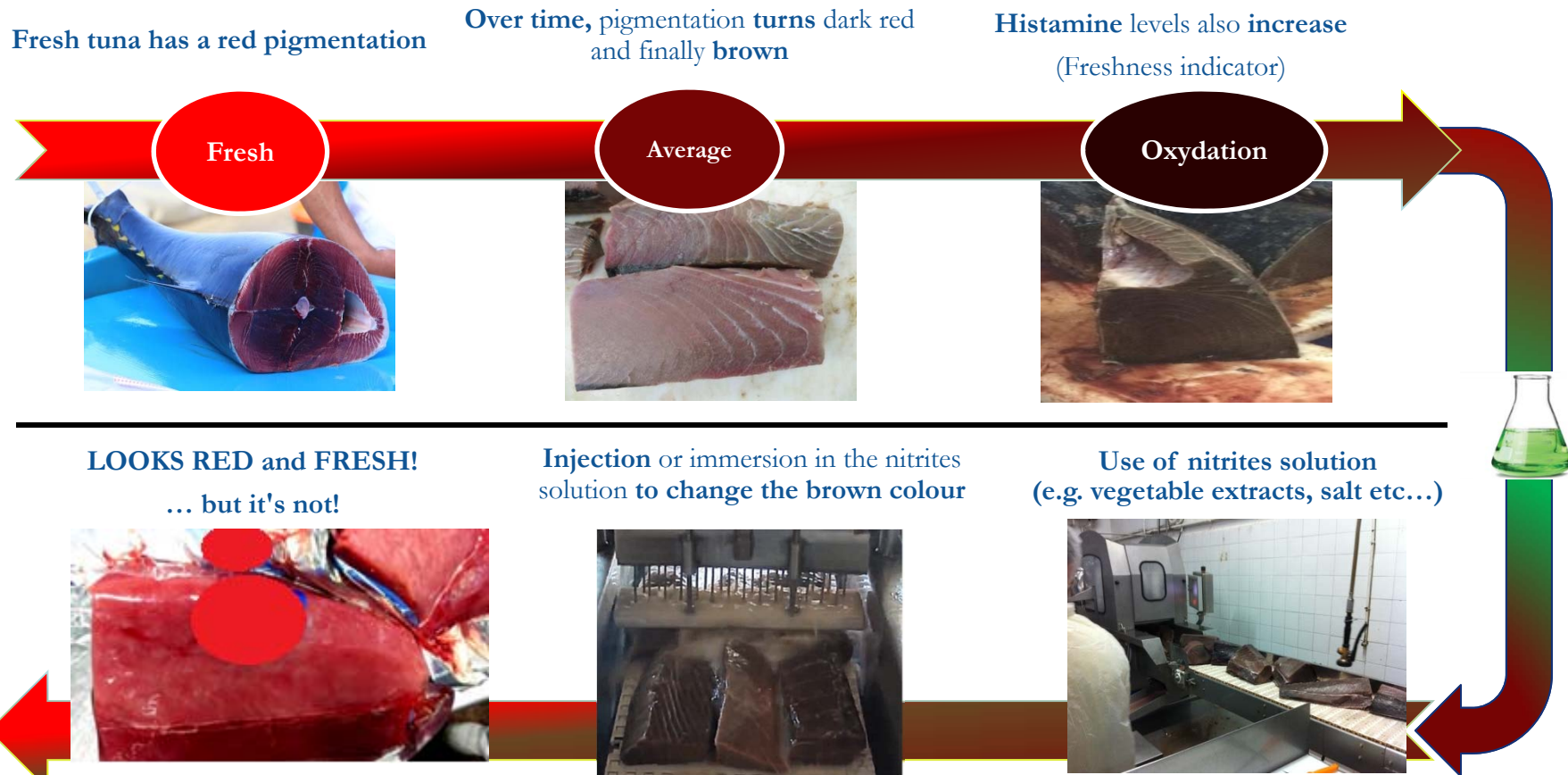


FOOD FRAUD NETWORK EU-COORDINATED CASE

**Illegal treatment of
Tuna:
from canning grade to
Sushi grade**



Tuna's normal ageing process



Illegal treatment

3 Main violations of EU Food Law



-18° Ultra-low freeze

Inappropriate freezing to be sold as fresh Tuna

Regulation (EC) n° 853/2004

Any fishery product shall be frozen below -18C.

Exceptionally, for canning industry,
whole tuna initially is tolerated to be frozen in brine at -9C



-9° frozen in brine



Before Injection

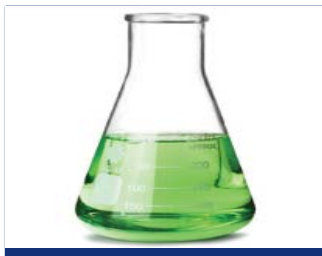
Change of colour

Additives intended to change tuna's colour are not authorised, and the use of such food additives would mislead the consumer

Regulation (EC) 1333/2008 art 6.1



After Injection



Additives

Treatment of the fish

Treatment of unprocessed fish with nitrites/nitrates (or additives containing high level of nitrites) and/or carbon monoxide is not authorised according to Regulation (EC) 1333/2008



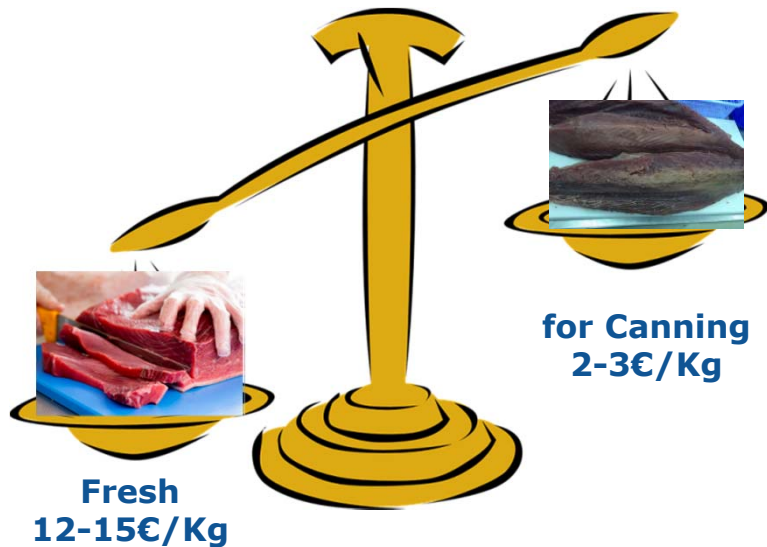
Injecting tuna

**There are even special guides for this illegal practice
(openly displayed in Tuna establishments)**



Economic gain

Tuna Price Balance



Calculation

According to the Industry, approximately 25.000 tons of Tuna undergone this treatment in 2016.

Economic gain per 1kg is
~8-10€

Potential gain
200 Million €
per year



Scombroid Syndrom* (fresh Tuna) reported in Rasff

	2015	2016	2017 (mostly first Half of the year)
Number of notifications (Histamine in Tuna)	18	12	27
Number of people with scombroid syndrome	59	24	165

Scombroid Syndrom notified in Rasff does not give an exhaustive picture of all cases

High underreporting at national level (hospital/doctors)

14,000 kilos of contaminated tuna trigger food poisoning outbreak in southern Spain

By Matt Ford · Thursday, 11 May 2017 13:32 · [Like](#) [+1](#) [+2](#) [+3](#) [+4](#) [+5](#) [+6](#) [+7](#) [+8](#) [+9](#) [+10](#) [+11](#) [+12](#) [+13](#) [+14](#) [+15](#) [+16](#) [+17](#) [+18](#) [+19](#) [+20](#) [+21](#) [+22](#) [+23](#) [+24](#) [+25](#) [+26](#) [+27](#) [+28](#) [+29](#) [+30](#) [+31](#) [+32](#) [+33](#) [+34](#) [+35](#) [+36](#) [+37](#) [+38](#) [+39](#) [+40](#) [+41](#) [+42](#) [+43](#) [+44](#) [+45](#) [+46](#) [+47](#) [+48](#) [+49](#) [+50](#) [+51](#) [+52](#) [+53](#) [+54](#) [+55](#) [+56](#) [+57](#) [+58](#) [+59](#) [+60](#) [+61](#) [+62](#) [+63](#) [+64](#) [+65](#) [+66](#) [+67](#) [+68](#) [+69](#) [+70](#) [+71](#) [+72](#) [+73](#) [+74](#) [+75](#) [+76](#) [+77](#) [+78](#) [+79](#) [+80](#) [+81](#) [+82](#) [+83](#) [+84](#) [+85](#) [+86](#) [+87](#) [+88](#) [+89](#) [+90](#) [+91](#) [+92](#) [+93](#) [+94](#) [+95](#) [+96](#) [+97](#) [+98](#) [+99](#) [+100](#)

A 14,000 kilo batch of contaminated tuna has prompted the Junta de Andalucía to issue health warnings across the region after consumers fell ill in Cordoba, Granada, Jaen, Malaga and Sevilla.

The Andalusian Ministry of Health has reported more than 50 cases of histamine poisoning since May 5, all caused by fresh tuna originating from Garciden, an Almeria-based supplier.

Symptoms include a sore throat, headaches, hot flushes, sweating, nausea and vomiting.



Tonno e istamina: "I trattamenti di colorazione aumentano il rischio"

Di Ettore Cera - 9 giugno 2017



Cesena, mangia sushi e ha un malore: morta dopo 5 giorni. Tra le ipotesi una reazione allergica



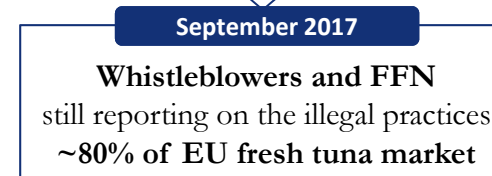
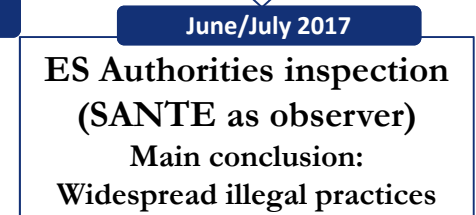
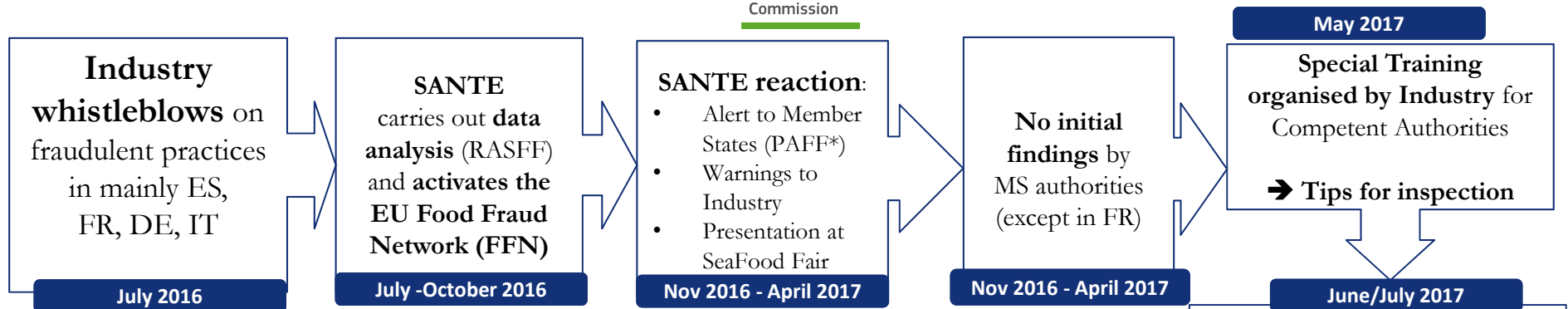
*Scombroid Syndrom: Allergic reaction

- Poisoning may cause respiratory problems
- In rare cases it may result in Death

Timeline and Food Fraud Criteria



European Commission



1. Violation of EU Food Law

- 1. Tuna frozen in brine sold as fresh instead of being canned
- 2. Change of colour
- 3. Treatment of the fish (unauthorised additives)

2. Intention

- Intentional use of Nitrites (and other additives) to enhance tuna's colour
- Industry warned several times by EC and MS to stop this practice

3. Economic Gain

- Potentially 200 million € /year

4. Customer Deception

- Poor quality tuna bought as high quality
- Public health issues:
 1. increased risk of high level of histamine (allergic syndrom)
 2. Nitrites may lead to formation of nitrosamines (carcinogenic)

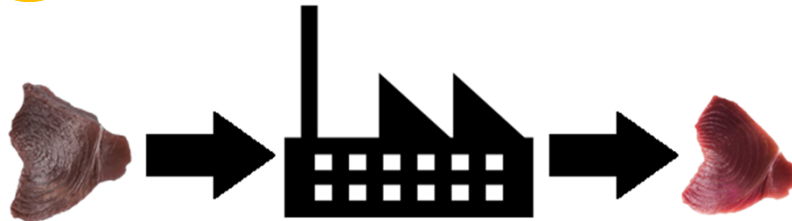


Tips for inspection/investigation



1

Change of destination
(from cannery to fresh)



If tuna frozen in brine and destined to cannery industry gets out with red colour.

The change of colour indicates that an illegal process has taken place.

2

Unsuitable vessel for preserving fresh tuna



Trace Backwards the Tuna

Is the red tuna from a vessel equipped with ultra low freezing system (-18C) ?

3

Fish industries buying nitrites



Trace Forward the "nitrites"

To which fish industries were the nitrites solutions sold ?