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IDENTIFICATION OF SEVERELY BURNED BODIES FROM A VEHICLE COLLISION USING DNA IQ ™ PROMEGA SYSTEM AND CHELEX 100 RESIN

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This work was performed by the specialists at the forensics genetic laboratory of the Procuraduria General de Justicia of Chihuahua State in Mexico, to identify 25 severely burned victims of a highway collision involving a tourist bus and a transport truck. Reference blood samples from the relatives, heart blood, tissue, and femur bones from the burned victims were analyzed for this case.

Bone DNA was extracted using the DNA IQ ™ System from Promega, which uses a paramagnetic resin, and extraction with phenol:chloroform:isoamilic alcohol (25:24:1 ratio) was performed for tissue and blood DNA. On the other hand, blood DNA on FTA card from both burned bodies and relatives was extracted with Chelex 100 resin. For the DNA typing, 16 STR (D8S1179, D21S11, D7S820, CSF1PO, D3S1358, TH01, D13S317, D16S539, D2S1338, D19S433, VWA, TPOX, D18S51, AMEL, D5S818 and FGA) loci were used. Y STRs were also amplified (DYS456, DYS389I, DTS390, DYS389II, DYS458, DYS19, DYS385 a/b, DYS393, DYS391, DYS439, DYS635, DYS392, DYS448, YGATAH4, DYS437 and DYS438) for a complete identification in cases of absence of close relatives. All 25 victims were successfully identified in a brief period of time.