

Durian Marker Kit for Durian (*Durio zibethinus* Murr.) Identity

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Abstract : Durian is the flagship fruit of Mindanao and there is an abundance of several cultivars with many confusing identities/ names. The project was conducted to develop procedure for reliable and rapid detection and sorting of durian planting materials. Moreover, it is also aimed to establish specific genetic or DNA markers for routine testing and authentication of durian cultivars in question. The project developed molecular procedures for routine testing. SSR primers were also screened and identified for their utility in discriminating durian cultivars collected. Results of the study showed the following accomplishments; 1. Twenty (29) SSR primers were selected and identified based on their ability to discriminate durian cultivars, 2. Optimized and established standard procedure for identification and authentication of Durian cultivars 3. Genetic profile of durian is now available at Biotech Unit. Our results demonstrate the relevance of using molecular techniques in evaluating and identifying durian clones. The most polymorphic primers tested in this study could be useful tools for detecting variation even at the early stage of the plant especially for commercial purposes. The process developed combines the efficiency of the microsatellites development process with the optimization of non-radioactive detection process resulting in a user-friendly protocol that can be performed in two (2) weeks and easily incorporated into laboratories about to start microsatellite development projects. This can be of great importance to extend microsatellite analyses to other crop species where minimal genetic information is currently available. With this, the University can now be a service laboratory for routine testing and authentication of durian clones.

Keywords : DNA, SSR analysis, genotype, genetic diversity, cultivars

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