

CHAPTER VII

CONCLUSION

The MAb secreted from clone 27E10 (MAb27E10, produced by Chaicumpa *et al.*, 1995) were of IgG1 (the isotype known to have high binding to its epitope when compared to other isotypes). This MAb was assembled into a Chole-Dot test kit which is a dot-ELISA version for detecting whole cell homogenate of *V. cholerae* O1 by the dot-ELISA. The lowest amount of whole cell homogenate was 6 ng.

The MAb secreted from clone 12F5G11 (MAb12F5G11, produced by Chaicumpa *et al.*, 1998) were IgG2b (the isotype known to have high binding to the homologous antigen). This MAb was used in a dot-ELISA for detecting whole cell homogenate of *V. cholerae* O139 in a Chole-Dot test kit. The lowest amount of whole cell homogenate was 3 ng.

As reported in **Table 7** and **Table 10**, the diagnostic sensitivity, diagnostic specificity, and efficacy of the dot-ELISA compared to the culture when performed on alkaline peptone water enriched rectal swabs of watery diarrhea patients were all 100% for *V. cholerae* O1 and 100%, 99.9 % and 99.9% for *V. cholerae* O139, respectively. Kappa coefficient was 1.0 which indicates perfect agreement between the two tests (beyond chance). The dot-ELISA is easy to perform, relatively inexpensive, highly sensitive and specific. It permits multisample analysis at a single time, requires no special equipment and does not pose any disposal problem (compared with the conventional culture method). Diagnosis of cholera cases could be made accurately within three hours (while the culture method takes two days). The diagnostic kits currently provided by Science Development Management Ltd. (SDM), Bangkok, Thailand, are recommended for use in the detection of severe diarrhea caused by *V. cholerae* O1 and O139 not only in hospitals and health centers where adequate and prompt treatment of the patients is required as a life-saving measure but also for early recognition of cholera cases and their contacts so that other action, *i.e.* prevention and control of outbreaks and surveillance can be promptly implemented. Most advantages of all are a self-reliance of the country.