

CONCLUSION

Twenty two domesticated Asian elephant DNAs, extracting from blood and hair follicle samples, were amplified using PCR technique. The PCR products were used for parentage test analyzing at three microsatellite loci (FH94, FH102 and LafMS03). The genotyping result showed the biparental inheritance, an elephant calf in each family inherited alleles from their father and mother. The statistical test indicated that all elephant families are real families with 99.72 percent of combined PD and 75.31 percent of culmulative PE. The null alleles were observed at the locus FH102 in two elephant calves. Using mitochondrial DNA sequence analyses, all the calves had maternal inheritance of both partial D-loop and cytochrome b.

Genotyping using microsatellite as the genetic marker for parentage test with the additional mitochondrial DNA sequence analysis for the mother-calf relation test were the gold standard techniques. However, more informative loci of both microsatellite and mitochondrial DNA should be used in the future study in order to make the test more efficient. These techniques can be used to solve the elephant registration problem in Thailand. Nevertheless, the active organization and the strong regulation are the essential clues and the urgent task for the government to help creating the good management to conserve both domesticated and wild elephants in Thailand.