

ABSTRACT

The Effect of Processing to Decreasing of Mercury concentration in Keting Fish

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Mercury is a heavy metal that is very toxic to human health. A study was held to know the easy and practical method of decreasing mercury concentration for safety level consumption. The purpose of this study is to know the effect of processing to reducing of mercury in fish.

This was an experimental study using keting fish from Kenjeran beach, assuming that it was polluted by mercury. The average weight of treated fishes was about 250 grams. The treatments were a combination of : (1) Fish processing with heating methods (cooking) including: boiling, steaming, frying and grilling (2) Acetic acid treatment including : soaking by acetic acid (25%) and without soaking and (3) Duration of fish heating methods : 10 and 20 minutes. The total combination of treatment was 16 and every treatment was replicated twice to 32 fish. Mercury concentration in keting fishes- before and after treatment- was determined by Atomic Absorption Spectrophotometry (AAS) in lab. The statistical method used in this study was three way variant analysis

The study showed that there was significant effect between of treatment to decrease mercury in keting fish. The heat processing (boiling, steaming, frying and grilling) has significant effect to decrease mercury in keting fish . The average decrease of mercury concentration in keting fish after treatment was 87.2%. The frying method yielded effect on decreasing mercury concentration with an average reduction 94.66% no significant effect with steaming and grilling which has average decrease 88.87% and 88.66%. Frying, steaming and grilling method have significant effect with boiling method which has an average decrease 76.52%. Soaking with acetic has no significant effect to decrease mercury in keting fish. The average decrease of mercury concentration of soaking in acetic acid was 86.14% and without acetic acid was 88.265. There was significant effect between duration of 10 and 20 minutes processing. The 20 minutes processing gave result to decreasing mercury concentration in fish (92.7%) higher than 10 minutes 81,6%.

Key words : Fish, mercury concentration, processing.

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