

Interpretation of electrophoretograms of seven microsatellite loci to determine the genetic diversity of the Arabian Oryx

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ABSTRACT. Microsatellite markers are commonly used for examining population structure, especially inbreeding, outbreeding and gene flow. An array of microsatellite loci, preferably with multiallelic presentation, is preferable for ensuring accurate results. However, artifact peaks or stutters in the electrophoretograms significantly hamper the reliable interpretation of genotypes. We interpreted electrophoretograms of seven microsatellite loci to determine the genetic diversity of the Arabian Oryx. All the alleles of different loci exhibited good peak resolutions and hence were clearly identified. Moreover, none of the stutter peaks impaired the recognition or differentiation between homozygote and heterozygote. Our findings suggest that correct identification of alleles in the presence of co-amplified nonspecific fragments is important for reliable interpretation of microsatellite data.

Key words: Microsatellites; Electrophoretograms; Stutter peaks; Molecular markers; Genetic diversity