

Thesis Title	Development of <i>Vibrio</i> spp. Detection Paper Test Kits in Foods.
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Abstract

The development of a paper test kits for the detection of *Vibrio* spp. in foods was carried out. Fifty (50) samples of foods such as cuttlefishes, crabs, shells, shrimp and oysters were used to evaluate the performance of the test kit. It was found that the size of the paper at 5×4 cm² and 1 ml sample size supported good growth of the *Vibrio* spp. tested such as *V. parahaemolyticus*, *V. cholerae*, *V. vulnificus*, *V. fluvialis* and *V. mimicus*. Agar at 1.5%, Sodium thiosulfate at 0.13 molar and Sodium chloride at 1% in the modified TCBS medium were suitable for growth of *Vibrio* spp. in the paper test kit. The application of triphenyl tetrazolium chloride (TTC) in place of bromthymol blue and arabinose as carbon source in place of sucrose were not effective for the detection of *V. parahaemolyticus*. Incubation temperature of 37 °C for 6 hours gave the equivalent results as that incubated for 8 hours or longer (24 hours) (P<0.05). *V. parahaemolyticus* could survive and grow in alkaline peptone water with 8% NaCl while the other *Vibrio* spp. showed no growth. The paper test kit performed well when tested with food sample against the standard MPN method (P>0.05). The test kit could be stored at 4 °C for 30 days.

Keywords: *Vibrio* spp / Paper Test Kits / Rapid Method / Conventional Method / TCBS