



FACT SHEET: PROCESSING ORGANIC MEAT

ORGANIC PRODUCTS REGULATIONS

The federal government enacted the Organic Products Regulations (OPR) in 2009 to ensure that organic food products are grown, processed and handled according to the Canadian Organic Standards (COS). The OPR references the COS, which include two standards that cover the principles and practices (CAN/CGSB.32.310) and permitted substances (PSL; CAN/CGSB.32.311) allowed in organic production and processing.

Under certain conditions where meat processing is provided as a contractual service to an organic producer who retains ownership of the livestock/meat before, during and after slaughter, the OPR does not provide the authority to certify the service. Meat processors can only be certified (and must be certified) if they are packaging and labeling products under their own label.

If the processing is performed as a service to a livestock producer, there are two options for maintaining organic integrity:

1. The producer can include meat processing activities in his or her own Organic Plan as an off-farm process and provide sufficient detail related to how the animals and products are handled, processed, packaged, labelled and stored off-farm. In this case, certification is linked to the producer and the cost and responsibility for maintaining organic integrity is borne by the producer.
2. The meat processor can obtain an *attestation of compliance* from an accredited Certification Body (CB) confirming that the service meets the requirements of the COS. In this case, certification is linked to the processor and the cost and responsibility are borne by the processor.

The slaughtering of organic livestock or the transportation and storage of organic livestock or an organic product shall, in order to ensure the organic integrity of the livestock or product, be conducted in accordance with the requirements set out in CAN/CGSB 32.310.

Section 19, OPR 2009

If the processor plans to process organic meat from more than one producer, the *attestation of compliance* may be the most practical option since it is recognized by all CBS and this option eliminates the need for multiple inspections.

Under each of these scenarios (certification, producer's Organic Plan, or *attestation of compliance*), processors must maintain the organic integrity of slaughter animals and meat, and the process must be verified annually by an accredited CB through on-site inspection.

WHAT IS ORGANIC INTEGRITY?

Maintaining organic integrity means that livestock and meats are not compromised at any stage of production or processing. Organic foods can be compromised through *commingling* or *contamination*. Commingling can occur when organic and non-organic foods come into contact with one another, or in a worst-case scenario, where a non-organic product is accidentally labelled and sold as organic. Contamination can occur when an organic food product comes into contact with a substance that is not allowed in organic processing, such as a sanitizing or pest control product.

HOW IS ORGANIC INTEGRITY ASSURED?

The OPR requires meat processors to demonstrate that organic integrity is maintained as outlined in the COS. Operators are required to put in place a record keeping system that demonstrates compliance to the COS. Compliance can be demonstrated through an organic System Plan and supporting documents such as Standard Operating Procedures (SOPs) and

check-off lists. A producer's or processor's CB will verify compliance with the COS on an annual basis through a facility inspection of processes and records. If compliance cannot be demonstrated, organic certification status can be affected. Prior to processing, producers should discuss the processes and cleaning procedures and substances used by the processor.

The most common reason that meat processors are cited for non-compliance is related to their choice of cleaning and pest control products and or an insufficient paper trail (records) to demonstrate compliance. In some cases, inadequate segregation of organic from conventional livestock and meat can also be an issue.

PREPARING TO PROCESS ORGANIC MEAT

Meat processors will need to develop an organic System Plan that may require changes to existing protocols, but the changes will usually not require significant investments of time or money. Spending the time up front to develop organic protocols and to train staff will help to avoid problems down the road. A system plan should include:

1. **An organic SOP** that includes:
 - Feeding and handling practices for livestock (organic feed and minimal stress to livestock),
 - scheduling procedures that allow organic processing to take place only after equipment has been cleaned with permitted products,
 - segregation protocols for organic meat,
 - appropriate cleaning solutions, concentrations and procedures,
 - procedures for interior and exterior pest control, and
 - if used, a list of spices or other food additives and their certification (spices must be certified organic).
2. **A list of cleaners and sanitizers** containing only ingredients listed on the Permitted Substances List (PSL). You may need to check with the CB that the brand name products you want to use are compliant with the COS. If the CB is not familiar with a particular product, be prepared to provide a Material Safety Data Sheet that can be obtained from the product manufacturer's website or by calling the head office.

3. **Set up a record keeping system** that demonstrates that staff are following the established SOP.
4. **Establish and implement training protocols for staff.**

CLEANING SOLUTIONS

Organic principles require operators to protect the environment, decrease pollution and to use careful processing and handling methods that maintain organic integrity and the vital qualities of the food products at all stages of production.

For these reasons, many of the sanitizers used in conventional meat processing, including quaternary ammonium, iodine and acid anionic sanitizers, are *not* allowed in organic processing. However, there are a number of effective alternatives that can be used, including, peroxyacetic acid, ozone and chlorine.



Only substances that appear in par. 7.3 of CAN/CGSB-32.311, Organic Production Systems - Permitted Substances Lists, may be used to clean, disinfect or sanitize organic food or food-contact surfaces without a mandatory removal event, provided that the origin and use are consistent with the annotation for that substance.

If the substances given in par. 7.3 or 7.4 of CAN/CGSB-32.311, Organic Production Systems - Permitted Substances Lists, can be demonstrated to be ineffective, substances not included in these lists may be used to clean, disinfect and sanitize organic food-contact surfaces, provided that

- a. documented procedures have verified the efficacy of the chosen removal event,*
- b. their removal from such surfaces as per a. is documented prior to each organic production run,*
- c. the disposition of all such substances is recorded to ensure that the effluent discharge is neutralized to minimize negative environmental impact.*

Sections 8.37 & 8.38 CAN/CGSB-32.310-2008



Chlorine is inexpensive and will eliminate micro-organisms from surfaces; however, during breakdown it forms carcinogenic trihalomethanes. If accidentally mixed with other chemicals, chlorine can create a toxic chemical gas. It can also corrode soft metal surfaces, which, if pitted or cracked, provide hard to clean niches where harmful micro-organisms can thrive. For these reasons, processors should consider reducing or eliminating chlorine even though it is allowed in organic processing.

Other permitted sanitizers are more expensive but they can be equally effective and are more environmentally benign than chlorine. For instance, mixtures of peroxyacetic acid and hydrogen peroxide and water form a strong oxidizing agent that eliminates many of the challenges associated with chlorine. Ozone-enriched water can also kill microbes as effectively as chlorine, and since it is generated on-site, it eliminates the need to handle and dispose of harsh chemicals.

PERMITTED CLEANERS, DISINFECTANTS & SANITIZERS

Table 7.3 of the PSL includes products that are allowed without a mandatory removal event (rinse). This means that they are considered safe enough to come into contact with food. Table 7.4 lists products that can be used as long as they are removed from food contact surfaces before processing.

PERMITTED SUBSTANCES LIST CAN/CGSB.32.311-2006, last amended June 2011

TABLE 7.3 FOOD GRADE CLEANERS, DISINFECTANTS AND SANITIZERS THAT ARE ALLOWED WITHOUT A MANDATORY REMOVAL EVENT

Acetic acid Non-synthetic and synthetic sources may be used on equipment. Non-synthetic sources may only be used on food and plants.

Ascorbic acid Non-synthetic sources may be used on equipment.

Citric acid Non-synthetic and synthetic sources may be used.

Ethyl alcohol Non-synthetic and synthetic sources may be used on equipment.

Isopropyl alcohol Non-synthetic and synthetic sources may be used on equipment.

Hydrogen peroxide

Peracetic (peroxyacetic) acid For use in wash or rinse water for food or plants or on food contact surfaces.

Potassium bicarbonate On equipment.

Sodium bicarbonate (baking soda) Only non-synthetic sources may be used on food or food contact surfaces without a mandatory removal event.

Sodium carbonate (soda ash) Only non-synthetic sources may be used on food or food contact surfaces without a mandatory removal event.

Sodium hydroxide (lye or caustic acid)

Vinegar Organic or non-organic sources.

TABLE 7.4 CLEANERS, DISINFECTANTS AND SANITIZERS ALLOWED ON FOOD CONTACT SURFACES INCLUDING EQUIPMENT PROVIDED THAT SUBSTANCES ARE REMOVED FROM FOOD CONTACT SURFACES PRIOR TO ORGANIC PRODUCTION

Bleach/chlorine (calcium hypochlorite, chlorine dioxide, sodium hypochlorite, ozone, and hydrogen peroxide – must not exceed 10% of solution by volume).

Detergents (biodegradable only, for use on equipment)

Iodine (equipment only, not to exceed 5% by volume)

Lime

Potassium hydroxide (caustic potash)

Potassium permanganate (not to exceed 1% by volume)

Soaps (fatty acids from animal or vegetable oils only)

Sodium bicarbonate (baking soda)

Sodium borate

Sodium carbonate (soda ash)

Surfactants (See Detergents, Soaps)

Wetting agents (natural agents, including saponins & microbial agents)

BRAND NAME PRODUCTS

The PSL is a list of allowable substances; it is not a list of acceptable brand name products. This can make it challenging to identify appropriate brand name cleaning and sanitizing products. Below is a list of brand name cleaning products adapted from the Organic Materials Review Institute (www.OMRI.org). This is not a comprehensive list, nor was it developed with the Canadian PSL in mind. A recently developed Canadian Organic Inputs Directory is also available (<http://organicfederation.ca>). Operators should use the lists as a starting point and do their own homework to compare ingredients (including non-active ingredients such as adjuvants and carriers) in a brand name product with the help of the Material Safety Data Sheet. CBs must verify that each product complies with the COS.

CHLORINE DIOXIDE

For use as a disinfectant and sanitizer for food contact surfaces, chlorine materials may be used up to maximum labelled rates. Rinsing is not required unless stated on the label. See also Chlorine Materials.

CDG Solution 3000TM (CDG Environmental, LLC)

Oxine® (FP) (Bio-Cide International Inc.)

ProOxine® (Bio-Cide International Inc.)

CHLORINE MATERIALS

For use as a disinfectant and sanitizer for food contact surfaces. May be used up to maximum labelled rates. Rinsing is not required unless stated on the label.

Accu-Tab® SI Calcium Hypochlorite Tablets (PPG Industries Inc.)

Oxide® + (CFI Chem Fresh Inc.)

San-I-King, No. 451 (Hydrite Chemical Co.)

The Disinfectant Answer® (Environmental Care & Share)

DETERGENTS

Take appropriate measures to prevent contact with organic food products or ingredients.

AFCO 5238 Super Alk Plus (Alex C. Fergusson Inc.)

DeccoNatur™ Equipment Cleaner (Decco US Post-Harvest Inc.)

The Clean 'N' Green Answer® (Environmental Care & Share Inc.)

The Cleaner Answer® (Environmental Care & Share)

The Glass & Mirror Answer® (Environmental Care & Share Inc.)

The Heavy Cleaner Mop Bucket Answer® (Environmental Care & Share Inc.)

The Janitors' Answer® (Environmental Care & Share Inc.)

triple7 EnviroClear® (Environmental Fluid Systems)

triple7 Eco-Scale® (Environmental Fluid Systems)

triple7 Envirolab (Environmental Fluid Systems)

triple7 Mega Clean (Environmental Fluid Systems)

triple7 Pristine Clean (Environmental Fluid Systems)

PERACETIC ACID/PEROXYACETIC ACID

For use as a sanitizer on food contact surfaces.

Clarity (FMC Corporation)

Maguard 5626 (Mason Chemical Company)

OXICURE (Advance Research Chemicals Inc.)

Oxonia Active® (Ecolab Inc.)

Peraclean® 15 (Evonik-Degussa Corporation)

Peraclean® 5 (Evonik-Degussa Corporation)

PerOx Extreme (Alex C. Fergusson)

VigorOx® 15 F&V (FMC Corporation)

VigorOx® Liquid Sanitizer & Disinfectant OA I (FMC Corporation)

VigorOx® LS-15 (FMC Corporation)

SANITIZERS, DISINFECTANTS & CLEANERS

Take appropriate measures to prevent contact with organic food products or ingredients.

FB® 400 Sodium Percarbonate (Solvay Chemicals Inc.)

AFCO 6001 Millennium Release (Alex C. Fergusson)

AFCO 6008 Millennium Yellow (Alex C. Fergusson)

B-T-F® Iodophor Sanitizer (National Chemicals)

Eco-Absorb™ (Eco Absorbent Technologies)

Gran-sorb (Kadant GranTek Inc.)

The Odor-Control Answer® (Environmental Care & Share)

XSORBTM Spill Clean-Up (Impact Absorbents)

Always ensure you are working with the latest copy of the Canadian Organic Standards. To download a free copy, including the Permitted Substances List, visit:

<http://www.tpsgc-pwgsc.gc.ca/ongc-cgsb/programme-program/normes-standards/internet/index-eng.html>

This fact sheet was developed by the Increasing Canadian Capacity Working Group of the Organic Value Chain Round Round Round Table

July 2014