



DNA Technology for sample identity testing

Introduction

Occasionally pathology laboratories experience doubt about the authenticity of specimens submitted for diagnostic testing, possibly due to miss-labelling or cross-contamination issues. We can assist in unravelling such problems by identifying the individual who has provided the suspicious sample using our human identification STR (Short Tandem Repeat) profiling methodology. This is a fully UKAS accredited service (ISO15189). We accept wide range of clinical specimens from hospital laboratories. The general process is as follows:

Sample Collection



- Isohelix RapiDri swabs, tissue specimens, personal items

DNA Purification



- Roche High Pure Viral kits
- ThermoFisher KingFisher instruments

Genetic Profiling



- Promega PowerPlex 16HS kits
- CE on ABI 3500xL Genetic Analyzers

Data Analysis

S1	S2	S3
PQ	PQ	(1+5+9+13p)/8p
PP	PP	(1+9)/(2p) ²
PP	PQ	(1+5)/(4p)
PQ	PR	(1+3p)/8p
PQ/PP	RS/RR	1/4

- In-house calculations

Sample types

UKAS accredited sample types for this assay are serum, blood samples (treated with EDTA anticoagulant), mouth-swabs, and FFPE specimens. We can process almost any biological specimen type that will yield human genomic DNA (except where there is a suspicion of a sample containing a category 4 organism), however non-accredited sample types will be reported with a caveat stating as such.

Turnaround time

The stated turn-around time for this assay is 10 days (please see our Laboratory User Handbook for a full list of turnaround times). This is because we often perform identification on challenging samples provided to us by HM Coroners, however in practice we are usually able to resolve clinical specimen identity tests within a couple of working days. Please note, it may be necessary for us to request further specimens for genetic profile analysis in circumstances where our investigations are inconclusive.

Consent

It is the responsibility of the clinician requesting a genetic test to obtain informed consent for testing from the patient (or an individual with parental/legal responsibility for the patient).

Contact us if you have any questions, please don't hesitate to email us at info@micropathology.com or phone us on +44 (0) 24 7632 3222 and ask for a member of the genetics team.