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transmissive blood test

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¹Tellspec LTD

XPRIIZE Rapid Covid Testing

mARK bLOORE

OPEN ACCESS

DOI:

dx.doi.org/10.17504/protocols.io.bj2pkqdn

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Protocol status:

Working
We use this protocol in our workspace and it is working.

Created: Aug 20, 2020

Last Modified: Sep 23, 2020

PROTOCOL integer ID:

40751

1 Launch COVIDTell app on mobile device at start of day.

5s

- 2

Collect blood with finger prick. 30 µL 2 drops

30s
- Room temperature

Equipment	
MediPurpose SurgiLance	NAME
disposable blood lancet	TYPE
MediPurpose	BRAND
SLN300	SKU
https://aossmedicalsupply.com/products/copy-of-safety-lancet-surgilance%C2%AE-fixed-depth-lancet-needle-2-8-mm-depth-21-gauge-pressure-activated	LINK
minimum 30 uL blood draw	SPECIFICATIONS

- 3

Place blood in cuvette well, either directly or from a micro pipette. This image shows the same protocol being followed using human milk.

15s

Equipment	
demountable cuvette	NAME
NIR quartz	TYPE
FireflySci	BRAND
Type 19	SKU
https://www.fireflysci.com/cuvette-holders-mounts/a20-series-cuvette-mounts-for-lightpaths-below-5mm?rq=cuvette%20mount	LINK
0.1 mm path length. NIR-transmissive, at least 1350 nm to 2150 nm.	SPECIFICATIONS

- 4 Slide cuvette window over well. This image shows the same protocol being followed using human milk.

5s

- 5 Place cuvette in mount. This image shows the same protocol being followed using human milk.

5s

Equipment	
A20 cuvette mount	NAME
cuvette mount	TYPE
FireflySci	BRAND
A20 Series	SKU
https://www.fireflysci.com/cuvette-holders-mounts/a20-series-cuvette-mounts-for-lightpaths-below-5mm?rq=cuvette%20mount	LINK
extended spring	SPECIFICATIONS

- 6 Place mount in sensor. This is the Premie-branded sensor. The COVIDTell sensor will be the same spectrometer with different branding and housing.

Equipment	
Premie Sensor	NAME
handheld spectrometer	TYPE
Premie	BRAND
Premie Sensor	SKU
NIR transmissive spectrometer, 1350 nm to 2150 nm.	SPECIFICATIONS

- 7 Perform scan by pressing button on sensor or tapping button in app.

8 Read results on app screen.

30s

Expected result

Positive or Negative, or Failed.

Mockup of COVID-19 smartphone app.

9 Clear result in app before next subject arrives.

1s

10 Clean cuvette with 50% alcohol. This might be done by a second person. ➡ go to step #2

1m