Microsatellite markers were used to identify genetic diversity among 129 turmeric accessions collected from different geographical areas in Thailand. The 13 selected microsatellite markers were highly polymorphic for turmeric. A total of 85 alleles were detected by the markers. The number of alleles per locus varied from 2 to 10. On average 6.54 alleles per locus were observed. Except for Cl-58 and Zc-85 all other microsatellite markers showed a high value of polymorphism information content (PIC) ranging from 0.429 to 0.775. Three clusters with 34 genotypes were determined using microsatellite markers and morphological characteristics. Cluster A consists of inflorescence with white bract and deep purple or pink colour at terminal of the bract, yellow or orange rhizome, soft aroma smell, medium or large rhizome and low curcuminiod content. Cluster B consists of inflorescence with white bract and soft green colour at terminal of the bract, deep or red orange rhizome, strong aroma smell, small and long rhizome and high curcuminoid content. Cluster C consists of soft brown on mid-rib of leaf while other genotypes in the two clusters are green, yellow rhizome, soft aroma smell and low curcuminiod content. The microsatellite markers were able to distinguish between different turmeric genotypes. The identification of turmeric genotypes by microsatellite markers was in accordance with the classification using morphological characteristics.

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