Beta HCG (Pregnancy Test) (Qualitative) – [Serum] Analysis

Objective

The objective of this test is to qualitatively detect beta-human chorionic gonadotropin (β-hCG) in serum. This test is primarily used for rapid confirmation of pregnancy status, and can also help in diagnosing pregnancy-related complications or trophoblastic disease.

Materials and Methods

Materials:
- Serum sample from patient
- Rapid immunoassay (lateral flow) or ELISA kits for β-hCG detection
- Test cassettes or microplate reader
- Standard laboratory equipment (pipettes, centrifuge)

Methods:
1. Sample Collection: Collect venous blood and separate serum by centrifugation.
2. Testing Procedure: Apply serum to test cassette or perform ELISA for qualitative detection.
3. Interpretation: Presence of a positive line (rapid test) or optical density above cutoff (ELISA) indicates pregnancy.
4. Confirmation: Positive results may be followed by quantitative β-hCG measurement for gestational assessment.
5. Quality Control: Use internal controls provided with the kit to ensure test accuracy.

Results

- Negative: No β-hCG detected (not pregnant)
- Positive: β-hCG detected (pregnant)
- Borderline/Indeterminate: Repeat test or confirm with quantitative β-hCG assay

Conclusion

Qualitative β-hCG testing in serum provides rapid and reliable confirmation of pregnancy status. Positive results should be confirmed and monitored with quantitative β-hCG levels and clinical evaluation for accurate pregnancy management.