Anti HCV (Quantitative) – [Serum] Analysis

Objective

The objective of this test is to quantitatively measure anti-hepatitis C virus (HCV) antibodies in serum. This test aids in screening, diagnosing, and monitoring HCV infection and helps assess immune response during or after antiviral therapy.

Materials and Methods

Materials:
- Serum sample from patient
- Quantitative ELISA or chemiluminescent immunoassay kits for anti-HCV antibodies
- Microplate reader or automated analyzer
- Standard laboratory equipment (pipettes, centrifuge)

Methods:
1. Sample Collection: Collect venous blood and separate serum by centrifugation.
2. Antibody Quantification: Perform quantitative ELISA or CLIA to determine anti-HCV antibody levels.
3. Calibration: Use standard calibrators provided in the kit for accurate measurement.
4. Interpretation: Compare antibody levels with cut-off values to determine exposure or immunity status.
5. Follow-up: Positive results should be confirmed with HCV RNA testing for active infection status.

Results

- Negative: No detectable anti-HCV antibodies (no evidence of exposure)
- Positive (low titre): Past exposure or resolved infection
- Positive (high titre): Suggestive of ongoing or chronic HCV infection; confirm with RNA testing

Conclusion

Quantitative anti-HCV antibody testing is an important tool for diagnosing hepatitis C infection and monitoring immune response. Results should be correlated with HCV RNA testing and clinical evaluation for accurate management and treatment decisions.