

Vermont Maple Products Inspection Procedures

This document is reviewed and updated periodically. The current version can be accessed at:

<https://agriculture.vermont.gov/food-safety/maple-products>

1 Vermont Maple Statutes and Regulations

The Vermont Maple Products statutes in 6 V.S.A. 32 and the Maple Products Regulations in C.V.R. 20-011-02 establish the requirements and standards for Vermont maple products.

2 Conducting Inspections

2.1 *Purpose of the Inspection*

The purpose of an inspection is to assess whether maple products offered for sale comply with the Vermont maple statutes and regulations.

2.2 *Inspection Location*

Inspections should take place at retail locations where maple products are sold to protect the consumer at the point of sale. Locations should be chosen based on the historical or likely volume of maple products sold and/or history of non-compliance.

2.3 *Initiating the Inspection*

Before beginning an inspection, first confirm the store is in business and open during the scheduled inspection time. Upon arrival at the store, conduct an initial assessment of whether the store sells maple products by walking the store aisles or by asking a store representative. If the store does not sell maple products the inspection is concluded. If the store sells maple products, inform the store representative of your role as an AAFM inspector and the scope of the inspection. Ask if there is a location where you can conduct inspection sampling, such as in a back room.

2.4 *Identify Inspection Lots*

Identify one inspection lot for each grade of maple syrup offered for sale for each producer or packer. If this results in an excessive number of inspection lots, only the most prominent grade for each producer or packer may be selected. An inspection lot is defined as all products of the same producer or packer, size, and grade offered for sale in the store. Due to the destructive nature of sampling, products chosen for sampling should be of the smallest size that is able to be tested for density using a hydrometer. Inspection lots with four or less products should not be sampled.

2.5 *Inspection Sampling*

2.5.1 *Sample Size*

For inspection lots with less than 120 products, the recommended sample size is ten percent of the total lot size. Because a majority of samples must fail for the whole inspection lot to fail (see 2.5.3), it is not always necessary to sample a full ten percent if the last sample will not change the overall outcome of the inspection. For example, if the first two samples pass inspection in an

inspection lot of 29 containers, a third sample is not necessary because it will not change the inspection outcome. For lot sizes greater than 120, refer to the minimum sample size guidelines in Table 2-1 in the National Institute of Science and Technology's (NIST) Handbook 133.

2.5.2 *Grade Samples*

Grade each sample based on the standards for maple products establish in the Vermont maple regulations, which include requirements for color, flavor, clarity, density, and labeling. The tolerance of sampling equipment should be taken into account when determining whether a sample is in grade with an applicable standard. Document findings on the inspection form.

2.5.2.1 *Color*

Determine whether a sample meets grade standards for color by measuring the light transmission (%T) and by assessing color with a visual color comparator.

2.5.2.2 *Flavor*

Assess the sample's flavor by tasting a small amount of syrup. The sample must meet grade standards for flavor and not contain off-flavors.

2.5.2.3 *Clarity*

Assess the clarity of the sample by visual inspection under a steady light source. The sample must be clear, well filtered, and free of niter or other suspended solids.

2.5.2.4 *Density*

Measure the sample's density and report measurements in Baume.

2.5.2.5 *Labeling*

Determine whether the product label complies with Vermont maple regulations.

2.5.3 *Determine Inspection Lot Results*

An inspection lot fails when a majority of samples are out of grade in at least one applicable grade standard or requirement (e.g., color, flavor, clarity, density, and/or labeling requirements), and, when the number of samples meets the minimum sample requirements in 2.5.1.

2.6 *Tag and Remove Off Grade Products from Sale*

When an inspection lot fails, all products with the same production lot codes as those that failed should be removed from sale. The store's representative should be notified of any products removed from sale.

2.7 *Conclude the Inspection*

Conclude the inspection by providing the store's representative with a copy of the inspection results. Mail a hardcopy of the inspection results to the producer.