HIV Laboratory Testing Algorithm in Serum/Plasma (modified from 2014 algorithm figure and CDC Quick Reference Guide)


**HIV-1/2 antigen/antibody immunoassay**

- **Nonreactive**
- **Reactive**

**HIV-1/HIV-2 antibody differentiation immunoassay**

- **HIV-1 Positive**
  - HIV-1 (+)
  - HIV-2 (-)

- **HIV-2 Positive**
  - HIV-1 (-)
  - HIV-2 (+)

- **HIV-2 Positive**
  - HIV-1 (+)
  - HIV-2 (+)

- **HIV Negative**
  - HIV-1 (-)
  - HIV-2 (-)

- **HIV-1 Indeterminate**
  - HIV-1 (ind)
  - HIV-2 (-)

- **HIV-2 Indeterminate**
  - HIV-1 (-)
  - HIV-2 (ind)

**HIV-1 NAT**

- **Detected**
- **Undetected**

- **Positive for acute HIV-1 infection**
- **Negative for HIV-1**

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a. APHL and CDC continue to recommend that laboratories use an FDA-approved instrumented HIV-1/HIV-2 antigen/antibody immunoassays as the initial assay the initial assay in the laboratory HIV testing algorithm for serum or plasma due to their superior sensitivity for detecting acute HIV infection. However, the FDA-approved single-use rapid HIV-1/HIV-2 antigen/antibody immunoassay may be used as the initial assay in the laboratory HIV testing algorithm for serum or plasma if an instrumented assay is not available. b. This includes specimens reported as HIV-2 positive with HIV-1 cross reactivity. c. Per the Genieus Package Insert, specimens with this final assay interpretation should be retested with a new cartridge. If the final assay interpretation is again HIV-2 indeterminate, it should be reported as such and followed with an HIV-1 NAT. d. If recent HIV exposure is suspected or reported, conduct HIV-1 NAT or request a new specimen and repeat the algorithm according to CDC Guidance. e. Link patient to HIV medical care and provide appropriate prevention counseling. f. Provider may consider additional testing. g. Link patient to HIV medical care and provide appropriate prevention counseling immediately to expedite prevention practices. h. A negative HIV-1 NAT result and repeatedly HIV-2 indeterminate antibody differentiation immunoassay result should be referred for testing with a different validated supplemental HIV-2 test (antibody test or NAT) if available. Alternatively, redraw and repeat algorithm in 2–4 weeks to assess HIV-2 infection.