

MEASURING THE AMBIENT STORAGE TEMPERATURE IN A TRANSPORT UNIT CONTAINING SHELL EGGS PACKAGED FOR THE ULTIMATE CONSUMER

The following guidance is provided for recipients electing to check the ambient temperature in a transport unit for shell eggs contracted for delivery under the USDA Commodity Purchase Program.

Regulations stated in 9 CFR 590.50 promulgated under the authority of the Food Safety and Inspection Service, U.S. Department of Agriculture, state that shell eggs destined for the ultimate consumer must be stored and transported under refrigeration at an ambient temperature of 45 degrees Fahrenheit (7.2 degrees Celsius) or less.

To note, unlike other commodities with regulatory temperature requirements for the individual items, shell eggs are required to be maintained in an environment with the ambient air temperature of 45 degrees Fahrenheit or less. Ambient temperature refers to the temperature of the air surrounding the container of eggs not the temperature of the individual egg. While assessing ambient temperature is relatively easy in stationary coolers at production facilities, accurately recording ambient air temperatures in smaller transport units such as trailers can be challenging.

Shell eggs are laid from hens with a body temperature above 105 degrees and immediately washed in water exceeding 90 degrees. Consequently, shell eggs have been shown to take an extended period of time to cool when placed in ambient air temperatures of 45 degrees or less. This may cause initial fluctuations in ambient air temperature readings when placed in smaller transport units. Additional fluctuations in ambient air temperature can be attributed to opening and closing transport unit doors while in warmer climates introducing warm air into the transport unit. Due to these challenges with accurately assessing ambient air temperatures in transport units, it is imperative to closely follow the provided guidance below and contact USDA technical experts prior to rejecting loads of shell eggs.

The following steps are provided for guidance in checking the ambient temperature inside the transport unit upon arrival or just prior to unloading the shipment:

1. Do not open rear doors until prepared to take ambient air temperature. Opening the doors too soon will allow refrigerated air to escape impacting the ability to determine an accurate ambient temperature inside the unit.
2. When taking ambient temperatures, slightly open the rear door enough to place the stem thermometer inside of the transport unit and quickly close the door completely so cool air does not escape. Caution must be taken not to open the doors on the unit for an extensive period of time (no longer than approximately 10 to 15 seconds) as it will allow the refrigerated air to escape impacting the ability to determine an accurate ambient temperature inside the unit. Note that if the refrigeration unit is not running on the transport unit, this will prevent obtaining an accurate ambient air temperature.

3. With the doors closed, allow approximately 10 minutes for the stem thermometer to adjust to the environment inside the transport unit. Note that measuring the ambient air temperature with an infrared hand-held thermometer is not acceptable. These hand-held units measure the temperature of a surface not the refrigerated ambient air temperature.
 - Do not take the temperature of the individual egg or case.
4. Open the doors and read the stem thermometer immediately to determine the ambient air temperature inside the transport unit.

Prior to rejecting any load due to non-compliant ambient temperatures of a transport unit, contact the CP Contracting Officer (listed on the purchase order) and a QAD technical expert listed below for formal guidance:

- Greta Samuel, CP Contracting Officer
Phone: 202-720-6592
Email: Greta.Samuel@usda.gov
- Mark Perigen, QAD National Shell Egg Supervisor
Phone: 209-702-6894
Email: Mark.Perigen@usda.gov
- Victor Barajas, QAD Assistant National Shell Egg Supervisor
Phone: 951-202-2019
Email: Victor.Barajas@usda.gov
- Jeff Hendricks, QAD Assistant National Shell Egg Supervisor
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For non-temperature related inquiries, contact the Contracting Officer.