



Food Chemistry Analytical Unit
CISB
Agri-Food and Biosciences Institute
(AFBI)
Stoney Road
Belfast BT4 3SD

STUDY PLAN 10/2020

To: FSANI
10A-C Clarendon Road
Belfast

Official Control Services for Shellfish Chemical Contaminants 2020

Results included overleaf.

Abnormalities or departures from standard conditions: None.

Remarks: None.

Sample condition: Acceptable.

Method used:	PAHs	SOP 147
	Heavy Metals	SOP 33, 39, 41, 163

Issued by: AFBI, CISB, FCAU Laboratory Manager

Date of issue of report: 29/05/2020



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Table 1: Sample information.

Lab Number	Site name/Production Area	Site Identification Ref (SIR)	Species collected	Sample Date
2000773	Shingle Bay	L3 AFFNI 88	Oysters	21/01/20
2000924	Middlebank	B1 AFFNI 55	Mussels	27/01/20
2000925	Paddy's Point	S7 AFFNI 76	Oysters	27/01/20
2001641	Killough	K1 AFFNI 18	Oysters	18/02/20
2001995	Ballyedmond	C7 AFFNI 73	Oysters	25/02/20
2001996	Fair Green	C11 AFFNI 84	Oysters	25/02/20
2001997	Narrow Water	NW - Wild Fishery	Mussels	25/02/20

Three individual samples per site were collected and combined to make a composite sample for all analyses.



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Table 2: PAH results in µg/kg on a fresh (wet) weight basis

Lab Number	EFSA 4	Naphthalene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	7H-Benzo (c) Fluorene	Benzo (a) Anthracene	Cyclopenta (c,d) Pyrene	Chryse ne	5 Methyl Chryse ne	Benzo (b) Fluora nthene
2000773	17.6	1.4	10.3	0.85	21.7	15.9	<0.50	3.5	<0.50	4.3	<0.50	6.5
2000924	12.4	0.87	6.6	1.7	9.5	9.6	<0.50	3.3	<0.50	3.2	<0.50	3.8
2000925	17.4	1.0	7.4	0.74	12.9	9.5	<0.50	3.0	<0.50	3.3	<0.50	7.2
2001641	10.5	0.77	7.9	0.82	16.2	13.0	<0.50	2.5	<0.50	3.6	<0.50	3.4
2001995	16.4	1.2	10.0	1.2	19.7	15.3	<0.50	4.5	<0.50	4.7	<0.50	5.8



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Table 2 continued: PAH results in µg/kg on a fresh (wet) weight basis

Lab Number	Benzo (k) Fluoranthene	Benzo (j) Fluoranthene	Benzo (a) Pyrene	Indeno (123,cd) Pyrene	Dibenzo (a,h) Anthracene	Benzo (ghi) Perylene	Dibenzo (a,l) Pyrene	Dibenzo (a,e) Pyrene	Dibenzo (a,i) Pyrene	Dibenzo (a,h) Pyrene
2000773	2.8	2.4	3.2	0.99	<0.50	1.4	<0.50	<0.50	<0.50	<0.50
2000924	2.3	2.3	2.2	2.9	1.1	3.2	<0.50	<0.50	<0.50	<0.50
2000925	3.3	2.6	3.8	1.8	<0.50	1.9	<0.50	<0.50	<0.50	<0.50
2001641	1.5	1.3	0.95	0.78	<0.50	0.83	<0.50	<0.50	<0.50	<0.50
2001995	3.1	1.7	1.4	1.1	<0.50	1.5	<0.50	<0.50	<0.50	<0.50



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Table 2 continued: PAH results in $\mu\text{g}/\text{kg}$ on a fresh (wet) weight basis

Lab number	EFSA 4	Naphthalene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	7H-Benzo (c) Fluorene	Benzo (a) Anthracene	Cyclopenta (c,d) Pyrene	Chryse ne	5 Methyl Chryse ne
2001996	13.1	0.95	5.5	0.95	11.1	8.0	<0.50	2.6	<0.50	3.4	<0.50
2001997	21.4	0.83	5.0	1.5	15.6	14.3	<0.50	6.7	<0.50	4.6	<0.50
LOD ($\mu\text{g}/\text{kg}$)		0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
LOQ ($\mu\text{g}/\text{kg}$)		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
HORRAT _r		1.34	0.48	1.00	0.32	0.32	0.85	0.56	0.57	0.26	0.37
Uncertainty		0.20	0.17	0.19	0.17	0.17	0.38	0.14	0.26	0.20	0.17



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Table 2 continued: PAH results in µg/kg on a fresh (wet) weight basis

Lab number	Benzo (b) Fluoranthene	Benzo (k) Fluoranthene	Benzo (j) Fluoranthene	Benzo (a) Pyrene	Indeno (123,cd) Pyrene	Dibenzo (a,h) Anthracene	Benzo (ghi) Perylene	Dibenz o (a,l) Pyrene	Dibenz o (a,e) Pyrene	Dibenz o (a,i) Pyrene	Dibenz o (a,h) Pyrene
2001996	5.4	2.8	2.2	1.6	1.2	<0.50	1.3	<0.50	<0.50	<0.50	<0.50
2001997	6.8	3.5	3.7	3.2	2.0	<0.50	2.9	<0.50	<0.50	<0.50	<0.50
LOD (µg/kg)	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
LOQ (µg/kg)	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
HORRAT _r	0.30	0.40	0.36	1.09	1.19	0.38	0.55	0.67	1.08	1.27	0.97
Uncertainty	0.14	0.18	0.16	0.19	0.29	0.17	0.18	0.30	0.49	0.58	0.44



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Table 3: Metal results for Lead, Cadmium and Mercury, expressed as mg/kg on a fresh (wet) weight basis.

Lab Number	Lead	Cadmium	Mercury
2000773	<0.30	0.31	<0.10
2000924	0.55	<0.20	<0.10
2000925	<0.30	0.28	<0.10
2001641	<0.30	<0.20	<0.10
2001995	<0.30	0.30	<0.10
2001996	<0.30	0.35	<0.10
2001997	0.40	<0.20	<0.10
LOD (mg/kg)	0.15	0.10	0.05
LOQ (mg/kg)	0.30	0.20	0.10
HORRATr	0.27	0.16	0.17
Uncertainty	0.09	0.07	0.09