

## Evaluation of Determine HIV-1/2 as part of WHO's Quick Assessment Programme

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### Background

Determine HIV-1/2 is an immunochromatographic test for the detection of antibodies to HIV-1 and HIV-2 in human serum, plasma or whole blood. The evaluation of different diagnostic assays was conducted using fresh samples collected from patients at the Institute of Tropical Medicine, Belgium.

### Method

A total of 140 fresh samples, which had been routinely collected at the Institute from patients with different geographical origins, and 10 frozen HIV-2 samples were tested. Samples were assayed with 10 different HIV antibody tests, including four enzyme-linked immunoassays (ELISAs) and six simple/rapid (S/R) assays. Results were compared with those of a standard testing algorithm used at the AIDS Reference Laboratory, Antwerp. In addition, sequential plasma samples from 3 patients were used to determine the time of early seroconversion using Abbott's HIV-1/HIV-2 recombinant third generation EIA kit as standard.

### Results

The specificity was 100% for the ELISA assays and between 60.95 – 100% for the S/R tests. None of the assays were as sensitive as the standard in detecting early seroconversion. The delay was 2.7 days for Determine HIV-1/2 and varied from 1.7 to 6 days for the other S/R kits and from 3.7 to 8.3 days for the ELISAs. The sensitivity and specificity of Determine HIV-1/2 in this evaluation were both 100%. The average time to detect antibodies in early seroconversion panels, compared with the reference test, was 1.7 days.

### Conclusion

Determine HIV-1/2 is simple to perform, provides results within 15 minutes, is user-friendly and comparable in price to ELISAs.