

C226322 : MAJOR FOOD TECHNOLOGY

KEY WORD : ASCORBIC ACID/DETINNING/CANNED PINEAPPLE

RATJIKA CHANAMAI : EFFECTS OF ASCORBIC ACID AND SODIUM ERYTHORBATE ON
DETINNING OF VARIOUS TYPES OF CANS IN CANNED PINEAPPLE. THESIS

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The objective of this research was to study the effect of ascorbic acid and sodium erythorbate to the dissolving of tin content and the quality of pineapple in the different types of can. Mixed pieces pineapple was mixed with its juice and ascorbic acid 700 ppm or sodium erythorbate 700 ppm or combination of both additives 350 ppm each and canned in plain cans, one-layer epoxy phenolic lacquered cans, and double-layer epoxy phenolic lacquered cans. The canned pineapple was chemically analyzed for the contents of ascorbic acid, hydroxy methylfurfural (HMF), and tin, and was organoleptically evaluated for color, odor, flavor, and texture during the storage at room temperature for 12 months.

The results showed that addition of ascorbic acid and/or sodium erythorbate significantly ($p < 0.05$) improved the quality of pineapples in all three types of can. The samples with ascorbic acid had the highest rate of ascorbic acid destruction and tin dissolving and the lowest HMF formation. The tin content in the canned pineapple increased with time with the maximum amount of 130 ppm found in plain can. From the organoleptic evaluation, it was found that pineapples canned in lacquered cans gave the off-odor and off-flavor of lacquer after six-month storage while those in plain can were still acceptable. Therefore, lacquered cans were suitable for canned pineapples storing upto 6 months and for longer storage the plain cans should be used instead.