

# Giving Names to the Nameless

Solutions for missing persons and bone sample processing



## The QIAGEN bone workflow

### Giving names to the nameless and closure to families

A fundamental goal of human identification is to give a name to human remains and return them to their loved ones. The nameless ones might be individual missing persons, or victims of terrorist attacks, mass disasters or conflict zones. All missing persons samples bring unique challenges, and these must be overcome to achieve our goal and bring closure to families.

Missing persons samples frequently contain limited DNA. The DNA may be degraded and may be associated with PCR inhibitors such as calcium or humic acid.

The QIAGEN bone workflow is designed to prepare samples for DNA purification, maximizing recovery of DNA while removing inhibitors. The workflow also provides unparalleled insight into the quality and quantity of DNA so you can choose the right downstream analysis route with confidence.



Prepare bone samples  
TissueLyser II

Maximize DNA recovery  
EZ2® Connect Fx bone  
protocol

Determine downstream  
processing  
Investigator® Quantiplex® Pro

### Give yourself the best chance of success with TissueLyser II and EZ2 Connect Fx

Many labs handling challenging missing persons samples rely on the convenience and reproducibility of the TissueLyser II to ensure downstream success.

The TissueLyser II has a typical run time of three minutes and accommodates adapter sets for up to 96 samples. You can increase your lab's throughput while maximizing DNA recovery.

The TissueLyser II is specially designed to disrupt difficult biological samples such as bones and teeth. The resulting product is a fine powder ready for DNA recovery and purification on the EZ2 Connect Fx.



## EZ2 Connect Fx bone protocol

### Extract DNA from bone or teeth with the EZ1&2® DNA Investigator Kit on the EZ2 Connect Fx

Efficiently recover inhibitor-free DNA for downstream analysis.

With the EZ2 Connect Fx Bone Extra Large Volume Protocol in conjunction with the TissueLyser II, you can:

- Process large bone fragments into bone powder
- Purify DNA from up to 800 mg of powdered bone or teeth
- Process samples requiring larger lysis volumes
- Increase lab throughput with prefilled forensic grade cartridges
- Stay connected through remote monitoring
- Keep your samples safe with recovery and tracking functions

Find the complete protocol for extraction of DNA from bone or teeth in the [EZ1&2 DNA Investigator Kit Handbook for Use with the EZ2 Connect Fx Instrument](#).



## Investigator Quantiplex Pro Kit

### Choose the right downstream test for your samples

Efficient and effective DNA recovery is just the first step to a successful identification. You'll need to make careful decisions on downstream processing based on the quantity and quality of DNA in your sample. Other factors, such as the availability of family references, also must be considered.

The Investigator Quantiplex Pro Kit gives you comprehensive information about your samples to make the right decisions on downstream processing.

- Quantify your samples down to <1 pg/μl DNA
- Simultaneously quantify total human and male DNA
- Get quality assessment information on DNA degradation
- Test for PCR amplification or inhibition with the integrated internal control

## Ordering Information

Product	Contents	Cat. no.
TissueLyser II	Bead mill, 100–120/220–240 V, 50/60 Hz; requires the TissueLyser Adapter Set 2 x 24 or TissueLyser Adapter Set 2 x 96 (available separately)	85300
Grinding Jar Set, Stainless Steel (2 x 10 ml)	2 Grinding Jars (10 ml), 2 Stainless Steel Grinding Balls (20 mm)	69985
EZ2 Connect Tip Rack, Large Volume	Rack for use with EZ2 Connect; for Large-Volume Tubes [Large Volume Tube (7 ml) Sarstedt® cat. no. 60.550.109]	9027011
Buffer MTL (54 ml)	For lysis of a variety of sample types	1023430
Buffer G2 (260 ml)	260 ml Lysis Buffer	1014636
QIAGEN Proteinase K (2 ml)	2 ml (>600 mAU/ml, solution)	19131
EZ2 Connect Fx System	Benchtop instrument for automated isolation of nucleic acids from up to 24 samples in parallel, using sealed prefilled cartridges; includes 2x EZ2 Connect racks (EZ2 Connect Fx Tip Rack and the EZ2 Connect Fx Tip Rack – Flip Cap Tubes), EZ2 Connect Fx Cartridge Rack and 1-year warranty on parts and labor.	9003220
EZ1&2 DNA Investigator Kit (48)	For 48 preps: Reagent Cartridges (DNA Investigator), Disposable Filter-Tips, Disposable Tip-Holders, Sample Tubes (2 ml), Elution Tubes (1.5 ml), Buffer G2, Proteinase K, Carrier RNA	952034
Investigator Quantiplex Pro Kit (200)	For use on Applied Biosystems® Real-Time Systems: Quantiplex Pro Reaction Mix, Quantiplex Pro Primer Mix, Control DNA M1, QuantiTect® Nucleic Acid Dilution Buffer	387216



4N6FLOQSwabs meet ISO18385 requirements. For more Forensic Grade quality, see [www.qiagen.com/forensicgrade](http://www.qiagen.com/forensicgrade)

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