

DiSSPA STAL - Food Science

Canned Tuna

SJ Christopher 2015

Canned tuna was first produced in 1903, and quickly became popular. Tuna is canned in edible oils, in **brine**, or in spring water. In the United States, 52% of canned tuna is used in sandwiches, 22% in salads, 15% in casseroles and sauces.

Tuna are often fished far from where they are processed and poor quality control leads to **spoilage**. Tuna are typically eviscerated by hand, then pre-cooked for 45 minutes to three hours. The fish are then cleaned and **filleted**, canned and **sealed**. The sealed can is then heated (called retort cooking) for 2 to 4 hours. This process kills any bacteria, but retains the histamine that can produce rancid flavors. The international standard sets the maximum histamine level at 200 milligrams per kilogram.

Canned tuna is a **prominent** component in many weight trainers' diets because it has a high protein content and is easy to prepare. Tuna is an oily fish and **therefore** it contains a high amount of Vitamin D. It can also be a good source of omega-3 fatty acids, which are known to have beneficial effects on human health.

However, some kinds of tuna can contain mercury, and this can be a potential risk for health. A study published in 2008 found that mercury distribution in tuna meat is inversely related to its lipid content. This suggests that lipid concentration in **edible** tuna tissues has a diluting effect on mercury content. For this reason, consumption of a type of tuna with a relatively high natural fat content may help to reduce the amount of mercury **intake**, whereas a tuna with a low fat content may contain more mercury.

Exercise A: Are the sentences TRUE or FALSE?

1. Canned tuna first appeared over a hundred years ago.....
2. The USA is the world's biggest producer of canned tuna.....
3. Tuna is canned in a variety of liquids.....
4. Tuna salads are more popular than tuna sandwiches in the USA.....
5. Tuna is the favorite fish with US consumers.....
6. When tuna is caught, quality control is important.....
7. Sealed cans are heated to kill bacteria.....
8. Histamine improves the flavor of canned tuna.....
9. Weight trainers like tuna because it contains vitamins.....
10. Tuna is rich in Vitamin D.....
11. Omega-3 fatty acids can be positive for human health.....
12. Most tuna contains mercury.....
13. Mercury in tuna is concentrated in the fat.....
14. People should avoid eating foods containing mercury.....
15. This article presents some positive and some negative aspects of canned tuna.....

Exercise B: Decide the meaning of the words from the text.

1. prominent a) expensive b) important c) healthy
2. edible..... a) it is a food b) it is a liquid c) it is a vegetable
3. spoilage a) destruction b) damage c) conservation
4. sealed..... a) cooked b) heated c) closed
5. intake a) ingested b) contacted c) created
6. brine a) salt b) salted water c) water
7. filleted..... a) bones are removed b) cooked c) washed
8. therefore..... a) because b) although c) consequently