

Domoic Acid 2019 Proficiency Test Summaries

AFBI EURL 2019

Sample ID	Sample description	Assigned value	Reported value	Units	z-score
EURLMB/19/A/01	Mussel homogenate	7.3	7.2	mg/kg	-0.1
EURLMB/19/A/02	Scallop homogenate	76.5	77.9	mg/kg	0.1

AFBI Quasimeme Round 2019.1

Sample No	Sample ID	Sample description	Determinand	Assigned value	Reported value	Units	z-score
2019.1	QST260BT	King scallop homogenate	Total Domoic + Epi DA	27	25.98	mg/kg	-0.3
2019.1	QST261BT	Queen scallop adductor	Total Domoic + Epi DA	28.1	29.48	mg/kg	0.4
2019.1	QST262BT	Pacific oyster	Total Domoic + Epi DA	8.43	8.33	mg/kg	-0.1

AFBI Quasimeme Round 2019.2

Sample No	Sample ID	Sample description	Determinand	Assigned value	Reported value	Units	z-score
2019.2	QST269BT	Oyster homogenate	Total Domoic + Epi DA	17.1	18.7	mg/kg	0.7
2019.2	QST270BT	Scallop homogenate	Total Domoic + Epi DA	28.3	32.2	mg/kg	1.1
2019.2	QST271BT	Mussel homogenate	Total Domoic + Epi DA	52.1	45.9	mg/kg	-0.9

PSP 2019 Proficiency Test Summaries

AFBI EURL 2019

Sample ID	Method	Matrix	Determinand	Assigned Value	Reported value	Recovery corrected result	Units	Z'-Score
EURLMB/19/P/01	HPLC	Clam homogenate	dcGTX2&3	82.3	77.4	136	ugSTX2HCL equiv/Kg	2.50
EURLMB/19/P/01	HPLC	Clam homogenate	dcSTX	642.8	527	909	ugSTX2HCL equiv/Kg	2.20
EURLMB/19/P/01	HPLC	Clam homogenate	GTX2&3	137.4	166	252	ugSTX2HCL equiv/Kg	3.50
EURLMB/19/P/01	HPLC	Clam homogenate	GTX5 (B1)	3.43			ugSTX2HCL equiv/Kg	
EURLMB/19/P/01	HPLC	Clam homogenate	STX	24.37	14.9	17.9	ugSTX2HCL equiv/Kg	-1.1
EURLMB/19/P/01	HPLC	Clam homogenate	dcNeo	58.35			ugSTX2HCL equiv/Kg	
EURLMB/19/P/01	HPLC	Clam homogenate	GTX6 (B)	25.8	31.6	31.6	ugSTX2HCL equiv/Kg	0.9
EURLMB/19/P/01	HPLC	Clam homogenate	Total STX	967	817	1346	ugSTX2HCL equiv/Kg	2.4
Sample ID	Method	Matrix	Determinand	Assigned Value	Reported value		Units	Z-Score
EURLMB/19/P/02	HPLC	Mussel homogenate	C1&C2	150	153	232	ugSTX2HCL equiv/Kg	2.40
EURLMB/19/P/02	HPLC	Mussel homogenate	dcSTX	274	211	365	ugSTX2HCL equiv/Kg	1.60
EURLMB/19/P/02	HPLC	Mussel homogenate	GTX2&3	53.0	51.8	78.5	ugSTX2HCL equiv/Kg	1.90
EURLMB/19/P/02	HPLC	Mussel homogenate	GTX5 (B1)	194	95	233	ugSTX2HCL equiv/Kg	0.9
EURLMB/19/P/02	HPLC	Mussel homogenate	dcNeo	36.7			ugSTX2HCL equiv/Kg	
EURLMB/19/P/02	HPLC	Mussel homogenate	C3&C4	59.7	81.1	81	ugSTX2HCL equiv/Kg	1.3
EURLMB/19/P/02	HPLC	Mussel homogenate	GTX6 (B2)	148	174	174	ugSTX2HCL equiv/Kg	0.7
EURLMB/19/P/02	HPLC	Mussel homogenate	Total STX	1026	1003	1312	ugSTX2HCL equiv/Kg	1.6
Sample ID	Method	Matrix	Determinand	Assigned Value	Reported value		Units	Z-Score
EURLMB/19/P/03	HPLC	Shellfish	GTX2&3	358	338	512	ugSTX2HCL equiv/Kg	2.20
EURLMB/19/P/03	HPLC	Shellfish	STX	254	229	276	ugSTX2HCL equiv/Kg	0.5
EURLMB/19/P/03	HPLC	Shellfish	Total STX	645	567	788	ugSTX2HCL equiv/Kg	1.2

z' scores: Recovery corrected evaluations are available only. (Statutory monitoring samples are not reported as recovery corrected).

AFBI Quasimeme Round 2019.1

Sample ID	Method	Matrix	Determinand	Assigned Value	Reported value	Units	Z-Score
QST266BT	HPLC	Mussel	GTX-2,3	3.21	3.04	µmol/kg	-0.4
QST266BT	HPLC	Mussel	STX	1.74	1.568	µmol/kg	-0.6
QST266BT	HPLC	Mussel	Total toxicity	1334	1263	µgSTXdiHCleq./kg	-0.4
Sample ID	Method	Matrix	Determinand	Assigned Value	Reported value	Units	Z-Score
QST267BT	HPLC	Mussel	GTX-2,3	2.94	2.768	µmol/kg	-0.4
QST267BT	HPLC	Mussel	STX	1.41	1.296	µmol/kg	-0.5
QST267BT	HPLC	Mussel	Total toxicity	1156	1101	µgSTXdiHCleq./kg	-0.4
Sample ID	Method	Matrix	Determinand	Assigned Value	Reported value	Units	Z-Score
QST268BT	HPLC	Mussel	dc-Neo	0.215	0.256	µmol/kg	0.5
QST268BT	HPLC	Mussel	dc-STX	1.87	1.384	µmol/kg	-1.5
QST268BT	HPLC	Mussel	GTX-2,3	0.072	0.072	µmol/kg	0
QST268BT	HPLC	Mussel	STX	0.0841	0.064	µmol/kg	-0.3
QST268BT	HPLC	Mussel	Total toxicity	762	592	µgSTXdiHCleq./kg	-1.5

AFBI Quasimeme Round 2019.2

Sample ID	Method	Matrix	Determinand	Assigned Value	Reported value	Units	Z-Score
QST275BT	HPLC	Mussel	GTX-2,3	5.02	4.56	µmol/kg	-0.5
QST275BT	HPLC	Mussel	STX	3.4	3.24	µmol/kg	-0.3
QST275BT	HPLC	Mussel	Total toxicity	2327	2224	µgSTXdiHCleq./kg	-0.3
Sample ID	Method	Matrix	Determinand	Assigned Value	Reported value	Units	Z-Score
QST276BT	HPLC	Mussel	dcSTX	0.506	0.44	µmol/kg	-0.6
QST276BT	HPLC	Mussel	GTX-2,3	5.35	4.98	µmol/kg	-0.4
QST276BT	HPLC	Mussel	STX	1.27	1.11	µmol/kg	-0.7
QST276BT	HPLC	Mussel	Total toxicity	1768	1689	µgSTXdiHCleq./kg	-0.3
Sample ID	Method	Matrix	Determinand	Assigned Value	Reported value	Units	Z-Score
QST277BT	HPLC	Mussel	GTX-2,3	6.85	6.26	µmol/kg	-0.5
QST277BT	HPLC	Mussel	STX	1.88	1.66	µmol/kg	-0.7
QST277BT	HPLC	Mussel	Total toxicity	2163	2012	µgSTXdiHCleq./kg	-0.5

Lipophilic 2019 Proficiency Test Summaries

AFBI EURL 2019

Sample ID	Method	Matrix	Determinand	Assigned Value	Reported value	Units	Z-Score
EURLMB/19/L/01	LC-MS/MS	Mussel (homogenate)	Free OA	201	150.0	µg/kg	-1.2
EURLMB/19/L/01	LC-MS/MS	Mussel	Free DTX-2	165	123.0	µg/kg	-1.1
EURLMB/19/L/01	LC-MS/MS	Mussel	Total OA	1419	1266.0	µg/kg	-0.7
EURLMB/19/L/01	LC-MS/MS	Mussel	Total DTX-2	330	283.0	µg/kg	-0.8
EURLMB/19/L/01	LC-MS/MS	Mussel	OA group (total)	1660	1435.8	µg OA eq/kg	-0.8
EURLMB/19/L/01	LC-MS/MS	Mussel	YTX	0.20	0.20	mg/kg	0.0
EURLMB/19/L/01	LC-MS/MS	Mussel	Homo-YTX	2.10	1.90	mg/kg	-0.5
EURLMB/19/L/01	LC-MS/MS	Mussel	45-OH-YTX	0.30	0.20	mg/kg	-0.8
EURLMB/19/L/01	LC-MS/MS	Mussel	45-OH-Homo-YTX	1.20	1.50	mg/kg	1.4
EURLMB/19/L/01	LC-MS/MS	Mussel	YTX group (total)	3.00	3.00	mg YTX eq/kg	0.1
Sample ID	Method	Matrix	Determinand	Assigned Value	Reported value	mg YTX eq/kg	Z-Score
EURLMB/19/L/02	LC-MS/MS	Mussel (homogenate)	Free OA µg/kg	44	27.8	Free OA	-1.6
EURLMB/19/L/02	LC-MS/MS	Mussel	Total OA µg/kg	81	47.2	Total OA	-1.8
EURLMB/19/L/02	LC-MS/MS	Mussel	OA group (total)	82.1	47.2	µg OA eq/kg	-1.9
EURLMB/19/L/02	LC-MS/MS	Mussel	AZA1 µg/kg	262	253.0	µg/kg	-0.2
EURLMB/19/L/02	LC-MS/MS	Mussel	AZA2 µg/kg	74	74.1	µg/kg	0
EURLMB/19/L/02	LC-MS/MS	Mussel	AZA3 µg/kg	55.20	46.4	µg/kg	-0.7
EURLMB/19/L/02	LC-MS/MS	Mussel	AZA group (total)	477	451.3	µg AZA eq./kg	-0.3
Sample ID	Method	Matrix	Determinand	Assigned Value	Reported value	Units	Z-Score
EURLMB/19/L/03	LC-MS/MS	Mussel (homogenate)	Free OA µg/kg	21	14.8	µg/kg	-1.2
EURLMB/19/L/03	LC-MS/MS	Mussel	Free DTX-1 µg/kg	225	229.0	µg/kg	0.1
EURLMB/19/L/03	LC-MS/MS	Mussel	Total OA µg/kg	49	23.4	µg/kg	-2.1
EURLMB/19/L/03	LC-MS/MS	Mussel	Total DTX-1 µg/kg	788	854.0	µg/kg	0.4
EURLMB/19/L/03	LC-MS/MS	Mussel	µg Total OA eq/kg	905	877.4	µg OA eq/kg	-0.2

AFBI Quasimeme Round 2019.1

Sample ID	Method	Matrix	Determinand	Assigned Value	Reported value	Units	Z-Score
QST263BT	LC-MS/MS	Mussel (homogenate)	AZA-1	738	639	µg/kg	-1.1
QST263BT	LC-MS/MS	Mussel	AZA-2	210	217	µg/kg	0.3
QST263BT	LC-MS/MS	Mussel	AZA-3	125	110	µg/kg	-0.9
QST263BT	LC-MS/MS	Mussel	Total AZA group	1304	1183	µg AZA eq./kg	-0.7
QST263BT	LC-MS/MS	Mussel	Free DTX1	85.8	71.2	µg/kg	-1.3
QST263BT	LC-MS/MS	Mussel	Free DTX2	567	520	µg/kg	-0.6
QST263BT	LC-MS/MS	Mussel	Free OA	149	134	µg/kg	-0.8
QST263BT	LC-MS/MS	Mussel	Free OA group	563	517	µg OA eq./kg	-0.6
QST263BT	LC-MS/MS	Mussel	Total DTX1	113	101	µg/kg	-0.8
QST263BT	LC-MS/MS	Mussel	Total DTX2	787	690	µg/kg	-1
QST263BT	LC-MS/MS	Mussel	Total OA	339	289	µg/kg	-1.1
QST263BT	LC-MS/MS	Mussel	Total OA group	924	804	µg/kg	-1
QST263BT	LC-MS/MS	Mussel	PTX-2	3.62	<LOQ	µg/kg	N/A
QST263BT	LC-MS/MS	Mussel	Total OA+PTX group	904	804	µg OA eq./kg	-0.9
QST263BT	LC-MS/MS	Mussel	YTX	0.227	0.2584	µg/kg	0.8
QST263BT	LC-MS/MS	Mussel	homo-YTX	1.1	1.0385	µg/kg	-0.4
QST263BT	LC-MS/MS	Mussel	45-OH-YTX	0.118	0.1524	µg/kg	1.2
QST263BT	LC-MS/MS	Mussel	45-OH-homo-YTX	0.513	0.6006	µg/kg	1.1
QST263BT	LC-MS/MS	Mussel	Total-YTX group	1.76	1.7496	µg OA eq./kg	0
Sample ID	Method	Matrix	Determinand	Assigned Value	Reported value	Units	Z-Score
QST246BT	LC-MS/MS	Mussel (extract)	AZA-1	97	87.3	µg/kg	-0.8
QST246BT	LC-MS/MS	Mussel	AZA-2	20.5	22.8	µg/kg	0.8
QST246BT	LC-MS/MS	Mussel	AZA-3	36.8	32.3	µg/kg	-0.9
QST246BT	LC-MS/MS	Mussel	Total AZA group	187	173.6	µg AZA eq./kg	-0.5
QST246BT	LC-MS/MS	Mussel	Free DTX2	3.88	3.6	µg/kg	-0.5
QST246BT	LC-MS/MS	Mussel	Free OA	38.7	37.9	µg/kg	-0.2
QST246BT	LC-MS/MS	Mussel	Free OA group	41.3	40	µg OA eq./kg	-0.2
QST246BT	LC-MS/MS	Mussel	Total DTX2	4.1	3.4	µg/kg	-1.2
QST246BT	LC-MS/MS	Mussel	Total OA	46	47.7	µg/kg	0.3
QST246BT	LC-MS/MS	Mussel	Total OA group	48.4	49.8	µg OA eq./kg	0.2
QST246BT	LC-MS/MS	Mussel	Total OA+PTX group	47.9	49.8	µg OA eq./kg	0.3

Sample ID	Method	Matrix	Determinand	Assigned Value	Reported value	Units	Z-Score
QST265BT	LC-MS/MS	Mussel (homogenate)	AZA-1	422	367	µg/kg	-1
QST265BT	LC-MS/MS	Mussel	AZA-2	119	130	µg/kg	0.7
QST265BT	LC-MS/MS	Mussel	AZA-3	84.7	72.9	µg/kg	-1.1
QST265BT	LC-MS/MS	Mussel	Total AZA group	767	703	µg AZA eq./kg	-0.7
QST265BT	LC-MS/MS	Mussel	Free DTX2	101	82.8	µg/kg	-1.4
QST265BT	LC-MS/MS	Mussel	Free OA	45.9	35.8	µg/kg	-1.7
QST265BT	LC-MS/MS	Mussel	Free OA group	107	85.5	µg OA eq./kg	-1.5
QST265BT	LC-MS/MS	Mussel	Total DTX2	146	119	µg/kg	-1.4
QST265BT	LC-MS/MS	Mussel	Total OA	99.1	83	µg/kg	-1.2
QST265BT	LC-MS/MS	Mussel	Total OA group	186	154.4	µg OA eq./kg	-1.3
QST265BT	LC-MS/MS	Mussel	Total OA+PTX group	186	154,4	µg OA eq./kg	-1.3

AFBI Quasimeme Round 2019.2

Sample ID	Method	Matrix	Determinand	Assigned Value	Reported value	Units	Z-Score
QST272BT	LC-MS/MS	Mussel (homogenate)	Free DTX2	407	392.4	µg/kg	-0.3
QST272BT	LC-MS/MS	Mussel	Free OA	153	142.6	µg/kg	-0.5
QST272BT	LC-MS/MS	Mussel	Free OA group	404	378.1	µg OA eq./kg	-0.5
QST272BT	LC-MS/MS	Mussel	Total DTX2	706	693.7	µg/kg	-0.1
QST272BT	LC-MS/MS	Mussel	Total OA	484	475.2	µg/kg	-0.1
QST272BT	LC-MS/MS	Mussel	Total OA group	920	891.4	µg OA eq./kg	-0.2
QST272BT	LC-MS/MS	Mussel	Total OA+PTX group	924	891.4	µg OA eq./kg	-0.3
Sample ID	Method	Matrix	Determinand	Assigned Value	Reported value	Units	Z-Score
QST273BT	LC-MS/MS	Mussel (extract)	AZA-1	13.6	10.7	µg/kg	-1.6
QST273BT	LC-MS/MS	Mussel	AZA-2	3.87	3.5	µg/kg	-0.7
QST273BT	LC-MS/MS	Mussel	AZA-3	3.94	3.9	µg/kg	-0.1
QST273BT	LC-MS/MS	Mussel	Total AZA group	25.4	22.5	µg AZA eq./kg	-0.9
QST273BT	LC-MS/MS	Mussel	Free DTX2	60.8	53.4	µg/kg	-0.9
QST273BT	LC-MS/MS	Mussel	Free OA	11	10.5	µg/kg	-0.3
QST273BT	LC-MS/MS	Mussel	Free OA group	49.4	42.5	µg OA eq./kg	-1.1
QST273BT	LC-MS/MS	Mussel	Total DTX2	74.2	68.8	µg/kg	-0.5
QST273BT	LC-MS/MS	Mussel	Total OA	18.7	16.7	µg/kg	-0.8
QST273BT	LC-MS/MS	Mussel	Total OA group	63	57.9	µg OA eq./kg	-0.6
QST273BT	LC-MS/MS	Mussel	Total OA+PTX group	64.4	57.9	µg OA eq./kg	-0.8
QST273BT	LC-MS/MS	Mussel	YTX	0.0311	0.0308	mg/kg	0
QST273BT	LC-MS/MS	Mussel	homo-YTX	0.302	0.3277	mg/kg	0.5
QST273BT	LC-MS/MS	Mussel	45-OH-YTX	0.023	0.0245	mg/kg	0.1
QST273BT	LC-MS/MS	Mussel	45-OH-homo-YTX	0.174	0.1962	mg/kg	0.6
QST273BT	LC-MS/MS	Mussel	YTX group	0.432	0.4811	mg YTX eq./kg	0.7
Sample ID	Method	Matrix	Determinand	Assigned Value	Reported value	Units	Z-Score
QST274BT	LC-MS/MS	Mussel (homogenate)	AZA-1	218	180.8	µg/kg	-1.3
QST274BT	LC-MS/MS	Mussel	AZA-2	59	59.2	µg/kg	0
QST274BT	LC-MS/MS	Mussel	AZA-3	49.6	50.9	µg/kg	0.2
QST274BT	LC-MS/MS	Mussel	Total AZA group	392	358.5	µg AZA eq./kg	-0.7
QST274BT	LC-MS/MS	Mussel	Free DTX2	297	284.7	µg/kg	-0.3

QST274BT	LC-MS/MS	Mussel	Free OA	67.5	57.9	µg/kg	-1.1
QST274BT	LC-MS/MS	Mussel	Free OA group	250	228.7	µg OA eq./kg	-0.6
QST274BT	LC-MS/MS	Mussel	Total DTX2	439	368.6	µg/kg	-1.2
QST274BT	LC-MS/MS	Mussel	Total OA	156	125.5	µg/kg	-1.5
QST274BT	LC-MS/MS	Mussel	Total OA group	435	346.7	µg OA eq./kg	-1.6
QST274BT	LC-MS/MS	Mussel	Total OA+PTX group	433	346.7	µg OA eq./kg	-1.5

Tetrodotoxin 2019 development exercise

Sample ID	Sample description	Assigned value	Reported value	Units	z-score
QTT003BT	Negative Oyster	-	<10	µg/kg	-
QTT004BT	Mussel homogenate	39	51.2	µg/kg	1.3
QTT005BT	Oyster homogenate	121	169.2	µg/kg	1.8
QTT001SS	Solvent standard	4.65	24.67	µg/L	28.8
QTT002EX	Mussel Extract	#	3.172	µg/L	#

not given - study organiser indicated stability issue with this extract

AFBI - International Phytoplankton Inter-comparison (IPI) 2019

(Phytoplankton Proficiency Testing Scheme)

IPI Taxonomy Quiz 2019	Analyst 1	Analyst 2	Analyst 3
Overall summary result >	100% (proficient)	93.37% (proficient)	89.06% (good)
Species ID (individual z-scores >)	Z-score	Z-score	Z-score
Akashiwo sanguinea	0.7	1.1	0.7
Prorocentrum micans	0.1	0.3	0.7
Pseudo-nitzschia seriata gp	-0.2	0.0	0.4
Azadinium spinosum	0.7	1.1	0.3
Chaetoceros danicus	0.3	0.9	-0.3
Chaetoceros curvisetus	0.0	0.2	-0.7
Gonyaulax spinifera	0.1	0.5	0.4
Corethron hystrix	0.1	0.3	1.9
Thalassiosira tenera	0.6	0.3	0.0
Heterosigma akashiwo	0.7	0.6	1.2
<p>The IPI quiz assesses both enumeration and individual species identification. An overall summary result is also given for each analyst as follows: test score >90% is deemed proficient, >70% is deemed a pass.</p>			

