

At-home COVID-19 tests: How good are they?

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As the country gets vaccinated and begins to reopen, testing remains a key element of safe interactions. Rapid testing for COVID-19 has become more common and accessible, including over-the-counter (OTC) tests approved by the U.S. Food and Drug Administration (FDA). *Chemical & Engineering News* (C&EN), the weekly newsmagazine of the

American Chemical Society, puts five of these at-home rapid tests through their paces to gauge efficacy and ease of use in a new cover story.

Despite decreasing [infection rates](#), experts say that continued COVID-19 testing will be vital for ensuring safety at businesses, schools and events. At-[home](#) tests are convenient and supposedly easy to use, writes Senior Editor Megha Satyanarayana. In fact, ease of use for the average person is a requirement for FDA approval. However, some experts worry that the results of OTC tests do not necessarily get reported to public health agencies, and that those who test positive at home might be less compliant with quarantine recommendations.

At-home [test](#) kits come in two varieties: Antigen and molecular. Antigen tests detect pieces of viral proteins in cells and have a reputation for being less sensitive and accurate. Molecular tests look for the virus's genetic instructions, or RNA, which is more readily detected in a given sample. Of the five tests C&EN tried out, each had a different way of swabbing and reading results, including specialized devices and smartphone apps. They found that all five tests were relatively easy to use with instructions, and they provided accurate results compared to lab testing. In addition to questions about the accuracy of self-testing, the cost of and access to these tests is a concern. To help offset this, some communities have created programs to distribute at-[home tests](#), which could help build trust in testing and help stop the spread.

The article, "Over-the-counter COVID-19 tests make big promises. Do they deliver?," is freely available [here](#).

Provided by American Chemical Society

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