THE USE OF CHLORINE MATERIALS IN ORGANIC PRODUCTION AND HANDLING

Pertinent NOP Rules:
§205.601 Chlorine restriction in Crop Production
§205.603 Chlorine Restriction in Livestock Production
§205.605 Chlorine use in Organic Handling

NOP Regulations

Crops:
205.601(a): As algicide, disinfectant and sanitizer, including irrigation system cleaning systems.
(2): Chlorine materials- Except, That, residual chlorine levels in the water shall not exceed maximum residual disinfectant limit under the Safe Drinking Water Act
(i) Calcium hypochlorite
(ii) Chlorine dioxide
(iii) Sodium hypochlorite

Livestock:
205.603(a): As disinfectants, sanitizer and medical treatments as applicable.
(7): Chlorine materials – disinfecting and sanitizing facilities and equipment. Residual chlorine levels in the water shall not exceed the maximum residual disinfectant limit under the Safe Drinking Water Act.
(i) Calcium hypochlorite
(ii) Chlorine dioxide
(iii) Sodium hypochlorite

Handling:
205.605(b) Synthetics allowed:
Chlorine materials – disinfecting and sanitizing food contact surfaces, Except, That, residual levels in the water shall not exceed the maximum residual disinfectant limit under the Safe Drinking Water Act. (Calcium hypochlorite; Chlorine dioxide; and Sodium hypochlorite)

Background

In May 2011, the USDA- NOP published a guidance that clarifies the policy within the NOP regulations concerning the use of chlorine in organic handling and production.

The NOP Rule mentions the use of chlorine in annotations limiting the use of chlorine in 7 CFR 205.601(a)(2), 205.603(a)(7) and 205.605(b) of the National List of Allowed and Prohibited Substances. These annotations allow the use of chlorine materials in organic crop production, organic food processing and organic livestock production with the following annotation:

“Allowed for disinfecting and sanitizing food contact surfaces. Residual chlorine levels for wash water in direct crop or food contact in flush water from cleaning irrigation applied to crops or fields cannot exceed the maximum residual disinfectant limit in the Safe Drinking Water Act (currently 4 mg/L).”
**Chlorine Policy**

As per the annotations in the National List shown below, residual chlorine levels in the water shall not exceed residual disinfectant limit under the Safe Water Drinking ACT (SWDA).

To demonstrate compliance with the NOP regulations regarding chlorine, certified operations should monitor the chlorine level at the point where the water last contacts the organic product in direct applications. The Colorado Department of Agriculture (CDA) will review and verify records used by certified operations to demonstrate compliance during the operation’s annual inspection.

**CROP OPERATIONS:**

1. Residual chlorine levels in the water in direct crop contact (when used pre-harvest) or as water from cleaning irrigation systems applied to soil should not exceed the maximum residual disinfectant limit under SDWA.

2. Chlorine products may be used up to maximum labeled rates for disinfecting and sanitizing equipment and tools. No intervening event is necessary before equipment is used in contact with organic crops.

**LIVESTOCK OPERATIONS:**

1. Residual chlorine levels in the water in direct food and animal contact (for example, drinking water) should not exceed the maximum residual disinfectant limit under the SWDA.

2. Chlorine products may be used to maximum labeled rates for sanitizing equipment or tools (including dairy pipelines and tanks). Label instructions should be followed regarding requirements for rinsing or not rinsing prior to the equipment’s next use.

**HANDLING OPERATIONS** (includes on-farm post-harvest handling):

1. For food handling facilities and equipment, chlorine materials may be used up to maximum labeled rates for disinfecting and sanitizing food contact surfaces. Rinsing is not required unless mandated by the label use directions. Thus, organic operations using chlorine in this way, must use a product that has a label with rates listed.

2. Water used in direct post-harvest crop or food contact (including flume water for transportation, wash water in produce lines, egg or carcass washing) is permitted to contain chlorine materials at levels approved by the FDA or the EPA for such purpose.
   a. Rinsing with potable water that does not exceed the maximum residual disinfectant limit for the chlorine material under the SDWA must immediately follow the permitted use.
   b. Operators should monitor the chlorine level of the final rinse, the point at which the water last contacts the organic product. The level of chlorine must meet limits as set forth by the SWDA.

3. Water used as an ingredient in organic food production should not exceed the maximum residual disinfectant limit for the chlorine material under the SDWA, as required by the Organic Food Production Act.