Identification Guide for Toothfish

Dissostichus eleginoides (FAO code: TOP)
Dissostichus mawsoni (FAO code: TOA)

Order: Perciformes
Family: Nototheniidae
Genus: Dissostichus
Species: eleginoides and mawsoni

Customs Codes
- Fresh/chilled: 03026800 (excluding fillets, livers, roes), 03041210 (fillets), 03041290 (other meats)
- Frozen: 03036200 (excluding fillets, livers, roes), 03042200 (fillets), 03049200 (other meats)

About Toothfish
Patagonian toothfish (Dissostichus eleginoides) and Antarctic toothfish (Dissostichus mawsoni) are highly sought species on the world fish market.

Market names include: Patagonian toothfish, Antarctic toothfish, Chilean seabass, Merluza negra, Mero, White cod.

Other common names include: Sort patagonisk isfisk (Denmark); Legine australe (France); Schwarzer Seehecht (Austria & Germany); Ookuchi (Japan); Antar patagoniski (Poland); Marlonga-negra (Portugal), Patagonskiy klykach (Russia); Austromerluza negra (Spain), Bacalao (Chile), Mero, Marlonga-negra (Portugal); Patagonskiy klykach (Russia); Austromerluza negra (Spain); Tandnoting (Sweden).

Toothfish has been subject to high levels of illegal, unreported and unregulated (IUU) fishing. Consignments of IUU-caught toothfish may be misreported as other species.

Other Similar Species
Toothfish may resemble, or may be misreported as or mixed with the following species: Hake (HKE), Shark, African barrelfish (SEY), Butterfish/Bluenose (BUX) (when filleted), Greenland halibut (GHL) (when filleted and with skin)

Common Product Forms
Toothfish are normally processed and frozen on board the fishing vessel. Common basic cuts are headed, gutted and tailed (HGT) heads, collars and cheeks. Depending on the market, the fish may also be filleted or simply gutted.

Physical Description
Toothfish are slow-growing and long-lived, reaching maturity at about 8-10 years of age and living for up to 45-50 years. Toothfish caught in the fisheries are typically 80–140 cm long and weigh 10–30 kg. Large specimens may grow in excess of 160 cm and 60–80 kg. Toothfish have a fusiform body shape, protruding lower jaw and large lower lip, large eyes and large gill plates.

The Fishery
Toothfish are caught by longline, trawl and pot, typically in depths of 500–1800 m. Patagonian toothfish is caught off the coasts of Chile, Argentina, Peru, Uruguay, Patagonia, and around sub-Antarctic islands and seamounts. Antarctic toothfish is generally caught at latitudes higher than 55°S in the circumpolar waters adjacent to Antarctica. In addition, toothfish are caught outside CCAMLR’s Convention Area, mostly taken from domestic fisheries around South America and landed in local ports.

Toothfish Fishing Vessels
Legally-caught toothfish is usually taken by bottom longlines deployed from vessels of 50–60 m in length. Some toothfish is also caught by trawl in the Western Indian Ocean and by pot in the Southwest Atlantic Ocean and off South America.

IUU fishing vessels may longline or gillnet, the latter method considered particularly destructive to the Antarctic marine environment. IUU-caught toothfish is often transhipped at sea and landed in port by cargo vessels. CCAMLR maintains a list of IUU vessels which is available on its website.

Species Identity in Catches
If in doubt as to the species identity, sampling of toothfish catch for protein or DNA analysis may be considered. Protein fingerprints can be obtained from fillet samples using isoelectric focusing on the muscle proteins. For this test, muscle tissue needs to be fresh or frozen at -20°C.

For DNA analysis, an optimum sample would consist of 50–150 mg of white muscle tissue, either fresh, frozen at -20°C, or suspended in a solution of 95% alcohol (e.g. pure ethanol) in a well-sealed tube or container. If difficulties are likely in the transportation of ethanol, an alternative method is to soak the sample in ethanol for 1 week, pour off excess and transport. Unsuspended frozen samples can also be transported if low temperatures can be maintained throughout transportation. The recommended initial freezing temperature for samples is -20°C. Photographs of toothfish products and packaging could also be taken to assist with identification.

If local laboratory is not available, information on sample analysis may be obtained from:

National Seafood Inspection Laboratory
NOAA Fisheries
P.O. Drawer 1207 or 3209 Frederic St
Pascagoula, MS 39567, USA
Phone +1 228 769 8964, ext. 106
Fax +1 228 762 7144

CSIRO Marine and Atmospheric Research
Castray Esplanade, Hobart
Tasmania 7000, AUSTRALIA
Phone +61 3 6232 5222
Fax +61 3 6232 5000

Campden BRI (Campden site) - Steve Garrett
Station Road, Chipping Campden
Gloucestershire, UK, GL55 6LD
Phone +44 (0) 1386 842000
email info@campden.co.uk
website www.campden.co.uk
Port inspections on RFMO Catch Documentation Scheme vessels carrying toothfish IUU Vessel Lists

Conservation Measure 10-05
Conservation Measure 10-03
Conservation Measures 10-06 and 10-07

www.ccamlr.org
see www.ccamlr.org
see www.ccamlr.org
see www.ccamlr.org

- CDS and Publications,
- Publications,
- Vessels and Publications,
- Conservation Measures
- Conservation Measures
- Conservation Measures

All toothfish unloaded or transported must be accompanied by a Dissostichus catch document (DCD) issued subject to the CCAMLR Catch Documentation Scheme (CDS). For more information see www.ccamlr.org

Each CCAMLR Contracting Party is required to identify the origin of any Dissostichus spp. landed or imported into or exported from its territories in order to establish if it was caught within the Convention Area according to the Conservation Measures agreed by CCAMLR. Toothfish landed in the port of Contracting Parties will be accompanied by catch and export documents from the point of landing to the point of final consumption. Toothfish without valid documentation cannot be landed in the port of any CCAMLR Contracting Party or subsequently traded. Catch documents cannot be issued to vessels included on CCAMLR’s IUU Vessel Lists.