

## **EVALUATION OF A NEW AMPLIFICATION MULTIPLEX SYSTEM FOR HUMAN IDENTIFICATION**

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The Power Plex ESI 16 System and ESX 16 System (Promega Corporation, USA) were used to analyse a dilution series of Standard DNA, with the intent of evaluating the minimal amount of DNA that is permitted before the insurgence of Stochastic Effect. After that, an amplification efficiency comparison was made from these new kits to those previously used, by analysing the same evidence samples with very few and damaged DNA. ESI and ESX kits showed no stochastic effects until 100 pg of total standard DNA in the reaction, reaching even 30 pg of total DNA standard per reaction with the loss of 50% of the alleles. The combination of these two kits, allowed us to verify the alleles and to obtain a full profile with less quantity of DNA compared to the previous kits. Similar results were obtained after the comparison from the double amplification of DNA extract from evidences with these new kits to the amplification of the same samples with kits normally in use.