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

STUDY PLAN 10/2019

To: FSANI
10A-C Clarendon Road
Belfast

Official Control Services for Shellfish Chemical Contaminants 2019

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

Date of issue of report 31st May 2019

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Table 1: Sample information.

Lab Number	Site name/Production Area	Site Identification Ref (SIR)	Species collected	Sample Date	Date sample received
PL60408	Killough	K1 AFFNI 18	Mussels	28/01/2019	28/01/2019
PL60409	Middlebank	B1 AFFNI 55	Mussels	28/01/2019	28/01/2019
PL60430	Paddy's Point	S7 AFFNI 76	Mussels	11/02/2019	11/02/2019
PL60436	Shingle Bay	L5 AFFNI 21B	Mussels	12/02/2019	12/02/2019
PL60463	Narrow Water	NW – Wild Fishery	Mussels	04/03/2019	05/03/2019
PL60464	Ballyedmond	C7 AFFNI 73	Oysters	04/03/2019	05/03/2019
PL60465	Fair Green	C11 AFFNI 84	Oysters	04/03/2019	05/03/2019

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	Chrysene	5 Methyl Chrysene	Benzo (b) Fluoranthene	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
PL60408	5.3	<0.50	3.5	1.3	3.5	3.3	<0.50	1.2	<0.50	1.7	<0.50	1.9	0.79	0.70	0.59	0.73	<0.50	0.83	<0.50	<0.50	<0.50	<0.50
PL60409	8.2	0.59	4.9	1.5	6.2	6.4	<0.50	2.1	<0.50	1.8	<0.50	3.3	1.3	1.0	1.0	1.3	<0.50	1.8	<0.50	<0.50	<0.50	<0.50
PL60430	9.2	0.52	5.3	0.68	6.4	4.4	<0.50	1.9	<0.50	2.4	<0.50	3.9	1.6	1.2	1.0	1.9	<0.50	2.0	<0.50	<0.50	<0.50	<0.50
PL60436	7.2	<0.50	4.3	5.4	5.8	4.5	<0.50	1.9	<0.50	1.9	<0.50	2.5	1.0	0.88	0.81	0.85	<0.50	1.3	<0.50	<0.50	<0.50	<0.50
PL60463	26.6	0.65	6.8	2.0	14.0	14.9	<0.50	7.6	<0.50	5.0	<0.50	10.9	4.1	2.9	3.1	3.4	0.57	3.7	<0.50	<0.50	<0.50	<0.50

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Table 2 continued: 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	Chrysene	5 Methyl Chrysene	Benzo (b) Fluoranthene	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
PL60464	17.6	0.60	7.9	1.5	14.3	10.0	<0.50	3.5	<0.50	3.9	<0.50	8.8	3.1	1.6	1.3	0.94	<0.50	1.3	<0.50	<0.50	<0.50	<0.50
PL60465	17.9	0.68	8.3	1.4	15.0	10.5	<0.50	3.7	<0.50	3.9	<0.50	9.0	3.4	1.5	1.4	1.5	<0.50	1.5	<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	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	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	0.30	0.40	0.36	1.09	1.19	0.38	0.55	0.67	1.08	1.27	0.97
Uncertainty	-	0.20	0.17	0.19	0.17	0.17	0.38	0.14	0.26	0.20	0.17	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
PL60408	<0.30	<0.20	<0.10
PL60409	0.50	<0.20	<0.10
PL60430	0.39	0.24	<0.10
PL60436	0.58	0.29	<0.10
PL60463	0.57	<0.20	<0.10
PL60464	<0.30	0.30	<0.10
PL60465	<0.30	0.38	<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