Cannabis (THC) (Marijuana) (Qualitative) – [Urine, Spot] Analysis

Objective

The objective of this test is to qualitatively detect the presence of tetrahydrocannabinol (THC), the active compound in cannabis (marijuana), in spot urine samples. This test is used for drug screening, monitoring substance abuse, and forensic investigations.

Materials and Methods

Materials:
- Spot urine sample from patient
- Immunoassay screening kits (e.g., enzyme immunoassay, lateral flow)
- Confirmatory testing equipment (GC-MS or LC-MS) if needed
- Standard laboratory equipment (pipettes, centrifuge)

Methods:
1. Sample Collection: Collect spot urine sample in a sterile container.
2. Screening Test: Perform immunoassay to detect THC metabolites qualitatively.
3. Confirmatory Test: If screening is positive, confirm with gas chromatography-mass spectrometry (GC-MS) or liquid chromatography-mass spectrometry (LC-MS).
4. Interpretation: Presence of THC metabolites indicates recent cannabis use.
5. Quality Control: Include positive and negative controls in screening assays.

Results

- Negative: No THC metabolites detected in urine
- Positive: THC metabolites detected, indicating recent cannabis use
- Confirmatory testing recommended for positive screening results to rule out false positives

Conclusion

Qualitative detection of THC in urine spot samples is a valuable tool for drug screening and monitoring cannabis use. Positive results should be confirmed by more specific analytical methods to ensure accuracy.