

# Efficient SARS-CoV-2 Quantitative Reverse Transcriptase PCR Saliva Diagnostic Strategy utilizing Open-Source Pipetting Robots

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## Materials

| Name  | Company                     | Catalog Number | Comments  |
|---|-----------------------------|----------------|---|
| 100% EtOH   | Fisher scientific           | 22-032-601     |   |
| 20 uL Filtered Pipette Tips                       | Opentrons                   | 20uL tips      |   |
| 2mL Microcentrifuge Tubes                         | Fisher Scientific           | 14-666-313     | Alternate product may be used   |
| Armadillo PCR Plate, 384-well, clear, white wells | Thermo Scientific           | AB3384         | Alternate product may be used   |
| Celltreat 2mL 96 Deep Well Plates                 | Fisher Scientific           | 50-828-743     | For mastermix preparation   |
| Clear PCR Sealing Sheets                          | Thermo Scientific           | AB0558         | Alternate product may be used   |
| DPEC Treated Water                                | Ambion (Thermo Scientific)  | AM9916         |   |
| Flip Cap 50 mL Conical Tubes                      | VWR                         | 75845-210      | For sample collection   |
| Foil PCR Sealing Sheets                           | Thermo Scientific           | AB0626         | For storage of mastermix plates, Alternate product may be used        |
| HS_RPP30 Synthetic DNA                            | Integrated DNA Technologies | 299788131      | P1 positive control   |
| Luna Buffer Probe One-Step Reaction               | New England Biolabs         | M3006B         |   |
| Luna WarmStart RT Enzyme Mix                      | New England Biolabs         | M3002B         |   |
| nCOV_N1 Forward Primer, 100 nmol                  | Integrated DNA Technologies | 10006830       |   |
| nCOV_N1 Probe Aliquot, 50 nmol                    | Integrated DNA Technologies | 10006832       | Probe can be synthesized by other vendors with SYBR or FAM fluophores |
| nCOV_N1 Reverse Primer, 100 nmol                  | Integrated DNA Technologies | 10006831       |   |
| Opentron HEPA Filter Module                       | Opentrons                   | N/A            | Not required, but useful to reduce contamination                      |
| Opentron Multichannel Attachment, P20             | Opentrons                   | 999-00005      | For mastermix preparation   |

|  |                             |                          |  |
|--|-----------------------------|--------------------------|--|
| Opentron OT-2 Liquid Handling Robot                          | Opentrons                   | OT-2                     |  |
| Opentron Pipette Attachment, P20                             | Opentrons                   | 999-0000215              | For sample loading   |
| Oven   | Memmert                     | UF450 PLUS 208V-3PH      |  |
| PCR Tubes (rnase, dnase free)                                | Fisher Scientific           | 14-230-225               | For aliquots of positive and neg controls                      |
| PolarSafe Aluminum Cooling Block, 15-Well (1.5/2.0 mL Tubes) | VWR                         | 10808-952                |  |
| PolarSaf Aluminum Cooling Block, 24-Well (0.5mL tubes)       | VWR                         | 10808-956                |  |
| RNAse P (ATTO 647) Probe, 50 nmol                            | Integrated DNA Technologies | 10007062                 | Probe can be synthesized by other vendors with Cy5 fluorophore |
| RNAse P Forward Primer, 100nmol                              | Integrated DNA Technologies | 10006836                 |  |
| RNAse P Reverse Primer, 100 nmol                             | Integrated DNA Technologies | 10006837                 |  |
| Sars-CoV-2 Synthetic RNA Control 2                           | Twist Biosciences           | 102024 / 103907 / 103909 | N1 Positive Control  |
| Scanners   | Code                        | CR1500                   | Only required when scaling up                                  |
| Small HEPA Filtered Hood                                     | Erlab                       | Captair Bio 321          | For mastermix preparation                                      |
| Thermocycler CFX384 Touch                                    | Biorad                      | CFX384 Touch             | Alternate models can be used, e.g. CFX384 Opus                 |
| X-acto Knife Set   | Staples                     | N/A                      | To cut foil for keeping control wells covered                  |