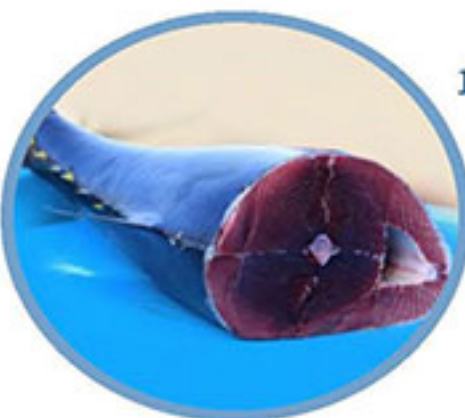


1. FRESH tuna has a red pigmentation



2. AVERAGE over time pigmentation turn brown



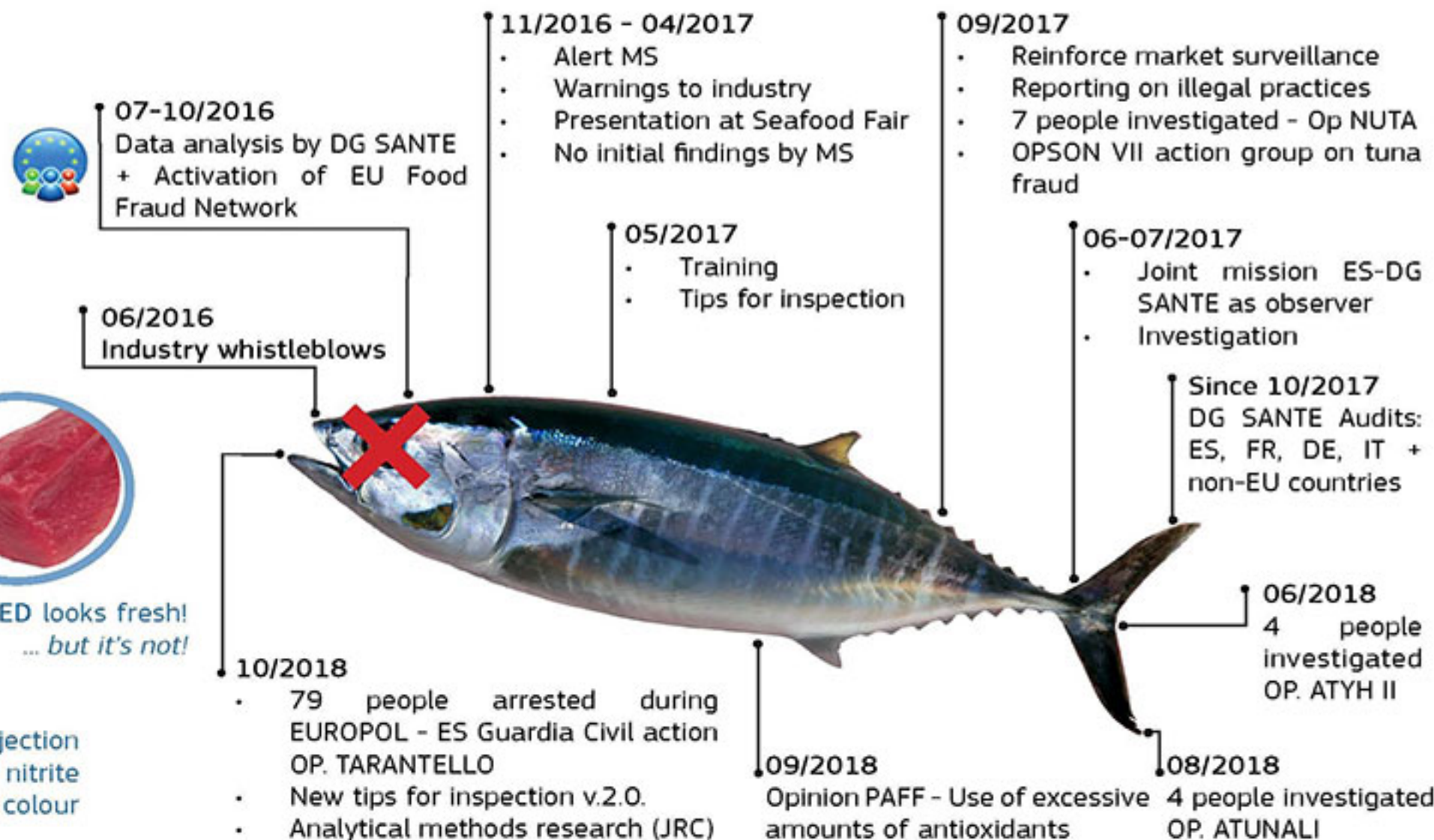
3. OXIDATION histamine levels also increase



4. TREATMENT using injection techniques or immersion in the nitrite solution to reverse brown colour



5. RED looks fresh! ... but it's not!



CRITERIA

Violation of EU law

- Tuna frozen in brine sold as fresh instead of being canned. (Reg 853/2004)
- Treatment of the fish (unauthorised/authorised additives) to promote a colour change. (Reg 1333/2008)
- Provision of food information to consumers. (Reg 1169/2011)



Intention

- Intentional use of authorised (antioxidant not in concordance with good manufacturing practices), unauthorised additives (nitrates/nitrites) and carbon monoxide to promote colour change.
- EC warned industry several times to stop this practice.



Economic gain

Potentially > € 200 mio / year



Deception of consumer

- Poor quality tuna sold as high quality.
- Public health issues: a high level of histamine can lead to allergic syndrom and nitrites may lead to formation of nitrosamines (carcinogenic).

