

Summary of Committee's Shellfish Sampling
February 1969

Crystals of sulfur containing methylmercuric (CH₃-Hg) compound (organic mercury) has been isolated from shellfish. It has been identified as methylmercuric methylsulfide and has been synthesized in the laboratory

Animal experimentation was conducted. Cats exposed to the methylmercuric methylsulfide became stricken with the same symptoms as those with natural Minamata disease.

When the fish and shellfish were tested, they contained up to 50 ppm of mercury. Some of them remained healthy in the lab, although they concentrated from 5000 to 50,000 times more mercury than the 1 ppb in the water.

Although the symptoms of organic mercury have been verified at Minamata, the origin is still not certain, especially since the chemical plant used only inorganic mercury compounds, and they usually concentrated in the sediments.

J-
WE ARE SO CLOSE - I
CAN ALMOST TASTE IT!
NEXT STEPS:
- Research, Methylation of Hg
(Swedes?)
- Chisso protocols
(How can we get these?)

- S. T.

March 7, 1969

S-

I have finally spoken to the two Swedish scientists who provided the first indication that alkulation of mercury may take place in bacteria. In Sweden, when certain bird populations decreased drastically, investigation revealed the presence of large amounts of mercury in the dead birds. Increased amounts of mercury were observed in fish as well as in people consuming large quantities of fish. The death of the birds was linked to methyl mercury compounds in fungicides; however, there was no discharge of methyl mercury into the lakes and rivers where contaminated fish were caught, so the scientists started examining the food chain. They have shown that mercury can be methylated by aquatic micro-organisms.

I have attached a diagram of flow of mercury through an aquatic food chain that Jensen and Jernelov have sent to me.

-J

