SUMMARY

1. Chitinase activity in papaya leaves extract can be detected in agar plate assay, native PAGE and SDS-PAGE, while the extract from leave of aztec kuamochill can be detected on native PAGE and SDS-PAGE but not on agar plate assay.

2. Colloidal chitin could induce chitinase in bean seeds during growth of seedling by growing bean seeds in medium with colloidal chitin.

3. Chitinase was present in angled loofah fruit pericarp and purified by ammonium sulfate precipitation at 30-70 % saturation and DEAE-cellulose column chromatography with 18.9 folds of purification and 6.7% recovery. Characterization of this chitinase revealed that there were 2 chitinases with native molecular weight 54,000 and 30,000. The former contained two subunit of the molecular weight 29,000 and 25,000 while the latter contained one subunit with molecular weight of 29,000. The larger chitinase showed 2 bands with pI of 5.4 and 5.5 in IEF gel while the smaller chitinase showed one band with pI 5.4. The enzymes showed optimum pH of 3.5 and optimum temperature 37°C. It has highest substrate specificity for purified chitin followed by colloidal chitin, glycol chitin and glycol chitosan, respectively.