Design Options: more common approaches

STRATEGY

SAMPLING

INACTIVATION & RELEASE

EXTRACTION & PURIFICATION

AMPLIFICATION

READOUT

INSTRUMENT

qPCR reader

Tube / Plate

Smartphone

Reader

8

Individual



Pools

Swab

1. NPS

2. ANS

3. OPS

1. Saliva

Liquid biopsy

2. Gargle/wash

Wastewater

Heat

± TCEP/EDTA

Proteinase K

± TCEP/EDTA

Heat Only

Magnetic Beads

Silica Beads

Commercial extraction kit

Commercial

None (Direct)

DIY Enzyme LAMP

Commercial Enzyme LAMP Colorimetric

1. Phenol red

2. HNB

3. LCV

Fluorimetric sequence independent E.g SYTO9

imetric - Naked eye

Fluorimetric - sequence specific

- 1. DARQ
- 2. QUASR
- 3. OSD
- 4. MolBeac
- 5. Displ. Probe

/ camera

Microfluidic

- 1. Channel
- 2. Paper



