

**DNA kits and equipment required for Rasuwa disaster affected dead bodies identification:**

| S. N.              | Name                                               | Required quantity | Details                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------|----------------------------------------------------|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>A. DNA Kits</b> |                                                    |                   |                                                                                                                                                                                                                                                                                                                                                                                                    |
| 1                  | Forensic DNA Extraction Kit from bone              | 3000 kits         | * For use with AutoMate Express Forensic DNA Extraction System or Qiacube.                                                                                                                                                                                                                                                                                                                         |
| 2                  | Forensic DNA Extraction Kit from blood and swabs   | 200 kits          | * For use with AutoMate Express Forensic DNA Extraction System or Qiacube.                                                                                                                                                                                                                                                                                                                         |
| 3                  | DNA Quantification Kit                             | 3000 reactions    | * Capable to quantitate of total amount of amplifiable human DNA and human male DNA in a sample based on Real-Time PCR Technology.                                                                                                                                                                                                                                                                 |
| 4                  | Nuclease Free water 500 ml or equivalent           | 10 bottle         | * Purity or Quality Grade: DNAase-Free, RNAase-Free, Molecular Biology Grade<br>* Purification: Membrane-Filtered, Autoclaved                                                                                                                                                                                                                                                                      |
| 5                  | MicroAmp 96 well Rxn plate                         | 50 plates         | * Compatible with Real-Time PCR systems, thermal cyclers and genetic analyzers                                                                                                                                                                                                                                                                                                                     |
| 6                  | Optical Adhesive Cover                             | 25 covers         | * Optical Adhesive Cover is a pressure sensitive film that reduces well-to-well contamination and prevents sample evaporation when applied to a microplate.                                                                                                                                                                                                                                        |
| 7                  | PCR Amplification Kit                              | 3000 reactions    | * Target Loci: Should include at least CODIS loci and Sex determination loci                                                                                                                                                                                                                                                                                                                       |
| 8                  | POP-4(384) Polymer 3500                            | 3000 reaction     | * Capable to be used with Genetic Analyzer 3500                                                                                                                                                                                                                                                                                                                                                    |
| 9                  | Cathode Buffer Container 3500 Series or equivalent | 3000 reaction     | * Capable to be used with Genetic Analyzer 3500 or Seq Studio                                                                                                                                                                                                                                                                                                                                      |
| 10                 | Anode Buffer Container                             | 3000 reaction     | * Capable to be used with Genetic Analyzer 3500                                                                                                                                                                                                                                                                                                                                                    |
| 11                 | GeneScan 600 Liz Dye size standard v2              | 3000 reaction     | * Capable of sizing DNA fragments in the 20-600 nucleotides range.<br>* Should contain 36 single-stranded LIZ flurophore labeled fragments of: 20, 40, 60, 80, 100, 114, 120, 140, 160, 180, 200, 214, 220, 240, 250, 260, 280, 300, 314, 320, 340, 360, 380, 400, 414, 420, 440, 460, 480, 500, 514, 520, 540, 560, 580 and 600.<br>* Capable to be used with Genetic Analyzer 3500 or Seq Studio |
| 12                 | Hi-Di Formamide or equivalent                      | 200ml             | * For use with 3500 Genetic Analyzer and Seqstudio.                                                                                                                                                                                                                                                                                                                                                |

|    |                                         |          |                                                                                                                                                                                  |
|----|-----------------------------------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 13 | Conditioning Reagent                    | 20 unit  | * Should be capable of priming the polymer pump, washing the polymer pump between polymer type changes and during instrument shut down.<br>* For use with 3500 Genetic Analyzer. |
| 14 | FTA card (single spot) or equivalent    | 200 unit | * Intended for simplified collection, transportation, and storage of biological samples (blood) and processing of nucleic acids at room temperature.                             |
| 15 | FTA card punching tool for disc making  | 20 unit  | * Intended for making FTA punch.                                                                                                                                                 |
| 16 | DNA Suspension buffer (Low T.E. Buffer) | 4000 ml  | * DNA Suspension Buffer should be free of DNase and RNase.                                                                                                                       |
| 17 | Proteinase K                            | 65 ml    | * Enable purification of high-molecular-weight DNA suitable for archiving.                                                                                                       |

| <b>B. DNA Equipments and Accessories</b> |                                        |                         |                                                                                                                                                                                                                                           |
|------------------------------------------|----------------------------------------|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1                                        | Cold chamber                           | 1 unit                  | * External dimension: 20ft*12ft*10ft<br>* Temperature range: 15 to -20°C                                                                                                                                                                  |
| 2                                        | Rapid Short Tandem repeat (STR) system | 5 unit                  | * Should have integrated expert system software for data analysis.<br>* Generates human DNA IDs compatible with DNA databases.<br>* Can process blood, tissue, bone, and crime scene samples<br>* Process time upto 5 hours<br>* Portable |
| 3                                        | Lab freezer                            | 12 unit                 | Temperature range: -10 to -25°C                                                                                                                                                                                                           |
| 4                                        | Lab refrigerator                       | 12 unit                 | Temperature range: 4 to 8°C                                                                                                                                                                                                               |
| 5                                        | Water bath                             | 5 unit                  | * Operates in a temperature range from +5°C to 100°C with a stability of $\pm 0.1^\circ\text{C}$ and a tank capacity ranging from 10 to 25 liters<br>* Speed: 40 to 500 rpm                                                               |
| 6                                        | Thermomixer                            | 5 unit                  | * Speed: 40 to 1000 rpm<br>* Temperature range: 37 to 160°C                                                                                                                                                                               |
| 7                                        | Stainless Steel Grinding Jar Set       | 15 set (30 jars)        | * Recommended for disrupting hard samples such as bone/teeth.<br>* Sample volume should be about 25mL.<br>* Each grinding jar can hold one grinding ball.<br>* Grinding balls should be stainless steel of about 20 mm.                   |
| 8                                        | Rotary tool for cutting                | 10 unit                 | * Should come with all accessories required for cutting, engraving, milling, grinding, sharpening, polishing and cleaning of hard substances.<br>* Warranty – 1 year                                                                      |
| 9                                        | Purple Nitrile examination gloves      | 100 pieces/box (40 box) | * Made up of a highly durable Nitrile Polymer.<br>* Product size should be medium size.                                                                                                                                                   |
| 10                                       | Drill bead                             | 4000 beads              | * For drilling bone with size 4.5 mm                                                                                                                                                                                                      |
| 11                                       | Stainless steel plier                  | 30 units                | * To break and hold bones                                                                                                                                                                                                                 |