



geometric mean (GM) of 0.90 ELISA unit. Similarly, neonatal pertussis antitoxin at the level of 0.390 ELISA unit was the highest frequency (31.4%) with the GM of 0.60 ELISA unit. All of mothers could transfer pertussis antitoxins to their newborns and could transfer 73.9% of own pertussis antitoxins to their newborns. Mothers with low, medium and high level of antitoxins could transfer 73.0%, 74.4% and 88.5% of their pertussis antitoxins to their neonates, respectively. However, pertussis antitoxins in newborns were directly varied to the levels of pertussis antitoxins in maternal sera. It also found that newborns from mothers with high level of antitoxin had more chance to possess higher pertussis antitoxins than the neonates from mothers who had low pertussis antitoxins (odds ratio=85). In addition, there was a positive linear correlation between the pertussis antitoxins of mothers and their newborns (Spearman's  $r=0.85$ ,  $P<0.05$ ).

From this study, it was shown that pertussis antitoxins of mothers were not associated with any socio-demographic characteristics *ie.* age, home town, residence, type of residence, education and income ( $P>0.05$ , Chi-square test).