

## SUMMARY

The water from various sources in Chiengmai was examined for initial bacterial population as well as pH, calcium and iron content. Then water was contaminated with Shigella flexneri type III, Salmonella typhosa and Vibrio cholerae El Tor-Ogawa to a final of  $10^4$  of each organism per milliliter in 100 liters earthen water jars. Viability of the pathogens was checked from zero hour to 20 days. The shigellae and salmonellae lived for only a few days, but only the cholera vibrios survived up to ten days in the water from both deep and shallow wells. In the rain diluted water of Mae Ping River the viability of Vibrio cholerae increased, the survival of salmonellae and shigellae seemed to be unchanged. The effective concentration of inoculum was between  $10^4$  to  $10^5$  of each organism per milliliter of water. The contribution of this work to understanding of the epidemiology and endemiology of enteric infection in Chiengmai is discussed.