WHO Prequalification of In Vitro Diagnostics
PUBLIC REPORT

Product: ARCHITECT HCV Ag assay
WHO reference number: PQDx 0374-130-00

ARCHITECT HCV Ag assay with product codes 6L47-29, 6L47-11, 6L47-02 and 8C89-01 manufactured by Denka Seiken Co., LTD, Kagamida Factory, CE- Mark regulatory version was accepted for the WHO list of prequalified in vitro diagnostics and was listed on 31 July 2019

Summary of WHO prequalification assessment for ARCHITECT HCV Ag assay

<table>
<thead>
<tr>
<th>Date</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>31-07-2019</td>
<td>Listed</td>
</tr>
<tr>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>20-05-2019</td>
<td>MR</td>
</tr>
<tr>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

NA: Not Applicable.
MR: Meet Requirements

Intended use:

According to the claim of intended use from Denka Seiken Co., LTD, Kagamida Factory “The ARCHITECT HCV Ag assay is a chemiluminescent microparticle immunoassay (CMIA) for the quantitative determination of Hepatitis C virus core antigen in human serum and plasma”.

Assay description:

According to the claim of assay description from Denka Seiken Co., LTD, Kagamida Factory “ARCHITECT HCV Ag is a chemiluminescent microparticle immunoassay (CMIA) using microparticles coated with monoclonal anti-HCV for the detection of HCV Ag. HCV Ag assays are used as an aid in the diagnosis of suspected Hepatitis C viral (HCV) infection and to monitor the status of infected individuals, i.e., whether the patient’s infection has resolved, or the patient has become a chronic carrier of the virus. An HCV Ag assay can detect acute HCV infection in newly infected individuals who are seronegative for antibodies to HCV due to the delayed response of HCV specific antibodies. These may include patients with an elevated risk of HCV infection for example intravenous drug users or in patients with impaired immune function such as patients undergoing hemodialysis or suffering from HIV-HCV coinfections, where HCV Ag may be the only serological marker to
detect HCV infection.\textsuperscript{1, 2} Recent studies suggest a testing algorithm using the HCV Ag test to confirm active viral replication in anti-HCV positive individuals.\textsuperscript{19-21} Using an algorithm such as those proposed in the Mederacke, et al.\textsuperscript{19}, Ottiger, et al.\textsuperscript{20} and Cloherty, et al.\textsuperscript{22} publications could be helpful to accelerate access to new, improved anti-viral therapies. For the diagnosis of acute or chronic hepatitis, HCV Ag reactivity should be correlated with patient history and the presence of other Hepatitis C serological markers.\textsuperscript{3, 4}

The ARCHITECT HCV Ag assay is a two-step immunoassay for the quantitative determination of core antigen of Hepatitis C virus using CMIA technology with flexible assay protocols, referred to as Chemiflex.

1. Sample, Pre-Treatment Reagent 1 and Pre-Treatment Reagent 2 are combined. An aliquot of the pre-treated sample is aspirated and dispensed into a new reaction vessel. The pretreated sample, Assay Specific Diluent and anti-HCV coated microparticles are combined. The HCV Ag present in the pretreated sample binds to the anti-HCV coated microparticles.

2. After washing, acridinium-labeled anti-HCV conjugate is added to create a reaction mixture.

3. Following another wash cycle, Pre-Trigger and Trigger Solutions are added to the reaction mixture.

4. The resulting chemiluminescent reaction is measured as relative light units (RLUs). There is a direct relationship between the amount of HCV Ag in the sample and the RLUs detected by the ARCHITECT iSystem optics. The concentration of Hepatitis C core antigen in the specimen is determined using a previously generated ARCHITECT HCV Ag calibration curve. If the concentration of the specimen is greater than or equal to 3.00 fmol/L, the specimen is considered reactive for HCV Ag.

For additional information on system and assay technology, refer to the ARCHITECT System Operations Manual, Section 3."

Test kit contents:

<table>
<thead>
<tr>
<th>Component</th>
<th>Product code</th>
</tr>
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<tbody>
<tr>
<td>Instrumentation</td>
<td></td>
</tr>
<tr>
<td>ARCHITECT i2000</td>
<td>8C89-01</td>
</tr>
<tr>
<td>ARCHITECT i2000SR</td>
<td>03M74-02</td>
</tr>
<tr>
<td>Software</td>
<td></td>
</tr>
<tr>
<td>ARCHITECT System Software v9.40</td>
<td>05F48-40 (Basic)</td>
</tr>
<tr>
<td></td>
<td>Operations Manual 201837-115 or higher</td>
</tr>
<tr>
<td>Reagent</td>
<td>100 tests (product code 6L47-29)</td>
</tr>
<tr>
<td>Microparticles</td>
<td>1 x 6.7 mL</td>
</tr>
<tr>
<td>Conjugate</td>
<td>1 x 6.1 mL</td>
</tr>
</tbody>
</table>
## Assay specific diluent
- **1 x 30.0 mL**

## Pre-treatment reagent 1
- **1 x 14.5 mL**

## Pre-treatment reagent 2
- **1 x 11.0 mL**

## Specimen diluent
- **1 x 5.9 mL**

### Control
- **(product code 6L47-11)**
  - **Negative control (Control –)**  
    - **1 x 8mL**
  - **Positive control 1 (Control +1)**  
    - **1 x 8mL**
  - **Positive control 2 (Control +2)**  
    - **1 x 8mL**

### Calibrators
- **(product code 6L47-02)**
  - **Calibrator A**  
    - **1 x 4mL**
  - **Calibrator B**  
    - **1 X 4mL**
  - **Calibrator C**  
    - **1 x 4mL**
  - **Calibrator D**  
    - **1 X 4mL**
  - **Calibrator E**  
    - **1 X 4mL**
  - **Calibrator F**  
    - **1 x 4mL**

### Items required but not provided:

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Consumables:</strong></td>
<td></td>
</tr>
<tr>
<td>Pre-trigger solution</td>
<td>ARCHITECT Pre-Trigger Solution containing 1.32% (w/v) hydrogen peroxide (supplied as 4 bottles of 975 ml bulk solution)</td>
</tr>
<tr>
<td>Trigger solution</td>
<td>ARCHITECT Trigger Solution containing 0.35 N sodium hydroxide. (supplied as 4 bottles of 975 ml bulk solution)</td>
</tr>
<tr>
<td>Wash buffer</td>
<td>ARCHITECT Wash Buffer containing phosphate buffered saline solution. Preservatives: antimicrobial agents (supplied as 4 bottles of 975 ml bulk solution)</td>
</tr>
</tbody>
</table>

### Storage:

<table>
<thead>
<tr>
<th>Item</th>
<th>Storage temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architect HCV Ag Reagent Pack (100 Tests)</td>
<td>2-8°C</td>
</tr>
<tr>
<td>Architect HCV Ag Calibrators</td>
<td>2-8°C</td>
</tr>
<tr>
<td>Architect HCV Ag Controls</td>
<td>2-8°C</td>
</tr>
</tbody>
</table>
Maximum shelf-life upon manufacture:

<table>
<thead>
<tr>
<th>Item</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architect HCV Ag Reagent Pack</td>
<td>12 months</td>
</tr>
<tr>
<td>Architect HCV Ag Calibrators</td>
<td>12 months</td>
</tr>
<tr>
<td>Architect HCV Ag Controls</td>
<td>12 months</td>
</tr>
</tbody>
</table>

Warnings/limitations:

Refer to manufacturer’s latest instructions for use.
Prioritization for prequalification
Based on the established eligibility criteria, ARCHITECT HCV Ag assay was given priority for WHO prequalification assessment.

**Product dossier assessment**

In accordance with the WHO procedure for abridged prequalification assessment, Denka Seiken Co., LTD, Kagamida Factory was not required to submit a product dossier for ARCHITECT HCV Ag assay as per the “Instructions for compilation of a product dossier” (PQDx_018 version 3). Notwithstanding, certain aspects of the product dossier previously submitted for stringent regulatory review were reviewed by an assessor during the site inspection.

Based on the findings of the review of labels and IFU, the manufacturer gave the following commitment

1. To provide a revised IFU by 31 March 2022 with amended intended use to state the intended use population, intended user and the dedicated instrumentation on which the ARCHITECT HCV Ag assay is used.

**Manufacturing site inspection**

In accordance with the WHO procedure for abridged prequalification assessment, a shortened inspection with fewer inspectors was conducted at the site(s) of manufacture (Street 1359-1, Kagamida, Kigoshi, Gosen-shi, Niigata, Japan) of ARCHITECT HCV Ag assay in 28 – 30 November 2018 as per the “Information for manufacturers on prequalification inspection procedures for the sites of manufacture of diagnostics” (PQDx_014 version 4).

The inspection found that the manufacturer had an acceptable quality management system and good manufacturing practices in place that ensured the consistent manufacture of a product of good quality.

The manufacturer’s responses to the nonconformities found at the time of the inspection were accepted 30 May 2019.

**Commitments for prequalification:**

1. Denka Seiken Co. Ltd gives a commitment to provide WHO with a copy of the summary report of the revalidation of filling and capping.

Based on the site inspection and corrective action plan review, the quality management system for ARCHITECT HCV Ag assay meets WHO prequalification requirements.
Product performance evaluation

In accordance with the WHO procedure for prequalification assessment and given the fact that ARCHITECT HCV Ag assay is used as the benchmark assay in the WHO evaluation protocol for HCV core antigen assays, it was decided that WHO will not conduct the performance evaluation of this assay as part of the prequalification assessment process.

Consequently, the laboratory evaluation of ARCHITECT HCV Ag assay was waived.
Labelling

1. Labels
2. Instructions for use
1. Labels

1.1 ARCHITECT HCV Ag Controls labels
INTENDED USE
The ARCHITECT HCV Ag Controls are for the verification of the accuracy and precision of the ARCHITECT iSystem when used for the quantitative determination of core antigen to Hepatitis C virus in human serum and plasma. Refer to the ARCHITECT HCV Ag reagent package insert and the ARCHITECT System Operations Manual for additional information.

CONTENTS
3 Bottles (8 mL each) of ARCHITECT HCV Ag Controls. The Negative Control (1 Bottle) contains recalcified human plasma. Preservatives: sodium azide, ProClin 300 and ProClin 950. The Positive Controls 1 and 2 (2 Bottles) contain recombinant core antigen to Hepatitis C virus prepared in acetate buffer.

The controls are at the following concentrations:

<table>
<thead>
<tr>
<th>Control</th>
<th>Color</th>
<th>Concentration (fmol/L)</th>
<th>Range (pg/mL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONTROL -</td>
<td>Natural</td>
<td>0.00</td>
<td>0.00 - 2.99</td>
</tr>
<tr>
<td>CONTROL +1</td>
<td>Blue*</td>
<td>50.00</td>
<td>1.00</td>
</tr>
<tr>
<td>CONTROL +2</td>
<td>Red**</td>
<td>300.00</td>
<td>6.00</td>
</tr>
</tbody>
</table>

* Dye: Acid Blue No. 9
** Dye: Red D&C No. 33

STANDARDIZATION
The ARCHITECT HCV Ag Controls are referenced to the manufacturer’s Internal Reference standard.

PRECAUTIONS
- [IVD]
- For In Vitro Diagnostic Use
- CAUTION: This product contains human-sourced and/or potentially infectious components. Refer to the CONTENTS section of this package insert. No known test method can offer complete assurance that products derived from human sources or inactivated microorganisms will not transmit infection. Therefore, all human-sourced materials should be considered potentially infectious. It is recommended that these reagents and human specimens 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.1-4
- The human plasma used in the Negative Control is nonreactive for HBsAg, HIV-1 Ag or HIV-1 RNA, anti-HCV, and anti-HIV-1/HIV-2.

The following warnings and precautions apply to: [CONTROL -]

WARNING:
Contains methylisothiazolones and sodium azide.
H317 May cause an allergic skin reaction.
EUH032 Contact with acids liberates very toxic gas.

The following warnings and precautions apply to: [CONTROL +1]

WARNING:
Contains myristyltrimethylammonium bromide, dodecyltrimethylammonium bromide, polyethylene glycol octylphenyl ether and cetyltrimethylammonium bromide.
H318 Causes serious eye damage.
H315 Causes skin irritation.
H410 Very toxic to aquatic life with long lasting effects.

Prevention:
P261 Avoid breathing mist / vapors / spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves / protective clothing / eye protection.

Response:
P302-P352 IF ON SKIN: Wash with plenty of water.
P333+P313 IF skin irritation or rash occurs: Get medical advice / attention.
P362+P364 Take off contaminated clothing and wash it before reuse.

Disposal:
P501 Dispose of contents / container in accordance with local regulations.

The following warnings and precautions apply to: [CONTROL +2]

WARNING:
Contains myristyltrimethylammonium bromide, dodecyltrimethylammonium bromide, polyethylene glycol octylphenyl ether and cetyltrimethylammonium bromide.
H318 Causes serious eye damage.
H315 Causes skin irritation.

Prevention:
P264 Wash hands thoroughly after handling.
P280 Wear protective gloves / protective clothing / eye protection.
P273 Avoid release to the environment.

Response:
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor / physician.
P302+P352 IF ON SKIN: Wash with plenty of water.
P332+P313 IF skin irritation occurs: Get medical advice / attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P391 Collect spillage.

Disposal:
P501 Dispose of contents / container in accordance with local regulations.
Safety Data Sheets are available at www.abbottdiagnostics.com or contact your local representative.
For a detailed discussion of safety precautions during system operation, refer to the ARCHITECT System Operations Manual, Section 8.

STORAGE
• Controls are stable until the expiration date when stored and handled as directed.
• Do not use past expiration date.

PREPARATION FOR ANALYSIS
Controls may be used immediately after removal from 2-8°C storage. Prior to use, mix by gentle inversion (5-10 times). After each use, tightly close the caps and return the controls to 2-8°C storage.

BIBLIOGRAPHY

Key to Symbols

- Caution
- Consult instructions for use
- Manufacturer
- Temperature limitation
- Use by/Expiration date
- Concentration
- Contains Sodium Azide. Contact with acids liberates very toxic gas.
- Negative Control
- Positive Control 1
- Positive Control 2
- In Vitro Diagnostic Medical Device
- Lot Number
- Produced for Abbott by
- Product of Japan
- Range
- List Number
- Warning: May cause an allergic reaction.
ARCHITECT HCV Ag Controls

**CONTENTS**

- **CONTROL -**
  - 1 x 8 mL 0.00 0.00 - 2.99

- **CONTROL + 1**
  - 1 x 8 mL 50.00 35.00 - 65.00

- **CONTROL + 2**
  - 1 x 8 mL 300.00 210.00 - 390.00

**PRODUCED FOR ABBOTT BY**
DENKA SEIKEN CO., LTD. Tokyo, Japan

**HCV Ag Ctrl**

**CONTAINS: AZIDE**

**WARNING: SENSITIZER**

**PRODUCT OF JAPAN**

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**Abbott GmbH & Co. KG**
Max-Planck-Ring 2
65205 Wiesbaden
Germany
+49-6122-580
HCV Ag

CONTROL + 1

8°C

2°C

Exp.

ABBOTT
65205 Wiesbaden, Germany
D5-Y306-4-2/R03

IVD
REF
6L47M
8 mL
50 fmol/L

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Size: 63,5 x 22 mm
Stamp field: 30 x 9 mm, lower right hand corner
Colors: Text, Logo, Symbols and
Color bar on top: Pantone 329 c
Text and Logo in Color bar: negative
“i”: Pantone 329 c (15%)
GHS Colors: Warning Symbol: Border: Pantone 185 c /
Inside border Symbol: black
Material: Refer to site specific documents
ARCHITECT

HCV Ag

CONTROL + 2

8°C

2°C

ABBOTT
65205 Wiesbaden, Germany
D5-Y306-4-3/R03

Exp.
LOT

File: O:\DDTP\Labels\Architect\FINAL\6L47_TPM_Denka Seiken\6L47N_D5-Y306-4-3R03.indd
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Size: 63,5 x 22 mm
Stamp field: 30 x 9 mm, lower right hand corner
Colors: Text, Logo, Symbols and
Color bar on top: Pantone 329 c
Text and Logo in Color bar: negative
“i”: Pantone 329 c (15%)
GHS Colors: Warning Symbol: Border: Pantone 185 c /
Inside border Symbol: black
Material: Refer to site specific documents
1.2 ARCHITECT HCV Ag Calibrators labels
INTENDED USE
The ARCHITECT HCV Ag Calibrators are for the calibration of the ARCHITECT iSystem when used for the quantitative determination of core antigen to Hepatitis C virus in human serum and plasma. Refer to the ARCHITECT HCV Ag reagent package insert and the ARCHITECT System Operations Manual for additional information.

CONTENTS
6 Bottles (4 mL each) of ARCHITECT HCV Ag Calibrators. Calibrator A contains citrate buffer. Calibrators B through F contain recombinant core antigen to Hepatitis C virus prepared in acetate buffer.

The calibrators yield the following concentrations:

<table>
<thead>
<tr>
<th>Calibrator</th>
<th>Concentration (fmol/L) (pg/mL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAL A</td>
<td>0.00 0.00</td>
</tr>
<tr>
<td>CAL B</td>
<td>10.00 0.20</td>
</tr>
<tr>
<td>CAL C</td>
<td>80.00 1.60</td>
</tr>
<tr>
<td>CAL D</td>
<td>600.00 12.00</td>
</tr>
<tr>
<td>CAL E</td>
<td>4,500.00 90.00</td>
</tr>
<tr>
<td>CAL F</td>
<td>20,000.00 400.00</td>
</tr>
</tbody>
</table>

STANDARDIZATION
The ARCHITECT HCV Ag Calibrators are referenced to the manufacturer’s Internal Reference standard.

PRECAUTIONS
- For In Vitro Diagnostic Use

The following warnings and precautions apply to: CAL B, CAL F

DANGER: Contains myristyltrimethylammonium bromide, dodecyltrimethylammonium bromide, polyethylene glycol octylphenyl ether, and cetyltrimethylammonium bromide.

H318 Causes serious eye damage.
H315 Causes skin irritation.
H410 Very toxic to aquatic life with long lasting effects.

Prevention
P264 Wash hands thoroughly after handling.
P280 Wear protective gloves / protective clothing / eye protection.
P273 Avoid release to the environment.

Response
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor / physician.
P302+P352 IF ON SKIN: Wash with plenty of water.
P332+P313 If skin irritation occurs: Get medical advice / attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P391 Collect spillage.

Disposal
P501 Dispose of contents / container in accordance with local regulations.

STORAGE
- Calibrators are stable until the expiration date when stored and handled as directed.
- Do not use past expiration date.
- 2°C

PREPARATION FOR USE
Calibrators may be used immediately after removal from 2-8°C storage.
Prior to use, mix by gentle inversion (5-10 times).
After each use, tightly close the caps and return the calibrators to 2-8°C storage.

Key to Symbols
- Consult instructions for use
- Manufacturer
- Temperature limitation
- Use by/Expiration date
- Calibrator (A,B,C,D,E or F)
- In Vitro Diagnostic Medical Device
- Lot Number
- Produced for Abbott by
- Product of Japan
- List Number
ARCHITECT HCV Ag Calibrators

<table>
<thead>
<tr>
<th>CAL</th>
<th>Concentration (fmol/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0</td>
</tr>
<tr>
<td>B</td>
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</tr>
<tr>
<td>C</td>
<td>80</td>
</tr>
<tr>
<td>D</td>
<td>600</td>
</tr>
<tr>
<td>E</td>
<td>4,500</td>
</tr>
<tr>
<td>F</td>
<td>20,000</td>
</tr>
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</table>

HCV Ag Cals
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Colors: Text, Logo, Symbols and
Color bar on top: Pantone 329 c
Text and Logo in Color bar: negative
“i”: Pantone 329 c (15%)
GHS Colors: Warning Symbol: Border: Pantone 185 c /
Inside border Symbol: black
Material: Refer to site specific documents
D5-Y206-3-4/R02
ABBOTT
65205 Wiesbaden, Germany

Exp.
LOT

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         Text and Logo in Color bar: negative
         “i”: Pantone 329 c (15%)
GHS Colors:  Warning Symbol: Border: Pantone 185 c /
             Inside border Symbol: black
Material:  Refer to site specific documents
D5-Y206-3-5/R02
ABBOTT
65205 Wiesbaden, Germany

Exp.
LOT

Architect HCV Ag

8°C
2°C

4 mL
4,500 fmol/L

File: 0:DDTP\Labels\Architect\FINAL\6L47_TPM_Denka Seiken\6L47E_D5-Y206-3-5R02.indd
Template: CalE_HZ.indt
Size: 51 x 22 mm
Stamp field: 25 x 9 mm, lower right hand corner
Colors: Text, Logo, Symbols and
Color bar on top: Pantone 329 c
Text and Logo in Color bar: negative
“i”: Pantone 329 c (15%)
GHS Colors: Warning Symbol: Border: Pantone 185 c /
Inside border Symbol: black
Material: Refer to site specific documents
3. Instructions for use

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1 English version of the IFU was the one that was assessed by WHO. It is the responsibility of the manufacturer to ensure correct translation into other languages.
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.

NAME
ARCHITECT HCV Ag

INTENDED USE
The ARCHITECT HCV Ag assay is a chemiluminescent microparticle immunoassay (CMIA) for the quantitative determination of Hepatitis C virus core antigen in human serum and plasma.

SUMMARY AND EXPLANATION OF THE TEST
ARCHITECT HCV Ag is a chemiluminescent microparticle immunoassay (CMIA) using microparticles coated with monoclonal anti-HCV for the detection of HCV Ag.

HCV Ag assays are used as an aid in the diagnosis of suspected Hepatitis C viral (HCV) infection and to monitor the status of infected individuals, i.e., whether the patient’s infection has resolved or the patient has become a chronic carrier of the virus. An HCV Ag assay can detect acute HCV infection in newly infected individuals who are seronegative for antibodies to HCV due to the delayed response of HCV specific antibodies. These may include patients with an elevated risk of HCV infection for example intravenous drug users or in patients with impaired immune function such as patients undergoing hemodialysis or suffering from HIV-HCV coinfections, where HCV Ag may be the only serological marker to detect HCV infection.21 Recent studies suggest a testing algorithm using the HCV Ag test to confirm active viral replication in anti-HCV positive individuals.19 Using an algorithm such as those proposed in the Mederacke, et al.19 Ottiger, et al.20 and Cloherty, et al. publications could be helpful to accelerate access to new, improved anti-viral therapies. For the diagnosis of acute or chronic hepatitis, HCV Ag reactivity should be correlated with patient history and the presence of other Hepatitis C serological markers.3, 4

BIOLOGICAL PRINCIPLES OF THE PROCEDURE
The ARCHITECT HCV Ag assay is a two-step immunoassay for the quantitative determination of core antigen of Hepatitis C virus using CMIA technology with flexible assay protocols, referred to as Chemiflex.

1. Sample, Pre-Treatment Reagent 1 and Pre-Treatment Reagent 2 are combined. An aliquot of the pre-treated sample is aspirated and dispensed into a new reaction vessel. The pre-treated sample, Assay Specific Diluent and anti-HCV coated microparticles are combined. The HCV Ag present in the pre-treated sample binds to the anti-HCV coated microparticles.
2. After washing, acridinium-labeled anti-HCV conjugate is added to create a reaction mixture.
3. Following another wash cycle, Pre-Trigger and Trigger Solutions are added to the reaction mixture.
4. The resulting chemiluminescent reaction is measured as relative light units (RLUs). There is a direct relationship between the amount of HCV Ag in the sample and the RLUs detected by the ARCHITECT iSystem optics.

The concentration of Hepatitis C core antigen in the specimen is determined using a previously generated ARCHITECT HCV Ag calibration curve. If the concentration of the specimen is greater than or equal to 3.00 fmol/L, the specimen is considered reactive for HCV Ag.

For additional information on system and assay technology, refer to the ARCHITECT System Operations Manual, Section 3.

REAGENTS

Kit Contents
ARCHITECT HCV Ag 6L47

REAGENT CONTENTS

<table>
<thead>
<tr>
<th>REF 6L47-29</th>
</tr>
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<tr>
<td>S</td>
</tr>
<tr>
<td>100</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>MICROPARTICLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 x 6.7 mL</td>
</tr>
<tr>
<td>1 x 6.1 mL</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CONJUGATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 x 30.0 mL</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ASSAY SPECIFIC DILUENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 x 14.5 mL</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PRE-TREATMENT REAGENT 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 x 11.0 mL</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>PRE-TREATMENT REAGENT 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 x 5.9 mL</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SPECIMEN DILUENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Murine anti-HCV antibody coated microparticles in 400 mM Bicine, 50 mM TRIS buffer with protein (bovine) stabilizer. Minimum concentration: 0.025% solids. Preservatives: sodium azide and antimicrobial agents.</td>
</tr>
<tr>
<td>Murine anti-HCV antibody acridinium-labeled conjugate in 80 mM BIS-TRIS with protein (bovine) stabilizer. Minimum concentration: 0.3 μg/mL. Preservatives: sodium azide and antimicrobial agents.</td>
</tr>
<tr>
<td>HCV Ag Assay Specific Diluent containing 1.46 N NaOH.</td>
</tr>
<tr>
<td>HCV Ag Pre-Treatment Reagent 1 containing 0.83 N HCl.</td>
</tr>
<tr>
<td>HCV Ag Pre-Treatment Reagent 2 containing 0.83 N HCl.</td>
</tr>
<tr>
<td>HCV Ag Specimen Diluent containing phosphate buffer with protein (horse serum) stabilizer. Preservatives: sodium azide and antimicrobial agents.</td>
</tr>
</tbody>
</table>

Other Reagents

<table>
<thead>
<tr>
<th>PRE-TRIGGER SOLUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCHITECT Pre-Trigger Solution containing 1.32% (w/v) hydrogen peroxide.</td>
</tr>
<tr>
<td>TRIGGER SOLUTION</td>
</tr>
<tr>
<td>ARCHITECT Trigger Solution containing 0.35 N sodium hydroxide.</td>
</tr>
<tr>
<td>WASH BUFFER</td>
</tr>
<tr>
<td>ARCHITECT Wash Buffer containing phosphate buffered saline solution. Preservatives: antimicrobial agents.</td>
</tr>
</tbody>
</table>

Warnings and Precautions

- For In Vitro Diagnostic Use
Safety Precautions

CAUTION: This product requires the handling of human specimens. It is recommended that all human-sourced materials be considered potentially infectious and 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.6-8

The following warnings and precautions apply to: [MICROPARTICLES] / SPECIMEN DILUENT

Contains sodium azide.
EUH032 Contact with acids liberates very toxic gas.
P501 Dispose of contents / container in accordance with local regulations.

The following warnings and precautions apply to: [CONJUGATE]

WARNING: Contains sodium azide, sodium fluoride, and cetyltrimethylammonium bromide.
EUH032 Contact with acids liberates very toxic gas.
H410 Very toxic to aquatic life with long lasting effects.

Prevention
P273 Avoid release to the environment.
Response
P391 Collect spillage.
Disposal
P501 Dispose of contents / container in accordance with local regulations.

The following warnings and precautions apply to: ASSAY SPECIFIC DILUENT

DANGER: Contains sodium hydroxide.
H314 Causes severe skin burns and eye damage.
H290 May be corrosive to metals.

Prevention
P234 Keep only in original container.
P260 Do not breathe mist / vapors / spray.
P264 Wash hands thoroughly after handling.
P280 Wear protective gloves / protective clothing / eye protection.

Response
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water / shower.
P310 Immediately call a POISON CENTER or doctor / physician.
P391 Collect spillage.
Disposal
P501 Dispose of contents / container in accordance with local regulations.

Safety Data Sheets are available at www.abbottdiagnostics.com or contact your local representative.

For a detailed discussion of safety precautions during system operation, refer to the ARCHITECT System Operations Manual, Section 8.

Reagent Handling

- Do not use reagent kits beyond the expiration date.
- Do not open the ASSAY SPECIFIC DILUENT plastic bag until ready to use.
- If leaking is observed with the Assay Specific Diluent bottle, the reagent kit cannot be used due to a lack of homogeneity which may impact results. The Assay Specific Diluent contains sodium hydroxide, and can cause severe skin and eye burns. Leaking bottles should be handled with appropriate safety precautions.
- Do not pool reagents within a kit or between kits.
- Before loading the reagent kit on the system for the first time, the reagents shipped on dry ice must be completely thawed and mixed thoroughly. For mixing instructions, refer to the PROCEDURE, Assay Procedure section of this package insert.
• Septums MUST be used to prevent reagent evaporation and contamination and to ensure reagent integrity. Reliability of assay results cannot be guaranteed if septums are not used according to the instructions in this package insert.
  - To avoid contamination, wear clean gloves when placing a septum on an uncapped reagent bottle.
  - Once a septum has been placed on an open reagent bottle, do not invert the bottle as this will result in reagent leakage and may compromise assay results.
  - Over time, residual liquids may dry on the septum surface. These are typically dried salts and have no effect on assay efficacy.

For a detailed discussion of handling precautions during system operation, refer to the ARCHITECT System Operations Manual, Section 7.

Reagent Storage
When stored and handled as directed, reagents are stable until the expiration date.

<table>
<thead>
<tr>
<th>Storage Temperature</th>
<th>Maximum Storage Time</th>
<th>Additional Storage Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unopened/Opened*</td>
<td>2-8°C Unpackaged</td>
<td>Shipped on dry ice, must be stored at 2-8°C after receipt. Store in upright position.</td>
</tr>
<tr>
<td>On board</td>
<td>System temperature</td>
<td>Discard after 30 days. For information on tracking onboard time, refer to the ARCHITECT System Operations Manual, Section 5.</td>
</tr>
</tbody>
</table>

* Reagents may be stored on or off the ARCHITECT iSystem. 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. For information on unloading reagents, refer to the ARCHITECT System Operations Manual, Section 5.

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 HCV Ag assay file must be installed on the ARCHITECT iSystem from an ARCHITECT iSystem Assay CD-ROM prior to performing the assay.

For detailed information on assay file installation and viewing and editing assay parameters, refer to the ARCHITECT System Operations Manual, Section 2.

If the ARCHITECT Anti-HCV assay and the ARCHITECT HCV Ag assay are run on the same ARCHITECT iSystem, the Anti-HCV assay file must be installed from ARCHITECT iSystem e-Assay CD-ROM found on www.abbottdiagnostics.com, prior to the installation of the HCV Ag assay file.

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.

Alternate Result Units
Edit assay parameter "Result concentration units" to select an alternate unit.

(Concentration in fmol/L) x (0.02) = (Concentration in pg/mL)

<table>
<thead>
<tr>
<th>Default result unit</th>
<th>Conversion factor</th>
<th>Alternate result unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>fmol/L</td>
<td>0.02</td>
<td>pg/mL</td>
</tr>
</tbody>
</table>

Specimen Collection and Preparation for Analysis

Specimen Types
Verified specimen types to be used with this assay:

<table>
<thead>
<tr>
<th>Specimen Types</th>
<th>Collection Tubes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human serum</td>
<td>Serum</td>
</tr>
<tr>
<td>Human plasma</td>
<td>Sodium EDTA</td>
</tr>
<tr>
<td></td>
<td>Potassium EDTA</td>
</tr>
<tr>
<td></td>
<td>Lithium Heparin</td>
</tr>
<tr>
<td></td>
<td>Sodium Heparin</td>
</tr>
<tr>
<td></td>
<td>Sodium Citrate</td>
</tr>
<tr>
<td></td>
<td>CPD</td>
</tr>
</tbody>
</table>

Specimen Conditions

• Other specimen collection tube types have not been tested with this assay.

• Liquid anticoagulants may have a dilution effect resulting in lower concentrations for individual patient specimens.

• The instrument 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 assay.

Preparation for Analysis

• Follow the tube manufacturer’s processing instructions for 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 3000 x g 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.
• Transfer clarified specimen to a sample cup or secondary tube for testing. For centrifuged specimens with a lipid layer, transfer only the clarified specimen and not the lipemic material.
• 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.

Specimen Storage

<table>
<thead>
<tr>
<th>Specimen Type</th>
<th>Storage Temperature</th>
<th>Maximum Storage Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serum or plasma</td>
<td>2-8°C</td>
<td>≤ 5 days</td>
</tr>
<tr>
<td></td>
<td>-20°C or colder</td>
<td></td>
</tr>
</tbody>
</table>

Specimen may be stored on or off the clot, red blood cells, or separator gel for up to 5 days refrigerated at 2-8°C.
If testing will be delayed more than 5 days, remove serum or plasma from the clot, red blood cells, or separator gel and store frozen at -20°C or colder.
Avoid more than two freeze/thaw cycles.

Specimen Shipping
• Package and label specimens in compliance with applicable state, federal, and international regulations covering the transport of clinical specimens and infectious substances.
• Do not exceed the storage limitations listed above.

PROCEDURE

Materials Provided
6L47 ARCHITECT HCV Ag Reagent Kit

Materials Required but not Provided
• ARCHITECT HCV Ag Assay file obtained from the ARCHITECT iSystem e-Assay CD-ROM found on www.abbottdiagnostics.com.
• 6L47-02 ARCHITECT HCV Ag Calibrators
• 6L47-11 ARCHITECT HCV Ag Controls
• ARCHITECT Pre-Trigger Solution
• ARCHITECT Trigger Solution
• ARCHITECT Wash Buffer
• ARCHITECT Reaction Vessels
• ARCHITECT Sample Cups
• ARCHITECT Septum
• ARCHITECT Replacement Caps
• Pipettes or pipette tips (optional) to deliver the volumes specified on the patient or control order screen.

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

Assay Procedure
• Before loading the reagent kit on the system for the first time, the reagents shipped on dry ice must be completely thawed and mixed thoroughly. After the first time the reagents have been loaded, no further mixing is required.
  • Tear open the ASSAY SPECIFIC DILUENT plastic bag.
  • Invert all the reagent bottles 30 times.
  • Visually inspect the bottle to ensure microparticles are resuspended. If microparticles are still adhered to the bottle, continue to invert 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 Reagent Handling section of this package insert.
  • Load the reagent kit on the ARCHITECT iSystem.
  • Verify that all necessary 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.
  • For information on ordering patient specimens and controls and for general operating procedures, refer to the ARCHITECT System Operations Manual, Section 5.
• Minimum sample cup volume is calculated by the system and printed on the Orderlist report. To minimize the effects of evaporation, verify adequate sample cup volume is present prior to running the test.
  • Maximum number of replicates sampled from the same sample cup: 10
  • Priority:
    • Sample volume for first test: 158 μL
    • Sample volume for each additional test from same sample cup: 108 μL
    • ≤ 3 hours on board:
      • Sample volume for first test: 158 μL
      • Sample volume for each additional test from same sample cup: 108 μL
    • > 3 hours on board: replace with a fresh sample (patient specimens, controls, and calibrators).
  • If using primary or aliquot tubes, use the sample gauge to ensure sufficient patient specimen is present.
• Prepare ARCHITECT HCV Ag Calibrators and Controls.
  • Mix calibrator(s) and controls by gentle inversion before use.
  • Hold bottles vertically and dispense recommended volumes into each respective sample cup.
  • Recommended volumes:
    • for each calibrator: 12 drops
    • for each control: 7 drops
• 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 System Operations Manual, Section 3.
• For optimal performance, it is important to perform routine maintenance as described in the ARCHITECT System Operations Manual, Section 9. Perform maintenance more frequently when required by laboratory procedures.

Specimen Dilution Procedures
Specimens with an HCV Ag concentration of > 20,000 fmol/L will be flagged as “>20,000” and may be diluted with either the Automated Dilution Protocol or the Manual Dilution Procedure.

Automated Dilution Protocol
The system performs a 1:9 dilution of the specimen and automatically calculates the concentration of the specimen before dilution and reports the result.

Manual Dilution Procedure
Suggested dilution: 1:20
1. Add 20 μL of the patient specimen to 380 μL of ARCHITECT HCV Ag Negative Control.
2. 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 and report the result. The result (before the dilution factor is applied) should be greater than 3.00 fmol/L.
For detailed information on ordering dilutions, refer to the ARCHITECT System Operations Manual, Section 5.
Calibration

- Test Calibrators A-F in duplicate and a single sample of each control level as below.
  1. Order the calibration. **DO NOT START THE RUN.**
  2. Order 1 rep of CONTROL+2, 1 rep of CONTROL+1 and 1 rep of CONTROL- in this order.
  3. Then, start the run.

The calibrators should be priority loaded. Ensure that assay control values are within the concentration ranges specified in the control package insert.

- Calibration Range: 0 – 20,000 fmol/L.
- Once an ARCHITECT HCV Ag 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 or
  - 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 HCV Ag assay is that a single sample of each control level be tested once every 24 hours each day of use. If the quality control procedures in your laboratory require more frequent use of controls to verify test results, follow your laboratory-specific procedures.
- The ARCHITECT HCV Ag 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 samples 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 HCV Ag assay belongs to method group 5.

# RESULTS

The ARCHITECT HCV Ag assay utilizes a 4 Parameter Logistic Curve fit data reduction method (4PLC, Y-weighted) 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.

Interpretation of Results

<table>
<thead>
<tr>
<th>Concentration Value</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 3.00 fmol/L</td>
<td>Nonreactive for HCV Ag</td>
</tr>
<tr>
<td>≥ 3.00 fmol/L</td>
<td>Reactive for HCV Ag</td>
</tr>
</tbody>
</table>

Specimens with concentration values ≥ 3.00 fmol/L to < 10.00 fmol/L should be retested in duplicate.

Duplicate Retest Results

<table>
<thead>
<tr>
<th>Instrument Interpretation</th>
<th>Specimen Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Both retest values nonreactive</td>
<td>Specimen considered nonreactive for HCV Ag.</td>
</tr>
<tr>
<td>One or both of the duplicates is (are) ≥ 3.00 fmol/L</td>
<td>Specimen considered repeatedly reactive for HCV Ag, and the initial value is used as the final reported value.</td>
</tr>
</tbody>
</table>

For details on configuring the ARCHITECT iSystem to use grayzone interpretations, refer to the ARCHITECT System Operations Manual, Section 2.

## LIMITATIONS OF THE PROCEDURE

- For diagnostic purposes, results should be used in conjunction with other data; e.g., symptoms, results of other tests, clinical impressions, etc.
- Specimens from patients who have received preparations of mouse monoclonal antibodies for diagnosis or therapy may contain human anti-mouse antibodies (HAMA). Such specimens may show either falsely elevated or depressed values when tested with assay kits such as ARCHITECT HCV Ag that employ mouse monoclonal antibodies. Additional information may be required for diagnosis. The ARCHITECT HCV Ag reagents contain a component that reduces the effect of HAMA reactive specimens. Additional clinical or diagnostic information may be required to determine patient status.
- If the ARCHITECT HCV Ag results are inconsistent with clinical evidence, additional testing is suggested to confirm the result.
- Samples containing particulate matter or red blood cells must be centrifuged prior to running the assay. Insufficiently separated plasma specimens from clots or red blood cells must not be used.
- Specimens from patients with high levels of IgM, e.g., specimens from patients with multiple myeloma, may generate “3350 Unable to process test, aspiration error for (Sample Pipetor) at (RV 24)”.
- The ARCHITECT Anti-HCV assay (LN 6C37) may cause falsely elevated HCV Ag results in the ARCHITECT HCV Ag assay when both assays are run on the same module. As a preventive measure to protect the integrity of test results, it is important that one of the following actions be taken:
  a. Multiple iSystem module customers should run the ARCHITECT HCV Ag and ARCHITECT Anti-HCV assays on separate modules or;
  b. If you are unable to run these assays on separate modules:
     i. Segregate the ARCHITECT HCV Ag samples and run them immediately following the ARCHITECT 6041 Daily Maintenance procedure.
     ii. After running the ARCHITECT HCV Ag samples, it is recommended to immediately perform the ARCHITECT 6041 Daily Maintenance procedure again, as an extra precaution.
     iii. It is recommended that duplicate retest be performed on samples between the range of 3 - 15 fmol/L instead of the range of 3 - 10 fmol/L in the RESULTS section.
- Due to the naturally occurring diversity of hepatitis C viruses, including amino acid variations within the core gene, rare specimens from HCV infected patients may produce unexpectedly low or negative results in the ARCHITECT HCV Ag assay. Two studies noted reduced assay sensitivity among a subpopulation of individuals infected with HCV genotype 3a. Additional studies have reported varying detection rates for genotype 3 samples on the ARCHITECT HCV Ag test when compared to HCV RNA testing. In patients that are anti-HCV positive but HCV Ag negative, it is advisable to perform additional clinical or diagnostic testing (e.g. molecular testing) to determine patient status.
SPECIFIC PERFORMANCE CHARACTERISTICS

Precision
The ARCHITECT HCV Ag assay precision is < 10% total CV. A study was performed as described in the National Committee for Clinical Laboratory Standards (NCCLS) Protocol EP5-A2.11 Five samples consisting of two buffer protein based HCV positive controls and three serum based panels were assayed in replicates of two at two separate times per day for twenty days (n=80 for each sample), using three lots of reagents. Data from this study are summarized in the following table.*

Table I: ARCHITECT HCV Ag Precision

<table>
<thead>
<tr>
<th>Sample</th>
<th>Reagent</th>
<th>Instrument</th>
<th>Lot</th>
<th>Mean Value (fmol/L)</th>
<th>Within Run SD</th>
<th>%CV</th>
<th>Total SD</th>
<th>%CV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1</td>
<td>1 80</td>
<td>52.41</td>
<td>4.82</td>
<td>9.2</td>
<td>4.96</td>
<td>9.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 80</td>
<td>50.08</td>
<td>3.76</td>
<td>7.5</td>
<td>4.07</td>
<td>8.1</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>3 80</td>
<td>52.92</td>
<td>3.80</td>
<td>7.2</td>
<td>4.10</td>
<td>7.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 80</td>
<td>53.57</td>
<td>4.80</td>
<td>8.2</td>
<td>4.73</td>
<td>8.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 80</td>
<td>52.31</td>
<td>3.81</td>
<td>7.3</td>
<td>3.81</td>
<td>7.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 80</td>
<td>51.98</td>
<td>3.21</td>
<td>6.2</td>
<td>3.28</td>
<td>6.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 2</td>
<td>1 80</td>
<td>303.18</td>
<td>20.60</td>
<td>6.8</td>
<td>23.01</td>
<td>7.6</td>
<td></td>
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</tr>
<tr>
<td>2 80</td>
<td>288.91</td>
<td>17.27</td>
<td>6.0</td>
<td>18.91</td>
<td>6.5</td>
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</tr>
<tr>
<td>3 80</td>
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<td>7.5</td>
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</tr>
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<td>2 80</td>
<td>320.62</td>
<td>20.53</td>
<td>6.4</td>
<td>20.53</td>
<td>6.4</td>
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<td>2 80</td>
<td>311.64</td>
<td>14.79</td>
<td>4.7</td>
<td>15.64</td>
<td>5.0</td>
<td></td>
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</tr>
<tr>
<td>3 80</td>
<td>306.22</td>
<td>11.98</td>
<td>3.9</td>
<td>13.32</td>
<td>4.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Panel 1</td>
<td>1 80</td>
<td>67.54</td>
<td>4.74</td>
<td>7.0</td>
<td>4.90</td>
<td>7.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 80</td>
<td>65.09</td>
<td>4.35</td>
<td>6.7</td>
<td>5.13</td>
<td>7.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 80</td>
<td>67.14</td>
<td>3.54</td>
<td>5.3</td>
<td>4.64</td>
<td>6.9</td>
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</tr>
<tr>
<td>2 80</td>
<td>65.57</td>
<td>4.61</td>
<td>7.0</td>
<td>5.00</td>
<td>7.6</td>
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</tr>
<tr>
<td>2 80</td>
<td>63.70</td>
<td>4.12</td>
<td>6.5</td>
<td>4.47</td>
<td>7.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 80</td>
<td>63.09</td>
<td>4.64</td>
<td>7.4</td>
<td>4.64</td>
<td>7.4</td>
<td></td>
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</tr>
<tr>
<td>Panel 2</td>
<td>1 80</td>
<td>327.17</td>
<td>22.40</td>
<td>6.8</td>
<td>24.81</td>
<td>7.6</td>
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</tr>
<tr>
<td>2 80</td>
<td>310.52</td>
<td>16.11</td>
<td>5.2</td>
<td>26.28</td>
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</tr>
<tr>
<td>3 80</td>
<td>324.36</td>
<td>15.22</td>
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</tr>
<tr>
<td>2 80</td>
<td>337.09</td>
<td>21.37</td>
<td>6.3</td>
<td>22.06</td>
<td>6.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 80</td>
<td>322.28</td>
<td>19.84</td>
<td>6.2</td>
<td>21.83</td>
<td>6.8</td>
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<td>3 80</td>
<td>310.09</td>
<td>14.46</td>
<td>4.7</td>
<td>17.65</td>
<td>5.7</td>
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<tr>
<td>Panel 3</td>
<td>1 80</td>
<td>7629.26</td>
<td>408.99</td>
<td>5.3</td>
<td>549.08</td>
<td>7.2</td>
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<tr>
<td>2 80</td>
<td>7785.96</td>
<td>545.13</td>
<td>7.0</td>
<td>599.72</td>
<td>7.7</td>
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<td>3 80</td>
<td>7360.23</td>
<td>318.91</td>
<td>4.3</td>
<td>363.50</td>
<td>4.9</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

Specificity
The ARCHITECT HCV Ag assay demonstrated a specificity of ≥ 99.5% in a study where specimens from a blood donor population, hospitalized patients and specimens containing potentially interfering substances were tested. This study includes the specimens from individuals with medical conditions unrelated to HCV infection (Table II). A total of 5027 serum and plasma specimens from blood donors were evaluated. The initial and repeat reactive rates were 0.24% (12/5027) and 0.02% (1/5027), respectively. Four of 250 specimens obtained from hospital patients were repeatedly reactive and confirmed positive for HCV infection. In 126 specimens from individuals with medical conditions unrelated to HCV infection and specimens containing potentially interfering substances, five specimens were repeatedly reactive and confirmed positive for HCV infection.

Table II: Reactivity of the ARCHITECT HCV Ag Assay in Specimens from Blood Donors, Hospital Patients, Individuals with Medical Conditions Unrelated to HCV Infection, and in Specimens Containing Potentially Interfering Substances

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Positive by Supplemental Testing (IR % of Total)</th>
<th>Number of Positive by Supplemental Testing (RR % of Total)</th>
<th>Number of Positive by Supplemental Testing (IR % of Total)</th>
<th>Number of Positive by Supplemental Testing (RR % of Total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood Donors</td>
<td>Serum 2256</td>
<td>7 (0.31)</td>
<td>1 (0.04)</td>
<td>0 (0.00)</td>
</tr>
<tr>
<td></td>
<td>EDTA Plasma 411</td>
<td>0 (0.00)</td>
<td>0 (0.00)</td>
<td>0 (0.00)</td>
</tr>
<tr>
<td></td>
<td>Na Citrate Plasma 1180</td>
<td>2 (0.17)</td>
<td>0 (0.00)</td>
<td>0 (0.00)</td>
</tr>
<tr>
<td></td>
<td>Heparin Plasma 1180</td>
<td>3 (0.25)</td>
<td>0 (0.00)</td>
<td>0 (0.00)</td>
</tr>
<tr>
<td>Total Donors</td>
<td>5027</td>
<td>12 (0.24)</td>
<td>1 (0.02)</td>
<td>0 (0.00)</td>
</tr>
<tr>
<td></td>
<td>Hospital Patients</td>
<td>250</td>
<td>4 (1.60)</td>
<td>4 (1.60)</td>
</tr>
<tr>
<td></td>
<td>Individuals with Medical Conditions Unrelated to HCV Infection, and in Specimens Containing Potentially Interfering Substances</td>
<td>126</td>
<td>5 (3.97)</td>
<td>5 (3.97)</td>
</tr>
</tbody>
</table>

IR = Initially Reactive; RR = Repeatedly Reactive

a A positive result was defined as reactive to Abbott AxSYM Anti-HCV (1D30), Roche Amplior HCV, and/or Abbott RealTime HCV (4J86).

b Category includes the following: anti-CMV positive (5), anti-EBV positive (5), anti-HAV positive (5), HBsAg positive (5), anti-HIV-1 positive (9), anti-HIV-2 positive (1), HCV Ag positive (5), anti-HTLV-1 positive (5), anti-HBc positive (5), Syphilis positive (5), rheumatoid factor (5), alcoholic liver disease (5), human anti-mouse antibody positive (5), E. coli (5), anti-HSV-1 positive (5), multiparous female (5), hemodialysis patients (5), anti-nuclear antibody positive (5), elevated IgG (5), elevated IgM (5), multiple myeloma (3), pregnant female (5), influenza vaccine recipients (5), Toxoplasma positive (3), West Nile virus positive (5), multiple transfusion recipients (5).

Sensitivity
The ARCHITECT HCV Ag assay has a sensitivity of ≤ 3.00 fmol/L. A total of 452 serum and plasma specimens known to be positive for HCV RNA including genotypes 1a, 1b, 2a, 2b, 3a, 3k, 4a, 5a, 6a, and 6i, were tested. Of the 452 specimens, 97.8% (442/452) were reactive. The ARCHITECT HCV Ag assay was obtained prior to detection of anti-HCV antibody, resulting in an average reduction between the times of infection and detection of 35.8 days.

Interference
The ARCHITECT HCV Ag assay is designed to have a mean interference of ≤ 10% difference in concentration for patient samples with triglycerides (3000 mg/dL), bilirubin (20 mg/dL), hemoglobin (500 mg/dL), and protein (9.2 g/dL).

In a representative study, the interference from hemoglobin, bilirubin, triglycerides, and protein was evaluated in the ARCHITECT HCV Ag assay. The following interferences were obtained:

- Hemoglobin < 10% at 500 mg/dL
- Bilirubin < 10% at 20 mg/dL
- Triglycerides < 10% at 3000 mg/dL
- Protein < 10% at 9.2 g/dL
**BIBLIOGRAPHY**


18. Nguyen et al., Hepatitis C Virus Core Mutations Associated with False-Negative Serological Results for Genotype 3a Core Antigen. *Journal of Clinical Microbiology* 53 (8) p.2697-2700.


**Key to Symbols**

1. Manufacturer
2. Sufficient for
3. Temperature limitation
4. Use by/Expiration date
5. Assay Specific Diluent
6. Conjugate
7. Contains Sodium Azide. Contact with acids liberates very toxic gas.
8. Control Number
9. Ecological hazard
10. In Vitro Diagnostic Medical Device
11. Lot Number
12. Microparticles
13. Pre-Treatment Reagent 1
14. Pre-Treatment Reagent 2
15. Pre-Trigger Solution
16. Produced for Abbott by
17. Product of Japan
18. Reaction Vessels
19. Reagent Lot
20. List Number
21. Replacement Caps
22. Sample Cups
23. Septum
24. Serial number
25. Specimen Diluent
26. Trigger Solution
27. Wash Buffer

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Anti-HCV monoclonal antibodies are prepared under US license by Chiron Corporation under a shared manufacturing agreement. The ARCHITECT HCV Ag assay is manufactured under contract agreement from Ortho Diagnostic Systems and Chiron Corporation.

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DENKA SEIKEN CO., LTD. Tokyo, Japan

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

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ARCHITECT 
HCV Ag Reagent Kit

HCV Ag 0088
HCV Ag6L47-29

www.abbottdiagnostics.com/IFU

Exp.
D5-Y406-2/R04

1 x 100

1 x 6.7 mL
1 x 6.1 mL
1 x 30.0 mL
1 x 14.5 mL
1 x 11.0 mL
1 x 5.9 mL

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MICROPARTICLES
ASSAY SPECIFIC DILUENT
PRE-TREATMENT REAGENT 1
PRE-TREATMENT REAGENT 2
SPECIMEN DILUENT
CONTAINS AZIDE

12345M100
2099-12-31
12345M100

003807740122003
991231

(01) 12345M100
(240) 6L4729

D5-Y406-2/R04
ARCHITECT
HCV Ag

MICROPARTICLES

8°C

CONTAINS: AZIDE

2°C

D5-Y206-2-1/R02

SN

CONTROL NO.

ABBOTT
65205 Wiesbaden, Germany

Material: Refer to site specific documents

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Template: Micropart.indt
Size: 85.7 x 44.5 mm
Stamp field: 25 x 17 mm, left to barcode field
Barcode field: 29 x 44.5 mm, right to Stamp field
Colors: Text, Logo and Symbols: black
Color bar on top and Component symbol: Pantone 675 c
Text, Logo and Symbols in Color bar: negative
“i”: Pantone 329 c (15%)
ARCHITECT HCV Ag

CONJUGATE

6.1 mL

ABBOTT
65205 Wiesbaden, Germany

CONTAINS: AZIDE

D5-Y206-2-2/R02

Exp.
ASSAY SPECIFIC DILUENT

30.0 mL

2°C

8°C

ABBOTT
65205 Wiesbaden, Germany

D5-Y206-2-3/R02

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Size: 85.7 x 44.5 mm
Stamp field: 25 x 17 mm, lower right hand corner
Barcode field: 85.7 x 22 mm, between color bar on top and label text
Colors: Text, Logo and Symbols: black
Color bar on top and Component symbol: Pantone 329 c
Text, Logo and Symbols in Color bar: negative
“i”: Pantone 329 c (15%)
GHS Colors: Warning Symbol: Border: Pantone 185 c /
Inside border Symbol: black
Material: Refer to site specific documents
PRE-TREATMENT REAGENT 1

14.5 mL

8°C

ECO HAZARD

CONTROL NO.

CONTROL NO.

D5-Y206-2-4/R02

ABBOTT
65205 Wiesbaden, Germany

Material: Refer to site specific documents
PRE-TREATMENT REAGENT 2

11.0 mL

ABBOTT
65205 Wiesbaden, Germany

D5-Y206-2-5/R02

6L47Y_D5-Y206-2-5R02.indd 1
14.10.2014 11:21:56