

International Clinical Laboratories

Test Review



Abbott Real Time HIV Qualitative PCR

The Abbott Real Time HIV Qualitative is an *in vitro* amplification assay for the qualitative detection of Human Immunodeficiency Virus (HIV) nucleic acids from human plasma and dried blood spots (DBS). The Abbott Real Time HIV Qualitative is intended to be used as an aid in the diagnosis of HIV infection in **pediatric and adult subjects**.

HIV infection usually presents signs and symptoms such as acute febrile illness that starts within days to weeks after initial exposure and typically last for less than 14 days. Acute HIV infection is associated with high levels of viremia prior to a detectable immune response. Therefore, HIV nucleic acid testing can be more sensitive than standard serologic testing in detection of acute infection. For pediatric HIV infection, maternal antibody can be transferred passively to infants and may be detectable for up to 18 months; therefore, early diagnosis of HIV in infants requires direct detection of the virus or its components. As a result, HIV nucleic acid testing has been recommended for detecting infection in pediatric patients 18 months of age or younger. The Abbott Real Time HIV Qualitative assay detects HIV nucleic acids by using Polymerase Chain Reaction (PCR) technology with homogeneous real-time fluorescent detection. Partially double-stranded fluorescent probe design allows

detection of diverse HIV groups and subtypes. The assay uses either human plasma or DBS specimen type and reports a qualitative result.

Required sample: Plasma or DBS

Plasma Specimen Collection

Human plasma (ACD-A and EDTA) specimens may be used

DBS Specimen Collection and Storage

DBS may be made on a Whatman 903 card (or equivalent) using blood obtained from a heel- or finger-stick or collected in a blood collection tube. Freshly drawn specimens (whole blood) may be held at 15-30°C for up to 6 hours or at 2-8°C for up to 24 hours.

DBS are made by following these steps:

- Spot whole blood onto a minimum of 2 one-half-inch (12-millimeter) circles on a Whatman 903 filter paper card (or equivalent), ensuring that the entire circle is covered (approximately 50 μ L). If the whole blood has been collected in a blood collection tube, the blood should be mixed prior to spotting using a pipette.
- Air dry the card at room temperature.
- Package each card in a bag with desiccant packs. The cards may be stored at 15-30°C for up to 12 weeks. Alternatively, cards may

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be stored at 2-8°C or -10°C or colder for up to 12 weeks.

Difference from other assay type

- The Abbott RealTime is **CE** marked and fully automated HIV qualitative testing systems; that reduce time to result and provide accurate and high quality result.
- Used in the diagnosis of HIV infection **in pediatric and adult subjects**.
- **It is** qualitative assay that has been specifically designed to target a conserved region of the HIV-1 virus; this means that it assure accurate results by detecting whatever group or subtype including the newly identified group P, and also provide a low cost infant diagnosis option combined with high-throughput.
- Infant diagnosis is recommended at the age of 6 weeks and used for infants up to 18 months.
- Low sample volume is critical for these small babies, therefore the

DBS option of our machine is a solution for it.

- The other feature of our assay is it's detection ability of HIV -RNA together with proviral HIV-DNA, to potentially improving the clinical sensitivity over assays that only detect HIV-DNA. An advantage of combining HIV-RNA and DNA detection may be related to the fact that in prenatal infection, HIV-RNA is detectable earlier and more reliably than HIV-DNA.
- ❖ Result available within 4 working days
- ❖ Price 399 Birr
- ❖ For adoption centers and anyone who need we give sample collection service at their premises.

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