Acetone (Qualitative) – [Urine] Analysis

Objective

The objective of this test is to qualitatively detect the presence of acetone in urine, which serves as an indicator of ketosis due to diabetic ketoacidosis (DKA), fasting, or alcohol-related metabolic disorders.

Materials and Methods

Materials:
- Fresh urine sample from patient
- Qualitative ketone/acetone test strips or reagents
- Standard laboratory equipment (pipettes, test tubes)

Methods:
1. Sample Collection: Obtain a midstream urine sample in a sterile container.
2. Screening: Dip a qualitative test strip into the urine sample or use chemical reagents for detection.
3. Observation: Observe color change on the strip or reaction in solution, indicating the presence of acetone/ketones.
4. Comparison: Compare results with the color chart provided by the test kit for qualitative interpretation.
5. Interpretation: Categorize findings as Negative, Trace, Moderate, or Large, correlating with the degree of ketosis.

Results

- Negative: No detectable acetone
- Trace/Moderate: Mild ketosis (possible fasting or dietary causes)
- Large: Severe ketosis (possible diabetic ketoacidosis or metabolic derangement)

Conclusion

The qualitative urine acetone test is a quick screening tool for detecting ketosis and aids in the diagnosis of diabetic ketoacidosis and related metabolic conditions. Positive results should be confirmed with quantitative blood tests for clinical management.