

STEC EQA-13 2024-2025

Dear Participant,

Welcome to the thirteenth External Quality Assessment (EQA-13) scheme for typing of STEC in 2024-2025.

NOTE: New virulence gene *esta* (STa).

If you are using WGS, please read the WGS part of the submission protocol thoroughly before starting your analysis. This year, you are required to use a specific strain/sequence when reporting allele differences/SNP distances.

Please note that most of the fields must be filled in before the submission can be completed. You can write any comments at the end of the form. If you have any questions, please feel free to contact us at ecoli.eqa@ssi.dk.

To begin, please fill in your country, laboratory name, and LAB_ID.

The available options in this participation form include:

- Provide your email to receive a link with your answers. The email containing the link will be sent after pressing "Finish" on the last slide of the survey.
- Open the windows in full screen for the best survey format.
- If the survey is closed before completion, your answers will be saved, and you can return to the survey using the same link.

Note: After pressing "Finish," you will not be able to review your results.

1. Country

- (1) Australia
- (2) Austria
- (3) Belgium
- (4) Bulgaria
- (5) Canada
- (6) Croatia
- (7) Czech Republic
- (8) Denmark
- (9) Estonia
- (10) Finland
- (11) France
- (12) Germany
- (13) Greece
- (14) Hungary
- (15) Iceland
- (16) Ireland
- (17) Italy
- (18) Israel
- (19) Latvia
- (20) Lithuania
- (21) Luxembourg
- (22) Malta
- (23) México
- (24) Montenegro
- (25) New Zealand
- (26) Norway
- (27) Paraguay
- (28) Poland
- (29) Portugal

- (30) Romania
- (31) Scotland, UK
- (32) Slovakia
- (33) Slovenija
- (34) South Africa
- (35) Spain
- (36) Sweden
- (37) The Netherlands
- (38) Turkey
- (39) United Kingdom
- (40) United States of American

2. Institute name _____

3. Laboratory name _____

4. Laboratory ID _____

Consisting of country code (two letters) Lab ID on the vial e.g
DK_SSI

5. E-mail

6. STEC EQA-13 Strain ID's

Please enter the isolate ID(4 digits)

We recommend to print this page out!

To have the overview of isolate ID's and isolate No. 1-12, it will make the work easier.

Strain1

Strain2

Strain3

Strain4

Strain5

Strain6

Strain7

Strain8

Strain9

Strain10

Strain11

Strain12

7. Serotyping and virulence gene determination of STEC

8. Submitting results

- (1) Submit serotyping/virulence gene determination results
- (2) Did not participate in the serotyping or virulence determination part(s) – Go to 21

9. Submitting results - Serotyping

- (1) Both O group and H type – Go to 10
- (2) Only O Group – Go to 10
- (3) Only H type – Go to 12
- (4) Did not participate in serotyping – Go to 14

10. Results for serotyping (O Group)

please type the number of O Group by using (1-188)

Non Typable: 7777, Rough: 8888, Not done: 9999

O Group

Strain1	_____
Strain2	_____
Strain3	_____
Strain4	_____
Strain5	_____
Strain6	_____
Strain7	_____
Strain8	_____
Strain9	_____
Strain10	_____

Strain11	_____
Strain12	_____

**11. Please specify the method used:
Phenotypic or molecular (PCR based, WGS based)**

	Phenotypic	PCR based	WGS based
Method:	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>

**12. Results for serotyping (H Type)
please type the number of H Type by using (1-56)
H-: 6666, Non Typable: 7777, Not done: 9999**

H Type

Strain1	_____
Strain2	_____
Strain3	_____
Strain4	_____
Strain5	_____

Strain6	_____
Strain7	_____
Strain8	_____
Strain9	_____
Strain10	_____
Strain11	_____
Strain12	_____

**13. Please specify the method used:
Phenotypic or molecular (PCR based, WGS based)**

	Phenotypic	PCR based	WGS based
Method:	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>

14. Submitting results - Virulence gene determination

- (1) Submit Virulence gene determination data (*eae*, *aggR*, *esta* (STa), *stx1*, *stx2* or subtyping)
- (2) Did not participate in the Virulence gene determination (*eae*, *aggR*, *esta* (STa) *stx1a*, *stx2* or subtyping). – Go to 21

15. Please specify the method used for the virulence gene determination (incl. subtyping):

WGS – Go to 17

Other – Go to 16

Method:

(1)

(2)

16. If another method is used please describe in detail your method:

17. Results for Virulence gene determination

please use 1 for detected and 0 for not detected, Not done: 9999

	<i>eae</i>	<i>aggR</i>	<i>esta</i> (STa)	<i>stx1</i>	<i>stx2</i>
Strain1	_____	_____	_____	_____	_____
Strain2	_____	_____	_____	_____	_____
Strain3	_____	_____	_____	_____	_____
Strain4	_____	_____	_____	_____	_____

Strain5	_____	_____	_____	_____	_____
Strain6	_____	_____	_____	_____	_____
Strain7	_____	_____	_____	_____	_____
Strain8	_____	_____	_____	_____	_____
Strain9	_____	_____	_____	_____	_____
Strain10	_____	_____	_____	_____	_____
Strain11	_____	_____	_____	_____	_____
Strain12	_____	_____	_____	_____	_____

18. Submitting results - subtyping results

- (1) Submit subtyping data
- (2) Did not participate in subtyping – Go to 21

19. Results for subtyping

Subtyping of stx1, select variant (stx1a, stx1c, stx1d)

All isolates have to be subtyped regardless of the results of the initial screening.

“Not done/ND” will by default be evaluated as an incorrect result.

	stx1a	stx1c	stx1d	stx1a; stx1c	stx1a; stx1d	stx1c; stx1d	Negative	ND
Strain1	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>	(6) <input type="checkbox"/>	(7) <input type="checkbox"/>	(8) <input type="checkbox"/>
Strain2	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>	(6) <input type="checkbox"/>	(7) <input type="checkbox"/>	(8) <input type="checkbox"/>
Strain3	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>	(6) <input type="checkbox"/>	(7) <input type="checkbox"/>	(8) <input type="checkbox"/>
Strain4	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>	(6) <input type="checkbox"/>	(7) <input type="checkbox"/>	(8) <input type="checkbox"/>
Strain5	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>	(6) <input type="checkbox"/>	(7) <input type="checkbox"/>	(8) <input type="checkbox"/>
Strain6	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>	(6) <input type="checkbox"/>	(7) <input type="checkbox"/>	(8) <input type="checkbox"/>
Strain7	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>	(6) <input type="checkbox"/>	(7) <input type="checkbox"/>	(8) <input type="checkbox"/>
Strain8	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>	(6) <input type="checkbox"/>	(7) <input type="checkbox"/>	(8) <input type="checkbox"/>
Strain9	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>	(6) <input type="checkbox"/>	(7) <input type="checkbox"/>	(8) <input type="checkbox"/>
Strain10	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>	(6) <input type="checkbox"/>	(7) <input type="checkbox"/>	(8) <input type="checkbox"/>
Strain11	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(5) <input type="checkbox"/>	(6) <input type="checkbox"/>	(7) <input type="checkbox"/>	(8) <input type="checkbox"/>

Strain8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strain9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strain10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strain11	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strain12	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

21. Submitting Cluster results

- (1) Cluster analyses based on PFGE and/or WGS
- (2) Did not participate in the Cluster part – Go to 116

22. Submitting Cluster analysis results

- (1) Cluster analysis based on PFGE – Go to 23
- (2) Do not wish to submit any cluster results based on PFGE analysis – Go to 26

23. Cluster analysis based on PFGE data

**24. Please list the ID for the isolate included in the cluster of closely related isolate detected by PFGE results (bands >33 kb):
please use semicolon (;) to separate the ID's**

25. XbaI - Total number of bands (>33kb) in a cluster strain

26. Submitting Cluster results

- (1) Cluster analysis based on WGS data – Go to 27
- (2) Do not wish to submit any cluster results based on WGS data – Go to 116

27. Cluster analysis based on WGS data

28. Please select the analysis used to detect the cluster using WGS

The results of the cluster detection can only be reported once (main analysis). If more than one analysis is performed please report later in this submission

- (1) SNP based – Go to 30
- (2) Allele based – Go to 37
- (3) Other – Go to 29

29. If another analysis is used please describe in detail your approach (including: assembler, number of loci, variant caller, read mapper or reference ID ect.)

- Go to 44

**30. Please report the used SNP-pipeline
(reference if publicly available or in-house pipeline)**

31. Please select the approach used for the SNP analysis

(1) Reference based – Go to 32

(2) Assembly based – Go to 35

32. Reference genome used:

Preferable use EQA strain0018 (downloaded sequences) as reference. Otherwise indicate Multi-locus Sequence Type (e.g. ST8) and identification of the used reference.

**33. Please indicate the read mapper used
(e.g. BWA, Bowtie2)**

**34. Please indicate the variant caller used
(e.g. SAMtools, GATK)**

**35. Please indicate the assembler used
(e.g. SPAdes, Velvet)**

**36. Please specify the variant caller used
(e.g. NUCMER)**

37. Please select tools used for the allele analysis

- (1) BioNumerics – Go to 39
- (2) SeqSphere – Go to 39
- (3) Enterobase – Go to 39
- (4) Other – Go to 38

38. If another tool is used please enter here:

39. Please indicate allele calling method:

- (1) Assembly based and mapping based – Go to 40
- (2) Only assembly based – Go to 40
- (3) Only mapping based – Go to 41

**40. Please indicate the assembler used
(e.g. SPAdes, Velvet)**

41. Please select scheme used for the allele analysis

- (1) Applied Maths (wgMLST) – Go to 43
- (2) Applied Maths (cgMLST/Enterobase) – Go to 43
- (3) Enterobase (cgMLST) – Go to 43
- (4) Other – Go to 42

42. If another scheme (e.g. in-house) is used, please give a short description

43. Please report the number of loci in the used allelic scheme

Cluster detected by analysis on data derived from WGS

On this page you have to report the results for the cluster detected by the selected analysis (e.g. SNP based). If another additional analysis (e.g. allele based or another SNP based analysis) is performed please report results later, but you will not be asked to submit the ID's for isolates in the cluster detected with the additional analysis.

**44. Please list the ID for the strains included in the cluster of closely related strains detected by WGS: please use semicolon (;) to separate the ID's
This includes the 12 test strains and the 8 provided sequences (20 in total). For the provided sequences write the numbers like: 0013, 0014, 0015, 0016 ect.**

45. Report the ID, part of the cluster (yes/no), and SNP distance/allele difference

Please use 9999 for not analyzed

	ID	Cluster (Yes/No)	AD/SNP
Strain1	_____	<input type="radio"/> (Yes) <input type="radio"/> (No)	_____
Strain2	_____	<input type="radio"/> (Yes) <input type="radio"/> (No)	_____
Strain3	_____	<input type="radio"/> (Yes) <input type="radio"/> (No)	_____
Strain4	_____	<input type="radio"/> (Yes) <input type="radio"/> (No)	_____
Strain5	_____	<input type="radio"/> (Yes) <input type="radio"/> (No)	_____
Strain6	_____	<input type="radio"/> (Yes) <input type="radio"/> (No)	_____
Strain7	_____	<input type="radio"/> (Yes) <input type="radio"/> (No)	_____
Strain8	_____	<input type="radio"/> (Yes) <input type="radio"/> (No)	_____
Strain9	_____	<input type="radio"/> (Yes) <input type="radio"/> (No)	_____
Strain10	_____	<input type="radio"/> (Yes) <input type="radio"/> (No)	_____
Strain11	_____	<input type="radio"/> (Yes)	_____

Strain12	_____	<input type="radio"/> (No)	_____
		<input type="radio"/> (Yes)	
		<input type="radio"/> (No)	

46. For each ID report: part of the cluster (yes/no), QC status (A/B/C), QC comment and SNP distance/allele difference

QC status:

Please select the QC status that fits with your assessment of the strain

A = Acceptable quality, B = Quality only acceptable for outbreak situations (less good quality), C = Not acceptable quality - strain not analyzed

Distance:

Please use 9999 for not analyzed

	Cluster (Yes/No)	QC (A/B/C)	QC comment	AD/SNP
Strain0013	<input type="radio"/> (Yes)	<input type="radio"/> (A)	_____	_____
	<input type="radio"/> (No)	<input type="radio"/> (B)		
		<input type="radio"/> (C)		
Strain0014	<input type="radio"/> (Yes)	<input type="radio"/> (A)	_____	_____
	<input type="radio"/> (No)	<input type="radio"/> (B)		
		<input type="radio"/> (C)		
Strain0015	<input type="radio"/> (Yes)	<input type="radio"/> (A)	_____	_____
	<input type="radio"/> (No)	<input type="radio"/> (B)		
		<input type="radio"/> (C)		
Strain0016	<input type="radio"/> (Yes)	<input type="radio"/> (A)	_____	_____
	<input type="radio"/> (No)	<input type="radio"/> (B)		
		<input type="radio"/> (C)		
Strain0017	<input type="radio"/> (Yes)	<input type="radio"/> (A)	_____	_____
	<input type="radio"/> (No)	<input type="radio"/> (B)		

		<input type="radio"/> (C)		
Strain0018	<input type="radio"/> (Yes)	<input type="radio"/> (A)	_____	_____
	<input type="radio"/> (No)	<input type="radio"/> (B)		
		<input type="radio"/> (C)		
Strain0019	<input type="radio"/> (Yes)	<input type="radio"/> (A)	_____	_____
	<input type="radio"/> (No)	<input type="radio"/> (B)		
		<input type="radio"/> (C)		
Strain0020	<input type="radio"/> (Yes)	<input type="radio"/> (A)	_____	_____
	<input type="radio"/> (No)	<input type="radio"/> (B)		
		<input type="radio"/> (C)		

**47. (Optional) Would you like to add additional information for the strains?
e.g. serotype or sequence type (ST)**

(1) Yes

(2) No – Go to 48

	Serotype	Subtype	Sequence type (ST)
Strain1	_____	_____	_____
Strain2	_____	_____	_____
Strain3	_____	_____	_____
Strain4	_____	_____	_____
Strain5	_____	_____	_____

Strain6	_____	_____	_____
Strain7	_____	_____	_____
Strain8	_____	_____	_____
Strain9	_____	_____	_____
Strain10	_____	_____	_____
Strain11	_____	_____	_____
Strain12	_____	_____	_____
Strain0013	_____	_____	_____
Strain0014	_____	_____	_____
Strain0015	_____	_____	_____
Strain0016	_____	_____	_____
Strain0017	_____	_____	_____

Strain0018	_____	_____	_____
Strain0019	_____	_____	_____
Strain0020	_____	_____	_____

48. Would you like to add results performed with another additional analysis on the data derived from the WGS?

e.g. if SNP based results are submitted you can also report allele based results or results from a second SNP analysis

- (1) Yes – Go to 49
- (2) No – Go to 86

49. Please select the additional analysis used on data derived from WGS

- (1) SNP based – Go to 51
- (2) Allele based – Go to 58
- (3) Other – Go to 50

50. If another analysis is used please describe in detail your approach (including: assembler, number of loci, variant caller, read mapper or reference ID ect.)

51. Please report the used SNP-pipeline (reference if publicly available or in-house pipeline)

52. Please select the approach used for the SNP analysis

- (1) Reference based – Go to 53
- (2) Assembly based – Go to 56

53. Reference genome used: (preferable use EQA strain0018, downloaded sequences as reference). Otherwise indicate Multi-locus Sequence Type (e.g. ST8) and isolate ID

54. Please indicate the read mapper used (e.g. BWA, Bowtie2)

55. Please indicate the variant caller used (e.g. SAMtools, GATK)

56. Please indicate the assembler used (e.g. SPAdes, Velvet)

57. Please specify the variant caller used (e.g. NUCMER)

58. Please select tool used for the allele analysis

- (1) BioNumerics – Go to 60
- (2) SeqSphere – Go to 60
- (3) Enterobase – Go to 60

(4) Other – Go to 59

59. If another tool is used please list here:

60. Please indicate allele calling method:

(1) Assembly based and mapping based – Go to 61

(2) Only assembly based – Go to 61

(3) Only mapping based – Go to 62

**61. Please indicate the assembler used
(e.g. SPAdes, Velvet)**

62. Please select scheme used for the allele analysis

(1) Applied Maths (wgMLST) – Go to 64

(2) Applied Maths (cgMLST/Enterobase) – Go to 64

(3) Enterobase (cgMLST) – Go to 64

(4) Other – Go to 63

63. If another scheme (e.g. in-house) is used, please give a short description

64. Please report the number of loci in the used allelic scheme

65. Additional analysis on data derived from WGS

66. Results for an additional cluster analysis.

Reporting allele differences /SNP distances to strain0018 (as downloaded sequence) (e.g. SNP or Allele based)

Please use 9999 for not analysed

Distance/difference (e.g. SNP/allele) to the strain0018 (downloaded sequence)

Strain1	<hr/>
Strain2	<hr/>
Strain3	<hr/>
Strain4	<hr/>

Strain5

Strain6

Strain7

Strain8

Strain9

Strain10

Strain11

Strain12

Strain0013 (as downloaded sequence)

Strain0014 (as downloaded sequence)

Strain0015 (as downloaded sequence)

Strain0016 (as downloaded sequence)

Strain0017 (as downloaded sequence)

Strain0018 (as downloaded sequence)

Strain0019 (as downloaded sequence)

Strain0020 (as downloaded sequence)

67. Would you like to add results performed with a third analysis on the data derived from the WGS?

e.g. if SNP based results are submitted you can also report allele based results or results from a second SNP analysis

(1) Yes – Go to 68

(2) No – Go to 86

68. Please select the third analysis used on data derived from WGS

(1) SNP based – Go to 70

(2) Allele based – Go to 77

(3) Other – Go to 69

69. If another analysis is used please describe in detail your approach (including: assembler, number of loci, variant caller, read mapper or reference ID ect.)

**70. Please report the used SNP-pipeline
(reference if publicly available or in-house pipeline)**

71. Please select the approach used for the SNP analysis

(1) Reference based – Go to 72

(2) Assembly based – Go to 75

72. Reference genome used:(preferable use EQA strain0018, downloaded sequences as reference) Otherwise indicate Multi-locus Sequence Type (e.g. ST8) and isolate ID

73. Please indicate the read mapper used (e.g. BWA, Bowtie2)

74. Please indicate the variant caller used (e.g. SAMtools, GATK)

75. Please indicate the assembler used (e.g. SPAdes, Velvet)

76. Please specify the variant caller used (e.g. NUCMER)

77. Please select tool used for the allele analysis

- (1) BioNumerics – Go to 79
- (2) SeqSphere – Go to 79
- (3) Enterobase – Go to 79
- (4) Other – Go to 78

78. If another tool is used please enter here:

79. Please indicate allele calling method:

- (1) Assembly based and mapping based – Go to 80
- (2) Only assembly based – Go to 80
- (3) Only mapping based – Go to 80

**80. Please indicate the assembler used
(e.g. SPAdes, Velvet)**

81. Please select scheme used for the allele analysis

- (1) Applied Maths (wgMLST) – Go to 83
- (2) Applied Maths (cgMLST/Enterobase) – Go to 83
- (3) Enterobase (cgMLST) – Go to 83
- (4) Other – Go to 82

82. If another scheme (e.g. in-house) is used, please give a short description

83. Please report the number of loci in the used allelic scheme

84. Third analysis on data derived from WGS

**85. Results for the third cluster analysis. Reporting allele differences /SNP distances to strain0018 (as downloaded sequence) (e.g. SNP or Allele based)
Please use 9999 for not analysed**

	Distance/difference (e.g. SNP/allele) to the strain0018 (downloaded sequence)
Strain1	_____
Strain2	_____
Strain3	_____
Strain4	_____
Strain5	_____
Strain6	_____
Strain7	_____
Strain8	_____
Strain9	_____
Strain10	_____

Strain11

Strain12

Strain0013 (as downloaded sequence)

Strain0014 (as downloaded sequence)

Strain0015 (as downloaded sequence)

Strain0016 (as downloaded sequence)

Strain0017 (as downloaded sequence)

Strain0018 (as downloaded sequence)

Strain0019 (as downloaded sequence)

Strain0020 (as downloaded sequence)

86. Additional questions to the WGS part

87. Where was the sequencing performed

- (1) In own laboratory
- (2) Externally

88. Protocol used to prepare the library for sequencing:

- (1) Commercial kits – Go to 89
- (2) Non-commercial kits – Go to 91

89. Please indicate name of commercial kit:

90. If relevant please list deviation from commercial kit shortly in few bullets:

91. For non-commercial kit please indicate a short summary of the protocol:

92. The sequencing platform used

- (1) Ion Torrent PGM – Go to 94
- (2) Ion Torrent Proton – Go to 94
- (3) Ion S5 XL System – Go to 94
- (4) Ion Genestudio S5 system – Go to 94
- (5) Genome Sequencer Junior System (454) – Go to 94
- (6) Genome Sequencer FLX System (454) – Go to 94
- (7) Genome Sequencer FLX+ System (454) – Go to 94
- (8) PacBio RS II – Go to 94
- (9) PacBio RS – Go to 94
- (10) HiScanSQ – Go to 94
- (11) HiSeq 1000 – Go to 94
- (12) HiSeq 1500 – Go to 94
- (13) HiSeq 2000 – Go to 94
- (14) HiSeq 2500 – Go to 94
- (15) HiSeq 4000 – Go to 94
- (16) Genome Analyzer Ix – Go to 94
- (17) MiSeq – Go to 94
- (18) MiSeq Dx – Go to 94
- (19) MiSeq FGx – Go to 94
- (20) ABI SOLiD – Go to 94
- (21) NextSeq – Go to 94
- (22) MinION (ONT) – Go to 94
- (23) Mini Seq Illumina – Go to 94
- (24) Other – Go to 93

93. If another platform is used please list here:

94. Criteria used to evaluate the quality of sequence data.

In this section you can report criteria used to evaluate the quality of sequence data. Please first reply on the use of 5 selected criteria, which were the most frequently reported by in previous EQAs.

Next you will be asked to report 5 **additional** criteria of your own choice.

For each criteria please also report the threshold or procedure used to evaluated the current criteria.

95. Did you use confirmation of species to evaluate the quality of sequence data?

(1) Yes

(2) No – Go to 97

96. Procedure used to evaluate confirmation of genus:

97. Did you use coverage to evaluate the quality of sequence data?

(1) Yes

(2) No – Go to 99

98. Procedure or threshold used for coverage:

99. Did you use Q score (Phred) to evaluate quality of sequence data?

(1) Yes

(2) No – Go to 101

100. Threshold or procedure used to evaluate Q score (Phred):

101. Did you use genome size to evaluate the quality of sequence data?

(1) Yes

(2) No – Go to 103

102. Procedure or threshold used for genome size:

103. Did you evaluate the number of good cgMLST loci?

(1) Yes

(2) No – Go to 105

104. Threshold or procedure used to evaluate the number of good cgMLST loci:

105. ONLY list additional information related to other criteria used to evaluate the quality of sequence data.

Please list up to 5 additional criteria (e.g. N50, read length, contamination)

106. Other criteria used to evaluate the quality of sequence data - additional criteria 1:

107. Threshold or procedure used to evaluate the additional criteria 1:

108. Other criteria used to evaluate the quality of sequence data - additional criteria 2:

109. Threshold or procedure used to evaluate the additional criteria 2:

110. Other criteria used to evaluate the quality of sequence data - additional criteria 3:

111. Threshold or procedure used to evaluate the additional criteria 3:

112. Other criteria used to evaluate the quality of sequence data - additional criteria 4:

113. Threshold or procedure used to evaluate the additional criteria 4:

114. Other criteria used to evaluate the quality of sequence data - additional criteria 5:

115. Threshold or procedure used to evaluate the additional criteria 5:

116. Comment(s):

e.g. remarks to the submission, the data analyses or the laboratory methods

117. Please remember to upload your raw reads to the sFPT site:

<https://sit-ftp.statens-it.dk/>

Code: EQA_STEC13_upload

Have you remebered to upload your raw reads?

(1) Yes

118. You have reached the end of the reporting scheme.

Please note that when you select "Yes" and "Next", your results will be automatically submitted and the reporting form will be locked.

If you wish to change your answers, use "Previous" to navigate backwards.

Upon completion, you will receive a link with your answers.

(1) Yes

Thank you for your participation

Thank you for filling out the Submission form for the STEC EQA-13.

For questions, please contact ecoli.eqa@ssi.dk or phone +45 3268 8341

Remember to press "Finish" to complete submission.

After submission you will receive a confirmation email with a link to the answers. We highly recommend to save this email.

Important: After pressing "Finish" you will no longer be able to edit or print your information.