Table S1: Primers used for the detection of *stx1*, *stx2* ed *eae* genes.

Target gene (Reference)	Primer name	Sequence
eae	eaeAF	GACCCGGCACAAGCATAAGC
(Paton & Paton, 1998)	eaeAR	CCACCTGCAGCAACAAGAGG
stx1	stx1F	ATAAATCGCCATTCGTTGACTAC
(Paton & Paton, 1998)	stx1R	AGAACGCCCACTGAGATCATC
stx2	stx2F	GGCACTGTCTGAAACTGCTCC
(Paton & Paton, 1998)	stx2R	TCGCCAGTTATCTGACATTCTG
stx2f	128-1	AGA TTG GGC GTC ATT CAC TGG TTG
(Schmidt et al. 2000)	128-1	TAC TTT AAT GGC CGC CCT GTC TCC

Table S2: Primers and probes used for serogroup characterization.

Target gene (Reference)	Primers and probe sequences
wzxO26 **(Perelle *et al.*, 2004)**	**FWD:** CGCGACGGCAGAGAAAATT **REV:** AGCAGGCTTTTATATTCTCCAACTTT **Probe:** CCCCGTTAAATCAATACTATTTCACGAGGTTGA
wzxO45 **(USDA, 2019)**	**FWD:** CGTTGTGCATGGTGGCAT **REV:** TGGCCAAACCAACTATGAACTG **Probe:** ATTTTTTGCTGCAAGTGGGCTGTCCA
wzxO55 **(EURL-VTEC, 2020)**	**FWD:** AATTAACGAACATAACACCCAACC **REV:** ATATCTCTTCGTTACTGTGTGTATTTC **Probe:** ACCTCCCGCTAAAACCCCAACTCTAGTAG
wzyO80 **(EURL-VTEC, 2020)**	**FWD:** TGAGAGCCAAGATCCAAGCA **REV:** TGGGCCATATTCGAAGTTTGAA **Probe:** TCCCAAGATTCCACGTTGAT
wzyO91 **(Perelle *et al.*, 2004)**	**FWD:** CGATTTTCTGGAATGCTTGATG **REV: C**AATACATAGTTTGATTTGTGTTTAAAGTTTAAT **Probe:** CCTGGGTTGTTAGGAACAATTTCAGCACTTC
wzxO103 **(Perelle *et al.*, 2005)**	**FWD:** CAAGGTGATTACGAAAATGCATGT **REV:** GAAAAAAGCACCCCCGTACTTAT **Probe:** CATAGCCTGTTGTTTTAT
wzxO104 **(Bugarel *et al.*, 2010)**	**FWD:** TGTCGCGCAAAGAATTTCAAC **REV:** AAAATCCTTTAAACTATACGCCC **Probe:** TTGGTTTTTTTGTATTAGCAATAAGTGGTGTC
wbdIO111 **(Perelle *et al.*, 2004)**	**FWD:** CGAGGCAACACATTATATAGTGCTTT **REV:** TTTTTGAATAGTTATGAACATCTTGTTTAGC **Probe:** TTGAATCTCCCAGATGATCAACATCGTGAA
wzyO113 **(Perelle *et al.*, 2004)**	**FWD:** GAGCGTTTCTGACATATGGAGTGA **REV:** TTGCTATAAATGGAAGCCATTCTTT

	Probe: TGCATGAAATGTTTAAATGCAGCGGGT
wzxO121 **(USDA, 2019)**	**FWD:** AGGCGCTGTTTGGTCTCTTAGA **REV:** GAACCGAAATGATGGGTGCT **Probe:** CGCTATCATGGCGGGACAATGACAGTGC
wzxO128 **(Lin *et al.*, 2011)**	**FWD:** TCGATCGTCTTGTTCAGGTT **REV:** GAATGCAATGGGCAATTAAC **Probe:** GGGTTGCACAATTGGCCTCC
wzxO145 **(USDA, 2019)**	**FWD:** AAA CTG GGA TTG GAC GTG G **REV:** CCC AAA ACT TCT AGG CCC G **Probe:** TGC TAA TTG CAG CCC TTG CAC TAC GAG GC
wzyO146 **(EURL-VTEC 2020)**	**FWD:** ACATTCGGCGTTTTTATCTCGT **REV:** GGTCAAATCTCGTGCCCATAGA **Probe:** AATTTCAAGGTGCCAACTTTTCA
rfbEO157 **(Perelle *et al.*, 2004)**	**FWD:** TTTCACACTTATTGGATGGTCTCAA **REV:** CGATGAGTTTATCTGCAAGGTGAT **Probe:** AGGACCGCAGAGGAAAGAGAGGAATTAAGG

Table S3. Primer used for *stx1a/c/d* and *stx2a/b/c/d/e/f/g* genes detection. All reported from EURL-VTEC Available online: https://www.iss.it/documents/20126/0/EURL-VTEC_Method_11_Rev_1.pdf/36a945da-ce05-1cab-df19-637f8169be3d?t=1644309311442 (Accessed 30/05/024).

Gene target	Primer name	Sequence
stx 1a	stx1a-F1	CCTTTCCAGGTACAACAGCGGTT
	stx1a-R2	GGAAACTCATCAGATGCCATTCTGG
stx 1c	stx1c-F1	CCTTTCCTGGTACAACTGCGGTT
	stx1c-R1	CAAGTGTTGTACGAAATCCCCTCTGA
stx 1d	stx1d-F1	CAGTTAATGCGATTGCTAAGGAGTTTACC
	stx1d-R2	CTCTTCCTCTGGTTCTAACCCCATGATA
stx2a	stx2a-F2	GCGATACTG**R**G**B**ACTGTGGCC
	stx2a-R3	CCG**K**CAACCTTCACTGTAAATGTG
	stx2a-R2	GGCCACCTTCACTGTGAATGTG
stx 2b	stx2b-F1	AAATATGAAGAAGATATTTGTAGCGGC
	stx2b-R1	CAGCAAATCCTGAACCTGACG
stx 2c	stx2c-F1	GAAAGTCACAGTTTTTATATACAACGGGTA
	stx2c-R2	CCGGCCAC**Y**TTTACTGTGAATGTA
stx 2d	stx2d-F1	AAARTCACAGTCTTTATATACAACGGGTG
	stx2d-R1	TT**Y**CCGGCCACTTTTACTGTG
	stx2d-R2	GCCTGATGCACAGGTACTGGAC
stx 2e	stx2e-F1	CGGAGTATCGGGGAGAGGC
	stx2e-R2	CTTCCTGACACCTTCACAGTAAAGGT
stx 2f	stx2f-F1	TGGGCGTCATTCACTGGTTG TAATGGCCGCCCTGTCTCC
	stx2f-R1	

stx 2g	stx2g-F1	CACCGGGTAGTTATATTTCTGTGGATATC
	stx2g-R1	GATGGCAATTCAGAATAACCGCT

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