Anti-CCP

Customer Service: Contact your local representative or find country specific contact information on www.abbottdiagnostics.com

Package insert instructions must be carefully followed. Reliability of assay results cannot be guaranteed if there are any deviations from the instructions in this package insert.

Key to symbols used

| REF  | List Number |
| IVD  | In Vitro Diagnostic Medical Device |
| LOT  | Lot Number |
| 2°C/°C | Expiration Date |
| i    | Store at 2-8°C |
|    | Consult instructions for use |
|    | Manufacturer |

See REAGENTS section for a full explanation of symbols used in reagent component naming.
**NAME**
ARCHITECT Anti-CCP

**INTENDED USE**
The ARCHITECT Anti-CCP assay is a chemiluminescent microparticle immunoassay (CMA) for the semi-quantitative determination of the IgG class of autoantibodies specific to cyclic citrullinated peptide (CCP) in human serum or plasma on the ARCHITECT i System. Detection of anti-CCP antibodies is used as an aid in the diagnosis of Rheumatoid Arthritis (RA) and should be used in conjunction with other clinical information and laboratory parameters.

**SUMMARY AND EXPLANATION OF TEST**
Rheumatoid Arthritis (RA) is a common, systemic autoimmune disease affecting 0.5% of the population. It is characterized by chronic inflammation of the synovium, which commonly leads to progressive joint destruction and in most cases, to disability and reduction of quality of life. Evidence gained over the last few years suggests that aggressive therapy given early in the disease has the greatest therapeutic potential. Although the RF test has good sensitivity for RA, it is not very specific for the disease as it can also be detected in the serum of patients with other rheumatic or inflammatory diseases and even in a substantial percentage of the healthy (elderly) population. For several years it has been recognized that antibodies to anti-CCP was included as a serology marker. It is a non-standard amino acid, as it is not incorporated into proteins during translation. The presence of RF is one of the American College of Rheumatology’s (ACR) criteria for the classification of RA. Although the CCP1 test is a non-standard amino acid, as it is not incorporated into proteins during translation. The presence of RF is one of the American College of Rheumatology’s (ACR) criteria for the classification of RA. Although the CCP1 test is used as an aid in the diagnosis of Rheumatoid Arthritis (RA) and should be used in conjunction with other clinical information and laboratory parameters.

**PROCEDURE, Assay Procedure**

1. **Sample Diluent**
   - Bottle (9.8 mL/50.0 mL) Phosphate buffer with surfactant and protein (bovine) stabilizer.
   - Preservative: sodium azide.

2. **Immobilized CCP Antigen**
   - 1 Bottle (5.8 mL/25.8 mL) Mouse anti-human IgG–acridinium-labeled conjugate in MES buffer with surfactant and protein (bovine) stabilizer. Minimum concentration: 10 ng/mL. Preservatives: Nipasert and Sarafloxacin.

3. **Trigger Solution**
   - Trigger solution containing 0.35 N sodium hydroxide.

**WARNINGS AND PRECAUTIONS**

**IVD**

- For In Vitro Diagnostic Use.
- Package insert instructions must be carefully followed. Reliability of assay results cannot be guaranteed if there are any deviations from the instructions in this package insert.

**Safety Precautions**

**CAUTION:** This product requires the handling of human specimens. It is recommended that all human-sourced materials be considered potentially infectious and be handled in accordance with the OSHA Standard on Bloodborne Pathogens. Biosafety Level 2 or other appropriate biosafety practices should be used for materials that contain or are suspected of containing infectious agents. This product contains sodium azide, for a specific listing, refer to the REAGENTS section. Contact with acids liberates very toxic gas. This material and its container must be disposed of in a safe way.

**Handling Precautions**

- Do not use reagent kits beyond the expiration date.
- Do not pool reagents within a kit or between reagent kits.
- Before loading the ARCHITECT Anti-CCP Reagent Kit on the system for the first time, the microparticle bottle requires mixing to resuspend the microparticles.
- The ARCHITECT Anti-CCP Reagent Kit may be stored on board the ARCHITECT System Operations Manual, Section 6.

**Storage Instructions**

- zc/IAF
- The ARCHITECT Anti-CCP Reagent Kit must be stored at 2-8°C in an upright position and may be used immediately after removal from 2-8°C storage.
- When stored and handled as directed, reagents are stable until the expiration date.
- The ARCHITECT Anti-CCP Reagent Kit may be stored on board the ARCHITECT System Operations Manual, Section 5.
• Reagents may be stored on or off the ARCHITECT System. If reagents are removed from the system, store them at 2-8°C (with septums and replacement caps) in an upright position. For reagents stored off the system, it is recommended that they be stored in their original trays and boxes to ensure they remain upright. If the microparticle bottle does not remain upright (with a septum installed) while in refrigerated storage off the system, the reagent kit must be discarded. After reagents are removed from the system, initiate a reagent scan to update the onboard stability timer.

Indications of Reagent Deterioration
When a control value is out of the specified range, it may indicate deterioration of the reagents or errors in technique. Associated test results are invalid and samples must be retested. Assay recalibration may be necessary. For troubleshooting information, refer to the ARCHITECT System Operations Manual, Section 10.

INSTRUMENT PROCEDURE
• The ARCHITECT Anti-CCP assay is designed for use on the ARCHITECT System from an ARCHITECT assay CD-ROM before performing the assay (refer to the PROCEDURE, Materials Required section). For detailed information on assay file installation and on viewing and editing assay parameters, refer to the ARCHITECT System Operations Manual, Section 2.
• For information on printing assay parameters, refer to the ARCHITECT System Operations Manual, Section 5.
• For a detailed description of system procedures, refer to the ARCHITECT System Operations Manual, Section 6.
• The default result unit for the ARCHITECT Anti-CCP assay is U/mL.

SPECIMEN COLLECTION AND PREPARATION FOR ANALYSIS
Specimen Types
The specimen collection tubes listed below were verified to be used with the ARCHITECT Anti-CCP assay. Other specimen collection tubes have not been tested with this assay.
• Human serum and serum separator tubes
• Human plasma collected in:
  • lithium heparin plasma separator tubes
  • potassium EDTA
• Plasma specimens from different anticoagulant tube types should not be used interchangeably for monitoring anti-CCP.
• Liquid anticoagulant may have a dilution effect resulting in lower concentrations for individual patient specimens.
• The ARCHITECT System does not provide the capability to verify specimen type. It is the responsibility of the operator to verify that the correct specimen types are used in the ARCHITECT Anti-CCP assay.

Specimen Conditions
• Do not use specimens with the following conditions:
  • heat-inactivated
  • pooled
  • grossly hemolyzed
  • obvious microbial contamination
  • cadaver specimens or body fluids other than human serum or plasma
• For accurate results, serum and plasma specimens should be free of fibrin, red blood cells, and other particulate matter. Serum specimens from patients receiving anticoagulant or thrombolytic therapy may contain fibrin due to incomplete clot formation.
• Use caution when handling patient specimens to prevent cross contamination. Use of disposable pipettes or pipette tips is recommended.
• For optimal results, inspect all specimens for bubbles. Remove bubbles with an applicator stick before analysis. Use a new applicator stick for each specimen to prevent cross contamination.

Preparation for Analysis
• Follow the tube manufacturer’s processing instructions for serum and plasma collection tubes. Gravity separation is not sufficient for specimen preparation.
• Mix thawed specimens thoroughly by low speed vortexing or by inverting 10 times. Visually inspect the specimens. If layering or stratification is observed, continue mixing until specimens are visibly homogeneous.

To ensure consistency in results, specimens must be transferred to a centrifuge tube and centrifuged at ≥ 10,000 RCF (Relative Centrifugal Force) for 10 minutes before testing if:
• they contain fibrin, red blood cells, or other particulate matter,
• they require repeat testing, or
• they were frozen and thawed.
• Centrifuged specimens with a lipid layer on the top must be transferred to a sample cup or secondary tube. Care must be taken to transfer only the clarified specimen without the lipemic material.
• Transfer clarified specimen to a sample cup or secondary tube for testing.

Storage
• Specimens may be stored on or off the clot, red blood cells, or separator gel for:
  • up to 22 hours at room temperature (study performed at 30°C) or
  • up to 7 days at 2-8°C.
• If testing will be delayed more than 22 hours for specimens stored at room temperature or more than 7 days for specimens stored at 2-8°C, remove serum or plasma from the clot, red blood cells, or separator gel and store at -20°C or colder.
• Avoid more than three freeze/thaw cycles.

Shipping
• Before shipping specimens, it is recommended that specimens be removed from the clot, red blood cells, or separator gel.
• When shipping, specimens must be packaged and labeled in compliance with applicable state, federal, and international regulations concerning the transport of clinical specimens and infectious substances.
• Specimens may be shipped on wet or dry ice. Do not exceed the storage time limitations listed above.

PROCEDURE
Materials Provided
• 1P65 ARCHITECT Anti-CCP Reagent Kit

Materials Required but not Provided
• ARCHITECT System
• 1P08 ARCHITECT / System ASSAY CD-ROM - US - Addition F, version 2.0 or higher (for use with ARCHITECT i2000 or i2000sr Systems)
• 1P39 ARCHITECT / System ASSAY CD-ROM - US - Addition F, version 2.0 or higher (for use with ARCHITECT i2000 or i2000sr Systems)
• 1P60 ARCHITECT i1000 System ASSAY CD-ROM - US Special Edition, version 6.0 or higher
• 1P61 ARCHITECT i1000 System ASSAY CD-ROM - WW (excluding US) Special Edition, version 5.01 or higher
• 1P65-01 ARCHITECT Anti-CCP Calibrators
• 1P65-10 ARCHITECT Anti-CCP Controls
• ARCHITECT PRE-TRIGGER SOLUTION
• ARCHITECT TRIGGER SOLUTION
• ARCHITECT WASH BUFFER
• ARCHITECT REACTION VESSEL
• ARCHITECT SAMPLE CUPS
• ARCHITECT SEPTUM
• ARCHITECT REPLACEMENT CAPS
• Pipettes or pipette tips (optional)

For information on materials required for maintenance procedures, refer to the ARCHITECT System Operations Manual, Section 9.

Assay Procedure
• Before loading the ARCHITECT Anti-CCP Reagent Kit on the system for the first time, the microparticle bottle requires mixing to resuspend microparticles that have settled during shipment. After the first time the microparticles have been loaded, no further mixing is required.
• Invert the microparticle bottle 30 times.
• Visually inspect the bottle to ensure microparticles are resuspended. If microparticles remain adhered to the bottle, continue inverting the bottle until the microparticles have been completely resuspended.
• If the microparticles do not resuspend, DO NOT USE. Contact your local Abbott representative.
• Once the microparticles have been resuspended, place a septum on the bottle. For instructions on placing septums on bottles refer to the Handling Precautions section of this package insert.
• Load the ARCHITECT Anti-CCP Reagent Kit on the ARCHITECT i System.
• Verify that all necessary assay reagents are present.
• Ensure that septums are present on all reagent bottles.
• Order calibration, if necessary.
• For information on ordering calibrations, refer to the ARCHITECT System Operations Manual, Section 6.
• Order tests.
• If utilizing ARCHITECT system software version 5.0 or higher, refer to the ARCHITECT System Operations Manual, Section 5 for information on ordering patient specimens and controls.
• If utilizing an ARCHITECT system software version lower than 5.0, use the following instructions to order patient specimens and controls:
  • For information on ordering patient specimens and the positive control, refer to the ARCHITECT System Operations Manual, Section 6.
  • Order the negative control as a patient specimen, not as a Control.
  • Manually verify the validity of the negative control every time it is run. Because the control is run as a patient specimen, a result will not be flagged by the ARCHITECT i System if it is outside the acceptable control range.
• To troubleshoot control values that fall outside the control range, refer to the ARCHITECT System Operations Manual, Section 10.
• The minimum sample volume is calculated by the system and is printed on the Orderlist report. No more than 10 replicates may be sampled from the same sample cup. To minimize the effects of evaporation, verify adequate sample cup volume is present prior to running the test.
  • Priority: 60 µL for the first ARCHITECT Anti-CCP test plus 10 µL for each additional ARCHITECT Anti-CCP test from the same sample cup.
  • ≤ 3 hours on board: 150 µL for the first ARCHITECT Anti-CCP test plus 10 µL for each additional ARCHITECT Anti-CCP test from the same sample cup.
  • If using primary or aliquot tubes, use the sample gauge to ensure sufficient patient specimen is present.
• Prepare calibrators and controls.
  • ARCHITECT Anti-CCP Calibrators and Controls should be prepared according to their respective package inserts.
• To obtain the recommended volume requirements for the ARCHITECT Anti-CCP Calibrators and Controls, hold the bottles vertically and dispense 4 drops of each calibrator or control into each respective sample cup.
• Load samples.
  • For information on loading samples, refer to the ARCHITECT System Operations Manual, Section 5.
  • Press RUN.
  • For additional information on principles of operation, refer to the ARCHITECT Operations Manual, Section 3.
• For optimal performance, it is important to perform routine maintenance as described in the ARCHITECT System Operations Manual, Section 5. When a laboratory requires more frequent maintenance, follow those procedures.

Specimen Dilution Procedures
Patient specimens with anti-CCP values exceeding 200.0 U/mL are flagged with the code “>200.0 U/mL.” To quantitate the concentration of these specimens, perform either the Automated Dilution or Manual Dilution Protocol.

Automated Dilution Procedure
If using the Automated Dilution protocol, the system performs a 1:6 dilution of the specimen and automatically calculates the concentrations of the specimen before dilution and reports the result.

Manual Dilution Procedure
• The suggested dilution for the ARCHITECT Anti-CCP assay is 1:10.
• Add 50 µL of the patient specimen to 450 µL of the ARCHITECT Anti-CCP Negative Control.
• The operator must enter the dilution factor in the Patient or Control order screen. The system will use this dilution factor to automatically calculate the concentration of the sample before dilution. This will be the reported result.
• For detailed information on ordering dilutions, refer to the ARCHITECT System Operations Manual, Section 5.

Calibration
• To perform an ARCHITECT Anti-CCP calibration, test calibrators A, B, C, D, E, and F in replicates of two. A single sample of each ARCHITECT Anti-CCP control must be tested to evaluate the assay calibration. Ensure that assay control values are within the concentration ranges specified in the control package insert. Calibrators should be priority loaded.
  • Calibration Range: 0.0 - 200.0 U/mL.
• Once an ARCHITECT Anti-CCP calibration is accepted and stored, all subsequent samples may be tested without further calibration unless:
  • A reagent kit with a new lot number is used.
  • Controls are out of range.
• For detailed information on how to perform an assay calibration, refer to the ARCHITECT System Operations Manual, Section 6.

QUALITY CONTROL PROCEDURES
The recommended control requirement for the ARCHITECT Anti-CCP assay is that a single sample of each control be tested once every 24 hours each day of use. If laboratory quality control procedures require more frequent use of controls to verify test results, follow those procedures. Additional controls may be tested in conformance with local, state, and/or federal regulations or accreditation requirements and your laboratory’s quality control policy.

The ARCHITECT Anti-CCP Control values must be within the acceptable ranges specified in the control package insert. If a control is out of its specified range, the associated test results are invalid and must be retested. Recalibration may be indicated.

Verification of Assay Claims
For protocols to verify package insert claims, refer to the ARCHITECT System Operations Manual, Appendix B. The ARCHITECT Anti-CCP assay belongs to method group 1. ARCHITECT Anti-CCP Calibrators may be used in place of MasterCheck as described in the ARCHITECT System Operations Manual, Appendix B.

RESULTS
Calculation
The ARCHITECT Anti-CCP assay uses a 4 Parameter Logistic Curve Fit (4PLC, Y-weighted) data reduction method to generate a calibration curve.

Flags
Some results may contain information in the Flags field. For a description of the flags that may appear in this field, refer to the ARCHITECT System Operations Manual, Section 5.

Measurement Range (Reportable Range)
The measurement range of the ARCHITECT Anti-CCP assay is 0.5 U/mL to 200.0 U/mL.

LIMITATIONS OF THE PROCEDURE
• For diagnostic purposes, the ARCHITECT Anti-CCP results should be used in conjunction with other clinical data; e.g., symptoms, medical history, etc.
• If the ARCHITECT Anti-CCP results are inconsistent with clinical evidence, additional testing is suggested to confirm the result.
• The value of anti-CCP in juvenile arthritis has not been determined.
• Some specimens may not dilute linearly because of the heterogeneity of the autoantibodies with respect to physicochemical properties.
• ARCHITECT Anti-CCP results should not be used interchangeably with other manufacturers’ methods for anti-CCP determinations.
• Plasma specimens from different anticoagulant tube types should not be used interchangeably for monitoring anti-CCP.
• Specimens from patients who have received preparations of mouse monoclonal antibodies for diagnosis or therapy may contain human anti-mouse antibodies (HAMA). Specimens containing HAMA may produce anomalous values when tested with assay kits such as ARCHITECT Anti-CCP that employ mouse monoclonal antibodies.
• Heterophilic antibodies in human specimens can react with reagent immunoglobulins, interfering with *in vitro* immunoassays. Patients routinely exposed to animals or to animal serum products can be prone to this interference and anomalous values may be observed. Additional information may be required for diagnosis.

• Refer to the SPECIMEN COLLECTION AND PREPARATION FOR ANALYSIS section in this package insert for specimen limitations.

### EXPECTED VALUES

In a representative study, serum specimens from 198 asymptomatic, apparently healthy males (n=126) and females (n=73), with an age range of 19 to 67 years, were tested with the ARCHITECT Anti-CCP assay. No differences attributable to gender or age were observed. Specimen values ranged from <0.5 U/mL to 25.0 U/mL. A cut-off of 5.0 U/mL was chosen, whereby a result of ≥5.0 U/mL is considered positive and a result of <5.0 U/mL is considered negative.

* Representative data; results in individual laboratories may vary from these data.

### SPECIFIC PERFORMANCE CHARACTERISTICS

#### Precision

The ARCHITECT Anti-CCP assay is designed to have an imprecision of <10% total CV. A study was performed based on guidance from the National Committee for Clinical Laboratory Standards (NCCLS) document EP6-A2.26 Seven samples consisting of the ARCHITECT Anti-CCP Positive Control, four human plasma panels, and two human plasma samples were assayed on two instruments, in replicates of two at two separate times per day for 20 days (n=80 for each sample), using two lots of reagents and a single calibration for each instrument/reagent lot combination. Data from this study are summarized in the following table.

* Representative data; results in individual laboratories may vary from these data.

### Specific Performance Characteristics

#### Linearity

The ARCHITECT Anti-CCP assay is designed to be linear across the measurement range of 0.5 to 200.0 U/mL. Based on a study performed by guidance from the NCCLS document EP6-A,26 the ARCHITECT Anti-CCP assay demonstrated linearity from 0.5 to 200.0 U/mL.

* Representative data; results in individual laboratories may vary from these data.

<table>
<thead>
<tr>
<th>Concentration Range (U/mL)</th>
<th>Slope (95% CI)</th>
<th>Intercept (95% CI)</th>
<th>r²</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1 - 257.4</td>
<td>0.98 (0.95 to 1.01)</td>
<td>-1.85 (-6.19 to 2.48)</td>
<td>0.9985</td>
</tr>
</tbody>
</table>

### Autodilution Verification

The ARCHITECT Anti-CCP automated dilution method is designed to have a mean difference of ±10% versus the manual dilution method when performed on samples with values >50.0 U/mL. The ARCHITECT Anti-CCP assay was evaluated with the 18 autodilution method versus the 1:10 manual dilution method using 12 human serum samples with anti-CCP levels ranging from 58.7 to 785.0 U/mL. Five replicates each of the autodiluted and manually diluted samples were assayed on one instrument using the ARCHITECT Anti-CCP assay. The mean percent difference across all samples was -2.6%. The percent difference results are summarized in the following table.

* Representative data; results in individual laboratories may vary from these data.

### Interference

The ARCHITECT Anti-CCP assay is designed to have a maximum deviation in anti-CCP concentration from the following potentially interfering compounds within:

- ±15% for anti-CCP concentrations > 10.0 U/mL
- ±10% for anti-CCP concentrations ≥ 5.0 U/mL to <10.0 U/mL
- ±0.5 U/mL for anti-CCP concentrations <5.0 U/mL

A study was performed based on guidance from the Clinical and Laboratory Standards Institute (CLSI) document EP7-A2.27 for the ARCHITECT Anti-CCP assay. Serum samples with anti-CCP levels across the assay range of 0.5 U/mL to 200.0 U/mL were supplemented with the potentially interfering compounds listed in the table below. The maximum deviation of anti-CCP concentration observed in serum samples during these studies ranged from:

-7.6% to 0.8% for anti-CCP concentrations > 10.0 U/mL
-7.1% for anti-CCP concentrations ≥ 5.0 U/mL to <10.0 U/mL
-0.3 U/mL to 0.2 U/mL for anti-CCP concentrations < 5.0 U/mL

<table>
<thead>
<tr>
<th>Sample</th>
<th>Mean Automated Diluted Value x 6 (U/mL)</th>
<th>Mean Manually Diluted Value x 10 (U/mL)</th>
<th>% Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>456.4</td>
<td>453.0</td>
<td>0.7</td>
</tr>
<tr>
<td>2</td>
<td>504.1</td>
<td>482.7</td>
<td>4.4</td>
</tr>
<tr>
<td>3</td>
<td>796.8</td>
<td>743.8</td>
<td>7.1</td>
</tr>
<tr>
<td>4</td>
<td>734.6</td>
<td>785.0</td>
<td>-6.4</td>
</tr>
<tr>
<td>5</td>
<td>220.2</td>
<td>209.8</td>
<td>4.9</td>
</tr>
<tr>
<td>6</td>
<td>192.0</td>
<td>187.9</td>
<td>2.2</td>
</tr>
<tr>
<td>7</td>
<td>213.9</td>
<td>207.0</td>
<td>3.3</td>
</tr>
<tr>
<td>8</td>
<td>198.6</td>
<td>184.6</td>
<td>1.1</td>
</tr>
<tr>
<td>9</td>
<td>65.3</td>
<td>61.4</td>
<td>6.3</td>
</tr>
<tr>
<td>10</td>
<td>70.1</td>
<td>69.2</td>
<td>1.3</td>
</tr>
<tr>
<td>11</td>
<td>72.0</td>
<td>69.0</td>
<td>4.4</td>
</tr>
<tr>
<td>12</td>
<td>167.2</td>
<td>165.2</td>
<td>1.2</td>
</tr>
</tbody>
</table>

* % Difference = \[
\frac{\text{Mean Manually Diluted Value x 10 (U/mL)} - \text{Mean Automated Diluted Value x 6 (U/mL)}}{\text{Mean Manually Diluted Value x 10 (U/mL)}} \times 100
\]

* Representative data; results in individual laboratories may vary from these data.
**Potential Interfering Substance** | **No Interference Found up to the Following Concentration**
--- | ---
Bilirubin | 20 mg/dL
Hemoglobin | 800 mg/dL
Total Protein | 12 g/dL
Triglycerides | 3000 mg/dL
Rheumatoid Factor | 200 IU/mL
Red Blood Cells | 0.4%

* Represented data; results in individual laboratories may vary from these data.

**Cross-Reactivity**

To assess the potential cross-reactivity of the CCP antigen used in the ARCHITECT Anti-CCP assay with other autoantibodies, the assay was evaluated with 20 samples positive for various other autoantibodies and negative for CCP antibodies. The following autoantibodies (1-4 samples of each) were tested in the assay: SSA, SSB, Sm, RNP, ds-DNA, Jo-1, Scl-70, Ribo-P, TPO, ANA, and AMA. The study showed no significant cross-reactivity of the CCP antigen with any of these other autoantibodies.

**Tube Type Matrix Comparison**

The specimen collection tubes listed below were verified for use with the ARCHITECT Anti-CCP assay:
- serum, serum separator, lithium heparin plasma separator, and potassium EDTA.

When compared to the control tube type (serum), the tube types evaluated for samples with anti-CCP values < 5.0 U/mL showed less than a 0.5 U/mL difference on average. When compared to the control tube type (serum), the tube types evaluated for samples with anti-CCP values < 5.0 U/mL showed less than a 10% difference on average. The distribution of the differences or percent differences per tube type is listed in the following table.*

<table>
<thead>
<tr>
<th>Tube Type</th>
<th>Distribution of Absolute Differences for Samples with Anti-CCP Values &lt; 5.0 U/mL</th>
<th>Distribution of Absolute Percent Differences for Samples with Anti-CCP Values 5.3 to 178.8 U/mL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serum Separator</td>
<td>100% (19/19)</td>
<td>&lt; 10%</td>
</tr>
<tr>
<td></td>
<td>76% (19/25)</td>
<td>&lt; 10% to 20%</td>
</tr>
<tr>
<td></td>
<td>16% (4/25)</td>
<td>&gt; 20%</td>
</tr>
<tr>
<td></td>
<td>8% (2/25)</td>
<td>&gt; 20%</td>
</tr>
<tr>
<td>Potassium EDTA</td>
<td>100% (19/19)</td>
<td>&lt; 10%</td>
</tr>
<tr>
<td></td>
<td>72% (18/25)</td>
<td>&lt; 10% to 20%</td>
</tr>
<tr>
<td></td>
<td>24% (6/25)</td>
<td>&gt; 20%</td>
</tr>
<tr>
<td></td>
<td>4% (1/25)</td>
<td>&gt; 20%</td>
</tr>
<tr>
<td>Lithium Heparin Plasma Separator</td>
<td>100% (19/19)</td>
<td>&lt; 10%</td>
</tr>
<tr>
<td></td>
<td>80% (20/25)</td>
<td>&lt; 10% to 20%</td>
</tr>
<tr>
<td></td>
<td>16% (4/25)</td>
<td>&gt; 20%</td>
</tr>
<tr>
<td></td>
<td>4% (1/25)</td>
<td>&gt; 20%</td>
</tr>
</tbody>
</table>

* Represented data; results in individual laboratories may vary from these data.

**Clinical Sensitivity and Specificity**

The clinical sensitivity was determined for 496 confirmed RA individuals, and clinical specificity was determined for 499 non-RA specimens (299 from patients with other rheumatic and non-rheumatic disorders and 200 from asymptomatic apparently healthy individuals) using a cut-off of 5.0 U/mL. The sensitivity was calculated to be 70.6% with a specificity of 98.2%. The results are summarized in the following tables.*

**Method Comparison**

The ARCHITECT Anti-CCP assay is designed to have a concordance of > 95% for RA and non-RA specimens when compared to the AxSYM Anti-CCP assay. The RA and non-RA specimens described in the Clinical Sensitivity and Specificity section were used to compare the ARCHITECT Anti-CCP assay to the AxSYM Anti-CCP assay. The cut-off employed for the AxSYM Anti-CCP assay was 5.0 U/mL, as stated in the manufacturer’s package insert. Using a cut-off of 5.0 U/mL for the ARCHITECT Anti-CCP assay, the concordance was calculated to be 99.3%. The results are summarized in the following table.*

A Receiver Operator Characteristic (ROC) analysis was carried out using the above data obtained for the two assays. The area under the curve (AUC) for the ARCHITECT Anti-CCP assay was 0.873 (95% confidence interval: 0.849-0.897) and 0.872 (95% confidence interval: 0.848-0.896) for the AxSYM Anti-CCP assay, thus indicating that both assays are comparable with respect to their clinical differentiation. The ROC analysis curve is shown below.*

* Represents data; results in individual laboratories may vary from these data.
BIBLIOGRAPHY


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