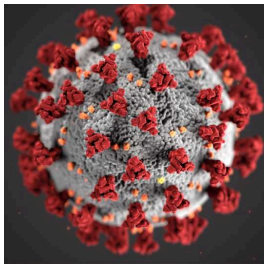
Sep 03, 2020 Version 1

Coronavirus Lateral Flow Assay (LFA) sample preparation protocol V.1



In 1 collection

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Protocol status: Working
We use this protocol in our laboratory and it is working

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Abstract

Coronavirus Lateral Flow Assay (LFA) sample preparation protocol

Materials

MATERIALS

- Triton X-100 **Merck MilliporeSigma (Sigma-Aldrich) Catalog #**93426
- DPBS 10X with Calcium and Magnesium **Gibco - Thermo Fisher Scientific Catalog #**14-080-055
- EDTA **Merck MilliporeSigma (Sigma-Aldrich) Catalog #**ED2SS
- Tributyl phosphate **Catalog #**240494

1 For each clinical sample to be processed, label 1 screwcap tube with the patient's ID. Make 400 µL aliquots of Lysis buffer in each tube.

Lysis buffer:
[M] 1 % volume Triton X - 100 [M] 0.3 % volume Tributyl phosphate 1x complete EDTA-free [M] 5 millimolar (mM) EDTA in 1x PBS

2 Take out the swabs out of the -80 °C freezer immediately before the analysis. Leave to thaw at RT for 00:05:00 and insert into the respective screw-cap tube. Note: handling times within a CL3 lab may be longer than expected, so do not take the swabs out of the freezer until all tubes are properly labelled and containing 400 µL Lysis buffer in them.

3 'Plunge' each swab up and down in Lysis Buffer for 00:15:00, constantly 'twisting' the swab so its sides are brushed against the side of the tube. Note: Ideally, do not handle more than 3-4 swabs at a time so as to spend enough time twisting each of them to 'encourage' maximum dissociation of Nucleocapsid protein from the swab and lysis of virions.

4 After 00:15:00, discard the swabs appropriately (e.g. in a second container that will then need to be autoclaved before disposal), making sure to recover as much volume out of the swab as possible (100 µL will be lost as absorbed by the swab foam) and re-cap the tube.

5 Samples can be tested immediately by lateral flow device or stored at -80 °C for further analysis.

6 Lateral flow assay could be performed directly inside a CL3 lab or within a Class I cabinet after decontamination
of the outside of the tubes before taking them out of the CL3 lab. For the lateral flow assay, follow the lateral flow assay operation protocol.