OraQuick ADVANCE® Rapid Antibody Test HIV-1/2

ENGLISH

Read the Package Insert completely before using the product. Follow the instructions carefully when performing testing. Failure to do so may result in inaccurate test results.

IVD For *In Vitro* Diagnostic Use Only.

For use by healthcare professionals only.

INTENDED USE

The OraQuick *ADVANCE*® HIV-1/2 Rapid Antibody Test is a single-use, qualitative immunoassay to detect antibodies to Human Immunodeficiency Virus Type 1 (HIV-1) and Type 2 (HIV-2) in oral fluid, fingerstick whole blood, venipuncture whole blood and plasma specimens. The OraQuick *ADVANCE*® HIV-1/2 Test is intended for use as a point-of-care test in the diagnosis of infection with HIV-1 and HIV-2.

RESTRICTIONS

- The OraQuick *ADVANCE*® HIV-1/2 Test is not approved for use to screen blood or tissue donors.
- The OraQuick *ADVANCE*® HIV-1/2 Test is not intended to be used to monitor individuals who are receiving Highly Active Antiretroviral Therapy (HAART).

SUMMARY AND EXPLANATION OF THE TEST

Acquired Immune Deficiency Syndrome (AIDS), AIDS related complex (ARC) and pre-AIDS are thought to be caused by the Human Immunodeficiency Virus (HIV). Testing for the presence of antibodies to HIV in bodily fluids (e.g., blood, oral fluid) is an accurate aid in the diagnosis of HIV infection.

BIOLOGICAL PRINCIPLES OF THE TEST

The OraQuick *ADVANCE*® HIV-1/2 Test is a manually performed, visually read, 20 minute immunoassay for the qualitative detection of antibodies to HIV-1 and HIV-2. The assay test strip, contains synthetic peptides representing the HIV envelope region and a goat anti-human IgG procedural control immobilized onto a nitrocellulose membrane in the Test (T) zone and the Control (C) zone, respectively.

MATERIALS PROVIDED (REF 1001-0284 25 TESTS, REF 1001-0285 100 TESTS)

- Divided pouch contains OraQuick *ADVANCE*® HIV-1/2 Test plus desiccant and OraQuick *ADVANCE*® HIV-1/2 Developer Solution: vial containing 1 mL phosphate buffered saline solution containing polymers and an antimicrobial agent.
- Reusable test stands
- Collection loops
- Package Insert

MATERIALS REQUIRED, AVAILABLE AS AN ACCESSORY TO THE KIT

OraQuick *ADVANCE*® HIV-1/2 Rapid Antibody Test Kit Controls

MATERIALS REQUIRED BUT NOT PROVIDED

Timer capable of timing 20 to 40 minutes
Biohazard waste container
Additional Items Required for Fingerstick and Venipuncture Specimens
Antiseptic wipe, sterile lancet or venipuncture supplies, disposable gloves (optional for oral fluid testing), sterile gauze pads, centrifuge

WARNINGS

For *in vitro* Diagnostic Use. For use by healthcare professionals only.

- Read the Package Insert completely before using the product.
- This kit has been approved for use with oral fluid, fingerstick whole blood, venipuncture whole blood, and plasma specimens only.
- This test should be performed at temperatures in the range of 15°-37°C. If stored refrigerated, ensure that the divided Pouch is brought to operating temperature (15°-37°C) before performing testing.
- If the test kit is stored at temperatures outside of ambient temperature (2°-27°C), or used outside of the operating temperature (15°-37°C), use the Kit Controls to ensure performance of the test.
- Individuals infected with HIV-1 and/or HIV-2 who are receiving highly active antiretroviral therapy (HAART) may produce false negative results.

PRECAUTIONS

- Handle specimens and materials in contact with specimens as if capable of transmitting infectious agents.
- Wear disposable gloves while handling and testing blood specimens. Change gloves and wash hands thoroughly after performing each test. Dispose of used gloves in a biohazard waste container.
- Use of gloves for oral fluid testing is recommended as any biologic specimen should be treated as potentially infectious. Test administrators with breaks in the skin (cuts, abrasions, or dermatitis) should wear gloves when performing oral fluid testing. Wash hands thoroughly after performing each oral fluid test and after contact with oral fluid.
- Do not reuse Specimen Collection Loops, Test Devices or Developer Solution. Dispose of these components properly. Reuse of these components is capable of transmitting infectious agents.
- Do not use the test beyond the expiration date printed on the pouch.

STORAGE

- Store unused OraQuick *ADVANCE*® HIV-1/2 Tests unopened at 2°-27°C.
- Do not open the pouch until you are ready to perform a test.
- If stored refrigerated, ensure that the pouch is brought to operating temperature (15°-37°C) before opening.

SPECIMEN HANDLING

- Oral Fluid: Ensure prior to testing that the subject has not had anything to eat, drink or has chewed gum for at least 15 minutes. Have the subject wait for at least 30 minutes prior to testing if they have used any oral care products. Collect specimen and place in Developer Solution immediately.
- Whole blood or plasma: insert the test device into the Developer Solution within 60 minutes of adding the sample.
- Whole blood or plasma specimens collected into sodium and lithium heparin or sodium citrate tubes may be stored at 2°-30°C for up to 24 hours. Plasma specimens using an EDTA test tube may be stored for up to 7 days at 2°-8°C. Invert the tube several times to mix.
- Plasma: Centrifuge at 1000-1300 x *g* for approximately 5 minutes.

DIRECTIONS FOR USE

GENERAL TEST PREPARATION

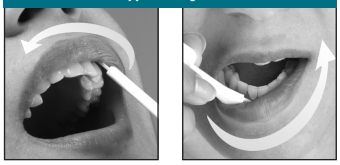
- Allow all components to come to operating temperature (15°-37°C).
- Place the Reusable Test Stand on your work space. Use only the stand provided with the OraQuick *ADVANCE*® HIV-1/2 Kit.
- Place the OraQuick *ADVANCE*® HIV-1/2 Test Developer Solution Vial into the test stand. Hold the vial firmly in the stand and remove the cap by rocking it back and forth while pulling it off.
- Do not open the pouch until you are ready to perform a test. Check the pouch for damage or holes. Discard it if damaged.
- Check for a desiccant packet in the pouch. If it is not present or appears damaged, discard the pouch and open a new one.
- **DO NOT** cover the 2 holes on the back of the device with labels. Blocking the holes may cause an invalid result.

1. SAMPLE COLLECTION

1a. Oral Fluid

- Ensure prior to testing that the subject has not had anything to eat, drink or has chewed gum for at least 15 minutes. Have the subject wait for at least 30 minutes prior to testing if they have used any oral care products.
- Remove the OraQuick *ADVANCE*® HIV-1/2 Test from the pouch. DO NOT touch the Flat Pad.
- Swab completely around the lower and upper outer gums **ONE TIME**. DO NOT swab the roof of the mouth, cheeks or tongue.

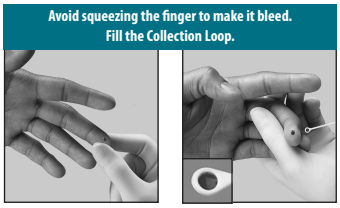
Swab completely around the lower and upper outer gums ONE TIME.



1b. Fingerstick Whole Blood

- Cleanse finger. Air dry.
- Puncture finger with a sterile lancet. Wipe away the first drop of blood with a sterile gauze. Hold the finger downward and apply gentle pressure beside the point of puncture. Avoid squeezing the finger to make it bleed.
- Fill the Collection Loop. Immediately insert the Loop into the Developer Solution. Mix with Loop.
- If the Loop is dropped or contacts any other surface, discard it. Use a new Loop to collect the blood.

Avoid squeezing the finger to make it bleed. Fill the Collection Loop.



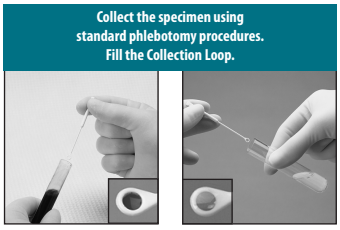
1c. Venipuncture Whole Blood

- Collect the specimen using standard phlebotomy procedures into a tube containing EDTA, sodium heparin, lithium heparin, or sodium citrate. Other anticoagulants have not been tested and may cause an incorrect result.
- Mix the blood by inversion. Fill the Collection Loop. Immediately insert the Loop into the Developer Solution. Mix with Loop.

1d. Plasma

- Plasma: Collect the specimen using standard phlebotomy procedures into a tube containing EDTA, sodium heparin, lithium heparin, or sodium citrate.
- Centrifuge at 1000-1300 x *g* for approximately 5 minutes.
- Fill the Collection Loop. Immediately insert the Loop into the Developer Solution. Mix with Loop.

Collect the specimen using standard phlebotomy procedures. Fill the Collection Loop.



2. RUN TEST

- Insert the Test Device into the Developer Solution.
- Set the timer for 20 to 40 minutes.

TEST RESULT AND INTERPRETATION

Refer to the Result Window on the Test Device.

Line in C Zone No HIV-1/2 antibodies detected

NON-REACTIVE

A test is Non-Reactive if a line appears in the C Zone and NO line appears in the T Zone. A Non-Reactive test result means that HIV antibodies were not detected in the specimen. Patient is presumed not to be infected with HIV.

REACTIVE

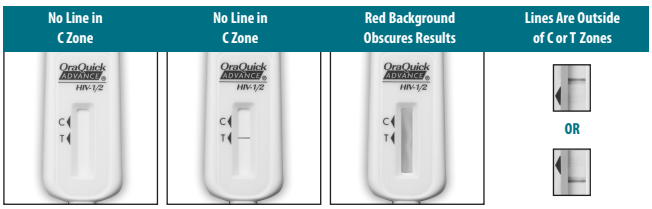
A test is Reactive if a line appears in the C Zone and a line appears in the T Zone. Lines may vary in intensity. The test is reactive regardless of how faint these lines are. A Reactive test result means that HIV antibodies have been detected in the specimen. The test result is interpreted as PRELIMINARY POSITIVE for HIV-1 and/or HIV-2 antibodies. Confirmation of a reactive result by another test method(s) is recommended.

Examples of positive results. Line in C Zone in each test

Line in T Zone | **Line in T Zone** | **Faint Line in T Zone**

INVALID

No Line in C Zone | **No Line in C Zone** | **Red Background Obscures Results** | **Lines Are Outside of C or T Zones**



A test is Invalid if:

An Invalid test result means that there was a problem running the test, either related to the specimen or to the Device. An Invalid result cannot be interpreted. Repeat the test with a new Pouch and a new specimen. Contact OraSure Technologies' Customer Service if you are unable to get a valid test result upon repeat testing.

GENERAL TEST CLEAN-UP

1. Dispose of the unused test materials and gloves in a biohazard waste container.
2. When using gloves, change your gloves between each test to prevent contamination.
3. Use a freshly prepared 10% solution of bleach to clean up any spills.

QUALITY CONTROL

The OraQuick *ADVANCE*® HIV-1/2 Test has a built-in procedural control. A line in the C Zone after 20 minutes indicates assay validity. External controls are available separately. Run OraQuick *ADVANCE*® HIV-1/2 Rapid Antibody Test Kit Controls according to the quality assurance policy of the facility.

LIMITATIONS OF THE TEST

1. OraQuick *ADVANCE*® HIV-1/2 Test is approved for use with oral fluid, fingerstick whole blood, venipuncture whole blood, and plasma specimens only. The use of other body fluids may not give accurate results.
2. Reading test results earlier than 20 minutes or later than 40 minutes may yield erroneous results.
3. Testing of venipuncture whole blood or plasma collected using a tube containing an anticoagulant other than EDTA, sodium and lithium heparin, or sodium citrate may not yield accurate results.
4. A negative result with this test does not exclude the possibility of infection with HIV. False negative results can occur in the following circumstances.
   - Individuals infected with HIV-1 or HIV-2 who are receiving highly active antiretroviral therapy (HAART).
   - Low levels of antibody due to recent exposure.
5. The OraQuick *ADVANCE*® HIV-1/2 Test is intended as an aid in the diagnosis of infection with HIV-1 and/or HIV-2. AIDS and AIDS-related conditions are clinical syndromes and their diagnosis can only be established clinically.
6. Clinical data has not been collected to demonstrate the performance of the OraQuick *ADVANCE*® HIV-1/2 Test in persons under 12 years of age.

PERFORMANCE CHARACTERISTICS

SENSITIVITY

Detection of Antibodies to HIV-1 in Specimens From Individuals Infected with HIV-1.

Oral Fluid

A sensitivity study was performed using freshly obtained oral fluid specimens collected from 597 individuals reported to be infected with HIV-1. Of the 597 specimens that were identified as seropositive using licensed confirmatory testing, 597 gave a reactive result on the OraQuick *ADVANCE*® HIV-1/2 Test. The sensitivity of the OraQuick *ADVANCE*® Rapid HIV-1/2 Antibody Test in oral fluid specimens was calculated to be 597/597= 100%.

Whole Blood

A sensitivity study was performed using freshly obtained fingerstick and/or tube whole blood samples from 543 individuals known to be infected with HIV-1. Of the 543 specimens that resolved as true positive using a licensed EIA and Western blot/IFA, 543 gave a reactive result on the OraQuick *ADVANCE*® HIV-1/2 Test.

Plasma

A sensitivity study was performed at eleven clinical trial sites using EDTA-plasma specimens collected from 728 individuals reported to be infected with HIV-1. Of the 728 specimens that were identified as seropositive by EIA and licensed confirmatory testing, 728 gave a reactive result on the OraQuick *ADVANCE*® HIV-1/2 Test.

TABLE 1. Summary of Sensitivity Studies

Specimen	Reactive	Total N	Sensitivity
Oral Fluid	597	597	100,0%
Whole Blood	543	543	100,0%
Plasma	728	728	100,0%

Reactivity with HIV-1 Specimens From Various Geographic Regions

To assess the sensitivity of the OraQuick *ADVANCE*® HIV-1/2 Test for HIV-1 specimens from various geographic regions, 119 specimens representing HIV-1 Subtypes A, B, C, D, E, F, G, H, J and Group O were tested and all were reactive using the OraQuick *ADVANCE*® HIV-1/2 Test.

Reactivity with HIV-1 Seroconversion Panels

Thirty HIV-1 seroconversion panels were tested in comparison with CE marked anti-HIV EIA tests. Each panel consisted of sequential serum/plasma specimens obtained from a single individual during seroconversion. The thirty seroconversion panels consisted of 235 specimens. The results of this study are shown in Table 2. In this study, the OraQuick *ADVANCE*® HIV-1/2 Test detected seroconversion, on average, at approximately the same time as the CE marked EIA.

TABLE 2. Comparison of OraQuick *ADVANCE*® HIV-1/2 Test and Licensed Anti-HIV EIA Tests Using Seroconversion Panels

Number of Panels	Reactive
17	**OraQuick® = Reference EIA**
13	**OraQuick® < Reference EIA**

The average differential was 2.5 days later (95% CIs: 1.2 to 3.8 days) for the OraQuick *ADVANCE*® HIV-1/2 Test.

Detection of Antibodies to HIV-2 in Specimens From Individuals Infected with HIV-2

A total of 104 repository specimens confirmed to be HIV-2 antibody positive by licensed HIV-2 EIA and supplemental test methods including Western blot and RIPA were obtained from various sources. OraQuick *ADVANCE*® detected 104/104 (100%) of the specimens from individuals confirmed as positive for HIV-2 antibodies. Two additional studies were performed to assess the sensitivity of OraQuick *ADVANCE*® in a known HIV-2 population. Three HIV-2 infected individuals located in the USA and 13 HIV-2 infected individuals located in Guinea-Bissau, Africa were tested using fingerstick whole blood and oral fluid with OraQuick *ADVANCE*® tests. Fingerstick whole blood and oral fluid samples from all subjects were reactive on the OraQuick *ADVANCE*® test. Combining the number of OraQuick *ADVANCE*® reactive results obtained from all studies, the sensitivity of the OraQuick *ADVANCE*® HIV-1/2 Test for the detection of antibodies to HIV-2 was calculated to be 120/120= 100%.

SPECIFICITY

Oral Fluid

A specificity study was performed at four clinical trial sites using freshly obtained oral fluid specimens collected from 606 previously unscreened individuals at low risk for HIV-1 infection. All of the 606 specimens were correctly non-reactive using the OraQuick *ADVANCE*® HIV-1/2 Test. Of the 106 HIV antibody-negative specimens from the four study sites that examined populations at high risk for HIV-1 infection, the OraQuick *ADVANCE*® test was non-reactive for 105.

A separate study conducted by the Centers for Disease Control and Prevention (CDC) evaluated oral fluid samples collected from 1679 individuals of unknown HIV status. The OraQuick *ADVANCE*® HIV-1/2 Test gave non-reactive results for 1662 of the 1666 specimens identified as true negative samples.

Combining the number non-reactive results obtained from both studies, the specificity of the OraQuick *ADVANCE*® HIV-1/2 Test in these studies was calculated to be 2373/2378= 99,8%.

Fingerstick Whole Blood

A specificity study was performed using freshly obtained fingerstick whole blood samples from 2189 previously unscreened individuals at low and high risk for HIV-1 infection. Of the 2189, 2166 were determined to be negative samples using EIA and supplemental testing. All true negative specimens gave non-reactive results using the OraQuick *ADVANCE*® HIV-1/2 Test for a specificity of 100%.

Plasma

A specificity study was performed at seven clinical trial sites using EDTA-plasma specimens collected from 1657 previously unscreened individuals at low and high risk for HIV infection. Of the 1657 specimens, 1642 were determined to be HIV negative based on results from licensed EIA and supplemental testing. All 1642 gave non-reactive results using the OraQuick *ADVANCE*® HIV-1/2 Test.

Combining the number of OraQuick *ADVANCE*® non-reactive results obtained from all studies, the specificity of the OraQuick *ADVANCE*® HIV-1/2 Test in these studies was calculated to be 1642/1642= 100%.

TABLE 3. Summary of Specificity Studies

Specimen	Total N	OraQuick® Non-Reactive	True Negative	Specificity
Oral Fluid	2378	2373	2378	99,8%
Fingerstick Whole Blood	2189	2166	2166	100,0%
Plasma	1657	1642	1642	100,0%

INTERFERING SUBSTANCES AND UNRELATED MEDICAL CONDITIONS

To assess the impact of unrelated medical conditions or interfering substances on the sensitivity of the OraQuick *ADVANCE*® HIV-1/2 Test, 200 serum/plasma specimens from a variety of medical conditions unrelated to HIV-1 infection and 100 specimens with interfering substances were spiked with an HIV-1 positive specimen to give a level of reactivity in the low positive range. All spiked specimens gave reactive results.

To assess the impact of unrelated medical conditions or interfering substances on the specificity of the OraQuick *ADVANCE*® Rapid HIV-1/2 Antibody Test, 321 serum/plasma specimens from a variety of medical conditions unrelated to HIV infection and 119 specimens with interfering substances were analyzed. One specimen from subjects known to be positive for EBV, for HBV, or for rheumatoid factor, one from a multiparous woman, and three specimens from known HAV infected subjects gave false positive results.

TABLE 4. Medical Conditions Unrelated to HIV Infection

Medical Condition (n = 321)	OraQuick® Reactive	OraQuick® Non-Reactive
Multiparous women	1	14
Anti-nuclear antibody (ANA)	0	17
Lupus	0	15
Rheumatoid Factor	1	17
Cytomegalovirus (CMV)	0	15
Epstein Barr Virus (EBV)	1	14
Hepatitis A Virus (HAV)	3	17
Hepatitis B Virus (HBV)	1	16
Hepatitis C (HCV)	0	15
Human T-cell Lymphotropic Virus Type I (HTLV-I)	0	15
Human T-cell Lymphotropic Virus Type II (HTLV-II)	0	15
Rubella	0	15
IgG Gammopathies	0	13
IgM Gammopathies	0	12
Syphilis	0	15
Toxoplasmosis	0	15
Tuberculosis	0	15
Influenza	0	10
Multiple Transfusions	0	10
Hemophiliacs	0	10
Herpes Simplex Virus	0	5
Cirrhosis	0	5
Dialysis Patient	0	4
Colon Cancer	0	4
HTLV I/II	0	2
Chlamydia	0	3
Anti-sci or anti-rnp Antibody	0	3
Breast Cancer	0	1
Anti-DNA Antibody	0	1
Gonorrhea	0	1
Interfering Substances (n = 119)		
Elevated Bilirubin	0	20
Elevated Hemoglobin	0	20
Elevated Triglycerides	0	20
Elevated Protein	0	20
Bacterially Contaminated	0	25
Visual Hemolysis (hemolytic)	0	5
Icteric	0	5
Lipemic	0	4

Explanation of Symbols

	Use by	HIV CONTROL –	HIV Negative Control	TEST	Test Device
REF	Catalog Number	HIV-1 CONTROL +	HIV-1 Positive Control	TESTS	Test Devices
LOT	Batch Code	HIV-2 CONTROL +	HIV-2 Positive Control	TEST STANDS	Test Stands
	Manufacturer	PACK INSERT	Package Insert	IVD	*In Vitro* Diagnostic Medical Device
	Consult Instructions for Use	LOOPS 5µL	5 µL Loops		Temperature Limitation
	Caution, Consult Accompany Documents	ABS PACK	Absorbent Packet		Do Not Reuse
CONTENTS	Contents	DEV SOL VIAL	Developer Solution Vial	EC REP	Authorized Representative in the European Country
KIT CTRLS	Kit Controls	USA	Not for Sale in USA		
5µL SPEC COLLECT LOOP	5µL Specimen Collection Loop	RETAIL	Not for Retail Sale		

CE
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EC REP
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Cipalstraat 3
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