Angiotensin Converting Enzyme (ACE) – [Serum] Analysis

Objective

The objective of this test is to measure serum angiotensin converting enzyme (ACE) activity. ACE testing is commonly used in the diagnosis and monitoring of sarcoidosis, as well as other conditions affecting the lungs, liver, and immune system.

Materials and Methods

Materials:
- Serum sample from patient
- ACE assay reagents (colorimetric or kinetic methods)
- Automated biochemical analyzer or spectrophotometer
- Standard laboratory equipment (centrifuge, pipettes)

Methods:
1. Sample Collection: Collect venous blood and separate serum using centrifugation.
2. Enzyme Activity Measurement: Perform ACE assay using colorimetric or kinetic spectrophotometric methods.
3. Calibration: Use standard reference materials and quality control samples for accuracy.
4. Interpretation: Compare ACE activity with reference ranges; elevated levels are often seen in sarcoidosis and other granulomatous diseases.

Results

- Normal range (adults): 8–52 U/L (varies by laboratory)
- Elevated ACE: Suggestive of sarcoidosis, Gaucher’s disease, or other granulomatous conditions
- Decreased ACE: May occur with ACE inhibitor therapy or chronic liver/kidney disease

Conclusion

Serum ACE measurement is a valuable diagnostic tool in evaluating sarcoidosis and related diseases. Interpretation should consider clinical findings, imaging studies, and other laboratory results for accurate diagnosis and monitoring.