

Portable DNA sequencer processes samples quickly and accurately

DNA sequencing is crucial for identifying and tracking nasty viruses like E. coli and the flu. But current tabletop-size DNA sequencing machines aren't readily portable. Researchers at the University of Otago in New Zealand have a solution in a brick-sized DNA sequencer that connects wirelessly to a smartphone or laptop.

The device, called Freedom4, brings the quantitative PCR method of DNA sequencing to the field. The brick-sized machine has a six-hour battery life and can process DNA samples in one step, identifying the presence and extent of, say, a norovirus infection in under an hour.

This capability is monumental for doctors, veterinarians, and public health officials working to quickly identify viral infections in the field. In testing, Freedom4 performed as well as full-size laboratory DNA sequencing machines in identifying and quantifying samples infected with E. coli and respiratory viruses including the H1N1 strain of swine flu that caused a global pandemic in 2009.

Read the full, original story: [The world's first handheld DNA amplifier is a genetics lab in a box](#)