



SLOVENSKI STANDARD

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Traceability of fishery products - Specification of the information to be recorded in farmed fish distribution chains

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CEN**CWA 14659****WORKSHOP**

February 2003

AGREEMENT

ICS 65.150; 67.120.30

English version

Traceability of fishery products - Specification of the information to be recorded in farmed fish distribution chains

This CEN Workshop Agreement has been drafted and approved by a Workshop of representatives of interested parties, the constitution of which is indicated in the foreword of this Workshop Agreement.

The formal process followed by the Workshop in the development of this Workshop Agreement has been endorsed by the National Members of CEN but neither the National Members of CEN nor the CEN Management Centre can be held accountable for the technical content of this CEN Workshop Agreement or possible conflicts with standards or legislation.

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Foreword

This CEN Workshop Agreement has been drafted and approved by a Workshop of representatives of interested parties on November 8th. 2002, the constitution of which was supported by CEN following the public call for participation made on March 8th. 2002.

A list of the individuals and organizations, which supported the technical consensus represented by the CEN Workshop Agreement, is available to purchasers from the CEN Management Centre. These organizations were drawn from the following incomplete list of economic sectors: Fish industry, Fish farming industry, IT industry, Research institutions, NGO's, Retailers, Regulatory authorities, EU Commission.

The formal process followed by the Workshop in the development of the CEN Workshop Agreement has been endorsed by the National Members of CEN. However neither the National Members of CEN nor the CEN Management Centre can be held accountable for the technical content of the CEN Workshop Agreement or possible conflict with standards or legislation. This CEN Workshop Agreement can in no way be held as being an official standard developed by CEN and it's members.

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Comments or suggestions from the users of the CEN Workshop Agreement are welcome and should be addressed to the CEN Management Centre.

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Introduction

There are increasing demands for detailed information on the nature and origin of food products. Traceability is becoming a legal and commercial necessity. Transmission of all the required information physically with the products would, in many instances, be impracticable and so the use of information technology is preferable.

The ISO definition of traceability concerns the ability to trace the history, application and location of that which is under consideration, and for products this can include the origin of materials and parts and processing history. Traceability includes not only the principal requirement to be able to physically trace products through the distribution chain, from origin to destination and vice versa, but also to be able to provide information on what they are made of and what has happened to them. These further aspects of traceability are important in relation to food safety, quality and labelling.

The *Tracefish* concept is an electronic system of chain traceability. It was developed under the patronage of the European Commission in its Concerted Action project QLK1-2000-00164.

Participation in the Tracefish scheme is voluntary but in order for it to function, there have to be agreed protocols for the system. For this purpose, three specifications have been developed:

- an information specification for captured fish distribution chains i.e. what information should be generated and held by the food businesses;
- a similar information specification for farmed fish distribution chains;

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- and a technical specification for the electronic encoding of the data.

The information specifications are CEN Workshop Agreements and the web-based technical specification is published on www.tracefish.org

The key to the operation of the scheme is the labelling of each unit of goods traded, whether of raw materials or finished products, with a unique ID. This is to be done by the food business that creates each unit. Businesses that transform units, such as processors who convert the units of raw materials received into the products dispatched, create new units and must give them new IDs.

Each of the food businesses that create or physically trade in those units, throughout the distribution chains from catcher or farmer through to retailer or caterer, are to generate and hold the information necessary for traceability. The information is to be held on computer databases, keyed to the unit IDs.

The information remains in the ownership of the food business that generated it but is available when required by law for the purposes of traceability (in the event of a food safety problem) or by commercial agreement between businesses. The means of communicating the information is standardised so that it can be readily accessed from business to business through the distribution chains, when required.

This is a development beyond the forthcoming EU legal requirement, coming into force January 1st 2005, for each food business to independently record sources of supplies and destinations of foods, but builds on that basis.

Commercial arrangements for businesses to communicate information through the distribution chains are to be encouraged, particularly for the information desired by the trade to be *visible* at the various transaction points in the chains, but that is not the subject of this document.

The method of identifying the units of goods traded is based on the EAN.UCC system that is already in use throughout the world. The information is keyed to unique IDs given to the individual trade units (e.g. boxes of fish or cases of products) but the scheme also accommodates trade in logistic units made up of numbers of trade units (e.g. pallets of boxes or cases). Businesses that create logistic units have to label them with a logistic unit ID and also record the IDs of the component trade units.

The Tracefish scheme does not demand perfect traceability, i.e. that a particular retail product should be traceable back to a single vessel or farm and batch of origin, or vice versa from origin to destination. Pragmatically it is recognised that mixing of units is likely to occur at a number of stages in the distribution chains, e.g. in grading at auction markets prior to sale and in the processing of raw materials into products. Where such mixing occurs, the food business is transforming the trade units. The requirement for traceability is that the business records the IDs of the received trade units that may be input to each created trade unit, and vice versa. The particular product is then traceable back to a finite number of vessels or farms and batches of origin, and vice versa.

The information itemised in the specifications for recording by the food businesses includes:

- the fundamental information necessary to identify and physically trace the products, that shall be recorded;
- specific information that is required by law in relation to food safety, quality and labelling, together with important elements of commercially desirable information related to those matters, that should be recorded;
- and further specific and commercial information considered to be of sufficient relevance to be included in the specifications, that may be recorded.

Given the enormous variety of fishery products and of their distribution chains that operate within and between different countries, and varying legal requirements, the information specifications cannot itemise all the information that may possibly be required in every situation. The specifications provide a generic basis for traceability. Flexibility is allowed for businesses to record further information, in their own non-standardised files, but keyed to the unit IDs.

Although virtually every distribution chain is different, they all appear to be made up of a number of characteristic components or *building blocks*. The types of business identified in this document for farmed fish distribution chains are:

- breeders;
- hatcheries;
- fish farms;
- live fish transporters;
- processors;
- transporters and stores;
- retailers;
- fish feed producers.

Any given farmed fish distribution chain may be made up of some or all of these components but not necessarily in the sequence listed.

The information specifications separately tabulate the information to be recorded by each of these types of business. Some businesses may carry out the functions of more than one of the types listed, for example distribution businesses may act as *wholesalers* and as *transporters*, in which case those businesses must record the relevant information requirements for each of the functions carried out.

There are limitations to this approach, for example it does not fit to the specialised requirements of live bivalve mollusc distribution chains, and so this initial information specification is limited in scope to the distribution for fish feed and human consumption of farmed fish and their products. The captured and farmed fish information specifications are substantially the same from processing onward.

Pragmatically it is recognised that some supplies of fish products and supplies of ingredients, etc, will come from outside of the Tracefish domain and may lack the required IDs and information records. To accommodate this, a business that brings in fish and materials from outside of the Tracefish domain is required to generate and hold the key information necessary for the traceability of the units brought in, and if they are to be traded on, to label those units with the required IDs.

CEN Workshop Agreements are not *tablets of stone*. They can be revisited, amended and extended. These initial specifications could be extended in the future to include further detail and the requirements of more specialised distribution chains, including those for shellfish and for fish meal and oil.

These specifications will provide a basis for IT service providers to develop business solutions (applications) for the trade. The information specifications do not preclude the use of paper systems, although the obvious benefits of business efficiency, including rapid communication, will be lost.

Further information on the background to the development of the Tracefish scheme and on its philosophy is given in informative annexes A.

CWA 14659:2003 (E)**1 Scope**

This document specifies the information to be recorded in distribution chains in order to establish the traceability of farmed fishery products.

It specifies how fishery products traded are to be identified and the information to be generated and held on those products by each of the food businesses that physically trade them through the distribution chains.

It is applicable to the distribution for human consumption of farmed finfish and their products, from breeding through to retailers or caterers. The CWA specify also data about ingredients brought in by processors and producers.

Together with CWA 14660 and the technical specification on www.tracefish.org it provides a basis for implementing chain traceability in the fish industry.

2 Normative references

This CWA incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this CWA only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

CWA 14660 *Traceability of fish products. Specification of Information to be recorded in captured fish distribution chains*

www.tracefish.org *Traceability of fishery products — Specification on the information to be recorded in farmed fish distribution chains*

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3 Terms and definitions

For the purposes of this CWA, the following terms and definitions apply:

3.1**traceability**

ability to trace the history, application or location of that which is under consideration

NOTE when considering products traceability can relate to

the origin of materials and parts;

the processing history.

(NS-EN ISO 9000:2000)

3.2**trade unit**

any item (product or service) upon which there is a need to retrieve pre-defined information and that may be priced, or ordered, or invoiced at any point in any supply chain. This definition covers services and products, all of which may have pre-defined characteristics (2002 General EAN.UCC Specifications Section 2.1.1.1)

3.3

logistic unit

an item of any composition established for transport and/or storage that needs to be managed through the supply chain (2002 General EAN.UCC Specifications Section 2.2.1)

4 Symbols and abbreviations

AI – EAN.UCC system Application Identifier

EAN – EAN International

EAN.UCC system – Unique global identification system

EFSIS –European Food Safety Inspection Service

FAO – Food and Agricultural Organization of United Nations

GLN– EAN.UCC system Global Location Number

GMP – Good Manufacturing Practice.

GTIN – EAN.UCC system Global Trade Item Number.

GTIN+ – GTIN plus a further number to uniquely identify each particular trade unit (e.g. the production batch and serial number or the date and time of production).

HACCP – Hazard Analysis Critical Control Points.

ID – Identification.

MSC – Marine Stewardship Council

n2 or n14, etc – EAN.UCC identifier numbers consisting of 2 or 14, etc digits

SSCC – EAN.UCC system Serial Shipping Container Code

UCC – Uniform Code Council

5 Information Requirements for Farmed Fish

5.1 The Identification of the units traded

Fishery products shall be traded as uniquely identified and labelled units.

Businesses that create trade units shall identify and label each of them with a GTIN+.

Businesses that create logistic units, made up of numbers of separately identified trade units, shall identify and label each logistic unit with a SSCC.

Businesses that bring in supplies of fishery products from outside of the domain of the Tracefish specifications and trade them onwards, shall identify and label each unit traded onward with the business's own EAN.UCC identifiers as above.

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5.2 The recording of information

Businesses that physically trade in fishery products shall generate and hold the required information, appropriate to the type of business, for each of the units traded.

The detailed information requirements are tabulated below as follows:

- for breeders in 5.3;
- for hatcheries in 5.4;
- for fish farms in 5.5;
- for live fish carriers in 5.6
- for processors in 5.7;
- for transporters and storers in 5.8;
- for traders and wholesalers in 5.9;
- for retailers and caterers in 5.10;
- for fish feed production in 5.11;
- and additional requirements for businesses that bring in fish and materials from outside of the Tracefish domain, in 5.12.

Businesses that carry out the functions of more than one of the categories listed above shall record the information relevant to each of the functions carried out.

The data elements tabulated in table 1 to table 10 categorised as *shall* are considered to be fundamental information necessary to identify and physically trace the products. These elements must be recorded.

The data elements tabulated in table 1 to table 10 categorised as *should* are specific information required by law in relation to food safety, quality and labelling together with important elements of commercially desirable information related to those matters. It is recommended that these elements are recorded.

The data elements tabulated in table 1 to table 10 categorised as *may* are further specific information required by law and commercially desirable information, considered to be of sufficient relevance to be included in the document. Businesses may choose to record these elements.

NOTE In these tabulations there is no repetition of the information originally recorded to describe the units created and their history, although businesses receiving those units later in the distribution chain will often need some of that information. The information is keyed to the unit IDs and can be supplied by commercial agreement between the businesses without having to re-input the data.

5.3 Breeders

For the purposes of this document, *breeders* are considered to be establishments that produce fish roe/eggs from brood stocks, often based on selection for special characteristics. They may carry out basic operations on the roe/eggs and brood stock such as temperature and light manipulation, and chemical treatments.

Prior to dispatch breeders may carry out their own operations including i.e. quality grading, and packing.

The trade units created by breeders can range from a few thousand to several millions of eggs passed into the hands of the next food business.

Table 1 —Detailed information requirements for breeders

Data element		Description	Examples	Categorisation		
				Shall	Should	May
BREEDERS						
FBR01	Food business ID	Name and address or GLN (n3+n13) of food business that operates breeding establishment.	Salmogen Ltd. 4321 Trondheim Norway	x		
FBR02	Breeding establishment ID	Name, address and registration number or GLN (n3+n13) of breeding establishment	Salmogen Breeding Station 1 1234 Trondheim Norway NTFS0001 NO	x		
FBR03	Breeder GMP certification	Names of fish quality or food safety GMP schemes by which breeder is certified	Debio			x
FOR EACH TRADE UNIT CREATED						
Identity						
FBR04	Unit ID	GTIN+ (n2+n14+AI's)	(01) 07012345000001 (10) 0000000125	x		
Description						
FBR05	Species	Latin names or FAO 3alpha codes	Salmo salar or SAS	x		
FBR27	Area/country of origin	FAO area for captured marine fish, or country of origin for captured fish from inland waters and for farmed fish, or more specific location (may be several areas)	Norway		x	
FBR09	Day degrees	Sum of average temperature per day in Celsius degrees (°C)	490		x	
FBR17	Viability	Percentage of eggs, from original batch, that survives until dispatched	98 %			x
FBR10	Spawning date	Date of fertilisation	2002-09-25		x	
FBR11	Genetic characteristics	Description of batch. All females, mixed sex, triploids etc	Triploids			x
FBR12	Genetic ID	Stock name and year class	MOWI 2000			x
FBR13	GMO	Use of GMO in production or in feeding of broodstock Yes/No	No			x
FBR28	Number of eggs	Number of eggs in created trade unit	1.000.000	x		
Production history						
FBR08	Farm unit ID	Internal number of rearing unit (tank)	15		x	
FBR14	Temperature record	Temperature/time log of the product holding area for the period between reception and dispatc	Series of temperature (°C)/date and time points		x	
FBR15	Salinity record	‰	0 ‰			x
FBR16	Water flow record	Average use – litre/minute	10 l/min			x

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Data element		Description	Examples	Categorisation		
				Shall	Should	May
FBR18	Disease record	Records of names and period of diseases or indication if records are available in electronic form, on paper or not available	Fungus infection 2003-03-02– 2004-04-02		x	
FBR19	Weight of parental fish	Weight of parental fish of our created trade unit. (kg)	16, 15, 18, 14, 16 (kg)			x
FBR20	Age of parental fish	Age of parental fish of our created trade unit. (years and months)	3,12 – 3,05 – 3,05 – 3,05 (years)			x
FBR26	Treatment record	Medicine, vaccine or chemical names and period of use or indication if records are available in electronic form, on paper or not available.	Pyceze, 2002-10-01– 2002-10-01			x
FOR EACH LOGISTIC UNIT CREATED						
Identities						
FBR21	Unit ID	SSCC (n2+n18)	SSCC: (00) 235467985462312345	x		
FBR22	Trade unit IDs	The IDs of the trade units within the logistic unit.	List of GTIN+	x		
FOR EACH UNIT DISPATCHED (either as a logistic unit or a separate trade unit)						
Identity						
FBR23	Unit ID	SSCC (n2+n18) (if dispatched as a logistic unit) or GTIN+ (n2+n14+AI's) (if dispatched as a separate trade unit)	SSCC: (00) 235467985462312345	x		
Destination						
FBR24	Next Food Business ID	Name and address or GLN (n3+n13) of the food business to whom the unit is dispatched (transporter or hatchery, etc.)	Fjord Harvest South Smolt 3456 Bergen Norway	x		
FBR25	Date and time of dispatch	Date and time of transfer to next food business	2002-09-25T12:15	x		

5.4 Hatcheries

For the purposes of this document, *hatcheries* are considered to be businesses that receive roe/eggs and keep it during the hatching stage and start feeding stage, and dispatch fish to the fish farms.

The hatcheries may change the nature of fishery products, by carrying out operations such as feeding, grading, treatments, etc.

Hatcheries create new trade units that can range from a few thousands to several hundred thousand fishes passed into the hands of the next food business.

Table 2 —Detailed information requirements for hatcheries

Data element		Description	Examples	Categorisation		
				Shall	Should	May
HATCHERY						
FHA01	Food business ID	Name and address or GLN (n3+n13) of food business that operates hatchery establishment	Fjord Harvest Ltd. 1234 Trondheim Norway	x		
FHA02	Hatchery establishment ID	Name, address and registration number or GLN (n3+n13) of hatchery establishment	Fjord Harvest South Smolt, 3456 Bergen Norway NTFS0002 NO	x		
FHA03	Hatchery GMP certification	Names of fish quality or food safety GMP schemes by which hatchery is certified	Debio			x
FOR EACH UNIT RECEIVED						
Identities						
FHA04	Unit ID	SSCC (n2+n18) (if received as a logistic unit) or GTIN+ (n2+n14+AI's) (if received as a separate trade unit)	SSCC: (00) 235467985462312345	x		
FHA05	Trade unit IDs	If received as a logistic unit, the IDs of the trade units within the logistic unit.	List of GTIN+	x		
Source						
FHA06	Previous Food Business ID	Name and address or GLN (n3+n13) of previous food business that operates breeding company or transporter	Salmogen Breeding station 1 1234 Trondheim Norway	x		
FHA07	Date and time of reception		2002-09-25T06:20	x		
Control checks (either on logistic or separate trade units)						
FHA08	Temperature check	Temperature °C i.e. in received unit	4,0 °C		x	
FHA09	Temperature record	If recording device is affixed to batch, temperature/time record product holding area	Series of temperature (°C)/date and time points		x	
FHA10	Quality control checks	Type of checks + measured results, or indication if records are available in electronic form, on paper or not available	Paper			x
Transformation Information						
FHA11	Related created trade unit IDs	List of ID's of our created trade units that may incorporate part of this received trade unit.	GTIN+ GTIN+ GTIN+	x		
FHA12	Fractions	Fraction (%'s, kilos) of the received trade unit that go into each created unit	GTIN+, 33 %,150 kg GTIN+, 33%, 150 kg GTIN+, 33%, 150 kg		x	
FOR EACH NEW TRADE UNIT CREATED						