

C-Reactive Protein – [Serum] Analysis

Objective

The objective of this test is to measure serum levels of C-Reactive Protein (CRP), an acute-phase reactant produced by the liver in response to inflammation. CRP testing helps detect and monitor inflammatory and infectious conditions.

Materials and Methods

Materials:

- Serum sample from patient
- Immunoassay kits specific for CRP
- Automated analyzers or microplate readers
- Standard laboratory equipment (pipettes, centrifuge)

Methods:

1. Sample Collection: Collect venous blood and separate serum by centrifugation.
2. Measurement: Perform quantitative CRP assay using immunoassay methods.
3. Calibration: Use calibrators for assay accuracy.
4. Interpretation: Elevated CRP indicates acute or chronic inflammation.
5. Quality Control: Include controls to validate assay performance.

Results

- Normal range: < 10 mg/L (may vary by laboratory)
- Elevated CRP: Suggests inflammation, infection, or tissue injury
- Used to monitor disease activity and response to treatment

Conclusion

CRP measurement is an important marker of inflammation and is useful in diagnosis and monitoring of various inflammatory and infectious diseases. Results should be interpreted in clinical context.