

First at-home coronavirus test kit

The U.S. Food and Drug Administration has given an emergency green light to the first rapid coronavirus test that can be performed entirely at home. Lucira Health's test kit delivers results in 30 minutes

1. Swab: User collects nasal sample from both nostrils with sterile swab

2. Sample: Swirled in vial of chemical reagents. Vial is inserted into test cartridge

Test cartridge

3. Test cartridge: Enzyme – **reverse transcriptase (RT)** – synthesizes any viral RNA in sample into **complementary DNA (cDNA)**

Viral RNA



4. Assay technique: Device combines RT with **loop-mediated isothermal amplification (LAMP)** which repeatedly copies cDNA until it reaches detectable level

5. Detection: Colour change of DNA-binding dye indicates presence of viral RNA

6. Result: Displayed in 30 minutes by positive or negative LEDs

