



3R4F Storage Information

The 3R4F product is stored long-term in a freezer which is maintained at approximately (-26° C). This cold storage is located in another state and is used to store the 3R4F product until it is shipped to KY for use in filling orders. To prepare the 3R4F for shipping to KY, the product is moved to a 10° C room where the product is spaced out and fans are placed on the product for approximately 5 days until dry. The 3R4F product is then shipped out to the Reference Cigarette Program in KY. The product is then either repackaged and shipped, or the cases are placed in plastic bags and stored in a cold room at approximately (3.3°C and 50-60% relative humidity).

Investigators who receive reference cigarettes from KTRDC and do not have environmental control units are encouraged to place the cigarettes in an airtight plastic bag and store in a standard laboratory refrigerator until used for the research. This procedure should hold the proper moisture level in the cigarettes. The reference cigarettes should be placed at room temperature for approximately 15 minutes and then used immediately.

References that may be of interest for ISO Testing (Technical Committee 126)

- ISO 3402: "Tobacco and Tobacco Products – Atmosphere for conditioning and testing"
- ISO 16055: "Tobacco and Tobacco Products – Monitor test pieces – Requirements and application."
- ISO 4387: "Determination of total and nicotine-free dry particulate matter using a routine analytical smoking machine."

3R4F Conditioning Guidelines

- Reference cigarettes are removed from cold storage and allowed to come to room temperature before opening.
- Based on the typical analytical smoking use, cigarettes are removed from cartons and placed in FTC or ISO conditions.
- Samples are equilibrated at one set of condition tolerances and tested at another. See table below.

Conditions of Equilibration of Product Prior to Testing		
Parameter	ISO	FTC
Temperature	71.6°F (22°C)	75°F
Temperature	± 1.8°F (1°C)	± 2°F
Relative Humidity	60% RH	60% RH
RH Limits	± 3% RH (absolute)	± 3% RH (absolute)

Conditions of Equilibration of Product During Testing		
Parameter	ISO	FTC
Temperature	71.6°F (22°C)	75°F
Temperature	± 3.6°F (2°C)	± 2°F
Relative Humidity	60% RH	60% RH
RH Limits	± 5% RH (absolute)	± 5% RH (absolute)