



# Automation of Paternity Testing

## Ampath

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# Scope of Work

- Sample types – Blood and Buccal Swabs
- Manual Extraction from FTA cards
- No Quantification – Reference Samples
- ABI 3500 – POP7 and 50cm Capillary

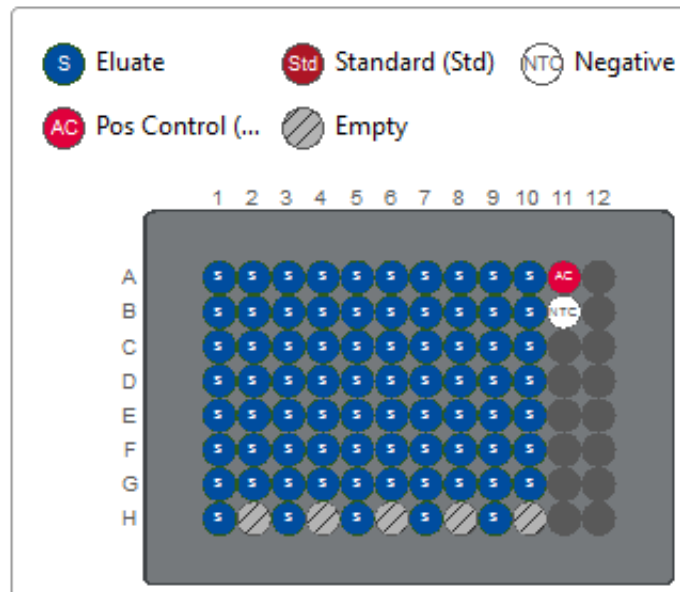
## Qiagen Workflow

- QIASymphony SP/AS
- QIASymphony DSP DNA Mini Kit
- Customized Protocol
- Investigator ID plex plus and Investigator 24 plex QS Kit

# Blood Samples

- Load Direct onto QIASymphony
- Customized Protocol based on Blood 200 Protocol
- 190ul Elution Volume
- PCR Setup performed on QIASymphony AS
- Premade Mastermix

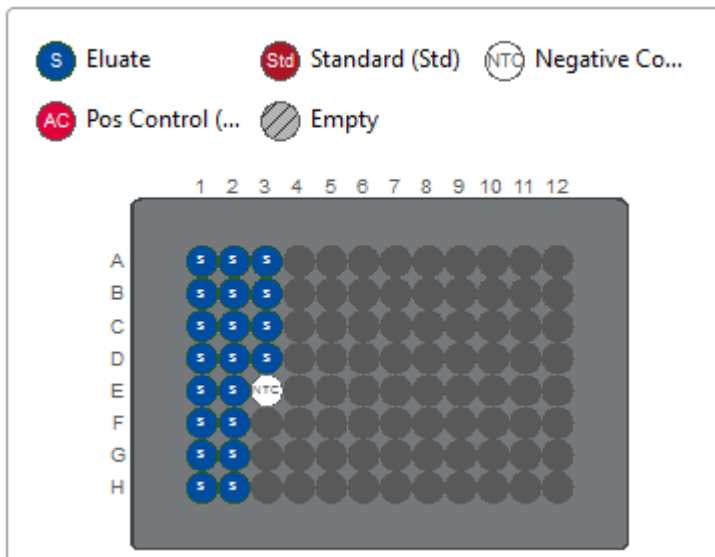
Preview of assay rack



# Buccal Swab Samples

- Pre-treatment step required
- Qiagen Lyse and Spin Basket kit
- Customized Protocol based on Blood 200 Protocol
- 90ul Elution Volume
- PCR Setup performed on QIASymphony AS
- Premade Mastermix

Preview of assay rack



# Outcome

- Blood Samples
  - V1 protocol resulted to DNA profiles with mean RFU values between 16000 – 20000
  - V2 protocol resulted to DNA profiles with mean RFU values between 8000 – 12000
- Buccal Swabs
  - V1 protocol resulted to DNA profiles with mean RFU values between 2000 – 10000
  - V2 protocol resulted to DNA profiles with mean RFU Values between 600 – 2000



# Recommendations

- Buccal Swab Pretreatment with ATL Buffer and Protinease K
- Blood Samples – Make use of Blood V2 Protocol
- Buccal Swabs – Make use of Blood V1 Protocol
- Increase volume of added BTO per sample – 0.6ul
- At least 2 ladders per plate

