D-71 Effect of acidic fruit juice on the extraction of shark liver oil by ensilage method

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The aim of the present study was to evaluate the effectiveness of fruit juice on the extraction of shark (*Carcharhinum falciformis)* liver oil by ensilage method. Liver samples were treated with combinations of formic acid and juice of tamarind (*Tamarindus indica)* seed and fruit, goraka (*Garcinia cambogia)* fruit and Butylated hydroxy toluene (BHT). Control test was conducted without fruit juices. Oil yield, free fatty acid (FFA) content (as a % of oleic acid), peroxide value, para anisidine value and total oxidation value were determined and used as indicators of effectiveness.

Significantly ($p<0.05$) higher oil yield (38%) was found in silage treated with bilin fruit juice when compared to other treatments. Hydrolytic rancidity of the oil recovered from BHT-treated sample was the lowest (FFA value 0.66%); compared to others. The next lower value was recorded for the raw tamarind (0.85%) treatment. However, it was not significantly different to the FFA value for bilin (0.86%) and goraka (0.87%) treatments. Lowest peroxide value (4.1) was recorded in the silage sample treated with bilin fruit juice. But is was not significantly different from that of goraka (*Garcinia cambogia)* and BHT treatments. The lowest anisidine value (0.5) and lowest total oxidation value (8.72) were observed in oil recovered with bilin fruit juice. Results from the present study suggest that high quality fish oil could be produced when liver samples were treated with a combination of formic acid and bilin juice.