n = 4)	4	100	4	100	3	75	3	75
Bruker-HAIN GenoType EHEC (n = 4)	4	100	4	100	3	75	4	100
QiaStat-Dx Gastrointestinal Panel 2 (n = 1)	1	100	1	100	1	100	1	100
Roche UC-TIB-EHEC/C.diff (n = 5)	5	100	5	100	5	100	5	100

Seegene Allplex GI Bacteria II (n = 15)	15	100	15	100	15	100	15	100
Seegene Allplex GI-EB Screening (n = 7)	7	100	7	100	6	86	7	100
TIB Molbiol Modular stx-1/stx-2/eae (n = 4)	4	100	4	100	4	100	3	75
RIDAGENE E.coli Stool Panel I (n = 16)	15	94	16	100	16	100	15	94
RIDAGENE EHEC/EPEC (n = 14)	11	79	14	100	12	86	14	100
RIDAUNITY EHEC/EPEC (n = 3)	3	100	3	100	3	100	3	100
In house PCR assay (n = 20)	20	100	20	100	20	100	20	100
Other commercial tests (n = 8)	8	100	8	100	8	100	8	100

Comments:

1. The following tests are listed under "Other commercial tests": Altona diagnostic FlexStar E.coli Pathotype 1 PCR Detection Mix (3x), AmpliGnost EHEC (Differenzierung) PCR (2x), Bruker-Hain LiquidArray Gastrointestinal Panel (1x), CerTest VIASURE E. coli EHEC, EPEC & EIEC Real Time PCR Detection Kit (1x) and Luminex Gastrointestinal Pathogen Panel (1x).
2. Partial or complete shiga toxin subtyping, eae-, and hlyA-detection was performed by 102 laboratories. With the exception of 2 laboratories, all reported results were correct
3. Four laboratories detected EIEC in sample 534A 251014 02 and classified the result as a false positive.
Five laboratories detected only the eae gene in sample 534A 251014 01 and therefore reported the presence of EPEC. In this case, the correct interpretation is to report the sample as negative. Unfortunately, two of these laboratories incorrectly reported this finding as positive.