ALLELE FREQUENCIES AND GENETIC ATTRIBUTES OF 24 AUTOSOMAL STR IN THE CHILEAN REGION OF BIO BIO

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We analyzed 24 autosomal STR *loci* using simultaneously PowerPlex® 21 System (Promega, Madison, WI) and GlobalFiler™ Express (Applied Biosystems®, Warrington, UK) among 291 unrelated individuals from Bio Bio (Chile). Hardy-Weinberg equilibrium (HWE) was assessed using exact tests. After employing Bonferroni correction (0.05/23 = 0.002) for the number of *loci* analyzed, Penta E and D8S1179 *loci* were departed from HWE expectations. Combined Power of Discrimination and Power of Exclusion for this population using both commercial kits exceeded 0,9999999999. Results showed a matching probability of 8.611×10^{-30} for 24 autosomal STR *loci*. The most variable autosomal STR *loci* observed was SE33 (observed heterozygosity: 0.943, match probability: 0.011). This dataset for this population may now be used in evaluating the weight of DNA evidence for forensic applications such as in parentage/kinship testing, human identification and interpretation of DNA mixtures in our population.