

**National Organic Standards Board  
Livestock Subcommittee  
Petitioned Material Proposal  
Acidified Sodium Chlorite (ASC)**

**August 20, 2013  
Reviewed January 7, 2014 - No revisions**

**Summary of Proposed Action:**

**Evaluation Criteria (see attached checklist for criteria in each category)**

	<b>Criteria Satisfied?</b>		
1. Impact on Humans and Environment	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
2. Essential & Availability Criteria	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
3. Compatibility & Consistency	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A

**Substance Fails Criteria Category: 2**

**Comments:**

Acidified Sodium Chlorite (ASC) was petitioned for use as a pre and post teat dip treatment in organic livestock production. ASC is currently allowed on the national list as a disinfectant for direct food contact under 205.605(b). After carefully reviewing the petition, along with the Technical Evaluation Report prepared for the committee in 2013, we have found that this material generally satisfies the criteria related to impact on humans and the environment, along with general compatibility and consistency with organic principles. However, the TR notes that a number of functional alternative substances are available, and the committee's research and outreach to producers confirms that many substances are already used as mastitis-preventing teat dips. Accordingly, the essentiality criteria are not met, and the committee does not recommend the addition of ASC to the national list as a teat dip.

**Subcommittee Action & Vote**

**Classification Motion:** Motion to classify Acidified Sodium Chlorite (CAS # 7758-19-2 (sodium chlorite) and CAS # 14998-27-7 (chlorous acid)) as synthetic.

Motion by: Joe Dickson

Seconded by: Colehour Bondera

Yes: 8 No: 0 Absent: 1 Abstain: 0 Recuse: 0

**Listing Motion:** Motion to list Acidified Sodium Chlorite(CAS #s 13898-47-0 (Chlorous Acid), 7758-19-2 (Sodium Chlorite)) at §205.603(a) and 205.603(b) of the National List annotated as follows: Acidified Sodium Chlorite, Allowed for use on organic livestock as a pre and post teat dip treatment, acidified with lactic acid or other GRAS acid.

Motion by: Joe Dickson

Seconded by: Colehour Bondera

Yes: 0 No: 8 Abstain: 0 Absent: 1 Recuse: 0

**Basis for annotation:**  To meet criteria above  Other regulatory criteria  Citation

**Approved by Tracy Favre, Subcommittee Chair, to transmit to NOSB August 20, 2013**

### NOSB Evaluation Criteria for Substances Added To the National List :Livestock

#### Category 1. Adverse impacts on humans or the environment? Acidified Sodium Chlorite

Question	Yes	No	N/A	Comments/Documentation (TAP; petition; regulatory agency; other)
1. Is there a probability of environmental contamination during use or misuse,? [§6518(m)(3)]		x		Risk is minimal. TR page 9, lines 359-369.
2. Is there a probability of environmental contamination during manufacture or disposal? [§6518(m)(3)]		x		TR page 9, lines 359-390.
3. Does the substance contain inerts classified by EPA as 'inerts of toxicological concern'? [§6517 (c)(1)(B)(ii)]		x		
4. Is there potential for detrimental chemical interaction with other materials used in organic farming systems? [§6518(m)(1)]		x		As petitioned, substance does not interact with the agroecosystem. TR page 10 lines 410-411.
5. Is there a toxic or other adverse action of the material or its breakdown products? [§6518(m)(2)]		x		Breakdown products are citric acid, salt and water (2009 handling recommendation).
6. Is there persistence or concentration of the material or breakdown products in the environment? [§6518(m)(2)]		x		When used as petitioned, SCA and its components exhibit minimal likelihood of persistence in the environment. TR page 7 lines 296-298.
7. Would the use of the substance be harmful to human health or the environment? [§6517 (c)(1)(A)(i); §6517 (c)(2)(A)(i); §6518(m)(4)]		x		"When used as petitioned, acidified sodium chlorite and its component chemicals exhibit minimal likelihood of persistence or accumulation in the environment." TR page 10, lines 436-428. The material is both GRAS and on the USDA National List for handling.
8. Are there adverse biological and chemical interactions in the agroecosystem, including biodiversity? [§6518(m)(5)]		x		As petitioned, substance does not interact with the agroecosystem. TR page 10 lines 410-411.
9. Are there detrimental physiological effects on soil organisms, crop- s, or livestock? [§6518(m)(5)]		x		As petitioned, substance does not interact with the agroecosystem. TR page 10 lines 410-411.

## NOSB Evaluation Criteria for Substances Added To the National List: Livestock

### Category 2. Is the Substance Essential for Organic Production: Acidified Sodium Chlorite

Question	Yes	No	N/A	Comments/Documentation (TAP; petition; regulatory agency; other)
1. Is the substance agricultural? [§6502(1)]		x		TR page 7, lines 280-293.
2. Is the substance formulated or manufactured by a chemical process? [§6502(21)]	x			TR page 6, lines 222-279
3. Is the substance formulated or manufactured by a process that chemically changes a substance extracted from naturally occurring plant, animal, or mineral sources? [§6502(21)]		x		The substance is synthetically produced. TR page 7, lines 280-293.
4. Is the substance created by naturally occurring biological processes? [§6502(21)]		x		The substance is synthetically produced. TR page 7, lines 280-293.
5. Is there a natural source of the substance? [§ 205.600(b)(1)]		x		TR page 7.
6. Is there an organic substitute? [§205.600(b)(1)]		x		There are a limited number of organic or natural substances that are appropriate substitutes. Nisin, a natural material that may be a substitute, is not authorized for use as a teat dip due to earlier rejection by NOSB as an antibiotic . A number of essential oils and organic acids may also be used as teat dips. TR page 11, lines 542-547
7. Is there a wholly natural substitute product? [§6517(c)(1)(A)(ii)]	x	x		See above.
8. Are there any alternative substances? [§6518(m)(6)]	x			The TR also suggests that a number of alternative substances, including iodine, alcohols, chlorine materials, hydrogen peroxide, chlorhexadine and certain essential oils may function as alternatives.
9. Are there other practices that would make the substance unnecessary? [§6518(m)(6)]		x		Teat dips are critical in commercial dairy production to prevent mastitis. TR page 12.

### NOSB Evaluation Criteria for Substances Added To the National List: Livestock

#### Category 3. Is the substance compatible with organic production practices? Acidified Sodium Chlorite

Question	Yes	No	N/A	Comments/Documentation (TAP; petition; regulatory agency; other)
1. Is the substance consistent with organic farming and handling? [§6517(c)(1)(A)(iii); 6517(c)(2)(A)(ii)]	x			TR, petition. Substance is already allowed for use in handling in direct food contact.
2. Is the substance compatible with a system of sustainable agriculture? [§6518(m)(7)]	x			
3. If used in livestock feed or pet food, Is the nutritional quality of the food maintained with the substance? [§205.600(b)(3)]			x	
4. If used in livestock feed or pet food, Is the primary use as a preservative? [§205.600(b)(4)]			x	
5. If used in livestock feed or pet food, Is the primary use to recreate or improve flavors, colors, textures, or nutritive value lost in processing (except when required by law)? [§205.600(b)(4)]			x	
6. Is the substance used in production, and does it contain an active synthetic ingredient in the following categories: [§6517(c)(1)(B)(i);		x		TR page 6, lines 210-221
copper and sulfur compounds				
toxins derived from bacteria		x		TR page 6, lines 210-221
pheromones, soaps, horticultural oils, fish emulsions, treated seed, vitamins and minerals		x		TR page 6, lines 210-221
livestock parasiticides and medicines		x		TR page 6, lines 210-221
production aids including netting, tree wraps and seals, insect traps, sticky barriers, row covers, and equipment cleansers		x		TR page 6, lines 210-221