

# Optimized Cannabis Drying Curve - Research Summary

This document summarizes the rationale behind the optimized 5-day Ramp, 5-day Plateau, and indefinite Hold drying curve for cannabis, with a focus on water activity (aw), microbial safety, and terpene preservation.

## Target Conditions:

- Ramp: 5 days from 68.0°F / 58.0°F DP to 65.0°F / 51.5°F DP
- Plateau: 5 days at 65.0°F / 51.7°F DP (~aw = 0.620)
- Hold: indefinite at 65.0°F / 52.1°F DP (~aw = 0.628)

This profile allows for fast but controlled initial drying, followed by equilibration near the target aw of 0.620, minimizing the risk of overdrying while preserving aroma and flavor.

## Scientific and Industry Support for 65-68°F Range

### 1. Terpene Volatility:

- beta-Myrcene begins to volatilize near 68°F
- Limonene and Linalool volatilize around 74-75°F
- > Keeping temps below 68°F retains key aromatic compounds.

Source: Ross & ElSohly, 1996 - Journal of Natural Products

### 2. Water Activity Safety:

- Mold and microbial growth are suppressed below aw = 0.650
- aw ~ 0.620 ensures stability and smooth cure

Source: Beuchat, 1983 - Journal of Food Protection

### 3. Industry SOP Alignment:

- Common drying targets fall between 60-70°F
- Hawthorne Gardening, Cannatrol, and commercial growers favor 65-68°F with ~52°F DP

Sources: Cannabis Business Times, Gavita White Papers, Cannatrol published specs