

# FISH CONSUMPTION II; are the fish safe to eat?

(updated 1.19.09)

By: Captain Pete Alex

There has been a lot said and written about this controversial topic from a local and national perspective. Recently, the Erie Pennsylvania Sport Fishing Association did some research and combined it with some older research and formed our own opinion.

In 2008, we caught and submitted three species for the purpose of testing these fish for PCB, Lead and Mercury. Granted, they were only (4) samplings, however, they were consistent with fish I caught and tested myself in the past, and then again when the EPSFA tested them 2006. The tests were also consistent with those done by others.

### **Submitted Fish Samples:**

The Walleye sample submitted had the skin and belly area removed.

The Steelhead sample submitted had the skin and belly area removed.

The Steelhead belly/rib cage sample submitted had skin removed.

The Yellow Perch sample submitted had skin and belly intact.

### **Subject Tested:**

**Walleye:** (5lb. 24" fish caught in Lake Erie off Port of Erie caught in 2008)

#### **Results:**

MERCURY: found traces of Methyl Mercury. These were well below the level of concern established by the FDA (Federal Dept. of Agriculture, EPA (Environmental Protection Agency, and HCA (Health Canada Agency)

PCB: found traces (almost at non-existent levels) of PCB. These were well below the level of concern established by the FDA (Federal Dept. of Agriculture, EPA (Environmental Protection Agency, WHO (World Health Organization and HCA (Health Canada Agency)

LEAD: a minute trace of lead was discovered. The amount detected was a trace amount and of no concern. Most lead discovered in marine species is usually found in shell fish or drinking water. Result was <1.0 MG/KG

#### **Comparisons:**

MERCURY levels were slightly less in 2008 samples than 2006 samples (0.212 MG/KG vs. 0.250 MG/KG)

PCB levels were below <0.2 levels and were at trace/low detection levels in 2008 vs. lower 2006 samples (<0.2 MG/KG vs. <0.08 MG/KG)

### **Subject Tested:**

**Steelhead:** (6lb. 25" fish caught in Lake Erie off Port of Erie in 2008)

#### **Results:**

MERCURY: found traces of Methyl Mercury. These were well below the level of concern established by the FDA (Federal Dept. of Agriculture, EPA (Environmental Protection Agency, and HCA (Health Canada Agency)

PCB: found traces of PCB. These were well below the level of concern established by the FDA (Federal Dept. of Agriculture, EPA (Environmental Protection Agency, WHO (World Health Organization and HCA (Health Canada Agency)

LEAD: a minute trace of lead was discovered. The amount detected was a trace amount and of no concern. Most lead discovered in marine species is usually found in shell fish or drinking water. Result was <0.81 MG/KG

Comparisons:

MERCURY levels were slightly less in 2008 samples than 2006 samples (0.126 MG/KG vs. 0.221 MG/KG)

PCB levels were below <0.2 levels and were at trace/low detection levels in 2008 vs. lower 2006 samples (<0.2 MG/KG vs. <0.19 MG/KG)

**Interesting Note:** 2006 Steelhead fillets were sampled with skin intact and belly meat attached. 2008 samples were skinless and no belly meat attached. The contaminant levels were much less in 2008 than samples submitted with belly and skin intact in 2006

Subject Tested:

**Steelhead Belly/Rib Cage:** (6lb. 25" fish caught in Lake Erie off Port of Erie in 2008)

Results:

MERCURY: found traces of Methyl Mercury. These were well below the level of concern established by the FDA (Federal Dept. of Agriculture, EPA (Environmental Protection Agency, and HCA (Health Canada Agency)

PCB: found traces of PCB. These were well below the level of concern established by the FDA (Federal Dept. of Agriculture, EPA (Environmental Protection Agency, WHO (World Health Organization and HCA (Health Canada Agency)

LEAD: a minute trace of lead was discovered. The amount detected was a trace amount and of no concern. Most lead discovered in marine species is usually found in shell fish or drinking water. Result was <1.1 MG/KG

Comparisons:

None: No Steelhead belly/rib cage was submitted in the past by the EPSFA for testing.

Subject Tested:

**Yellow Perch:** (10" fish caught in Lake Erie off Port of Erie caught in 2008)

Results:

MERCURY: found traces of Methyl Mercury. These were well below the level of concern established by the FDA (Federal Dept. of Agriculture, EPA (Environmental Protection Agency, and HCA (Health Canada Agency)

PCB: found traces (almost at non-existent levels) of PCB. These were well below the level of concern established by the FDA (Federal Dept. of Agriculture, EPA (Environmental Protection Agency, WHO (World Health Organization and HCA (Health Canada Agency)

LEAD: no trace levels of Lead was discovered

Comparisons:

None: No Yellow Perch were submitted in the past by the EPSFA for testing.

**Note: No Aroclors (PCB's) were found at all in the Yellow Perch sample**

The test result documents are scanned onto our site for your review or comparison with 2006 results. You may notice that the measurement results are in MG/KG and that charts and articles we scanned for your review refer to PPM (parts per million). However, these measurements can be interpreted as the same measurement and was just the measurement result used by *Microbac Laboratories, Inc.*

**Findings:**

The PCB AROCLOR 1260 and AROCLOR 1254 (only in belly sample of Steelhead) was the PCB discovered in all fish tested. This PCB was used commonly in several industries and found its way into the water through a variety of methods such as run-off. I have attached a very detailed chemical fact sheet from "Spectrum Laboratories". This fact sheet is very useful in determining what AROCLOR is, where it was used and how it reached the water.

I am no chemical expert by any means. When researching PCB's it was made very clear that PCB's enter our bodies from a variety of sources, NOT just fish. Sources such as beef and dairy contribute to PCB intake. PCB's are consumed by cattle in a similar method as fish and from the same sources but we seldom hear about this. Large consumption of the PCB chemicals has been linked to cancer but at what levels?

Methyl Mercury is the other contaminant found in these fish. This contaminant, like PCB, can also enter our bodies from other sources, not just fish. Methyl Mercury is a naturally-occurring element which is found in soil, rocks, lakes, oceans and rivers. It is also released into our environment by human activities such as pulp and paper processing mills and the burning of fossil fuels. Mercury at high levels has been known to cause damage to the nervous system. In my research, I did not find any links to Cancer.

Organizations such as the FDA (Federal Dept. of Agriculture), EPA (Environmental Protection Agency), WHO (World Health Organization and HCA (Health Canada Agency) have all researched this topic and established "safe" levels of consumption. These levels vary with different organizations and can vary with local government bodies. However, the agencies listed above would appear to carry the most weight in determining these "safe" or "action" levels. They are noted below:

<u>Agency</u>	<u>Mercury</u>	<u>PCB</u>	<u>LEAD</u>
FDA	1.00ppm	2.00ppm	
HCA	0.50ppm	2.00ppm	
EPA	0.50ppm	4.00ppm	15ppb

When these agencies establish these "safe" levels, they take into consideration that we will intake these chemicals into our bodies from other sources, such as beef and

dairy, over our lifetime. Not just from fish or a short period of time. They look at how much our bodies can safely consume over a lifetime of intake. So, when you see advisories placed on consumption, be aware that these advisories are based on consuming that many meals over a lifetime, not just a short period of time.

The Pennsylvania Fish and Boat Commission have very good information available through their website. In this site, they also mention that PCB's can accumulate in our bodies from many sources such as outside air, inside air, soil surfaces and surface waters. They confirm that even the put and fish trout raised in the PA hatcheries contain PCB contaminants at low levels but they "still" are contaminated. The fact is that there are many sources of contaminants in the environment; we will not escape contamination from one source or another. This website illustrates clearly the small risk involved with consuming fish that contain very small amounts of PCB's or Mercury. I suggest that if you are unsure or want to learn more about this subject, to please check their information page on this matter. Just Google search [Pennsylvania Fish and Boat Commission](#).

Recently, there has been a lot of research and published articles with findings surrounding the benefits of consuming fish. I have attached some for your review but there were hundreds available for review. These all reiterated some simple facts, that fish is good for us and have many health benefits. Several articles were very clear in making the statement that the benefits of consuming fish outweigh any negatives. For example, it was discovered that fish containing Omega-3 reduce the risk of coronary death by 36% and total mortality by 17% and that not consuming fish increases our health risks. I only offer these as examples and suggest that you research the further benefits of fish consumption for yourself. It has also been suggested that by eating less fish, you may substitute it for a "more" contaminated meal that has less health benefits.

The EPSFA will continue to research, test, compare results and inform you on this topic. It is an important one that affects ourselves, family and friends. Unfortunately, testing fish is expensive and can only be done when we have the funds to do so. Part of your membership fees go toward this important item.

The choice to consume or not consume fish from Lake Erie is an individual choice. It is not the EPSFA's purpose to steer you in one direction or the other but simply give you the facts to better enable you to make your own decision. I recommend that each and everyone of take the time to educate oneself on this subject if you have concerns about the fish that you consume, whether they are from Lake Erie or the Atlantic Ocean. There is a lot of very good and useful information that can be obtained from libraries or the internet.

If you are wondering, yes, my family and I consume Walleye, Steelhead, Brown Trout, Salmon and Yellow Perch from Lake Erie. It is a choice I made for myself and them some time ago after researching this topic and having the fish tested by a certified lab. Furthermore, most, if not all of us are fond of fast foods and other known foods that are bad for us. These lead to obesity, high cholesterol, and the gamut of

negative health effects that follow if we consume excessively. Let us not forget about long term alcohol consumption and those things we light and stick in our mouths, all of which are bad and do harm. So, do we eliminate fish from our diet or do we continue to consume fish at a moderate but beneficial level based on “good” information?

Bon Appetit