Beyond the "Positive" Result: Measuring Recent Marijuana Consumption with Breath

Validation Study Quick Facts

- The Journal: Journal of Analytical Toxicology (Oxford University Press).
- Validation Standard: ANSI/ASB Standard 036, First Edition 2019.
- Stability: 7-day sample stability for lab processing.
- Detection Window: 15-minutes to 4 hours.

Clinical Validation Summary: Cannabix Marijuana Breath Test

This summary highlights the findings of a peer-reviewed study published by Oxford University Press in the Journal of Analytical Toxicology (JAT). The study validates the accuracy of Omega Laboratories' analytical method using the Cannabix Breath Collection Unit (BCU) and Breath Cartridges.

Core Objective

To provide a reliable, non-invasive solution for detecting recent marijuana consumption (within the last 4 hours), addressing the "recency gap" left by traditional urine and hair testing.

Key Validation Findings

- Precision Detection: Successfully quantifies multiple cannabinoids simultaneously, including Delta-9 THC, Delta-8 THC, CBD, and CBN.
- Correlation with Blood: Confirms that THC metabolism trends in breath correlate with established trends previously reported in blood samples.
- Detection Window: Effectively identifies usage occurring 15 minutes to 4 hours prior to collection.
- Sample Stability: Breath samples collected via the Cannabix Breath Cartridge remain stable for up to 7 days, ensuring reliable laboratory processing after shipping.

- Scientific Rigor: The method was validated according to ANSI/ASB Standard 036 (First Edition 2019) guidelines.

System Advantages

- Non-Invasive Collection: Offers a quick, portable alternative to blood or urine testing that is effective regardless of the subject's lung function.
- Built-in Safeguards: The BCU monitors breath pressure and volume to ensure reproducible collection and includes "A & B" cartridges for a dual testing process.
- Environmental Integrity: Includes an ambient air sample collection to rule out environmental contamination in the event of a positive result.

Clinical Utility

Traditional testing often detects historical use rather than active impairment. This validated system allows employers, law enforcement, and safety-sensitive industries to focus on same-day usage, improving both fairness and public safety.

Source: Simultaneous Analysis of Delta-9 THC, Delta-8 THC, CBD, and CBN in Breath Aerosols Collected Using Cannabix Technologies Breath Collection Unit, Journal of Analytical Toxicology (2026).