

In the Supplementary Tables, the following abbreviations for the participating laboratories were used:

‘MBA’ for the Mycoplasmaology-Bacteriology and Antimicrobial Resistance Unit of Ploufragan-Plouzané-Niort Laboratory of the French Agency for Food, Environmental and Occupational Health & Safety, France.

‘Cefas’ for the Centre for Environment Fisheries and Aquaculture Science Laboratory, Weymouth, UK.

‘FDA’ for the Center for Veterinary Medicine, Office of Research, Division of Animal Research, Laurel, Maryland, USA.

‘MI’ for the Fish Health Unit, Marine Institute, Oranmore, Galway, Ireland.

‘UoS’ for the Institute of Aquaculture, University of Stirling, Scotland.

‘UG’ for the Department of Microbiology, University of Galway, Ireland.

The following abbreviations were used to indicate the antimicrobial agents:

‘AMP’ ampicillin

‘FLO’ florfenicol

‘OXO’ oxolinic acid

‘OXY’ oxytetracycline

Table S1. Range of antimicrobial agent concentrations ($\mu\text{g/ml}$) in the microplates used to perform MIC test by the participating laboratories.

Lab	Cefas	FDA ^a	MBA	UoS
Source	Thermo Fisher V1	na	In lab ^b	Thermo Fisher 1MPS
FLO	0.06 - 16	0.015 - 32	0.125 - 16	0.03 - 16
OXY	0.015 - 2	0.015 - 32	0.03 - 16	0.015 - 8
OYO	0.008 - 4	0.002 - 4	0.004 - 16	0.004 - 2

^a Data provided by Miller & Reimschuessel (2006)^b 'In lab' indicates that the microplates were manufactured by the participating laboratory

'na' indicates that the information was not available

Table S2. Number of isolates of *Aeromonas salmonicida* tested by each laboratory in determining minimum inhibitory concentrations (MIC) and disc diffusion inhibition zones (Disc).

	Cefas		FDA		MBA		MI ^a		UoS		UG ^a	
	MIC	Disc	MIC	MIC	MIC	Disc	MIC	Disc	MIC	Disc	MIC	Disc
AMP		58				75		106				106
FLO	50	58	144	144	144	75		106	82			106
OYO	50	58	144	144	144	90		106	82			106
OXY	50	58	68	68	68	28		106	82			106

^a Both UG and MI tested the same 106 isolates**Table S3. MIC values ($\mu\text{g/ml}$) reported for the quality control reference strain *Aeromonas salmonicida* subsp. *salmonicida* ATCC33658 by the participating laboratories in tests using a standard method that specified incubation at $22^{\circ}\text{C}\pm 2^{\circ}\text{C}$ for 44–48h and the acceptable ranges provided for these tests in VET04Ed3 (CLSI 2020).**

	VET04Ed3 Range	Cefas	FDA	MBA	UoS
FLO	0.25 - 1	0.5, 1, 1, 1	na	0.25, 0.25, 0.25, 0.25	0.25, 0.5, 0.5, 0.5
OYO	0.008 - 0.03	0.015, 0.03, 0.03, 0.03	na	0.03, 0.03, 0.03, 0.03	0.008, 0.015, 0.015, 0.015
OXY	0.12 - 1	0.12, 0.25, 0.5, 0.5	na	0.25, 0.25, 1	0.25, 0.25, 0.25, 1

'na' indicates data was not available

Table S4. Disc diffusion inhibition zones (mm) reported for the quality control reference strains by the participating laboratories in test using a standard method that specified incubation at 22°C±2°C for 44–48h and the acceptable ranges provided for these tests in VET04Ed3 (CLSI 2020).

For *E. coli* ATCC 25922

	VET04Ed3	Cefas	FDA	MBA	MI	UG
AMP	13-22	14-17	na	18-19	na	na
FLO	20-32	23-28	na	22-26	na	na
O XO	28-40	29-33	na	29-34	na	na
OXY	25-35	29-30	na	31	na	na

For *A. salmonicida* ATCC 33658

	VET04Ed3	Cefas	FDA	MBA	MI	GU
AMP	35-44	na	na	37-40	37-40	35-37
FLO	34-47	na	na	36-38	40-43	35-38
O XO	35-45	na	na	37-40	39-44	39-44
OXY	28-38	na	na	31	36-38	30-35

'na' indicates data was not available

Table S5. The distribution of MIC values for *Aeromonas salmonicida* recorded by the participating laboratories in their tests performed using the standard method specifying incubation at 22°C±2°C for 44–48h.

Cells shaded in grey indicate values that could not be determined using the microplates used in this work.

Values in red indicate MIC values of isolates categorized as WT by application of the cut-off values calculate from the multi-laboratory aggregation.

‘Off scale’ indicates the isolates for which the MICs were greater than the microplates used were capable of quantifying.

‘sd NRI’ and ‘sd ECOFFinder’ indicate the standard deviations of the WT distributions calculated by the NRI and ECOFFinder method respectively.

‘WT’ indicates the number of isolates categorized as WT by application of the cut-off values calculated from the multi-laboratory aggregation.

S5.1 florfenicol

MIC (µg/ml)	Cefas	FDA	MBA	UoS	Total
0.015					
0.03					
0.06					
0.125		8		2	10
0.25	3	43	1	8	55
0.5	28	120	1	32	181
1	16	42	71	22	151
2	1	4	28	2	35
4	1		16		17
8			9	1	10
16	1		3	13	17
32					
Off scale			15	2	17
sd NRI	0.70	0.87	0.66	0.93	0.93
sd ECOFFinder	0.52	0.69	0.38	0.73	0.84
WT	49	217	117	66	449

S5.2 oxolinic acid

MIC ($\mu\text{g/ml}$)	Cefas	FDA	MBA	UoS	Total
0.002					
0.004					
0.008				5	5
0.015	13	21	8	22	64
0.03	19	157	10	27	213
0.06	3	13	5	8	29
0.125		4		2	6
0.25			4	1	5
0.5			11	3	14
1	15	9	24	2	50
2		4	45	6	55
4		6	24		
8			5		
16					
Off scale		3	18	3	59
sd NRI	0.74	0.52	0.78	0.95	0.78
sd ECOFFinder	0.57	0.37	0.79	0.82	0.49
WT	35	191	23	62	311

S5.3 oxytetracycline

MIC ($\mu\text{g/ml}$)	Cefas	FDA	MBA	UoS	Total
0.015					
0.03					
0.06	3				3
0.125	10	19		7	36
0.25	24	91	5	27	147
0.5	2	38	15	15	70
1	3	1	10	6	20
2		1	3	1	5
4			1	1	
8		4	1	3	
16		22			
32		24			
Off scale	8	17	33	22	136
sd NRI	0.84	0.79	0.87	0.82	0.85
sd ECOFFinder	0.54	0.56	0.79	0.65	0.63
WT	42	149	30	55	276

Table S6. The distribution of disc diffusion inhibition zones for *Aeromonas salmonicida* recorded by the participating laboratories in their tests performed using the standard method specifying incubation at 22°C±2°C for 44–48h.

Values in red indicate MIC values of isolates categorized as wild-type (WT) by application of the cut-off values calculated from the multi-laboratory aggregation.

‘sd NRI’ and ‘sd ECOFFinder’ indicate the standard deviations of the WT distributions calculated by the NRI and ECOFFinder methods, respectively.

‘CO_{WT}’ indicates the wild-type cut off values and ‘sd’ the standard deviation of the normalised WT observations calculated by NRI analysis.

S6.1 ampicillin

Zones (mm)	Cefas	MBA	MI	UG	Total
6			2	3	5
7					
8					
9					
10			1	1	2
11			1		1
12				1	1
13				1	1
14	1				1
15					
16			1		1
17	1		1		2
18					
19					
20				1	1
21					
22					
23					
24			1		1
25	1				1
26					
27					
28		1		4	5
29		2	1	3	6
30		1		2	3
31	1	1	1		3
32	4	1	3	9	17
33		1	3	12	16
34	1	2	5	10	18
35		1	6	19	26
36	6		11	6	23
37	5	2	7	7	21
38	1	10	14	4	29
39	11	5	8	5	29
40	12	22	12	9	55

41	8	10	8	3	29
42	3	3	8	3	17
43	1	8	6	3	18
44	2	1	2		5
45		2	1		3
46		1	2		3
47					
48			1		1
49					
50					
51		1			1
CO _{WT} (mm)	≥35	≥34	≥31	≥25	≥29 mm
sd (mm)	1.9	2.5	3.3	4.3	3.4 mm
WT	55	74	99	95	323

S6.2 florfenicol

Zones (mm)	MBA	Cefas	FDA	MI	UG	Total
6	11					11
7	3					3
8						
9	1					1
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22		1				1
23						
24						
25						
26						
27	2				1	3
28	1				1	2
29	1				1	2
30			4		2	6
31	2	1		1	3	7
32	2			1	8	11
33	1			1	5	7
34	2	1			12	15
35	4		1	2	15	22

36	5	1	1	6	5	18
37	7	5	2	8	16	38
38	9	2	7	11	11	40
39	9	8	8	10	9	44
40	4	12	14	9	4	43
41	2	5	16	9	2	34
42	1	3	49	15	2	70
43	3	6	33	8	5	55
44	3	5	19	9	3	39
45		3	10	3	1	17
46	1	4	20	6		31
47		1	6	1		8
48			7	1		8
49				3		3
50			2			2
51			5	1		6
52	1		2	1		4
52			1			1
54						
55			2			2
56			4			4
57			1			1
58			1			1
59						
60						
61			2			2
CO _{WT} (mm)	≥26	≥36	≥26	≥30	≥24	≥30
<i>sd</i> (mm)	4.2	2.7	6.0	4.1	4.5	4.2
WT	56	57	217	106	103	539

S6.3 oxolinic acid

Zones (mm)	Cefas	FDA	MBA	MI	UG	Total
6	9	2	13	5	13	42
7				1	1	2
8	2		1	2	8	13
9				2	2	4
10	1	2		4	3	10
11			1	2	4	7
12			2	6	4	12
13		1		7	3	11
14			2	4	6	12
15	1	3	3	6	5	18
16		1	3	6	2	12
17		1		1	7	9
18		5	1	2		8
19		4	3	2		9
20		2	7	3	1	13

21	1	1	8	2		12
22			4	2		6
23			2	1		3
24				1		1
25			2			2
26			4			4
27			4		1	5
28			6			6
29			2			2
30	2		2		1	5
31				1	2	3
32					1	1
33		1			2	3
34	1		1	1	3	6
35	4	3	2	3	3	15
36	2	1	1	2	4	10
37	4	5	1	4	4	18
38	11	11	5	5	2	34
39	6	17	4	5	7	39
40	4	46	2	3	6	61
41	3	32	3	6	5	49
42	6	25	1	8		40
43	1	18		3		22
44		8		3	4	15
45		9		1		10
46		13			1	14
47		3		2		5
48		1				1
49						
50		1				1
51						
52		1				1
53						
54					1	1
CO _{WT} (mm)	≥30	≥36	≥32	≥34	≥27	≥32
<i>sd</i> (mm)	3.2	2.7	2.4	2.6	4.3	4.2
WT	42	195	20	46	43	346

S6.4 oxytetracycline

Zones (mm)	Cefas	FDA	MBA	MI	UG	Total
6	8	17		26	15	66
7		24		6	2	32
8		16		5	22	43
9		4		5	10	19
10		3		4	1	8
11		2		4		6
12		1				1

13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24		1			1	2
25						
26						
27						
28				1	1	2
29					1	1
30	1				3	4
31	1	1	1		2	5
32	1	3	1		6	11
33	1	7	1		6	15
34	7	28			5	40
35	5	14	3		7	29
36	7	32	3	3	7	52
37	7	15	5	1	4	32
38	11	11	5	3	5	35
39	5	14	5	9	2	35
40	2	4	2	9	1	18
41	1	4	2	6	2	15
42	1	1		7	1	10
43		4		4	1	9
44		1		8	1	10
45		3		5		8
46		3				3
47		1				1
48		2				2
49		1				1
CO _{WT} (mm)	≥32	≥20	≥33	≥35	≥24	≥25
<i>sd</i> (mm)	2.0	6.0	2.0	2.5	4.1	4.6
WT	50	149	28	56	55	338

LITERATURE CITED

CLSI (Clinical Laboratory Standards Institute) (2020) Performance standards for antimicrobial susceptibility testing of bacteria isolated from aquatic animals. CLSI guideline VET04, 3rd edn. CLSI, Wayne, PA