

# Laboratory services ILVO - Animal Sciences - ANIMALAB

(July 2021)

Quality control is an important element in the constant pursuit of integrated and sustainable quality assurance in animal and human nutrition. This covers several aspects:

- Composition and product quality of cattle or fish feeds
- Composition of animal end-products, such as eggs, milk, and meat
- Composition and quality of fisheries and aquaculture products
- Biological and chemical quality of the marine environment and habitat
- Determination of contaminants

Accurate and reliable analyses are extremely important for the governmental bodies in charge of policy as well as the fish and cattle feed industry, private aquaculturists and animal farmers. For this reason, the ILVO Animal Sciences Unit has grouped all of its testing laboratories into the ANIMALAB, short for the Animal Marine Laboratory. Each of these laboratories works according to the criteria of the NBN EN ISO/IEC 17025 standard. This standard, and the more general Belgian accreditation system ('BELAC'), gives laboratories, certification institutions and the inspecting organisation the opportunity to demonstrate their expertise and gain credibility at the national and international levels. The scope of these accredited analyses can be consulted on the BELAC website under certificate number T-315.

- -More information about laboratory services and co-creation is given at the ILVO website: <a href="https://ilvo.vlaanderen.be/en">https://ilvo.vlaanderen.be/en</a>
- -More details about the accredited analyses (ISO 17025) : BELAC scoop T-315

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# **ANIMAL RELATED ANALYSES**

#### **Animal Feed**

Product	Code	Parameter	Test method	Accreditation status
Animal feed	CHL012	ADF- ADLignin	Derived from Van Soest et al. (1991)	AC
Animal feed	CHL014	ADIN	Derived from Van Soest et al. (1991) and ISO 5983-2	NA
Animal feed	CHL001	Ammonia	Derived from ISO 5983-2	AC
Animal feed	CHL003	Gross energy	ISO 9831	AC
Animal feed	CHL004	Calcium	ISO 6490/1	AC
Animal feed	CHL006	Chromium oxide (Cr2O3)	François et al. (1978)	NA
Animal feed	CHL008	Protein solubility in H2O	CVB (2003)	NA
Animal feed	CHL009	Fytate phosphorusr	Haug W. and Lantzsch H.J (1983)	NA
Animal feed	CHL028	Macro-elements (Ca, P, K, Na, Mg)	ICP-OES	NA
Animal feed	CHL010	D-L-lactate	Gawehn (1984), Noll (1966)	AC
Animal feed	CHL011	NDF	Derived from Van Soest et al. (1991)	AC
Animal feed	CHL013	Insoluble ash - 3N	Derived from ISO 5985	AC
Animal feed	CHL013	Insoluble ash - 4N	Derived from McCarty et al. (1974)	AC
Animal feed	CHL014	Crude protein (Nx6.25)	Derived from ISO 5983-2	AC
Animal feed	CHL015	Crude fat-A	ISO 6492 without pre-hydrolysis	AC
Animal feed	CHL015	Crude fat-B	ISO 6492 with pre-hydrolysis	AC
Animal feed	CHL016	Crude ash	ISO 5984	AC
Animal feed	CHL017	Crude fibre	Derived from AOCS Approved Procedure Ba 6a-05	AC
Animal feed	CHL028	Trace elements (B, Fe, Cd, Zn, Pb, Ni, Cu, Cr, Se)	ICP-OES	NA
Animal feed	CHL018	Sugars	2009R0152 EEC	AC
Animal feed	CHL029	Tannins - Total	ISO 9648	NA
Animal feed	CHL032	Titaniumdioxide (TiO2)	In-house method	AC
Animal feed	CHL009	Total phosphorus	ISO 6491	AC
Animal feed	CHL022	Moisture	Derived from Regulation 152/2009/EG	AC
Animal feed	CHL023	Starch	NEN 3574	AC
Animal feed	CRL001	Alcohols C1-C4 + volatile fatty acids C2-C5	In-house method derived from Jouany (1981)	AC

Product	Code	Parameter	Test method	Accreditation status
Animal feed	CRL013	Fatty acids C6-C24.1	Derived from Sukhija P.S. et Palmquist D.L. (1988)	NA
Animal feed	FYL011	Buffer capacity	In-house method	NA
Animal feed	FYL001	Bulk density	Giger-Reverdin (2000)	NA
Animal feed	FYL002	Particle size-dry sieving	ASAE S319.2	NA
Animal feed	FYL002	Particle size-wet sieving	Lufa (2007)	NA
Animal feed	FYL004	Hardness (pellets)	Tetlow R. M. and Wilkins R. J. (1977)	NA
Animal feed	FYL010	Color Lab	In-house method	NA
Animal feed	FYL005	NIR – chemical composition	Raw materials: in-house calibrations; Mixed feeds: De Boever et al. (1995); maize and grass silages: De Boever et al. (1996)	NA
Animal feed	FYL006	рН	In-house method derived from BIPEA (1985)	AC
Animal feed	FYL007	Feed solubility-Waterbinding capacity	Giger-Reverdin (2000)	NA
Animal feed	FYL008	Waterabsorbing capacity	Giger-Reverdin (2000)	NA
Animal feed	FYL009	Swelling capacity	Vanstallen (1973)	NA
Animal feed	VFL001	Cellwall digestibility	Derived from Tilley and Terry (1963) & Van Soest et al. (1991)	NA
Animal feed	VFL007	Protein solubility, borate-phosphate buffer	Cone et al. (1994)	NA
Animal feed	VFL008	Protein solubility, pepsin-HCl	72/199/EEC (1972)	NA
Animal feed	VFL003	Organic matter digestibility-enzym-Boisen	Boisen and Fernandez (1997)	NA
Animal feed	VFL003	Organic matter digestibility-enzym-De Boever	De Boever et al. (1986)	AC
Animal feed	VFL003	Organic matter digestibility-rumen fluid	Derived from Tilley and Terry (1963)	NA
Animal feed	VFL004	Rumen degradability parameters-DVE + OEB	CVB-protocol (2003)	NA
Animal feed	VFL005	Total apparent digestibility-sheep	CVB-protocol (1996)	NA

<sup>\*</sup>Accreditation status: AC= accredited (BELAC 315-TEST) ; NA = not accredited

# Animal end products (egg, milk, meat)

Product	Code	Parameter	Test method	Accreditation status
Egg	CHL003	Gross energy	Derived from ISO 9831	NA
Egg	CHL004	Calcium	Derived from ISO 6490/1	NA
Egg	CHL014	Crude protein (Nx6.25)	Derived from ISO 5983-2	NA
Egg	CHL015	Crude fat-A	Derived from ISO 6492	NA
Egg	CHL016	Crude ash	Derived from ISO 5984	NA
Egg	CHL029	Tannins - Total	Derived from ISO 9648	NA
Egg	CHL009	Total phosphorus	Derived from ISO 6491	NA
Egg	CRL013	Fatty acids C6-C24.1	Derived from Sukhija P.S. et Palmquist D.L. (1988)	NA
Egg	CHL022	Moisture	Derived from Regulation 152/2009/EG	NA

Product	Code	Parameter	Test method	Accreditation status
Milk	FYL003	Composition: fat, protein, lactose, urea	FTIR Delta Instruments	NA
Milk	FYL006	рН	In-house method	NA
Milk	CHL014	Crude protein (Nx6.38)	Derived from ISO 5983-2	NA
Milk	CHL016	Crude ash	Derived from ISO 5984	NA
Milk	CHL009	Total phosphorus	Derived from ISO 6491	NA
Milk	CHL021	Fat	De Vleeschauwer et al. (1948)	NA
Milk	CRL013	Fatty acids C6-C24.1	Wolff R.L. et Fabien R.J. (1989)	NA
Milk	CHL022	Moisture	Derived from Regulation 152/2009/EG	NA

Product	Code	Parameter	Test method	Accreditation status
Meat	CHL003	Gross energy	Derived from ISO 9831	NA
Meat	CHL004	Calcium	Derived from ISO 6490/1	NA
Meat	FYL014	Drip loss	EZ-drip loss method, duplicate, (Christensen 2003)	NA
Meat	CHL024	Intramuscular fat	Bligh and Dyer adapted by Hanson and Olley (1963)	NA

Product	Code	Parameter	Test method	Accreditation status
Meat	FYL005	Intramuscular fat	In-house NIRS calibration	NA
Meat	FYL010	Colour Lab	Hunter MiniscanTM (Dikeman and Devine 2014)	NA
Meat	FYL012	Cooking loss	Boccard et al. 1981	NA
Meat	CHL028	Macro-elements (Ca, P, K, Na, Mg)	ICP-OES	NA
Meat	FYL006	рН	In-house method	NA
Meat	CHL014	Crude protein (Nx6.25)	Derived from ISO 5983-2	NA
Meat	CHL015	Crude fat-B	Derived from ISO 6492	NA
Meat	CHL016	Crude ash	Derived from ISO 5984	NA
Meat	FYL013	Shearing force	Boccard et al. 1981	NA
Meat	CHL028	Trace elements (B, Fe, Cd, Zn, Pb, Ni, Cu, Cr, Se)	ICP-OES	NA
Meat	CHL009	Total phosphorus	Derived from ISO 6491	NA
Meat	CRL013	Fatty acids C6-C24.1	Derived from Sukhija P.S. et Palmquist D.L. (1988)	NA
Meat	CHL022	Moisture	Derived from NEN-ISO 6496 (1999)	NA

<sup>\*</sup>Accreditation status: NA = not accredited

### Blood

Product	Code	Parameter	Test method	Accreditation status
Blood	FYL006	рН	In-house method	NA

<sup>\*</sup>Accreditation status: NA = not accredited

## Faeces, rumen fluid, urine

Product	Code	Parameter	Test method	Accreditation status
Faeces	CHL012	ADF	Derived from Van Soest et al. (1991)	NA
Faeces	CHL012	ADLignin	Derived from Van Soest et al. (1991)	NA
Faeces	CHL002	Ammonium N	Derived from BAM/part 3/05 (Liquid animal manure) en BAM/part 4/05 (solid animal excreta)	AC
Faeces	CHL003	Gross energy	Derived from ISO 9831	AC
Faeces	CHL004	Calcium	Derived from ISO 6490/1	AC
Faeces	CHL006	Chromium oxide (Cr2O3)	François et al. (1978)	NA
Faeces	CHL009	Fytate phosphorus	Derived from Haug W. and Lantzsch H.J (1983)	NA
Faeces	CHL028	Macro-elements (Ca, P, K, Na, Mg)	ICP-OES	NA
Faeces	CHL011	NDF	Derived from Van Soest et al. (1991)	AC
Faeces	FYL005	NIRS - composition	In-house method	NA
Faeces	CHL013	Insoluble ash - 4N	Derived from McCarty et al. (1974)	AC
Faeces	VFL003	Organic matter digestibility-enzym-De Boever	De Boever et al. (1986)	NA
Faeces	FYL006	рН	In-house method	NA
Faeces	CHL014	Crude protein (Nx6.25)	Derived from ISO 5983-2	AC
Faeces	CHL015	Crude fat-B	Derived from ISO 6492	AC
Faeces	CHL016	Crude ash	Derived from ISO 5984	AC
Faeces	CHL017	Crude fibre	Derived from AOCS Approved Procedure Ba 6a-05	AC
Faeces	CHL028	Trace elements (B, Fe, Cd, Zn, Pb, Ni, Cu, Cr, Se)	ICP-OES	NA
Faeces	CHL029	Tannins - Total	Derived from ISO 9648	NA
Faeces	CHL032	Titanium dioxide (TiO2)	In-house method	AC
Faeces	CHL009	Total phosphorus	Derived from ISO 6491	AC
Faeces	CHL033	Uric acid	In-house method derived from Poultry Sci. 1983 Oct; 62(10):2106-8.	NA
Faeces	CRL013	Fatty acids C6-C24.1	Derived from Sukhija P.S. et Palmquist D.L. (1988)	NA
Faeces	CHL022	Moisture	Derived from Regulation 152/2009/EG	AC
Faeces	CHL023	Starch	Derived from NEN 3574	AC

<sup>\*</sup>Accreditation status: AC= accredited (BELAC 315-TEST) ; NA = not accredited

Product	Code	Parameter	Test method	Accreditation status
Rumen fluid	CHL001	Ammonia	Voigt und Steger (1967)	AC
Rumen fluid	CHL010	D-L-lactate	Gawehn (1984), Noll (1966)	NA
Rumen fluid	CRL012	Fatty acids C2-C5	In-house method derived from Getachew (2001)	AC
Rumen fluid	FYL006	рН	In-house method	AC

<sup>\*</sup>Accreditation status: AC= accredited (BELAC 315-TEST); NA = not accredited

Product	Code	Parameter	Test method	Accreditation status
Urine	CHL001	Ammonia	Derived from ISO 5983-2	NA
Urine	CHL003	Gross energy	Derived from ISO 9831	NA
Urine	CHL007	Creatinine	Helger et al. (1974)	NA
Urine	FYL006	рН	In-house method	NA
Urine	CHL014	Crude protein (Nx6.25)	Derived from ISO 5983-2	NA
Urine	CHL022	Moisture	Derived from Regulation 152/2009/EG	NA

<sup>\*</sup>Accreditation status: NA = not accredited

#### **Bones**

Produkt	Code	Parameter	Test method	Accreditation status
Bones	CHL004	Calcium	Derived from ISO 6490/1	NA
Bones	CHL028	Macro-elements (Ca, P, K, Na, Mg)	ICP-OES	NA
Bones	CHL016	Crude ash	Derived from ISO 5984	NA
Bones	CHL028	Trace elements (B, Fe, Cd, Zn, Pb, Ni, Cu, Cr, Se)	ICP-OES	NA
Bones	CHL009	Total phosphorus	Derived from ISO 6491	NA

<sup>\*</sup>Accreditation status: NA = not accredited

# **MARINE RELATED ANALYSES**

# Fish (fish quality, authenticity, fish characteristics and age reading)

Product	Code	Parameter	Test method	Accreditation status
Fish	GNL001	Authenticity	Bossier et al (1999) and Lees (2003)	NA
Fish	CHL004	Calcium	Derived from ISO 6490/1	NA
Fish	CHL014	Crude protein (Nx6.25)	Derived from ISO 5983-2	NA
Fish	CHL015	Crude fat-A	Derived from ISO 6492	NA
Fish	CHL016	Crude ash	Derived from ISO 5984	NA
Fish	CHL019	Sulfite	Derived from Devries et al. (1986)	NA
Fish	CHL009	Total phosphorus	Derived from ISO 6491	NA
Fish	CHL022	Moisture	Derived from Verordening 152/2009/EG	NA
Fish	CRL014	Amino acids (tryptophan excluded)	In-house method	NA
Fish	CRL014	Amino acids (g/kg DM)	In-house method	NA
Fish	CRL002	Benzoic- and sorbic acid	Derived from Mikami et al. (2002)	NA
Fish	CRL003	Biogenic amines	Derived from Malle et al. (1996)	NA
Fish	CRL003	Histamine	Derived from Malle et al. (1996)	NA
Fish	CRL017	Microplastics	De Vriese et al. (2015)	NA
Fish	CRL007	PAH (sample preparation included)	In-house method derived from JAMP guidelines for monitoring contaminants in biota and sediment (ICES2011;OSPAR 2002)	NA
Fish	CRL008	PCB (sample preparation included)	In-house method derived from JAMP guidelines for monitoring contaminants in biota and sediment (ICES2011;OSPAR 2002)	NA
Fish	CRL011	Total lipid (sample preparation included)	In-house method derived from Smedes (1999)	AC
Fish	CRL014	Tryptophan	In-house method	NA
Fish	CRL013	Fatty acids C6-C24.1	Derived from Sukhija P.S. et Palmquist D.L. (1988)	NA
Fish	OLL001	Organoleptic parameters	Yamanaka et al. 1987; Torry Sensory Assessment Scoring Schemes Seafish	NA
Fish	OLL002	Freshness	QIM	NA
Fish	VKL001	Ammonia	Derived from AOAC 973.25	NA
Fish	VKL002	Batter	Derived from AOAC 996.15	NA
Fish	VKL003	Dimethylamine	Dyer and Mounsey	NA

Product	Code	Parameter	Test method	Accreditation status
Fish	VKL005	Bones	Codex STAN190-1995	NA
Fish	VKL006	Glaze	Derived from AOAC 963.18	NA
Fish	VKL007	Parasites	AOAC 985.12	NA
Fish	VKL008	рН	Derived from ISO 2917	NA
Fish	VKL009	Polyphosphates	Derived from NEN-ISO 5553	NA
Fish	VKL011	ТВА	Derived from AOCS Cd19-90	NA
Fish	VKL012	Trimethylamine	Derived from AOAC 971.14	NA
Fish	VKL013	TVB-N	Derived from EG Nr. 2074/2005	AC
Fish	VKL014	Fish diseases	ICES Guidelines	NA
Fish	VKL015	Salt	AOAC 937.09	NA
Fish	VKL004	α-glucosidase activity	Derived from Duflos et al. (2002)	NA
Fish	VSL001	Count	Scantrol Fishmeter manual	NA
Fish	VSL002	Length	Scantrol Fishmeter manual	NA
Fish	VSL003	Gender	Rijnsdorp et al. (2002)	NA
Fish	VSL004	Gender maturity	Rijnsdorp et al. (2002)	NA
Fish	VSL005	Weight	Scantrol Fishmeter manual	NA
Fish	VSL006	Gonad weight	Scantrol Fishmeter manual	NA
Fish	OTL001	Age	In-house method (count annual rings)	AC
Fish	TNL001	Motion compensated weight	In-house method	NA
Fish	MGL001	e-DNA metabarcoding	In-house method	NA
Fish	MGL001	e-DNA ddPCR	In-house method	NA

<sup>\*</sup>Accreditation status: AC= accredited (BELAC 315-TEST); NA = not accredited

#### Plastic

Product	Code	Parameter	Test method	Accreditation status
Plastic	CRL007		In-house method derived from JAMP guidelines for monitoring contaminants in biota and sediment (ICES2011;OSPAR 2002)	NA
Plastic	CRL008		In-house method derived from JAMP guidelines for monitoring contaminants in biota and sediment (ICES2011;OSPAR 2002)	NA
Plastic	MML004	Identification microbial communities	De Tender et al. 2015	NA

<sup>\*</sup>Accreditation status: NA = not accredited

# Fishing gear

Product	Code	Parameter	Test method	Accreditation status
Fishing gear	TNL002	Digital imaging	In-house method	NA
Fishing gear	TNL003	Mesh size	ISO 16663-1:2009	AC
Fishing gear	TNL004	Net opening-horizontal-vertical	In-house method	NA
Fishing gear	TNL005	Towing force	In-house method	NA

<sup>\*</sup>Accreditation status: AC= accredited (BELAC 315-TEST); NA = not accredited

## Sediment

Product	Code	Parameter	Test method	Accreditation status
Sediment	CRL019	Booster biocides	In-house method	NA
Sediment	CRL020	Carbonate	Loss on ignition	NA
Sediment	FYL002	Particle size-dry sieving	Derived from NPR 224	NA
Sediment	LPM001	Particle size-laser diffraction	In-house method (cf. Ugent)	NA
Sediment	FYL002	Particle size-wet sieving	Derived from NPR 224	NA
Sediment	MML004	Identification microbial communities	De Tender et al. 2015	NA
Sediment	CRL007	РАН	In-house method derived from JAMP guidelines for monitoring contaminants in biota and sediment (ICES2011;OSPAR 2002)	AC
Sediment	CRL008	РСВ	In-house method derived from JAMP guidelines for monitoring contaminants in biota and sediment (ICES2011;OSPAR 2002)	NA
Sediment	CHL020	тос	ICES Guidelines	NA
Sediment	CRL016	тос	In-house method derived from Mebius (1960) - dichromate-sulfuric acid oxidation with back titration with Mohr's salt	AC
Sediment	MGL001	e-DNA metabarcoding	In-house method	NA

<sup>\*</sup>Accreditation status: AC= accredited (BELAC 315-TEST); NA = not accredited

## **Epibenthos**

Product	Code	Parameter	Test method	Accreditation status
Epibenthos	GNL001	Authenticity	Bossier et al (1999) and Lees (2003)	NA
Epibenthos	CHL014	Crude protein (Nx6.25)	Derived from ISO 5983-2	NA
Epibenthos	CHL015	Crude fat-B	Derived from ISO 6492	NA
Epibenthos	CHL019	Sulfite	Derived from Devries et al. (1986)	NA
Epibenthos	CHL022	Moisture	Derived from Verordening 152/2009/EG	NA
Epibenthos	CRL002	Benzoic- and sorbic acid	Derived from Mikami et al. (2002)	NA
Epibenthos	CRL003	Biogenic amines	Derived from Malle et al. (1996)	NA
Epibenthos	CRL003	Histamine	Derived from Malle et al. (1996)	NA
Epibenthos	CRL005	Indole	Derived from AOAC 981.07	NA
Epibenthos	CRL007	PAH (sample preparation included)	In-house method derived from JAMP guidelines for monitoring contaminants in biota and sediment (ICES2011;OSPAR 2002)	NA
Epibenthos	CRL008	PCB (sample preparation included)	In-house method derived from JAMP guidelines for monitoring contaminants in biota and sediment (ICES2011;OSPAR 2002)	NA
Epibenthos	CRL011	Total lipid (sample preparation included)	In-house method derived from Smedes (1999)	AC
Epibenthos	CRL013	Fatty acids C6-C24.1	Derived from Sukhija P.S. et Palmquist D.L. (1988)	NA
Epibenthos	CRL017	Microplastics	De Vriese et al. (2015)	NA
Epibenthos	MCL001	Count	In-house method derived from ICES Guidelines for the study of the epibenthos of subtidal environments (No. 42, Febr 2009)	NA
Epibenthos	MCL002	Digital imaging	In-house method derived from ICES Guidelines for the study of the epibenthos of subtidal environments (No. 42, Febr 2009)	NA
Epibenthos	MCL003	Gender	In-house method	NA
Epibenthos	MCL004	Weight	In-house method derived from ICES Guidelines for the study of the epibenthos of subtidal environments (No. 42, Febr 2009)	NA
Epibenthos	MCL005	Gender transformation	In-house method	NA
Epibenthos	MCL006	Length	In-house method derived from ICES Guidelines for the study of the epibenthos of subtidal environments (No. 42, Febr 2009)	NA
Epibenthos	MCL007	Stomach contents	In-house method	NA
Epibenthos	MCL008	Stage of development	In-house method	NA

Product	Code	Parameter	Test method	Accreditation status
Epibenthos	MCL009	Species	In-house method derived from ICES Guidelines for the study of the epibenthos of subtidal environments, No. 42, Febr 2009)	NA
Epibenthos	NTL001	Count	In-house method derived from ICES Guidelines for the study of the epibenthos of subtidal environments, No. 42, Febr 2009)	NA
Epibenthos	NTL002	Digital imaging	In-house method derived from ICES Guidelines for the study of the epibenthos of subtidal environments, No. 42, Febr 2009)	NA
Epibenthos	NTL003	Gender	In-house method	NA
Epibenthos	NTL004	Gender maturity	In-house method	NA
Epibenthos	NTL005	Weight	In-house method derived from ICES Guidelines for the study of the epibenthos of subtidal environments, No. 42, Febr 2009)	NA
Epibenthos	NTL007	Length	In-house method derived from ICES Guidelines for the study of the epibenthos of subtidal environments, No. 42, Febr 2009)	NA
Epibenthos	NTL009	Parasites	In-house method	NA
Epibenthos	NTL010	Species	In-house method derived from ICES Guidelines for the study of the epibenthos of subtidal environments, No. 42, Febr 2009)	NA
Epibenthos	OLL001	Organoleptic parameters	Yamanaka et al. 1987; Torry Sensory Assessment Scoring Schemes Seafish	NA
Epibenthos	OLL002	Freshness	QIM	NA
Epibenthos	TNL001	Motion compensated weight	In-house method	NA
Epibenthos	VKL001	Ammonia	Derived from AOAC 973.25	NA
Epibenthos	VKL002	Batter	Derived from AOAC 996.15	NA
Epibenthos	VKL003	Dimethylamine	Dyer and Mounsey	NA
Epibenthos	VKL006	Glaze	Derived from AOAC 967.13	NA
Epibenthos	VKL008	рН	Derived from ISO 2917	NA
Epibenthos	VKL009	Polyphosphates	Derived from NEN-ISO 5553	NA
Epibenthos	VKL010	Caliber	AOAC Official Method 967.13 Drained Weight of Frozen Shrimp and Crabmeat	NA
Epibenthos	VKL012	Trimethylamine	Derived from AOAC 971.14	NA
Epibenthos	VKL013	TVB-N	Derived from EG Nr. 2074/2005	AC
Epibenthos	VKL015	Salt	AOAC 937.09	NA
Epibenthos	VKL016	Weight	US Standards for Grades of Frozen Raw Scallops	NA

<sup>\*</sup>Accreditation status: AC= accredited (BELAC 315-TEST); NA = not accredited

### Macrobenthos

Product	Code	Parameter	Test method	Accreditation status
Macrobenthos	MCL001	Count	Derived from ISO 16665 (no sampling)	AC
Macrobenthos	MCL002	Digital imaging	In-house method	NA
Macrobenthos	MCL004	Weight	Derived from ISO 16665 (no sampling)	AC
Macrobenthos	MCL006	Length	ISO 16665	NA
Macrobenthos	MCL008	Stage of development	ISO 16665	NA
Macrobenthos	MCL009	Species	Derived from ISO 16665 (no sampling)	AC
Macrobenthos	GNL001	Authenticity	Bossier et al (1999) and Lees (2003)	NA

<sup>\*</sup>Accreditation status: AC= accredited (BELAC 315-TEST); NA = not accredited

### Biota

Product	Code	Parameter	Test method	Accreditation status
Biota	CRL007	1	In-house method derived from JAMP guidelines for monitoring contaminants in biota and sediment (ICES2011;OSPAR 2002)	AC
Biota	CRL008	PCB (sample preparation included)	In-house method derived from JAMP guidelines for monitoring contaminants in biota and sediment (ICES2011;OSPAR 2002)	NA
Biota	CRL011	Total lipid (sample preparation included)	In-house method derived from Smedes (1999)	NA
Biota	CRL015	Geosmin + 2-methylisoborneol	In-house method	NA

<sup>\*</sup>Accreditation status: AC= accredited (BELAC 315-TEST); NA = not accredited

### Plankton

Product	Code	Parameter	Test method	Accreditation status
Plankton	MCL001	Count	In-house method derived from Harris, R.; Wiebe, P.; Lenz, J.; Skjoldal, HR.; Huntley, M.E. (Ed.) (2000). ICES Zooplankton Methodology Manual	NA
Plankton	MCL002	Digital imaging	In-house method	NA
Plankton	MCL004	Weight	In-house method derived from Harris, R.; Wiebe, P.; Lenz, J.; Skjoldal, HR.; Huntley, M.E. (Ed.) (2000). ICES Zooplankton Methodology Manual	NA
Plankton	MCL008	Stage of development	In-house method derived from Harris, R.; Wiebe, P.; Lenz, J.; Skjoldal, HR.; Huntley, M.E. (Ed.) (2000). ICES Zooplankton Methodology Manual	NA
Plankton	MCL009	Species	In-house method derived from Harris, R.; Wiebe, P.; Lenz, J.; Skjoldal, HR.; Huntley, M.E. (Ed.) (2000). ICES Zooplankton Methodology Manual	NA
Plankton	PTL004	Length	In-house method	NA
Plankton	GNL001	Authenticity	Bossier et al (1999) en Lees (2003)	NA

<sup>\*</sup>Accreditation status: NA = not accredited

#### Water

Product	Code	Parameter	Test method	Accreditation status
Water	CRL015	Geosmin + 2-methylisoborneol	In-house method	AC

<sup>\*</sup>Accreditation status: AC= accredited (BELAC 315-TEST)

#### Sea water

Product	Code	Parameter	Test method	Accreditation status
Sea water	MTL007	Algae density	In-house method	NA
Sea water	MML004	Identification microbial communities	De Tender et al. 2015	NA
Sea water	NTL008	CTD	In-house method	NA
		- Conductivity		
		- Pressure		
		- Speed of sound		
		- Dissolved oxygen		
		- Salinity		
		- Temperature		
		- Turbidity		
Sea water	NTL008	Test kit Water Quality	In-house method	NA
		- Ammonium		
		- Carb hardness		
		- Conductivity		
		- Phosphate		
		- Nitrate		
		- Nitrite		
		- pH		
		- Redox		
		- Temperature		
		- Oxygen		
Sea water	MGL001	e-DNA metabarcoding	In-house method	NA

<sup>\*</sup>Accreditation status: NA = not accredited