A potential problem of canine babesiosis is latent infection or subclinical disease. Carrier dogs without clinical signs are sources of transmission by tick vector. Traditional method for Babesia detection is light microscopic examination but it cannot detect a carrier stage or identify genotypic status. Therefore, the highly accurate PCR method has been performed and used for investigation of B. canis distribution in Bangkok, Thailand. The specific primers targeting on 18s rRNA gene were used. PCR reaction produced 208 bp products. DNA sequence of B. canis in Thailand was identical to the B. canis reference (AY272047). From February 2002 to January 2003, total of 204 blood samples were randomly collected from stray dogs in Bangkok. The prevalence of babesiosis was 12.25% (25/204) as detected by PCR. The most PCR positive (16.66%) was detected in the last three months, November 2002 to January 2003.