United States Department of Agriculture
Agricultural Marketing Service | National Organic Program

Document Cover Sheet

Document Type:

☒ **National List Petition or Petition Update**

A petition is a request to amend the USDA National Organic Program's National List of Allowed and Prohibited Substances (National List).

www.ams.usda.gov/rules-regulations/organic/national-list

Any person may submit a petition to have a substance evaluated by the National Organic Standards Board (NOSB) [7 CFR 205.607(a)].

www.ams.usda.gov/rules-regulations/organic/nosb

National List Petition Guidelines for submitting a petition are available on the AMS website at How to File a Petition.

www.ams.usda.gov/rules-regulations/organic/national-list/filing-petition

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☐ **Technical Report**

A technical report is developed in response to a petition to amend the National List. Reports are also developed to assist in the review of substances that are already on the National List. Technical reports are completed by third-party contractors and AMS posts completed technical reports online for public access on the NOP Petitioned Substances Index. Contractor names and dates completed are available in the report.

www.ams.usda.gov/rules-regulations/organic/petitioned-substances

Read more about the technical report process in section **H. SUBSTANCE/MATERIALS REVIEW PROCESS** in the NOSB Policy & Procedures Manual posted on the AMS website.

www.ams.usda.gov/sites/default/files/media/NOSB-PolicyManual.pdf

www.ams.usda.gov/rules-regulations/organic/nosb

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01 July 2026

Jared Clark
National List Manager
National Organic Program – Standards Division
USDA Agricultural Marketing Service
1400 Independence Avenue, SW
Washington, DC 20250

Subject: Petition for Addition of Sodium Chlorite for the Generation of Chlorine Dioxide Gas to 7 CFR §205.605(b)

Dear Mr. Clark:

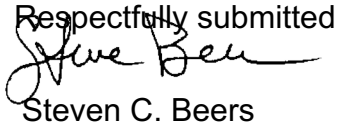
ICA-TriNova, LLC respectfully submits the enclosed petition requesting that sodium chlorite, when used solely for the controlled generation of chlorine dioxide gas for post-harvest antimicrobial treatment of harvested fruits and vegetables, be added to the National List of Allowed and Prohibited Substances under 7 CFR §205.605(b).

This petition is submitted in accordance with the current NOP Petition Guidelines and responds directly to the 2018 NOSB's previous consideration of the substance.
The petition documents several significant developments that were not available during the previous review, including:

- Expanded EPA registration, covering fifteen crop groups.
- Expanded EPA human health, dietary exposure, and residue evaluations.
- Establishment of a tolerance exemption for gaseous chlorine dioxide use pattern.

ICA-TriNova respectfully requests that the National Organic Program review the enclosed petition for listing. We appreciate your consideration and would welcome the opportunity to provide any additional information that may assist your review.

Respectfully submitted,



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Partner
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Sodium Chlorite for the Generation of Chlorine Dioxide Gas

Request for Addition to 7 CFR §205.605(b)

Date: 01 July 2026

Name of Petitioner: ICA-TriNova, LLC (Manufacturer and Distributor)
1 Beavers Street Newnan, Georgia 30263
Phone: 678.850.8844
sales@icatrinova.com

Contact: Steven C. Beers, Partner
Phone: 770.883.6410
stevenbeers@icatrinova.com

Item A: Sections for Inclusion – Section § 205.605(b)

Synthetic or non-synthetic nonagricultural (non-organic) substances allowed in or on processed products labeled as "organic" or "made with organic (specified ingredients)".

Item B: Background Information Regarding Substance Being Petitioned

1. Active Substance Chemical Name – Sodium Chlorite (impregnate precursor)
   Substance Material Common Name – FruitGard
2. Precursor Manufacturer/Producer's Name and Contact Information
   Steven Beers
   ICA-TriNova, LLC (Manufacturer)
   1 Beavers Street
   Newnan, Georgia 30263
   Phone: 770.683.9181
   sales@icatrinova.com; stevenbeers@icatrinova.com
3. Current Use – FruitGard (sodium chlorite impregnate) is a registered antimicrobial pesticide, sanitizer and/or disinfectant for fruits and vegetables (FCN 949, EPA Reg. # 79814-5) used to generate dry chlorine dioxide gas for the direct treatment of fruits, vegetables, nuts, grains and hemp during storage, transportation and food preparation applications with no requirement for post treatment rinse.

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4. Substance Usage - The substance is used to generate dry chlorine dioxide gas in the direct treatment of vegetables, fruits, nuts, to reduce spoilage and pathogenic organisms. Treatments are done so that generated chlorine dioxide gas is completely consumed. Application rates vary by article type.

5. Source of Precursor and Manufacturing Process.

    a. Raw materials for active substance are obtained from widely available commercial sources of Zeolite and Sodium Chlorite.
    b. Manufacturing Process for active substance - See **Exhibit 5b**

6. Summary of Previous Reviews by State or private certification programs or other organizations of the petitioned substance.

The petitioner respectfully requests the Board incorporate by reference the previously submitted Technical Evaluation Report and 2015 ICA-Tri-Nova LLC petition materials. No substantive scientific conclusions contained within those documents have been contradicted by subsequent federal review. Rather, later EPA actions have expanded and reinforced those conclusions. The current petition is supported by a substantially expanded administrative record compared with that available during the 2018 NOSB review. The original petition, USDA Technical Evaluation, EPA registration history, FDA Food Contact Notification, EPA tolerance exemption, and subsequent scientific evaluations should therefore be considered collectively when determining whether sodium chlorite impregnate for the generation of chlorine dioxide gas satisfies the evaluation criteria of the Organic Foods Production Act. **Table 1 summarizes key differences between 2018 board decision and the arguments made herein.**

7. Information regarding EPA, FDA and State Regulatory Authority Registrations.

    a. USEPA Reg # 79814-5, FruitGard **Exhibit 7 a**
    b. USEPA Tolerance Exemption **Exhibit 7 b**
    c. Various State Pesticide Registrations – FruitGard
    d. FDA FCN 949 – ClO_2 Gas Treatment for Processed Fruits and Vegetables

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Table 1: Comparison of the 2018 NOSB Decision and the Expanded 2026 Administrative Record

2018 NOSB Issue	Basis for 2018 Decision	2026 Expanded Administrative Record	Supporting Documents
Essentiality was not demonstrated.	The NOSB concluded that the petitioner had not demonstrated that the technology was essential because other allowed antimicrobial materials were available for post-harvest handling.	The petition now demonstrates that FruitGard provides a unique **gaseous** post-harvest treatment that complements, rather than replaces, existing sanitizers. The technology treats packed commodities, enclosed storage rooms, and shipping containers without immersion or spray application, supporting reduced food waste, lower water use, and improved post-harvest quality.	Original NOSB Recommendation; EPA Registration; Chapter 8
Alternative materials existed.	Existing chlorine materials, peracetic acid, hydrogen peroxide, ozone, and other sanitizers were considered available alternatives.	The updated petition distinguishes **liquid sanitizers** from **controlled gaseous chlorine dioxide**. The petition explains that these technologies serve different operational purposes and should not be considered direct functional equivalents.	USDA Technical Evaluation; EPA Registration; Chapter 8
Limited commercial need was demonstrated.	Commercial adoption was limited at the time of review.	FruitGard now has 7 plus years of commercial use, an expanded EPA registration covering 15 crop groups, and broader adoption for post-harvest handling. The technology addresses current needs for food safety, shelf-life extension, and reduced post-harvest losses.	EPA Registration; Commercial Technical Reports
Limited EPA registration.	EPA registration covered relatively few commodities.	EPA has expanded the FruitGard registration to **15 EPA crop groups**, encompassing numerous fruits, vegetables, berries, mushrooms, tree nuts, forage crops, tropical fruits, and hemp. This represents a substantially broader federal evaluation of safety and efficacy.	Current EPA Label; Federal Register
Limited federal regulatory record.	The NOSB relied primarily on the original petition and USDA Technical Evaluation.	Since 2018, EPA has completed additional dietary exposure assessments, aggregate human health evaluations, and registration reviews supporting expanded uses. These evaluations materially strengthen the federal scientific record.	EPA Human Health Assessments; Federal Register
Residue concerns.	Residue chemistry was reviewed through the original petition and Technical Evaluation.	EPA has established an exemption from the requirement of a tolerance for chlorate residues if they are formed from the registered gaseous chlorine dioxide use pattern after determining there is a reasonable certainty of no harm from aggregate exposure. This represents an independent federal safety determination based on the expanded record. **Note: in many produce items chlorate will not form**.	EPA Final Rule (40 CFR §180.1364); EPA Risk Assessments
Food-contact acceptance.	FDA authorization existed but was not a central part of the NOSB discussion.	FDA Food Contact Notification No. 949 remains effective for antimicrobial fumigation of raw fruits and vegetables, and FDA issued a Finding of No Significant Impact (FONSI), demonstrating continued federal acceptance of the intended use.	FDA FCN 949; FONSI
Food waste and sustainability were not major considerations.	The discussion focused primarily on antimicrobial alternatives.	Since 2018, reducing food waste, conserving water, extending shelf life, and improving supply-chain resilience have become increasingly important objectives. The substance directly supports these goals by reducing microbial spoilage in post-harvest handling.	Scientific Review; Technical Reports
Current scientific record.	Evaluation was based on the information available in 2018.	The administrative record now includes the original petition, USDA Technical Evaluation, expanded EPA registration, EPA tolerance exemption, FDA authorization, additional EPA human health reviews, and years of commercial experience.	Entire Petition and Appendices

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8. Chemical Abstract Service (CAS) Number and Labels
    a. CAS – none
    b. Substance(s) Commercial Labels and instruction Sheets. **Exhibit 7b** FruitGard label

9. Substance Physical Properties and Mode of Action

    a. Chemical Interactions - Chlorine dioxide gas is a known oxidizer; however, in the these applications there are no known interactions with other substances used in organic production.

    b. Toxicity and Environmental Persistence - Chlorine dioxide is not persistent nor a known bio-accumulative substance (ref: EPA/635/R-00-007, Toxicological Review of Chlorine Dioxide and Chlorite, Sept 2000)

    c. Environmental Impacts from Use and/or Manufacture - There are no known environmental impacts from the use patterns described herein.

    d. Effects on Human Health - The toxicity of chlorine dioxide is well established; it is not a known carcinogen or mutagenic substance – (ref: EPA/635/R-00-007, Toxicological Review of Chlorine Dioxide and Chlorite, Sept 2000). In these applications it does not persist on the surfaces of treated produce. The primary concern in applications is acute toxicity related to inhalation during applications, it is a known irritant to eyes and mucous membranes. Severe exposure (beyond amounts available by petitioned product) can result chemically induced pneumonia and or death. These dangers are effectively mitigated by proper PPE and site SOPs.

    e. Effects on Soil Organisms, Crops, or Livestock
        i. Chlorine dioxide has been shown to decrease soil organisms when applied in concentrated form as liquid or a gas. The literature shows bacteria populations can be suppressed, and larger insects, *e.g.* nematodes, can be reduced in a variety of soil types, *e.g*. potting soils.

        ii. Chlorine dioxide gas can be phytotoxic to plants when applied in concentrated form as liquid or gas. However, the literature shows low gas concentrations can be used to control root and foliage diseases.

        iii. Livestock exposures to chlorine dioxide gas (or by-products) treated feed commodities or produce wastes used in feed will parallel those of humans and EPA has considered these risks. Chlorine dioxide, itself, has been shown to be safe in many applications and has widespread use as a drinking water disinfectant and cleaning agent within the animal health industry.

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10. Safety Data Sheets (SDS – formerly MSDS); National Institute of Health Report

    a. National Institute of Health Report – None known

    b. **Exhibit 10 b** - SDS FruitGard

11. Substance Research Information

The petitioned substance is supported by technology-specific studies and a mature body of independent scientific literature. USDA-ARS residue investigations, peer-reviewed publications using the substance, and numerous independent studies collectively demonstrate the efficacy, residue profile, and safety of the substance for post-harvest treatment of fresh organic produce. As example See **Exhibit 11 a**.

The USDA has invested in dry chlorine dioxide gas research for more than two decades, with particularly strong activity since 2016. Many of these works used the substance described within this petition. The body of work consistently supports dry chlorine dioxide gas as an effective antimicrobial for fresh produce, with research spanning laboratory efficacy, predictive modeling, pilot-scale validation, packaging applications, and commercialization. Collectively, these publications provide a substantial scientific foundation for discussions with regulators, retailers, growers, and industry stakeholders regarding dry chlorine dioxide technologies for produce safety and postharvest quality.

A notable project completed after the 2018 petition review, was USDA-supported research program **"Enhancing the Safety and Quality of Fresh Produce and Low-Moisture Foods by Waterless Non-Thermal Technologies"**, a multidisciplinary initiative funded through the USDA National Institute of Food and Agriculture (NIFA) Agriculture and Food Research Initiative (AFRI), with complementary research conducted by the USDA Agricultural Research Service (ARS). The associated AFRI award provided approximately **$1.81 million** in competitive federal funding, while the ARS component was supported through USDA intramural research funding. The project was established to develop commercially viable, waterless, non-thermal technologies capable of improving the microbiological safety of fresh produce and low-moisture foods while preserving product quality, reducing water and energy consumption, extending shelf life, and facilitating technology transfer to the food industry.

The project evaluated several advanced antimicrobial technologies, including dry gaseous chlorine dioxide, cold plasma, ozone, pulsed light, and monochromatic blue light. Major objectives included determining antimicrobial efficacy against important foodborne pathogens such as *Salmonella*, Shiga toxin-producing *Escherichia coli*,

Listeria monocytogenes, viruses, and parasites; understanding the mechanisms governing microbial inactivation; optimizing treatment parameters and predictive process models, and developing commercially scalable treatment systems suitable for postharvest food processing. The project also emphasized industry adoption, commercialization, education, and extension activities designed to accelerate implementation of these technologies throughout the fresh produce industry.

Within this program, dry gaseous chlorine dioxide, generated from FruitGard emerged as one of the most extensively investigated technologies because of its ability to achieve substantial microbial reductions while maintaining the sensory, nutritional, and physical quality of fresh fruits and vegetables. Subsequent USDA publications demonstrated successful applications ranging from laboratory efficacy studies and predictive microbial modeling to pilot-scale commercial validation, active packaging technologies, agricultural water sanitation, and controlled-release systems designed to simultaneously improve food safety and extend produce shelf life. Collectively, this work represents one of the most comprehensive federal research efforts evaluating dry chlorine dioxide gas for postharvest produce applications.

The relevance of this work to the present National Organic Program (NOP) petition is significant. The USDA identified waterless, non-thermal antimicrobial technologies as an important national research priority because they offer practical solutions for improving food safety, reducing postharvest losses, conserving water resources, and maintaining the quality of fresh fruits and vegetables. These same objectives are central to the intended use of the petition substance as it addresses the same scientific, environmental, and commercial challenges that motivated USDA's substantial investment in this research area.

The USDA program further recognized that improved postharvest technologies contribute directly to sustainable agricultural production by reducing food losses, decreasing reliance on water-intensive sanitation systems, improving resource efficiency, and increasing the availability of wholesome produce to consumers. These objectives closely align with the principles of the Organic Foods Production Act (OFPA), which encourages production systems that conserve natural resources, minimize environmental impacts, and maintain the integrity and quality of agricultural products. These technologies safely reduce spoilage and waste without leaving harmful residues support both environmental stewardship and the long-term economic sustainability of organic agriculture.

In total USDA research programs establish a strong scientific foundation supporting the use of waterless dry chlorine dioxide gas as an effective postharvest intervention and support its consideration as a postharvest handling aid under the national organic program. The independent validation provided through years of federally funded research reinforces the conclusion the petitioned substance represents an innovative intervention capable of advancing food safety, reducing food

waste, conserving resources, and supporting the growth and integrity of organic agriculture.

12. Petition Justification Statement

This petition is submitted in accordance with the current National Organic Program Petition Guidelines; the justification focuses primarily on new scientific, regulatory, and commercial information that was not available during the previous 2018 review.

The original petition was supported by a USDA Technical Evaluation Report documenting the chemistry, toxicology, environmental fate, efficacy, and compatibility of chlorine dioxide gas for organic handling. In 2018 findings NOSB did not conclude the substance was unsafe or incompatible with organic production. Rather, the Board concluded the substance was not demonstrated to be essential because of limited EPA crop approval, available alternatives and because there was limited public support for the petition. Since that decision, the regulatory record has changed substantially. **This justification summarizes those changes and respectfully requests that the Board add the substance to its approved list**. The original 2018 petition, USDA Technical Evaluation, Handling Subcommittee Proposal, and NOSB Recommendation are incorporated by reference where appropriate.

The petitioner submits that four significant developments warrant consideration.

1. EPA Completed Extensive Additional Scientific Review

Since the original 2018 petition, EPA has completed multiple additional scientific reviews of the substance, dry chlorine dioxide gas. These reviews substantially add to the federal scientific record available to the NOSB. Specifically, EPA expanded dietary exposure assessments, cumulative risk evaluations, human health assessments, and environmental reviews associated with expanded commercial use of the substance.

Most significantly, EPA concluded the expanded uses present a reasonable certainty of no harm and established a tolerance exemption for chlorate residues associated with these uses. The EPA tolerance exemption established under **40 CFR §180.1364**, together with the original USDA residue studies and the USDA Technical Evaluation, demonstrates the substance should be evaluated based on its own scientific record. It is noteworthy that residue science shows in most produce applications chlorine dioxide proceeds through a full 5 electron transfer reaction pathway and the only by-product on produce is chloride ion, chlorate ion is not formed. This distinction is directly relevant to the Organic Foods Production Act because the petitioned substance is defined by its **registered method of generation and use**, rather than by the broader category of chlorine dioxide-based antimicrobial products.

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2. EPA Registration Has Expanded Significantly

One of the most significant developments since the 2018 National Organic Standards Board (NOSB) review is the substantial expansion of the EPA-approved FruitGard registration. At the time of the original petition, the registered use pattern was limited to potatoes, tomatoes and cantaloupe. In 2026 EPA expanded the registration to include **15 EPA crop groups**, encompassing numerous representative fruits, vegetables, edible fungi, tree nuts, forage crops, tropical fruits, and hemp. The expanded registration demonstrates EPA has evaluated the safety, residue profile, and efficacy of the registered substance application across a much broader range of commodity types than was available during the 2018 NOSB review. These commodities differ significantly in surface characteristics, respiration rates, storage conditions, and susceptibility to microbial spoilage, requiring EPA to evaluate commodity-specific application rates and treatment conditions as part of the registration process.

The 2026 registration includes crop groups encompassing many of the highest-value organic commodities produced in the United States – Table 2. This expansion substantially increases the potential benefit of the technology to the organic handling sector. Rather than serving a limited segment of post-harvest agriculture, the registered use pattern now encompasses a broad cross-section of commodities that are routinely produced, packed, stored, transported, and marketed through certified organic supply chains. From an organic handling perspective, broader commodity coverage increases the practical utility of the technology throughout the supply chain. Organic handlers frequently pack, store, and distribute multiple commodity types within the same facilities. A post-harvest antimicrobial technology that is registered for a diverse range of commodities can provide greater operational flexibility, reduce the need for commodity-specific treatment systems, and improve consistency in post-harvest handling practices.

The petitioner submits expanded commodity coverage is directly relevant to the statutory criterion of essentiality. The substance is no longer limited to a narrow application but has become broadly applicable across the organic produce sector. As the number and diversity of registered commodities have increased, so too has the potential contribution of the technology to reducing post-harvest losses, maintaining product quality, supporting food safety, and improving the efficiency of organic handling operations. Accordingly, the expanded EPA registration should be viewed not simply as an increase in the number of approved crops, but as evidence that the federal scientific and regulatory record has matured substantially since the 2018 NOSB review.

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Table 2: EPA-Approved FruitGard Crop Groups with Significant Relevance to Organic Agriculture

EPA Crop Group	Representative Organic Commodities	Relevance to Certified Organic Handling
1. Root and Tuber Vegetables	Potato, carrot, radish, beet	Major organic storage crops requiring long-term storage and distribution.
3-07. Bulb Vegetables	Onion, garlic, shallot	Important organic vegetables susceptible to storage losses and microbial spoilage.
8-10. Fruiting Vegetables	Tomato, bell pepper, specialty peppers	High-value organic produce requiring careful post-harvest quality management.
9. Cucurbit Vegetables	Cucumber, cantaloupe, muskmelon, summer squash	Widely marketed organic commodities with significant post-harvest handling requirements.
10-10. Citrus Fruits	Oranges, lemons and related citrus	Important domestic and imported organic fruit commodities.
11-10. Pome Fruits	Apples, pears	Among the largest organic fruit categories marketed in the United States.
12-12. Stone Fruits	Peaches, nectarines, plums, cherries	High-value organic fruit crops with relatively short post-harvest life.
13-07. Berry and Small Fruits	Strawberries, blueberries, raspberries, blackberries	One of the fastest-growing organic produce sectors and among the commodities with the highest post-harvest losses.
14-12. Tree Nuts	Almonds, walnuts, pistachios	High-value certified organic specialty crops requiring extended storage.
21. Edible Fungi	White button mushrooms, shiitake	Premium organic commodities with limited shelf life and high spoilage potential.
23. Tropical and Subtropical Fruits (Edible Peel)	Olives, figs, guava, dates	Expands coverage to specialty organic fruit commodities.
24. Tropical and Subtropical Fruits (Inedible Peel)	Avocado, pomegranate, banana, pineapple	Includes several of the highest-volume organic tropical fruits sold in the U.S. market.
Hemp (commodity specifically listed on the EPA label)	Harvested hemp	Specialty crop with increasing organic production and stringent microbial quality requirements.

Note 1. The commodities shown are representative examples from the EPA-approved FruitGard label. Each EPA crop group includes numerous additional commodities as defined in EPA crop-group regulations. The 2026 EPA tolerance exemption applies to these crop groups when residues result from the registered application of gaseous chlorine dioxide.

Note 2. The EPA registration evaluated representative commodities within these crop groups for post-harvest fumigation. The corresponding FDA Food Contact Notification (FCN No. 949) authorizes the antimicrobial fumigation of raw fruits and vegetables without limiting authorization to individual crop groups. Accordingly, FDA authorization encompasses all raw fruits and vegetables within the approved food-contact use, while the EPA registration establishes the specific pesticide use directions and crop-group coverage.

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3. FDA Food Contact Authorization Remains in Effect

FDA Food Contact Notification 949 remains effective for the use of chlorine dioxide gas as an antimicrobial agent for fumigating processed raw fruits and vegetables. FDA also issued a Finding of No Significant Impact (FONSI) under the National Environmental Policy Act for this use. Accordingly, the technology continues to have independent FDA authorization for direct food-contact applications.

4. Essentiality

The petitioner submits the essentiality of the petitioned substance should be evaluated based upon its potentially unique contribution to modern organic handling systems rather than solely on the availability of other antimicrobial materials. The principal reason for the previous 2018 NOSB recommendation was not safety, but the conclusion the petitioner had not demonstrated essentiality because alternative substances were available.

Since 2018, organic handlers have experienced:

1. increasing food loss and waste,
2. greater retailer food safety expectations,
3. increasing transportation distances,
4. increasing water conservation needs,
5. growing demand for reduced post-harvest losses without synthetic preservatives.
6. Increasing EPR pressure to reduce and simplify packaging waste

The petitioned substance expands organic producer's capabilities to address these challenges directly supporting the Organic Foods Production Act's objectives aimed to conserve natural resources while maintaining product integrity.

Specifically, it provides:

1. dry gaseous treatment without wash water;
2. treatment of packed produce;
3. penetration of irregular produce surfaces; greater efficacy than liquid alternatives
4. reduction of spoilage organisms during storage and shipment;
5. rapid decomposition following treatment;
6. reduced wastewater generation.

The substance is unique among post-harvest interventions because its intended use is directed toward two complementary public policy objectives simultaneously: reducing microorganisms that affect food safety while also reducing microorganisms that contribute to post-harvest spoilage and food waste. These objectives are aligned with Organic Foods Production Act's goals of

protecting the integrity of organically produced food while promoting environmentally responsible handling practices.

Fresh fruits and vegetables waste represents some of the largest contributions to greenhouse gas release, freshwater waste, and ultimately food insecurity. Their high moisture content, continued respiration after harvest, and susceptibility to microbial spoilage make post-harvest preservation particularly important for maintaining both food quality and safety. According to ReFED, approximately 29% of the U.S. food supply remained unsold or uneaten in 2024, representing approximately $380 billion in lost food value. Table 3 presents the potential substance impact and connection to organic produce.

Table 3: Economic Significance Produce Waste and Relevance to the Petition

Metric	Current Estimate	Significance to Organic Handling
Annual U.S. surplus food	Approximately 70 million tons	Demonstrates the national scale of food loss occurring throughout production, distribution, retail, food service, and households.
Annual economic value of surplus food	Approximately $380 billion	Represents the estimated annual value of food that is produced but never consumed.
Food supply not consumed	Approximately 29% of all food produced	Nearly one-third of the U.S. food supply is lost or wasted each year.
Largest category of retail food waste	Fresh fruits and vegetables (approximately one-third of retail surplus food)	Fresh produce is consistently the largest contributor to retail food waste because of its high perishability and susceptibility to microbial spoilage.
Primary causes of produce losses	Microbial spoilage, senescence, moisture loss, mechanical damage, and quality deterioration	These factors directly affect marketability, shelf life, and consumer acceptance.
FruitGard intended use	Post-harvest antimicrobial treatment of harvested fruits and vegetables during storage, transportation, and distribution	Directly addresses microorganisms associated with both food safety and spoilage, thereby supporting reduced shrink and improved utilization of harvested produce.
EPA commodity coverage	15 EPA crop groups encompassing representative fruits, vegetables, berries, tree nuts, edible fungi, tropical fruits, and hemp	Demonstrates that the technology is applicable across a substantial portion of the organic produce sector rather than a limited number of commodities.
Potential benefit to organic handlers	Reduced post-harvest microbial contamination, improved product quality, and reduced food waste	Supports the objectives of preserving organically produced food while improving supply-chain efficiency and reducing unnecessary waste of agricultural resources.

- ReFED U.S. Food Waste Report
- ReFED Retail Food Waste Data

The petitioner submits the intended use of the substance is also consistent with national objectives. Since the 2018 NOSB review, federal policy has also changed, placing increasing emphasis on reducing food loss and waste, improving food safety, strengthening domestic agriculture, and increasing consumption of fresh fruits and vegetables. Current federal initiatives, including those emphasizing improved nutrition, healthier diets, and increased consumption of fresh fruits and vegetables, recognize that maintaining the availability and quality of fresh produce is an important public health objective. Table 4 highlight these connections and the relevance to essentiality.

Table 4: Alignment of Substance with Current Federal Priorities

Federal Priority	Substance Contribution	Relevance to Essentiality
Reduce food waste	Suppresses spoilage microorganisms during storage, transportation, and distribution.	Preserves organically produced food and reduces post-harvest losses.
Improve food safety	Reduces microorganisms associated with foodborne contamination during post-harvest handling.	Supports modern food safety systems for organic handlers.
Increase consumption of fruits and vegetables	Helps maintain quality and marketability of fresh produce through the supply chain.	Supports consumer access to high-quality organic produce.
Conserve agricultural resources	Reducing spoilage also reduces the loss of water, fertilizer, land, labor, packaging, and transportation invested in producing food.	Consistent with sustainable resource management objectives.
Strengthen domestic agriculture	Applicable across EPA-approved crop groups representing many major U.S. fruit and vegetable commodities.	Broad utility for certified organic producers and handlers.
Improve supply-chain resilience	Helps maintain quality during storage and transportation, including longer distribution channels.	Supports efficient movement of organic produce from farm to consumer.

- U.S. EPA – Food Recovery Hierarchy and Food Waste Reduction
- U.S. Department of Agriculture – Food Loss and Waste
- ReFED – U.S. Food Waste Overview

The petitioner does not suggest the substance replaces good agricultural practices, sanitation programs, temperature management, refrigeration, or other approved antimicrobial materials. Rather, the substance complements existing practices by providing an additional post-harvest interventions designed for enclosed storage, transportation, and handling environments where conventional liquid antimicrobial treatments may not provide equivalent operational flexibility.

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Essentiality Conclusion

The scientific basis supporting the original petition has been substantially strengthened by years of additional federal review and regulatory action. The original reasons for denial were based primarily on the determination that essentiality had not been demonstrated rather than concerns regarding safety or compatibility with organic handling. The petitioner submits the expanded EPA registration, FDA authorization, federal tolerance exemption, and increasing need for effective post-harvest tools to reduce food waste and conserve water collectively warrant substance inclusion on the National List.

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Item a
Statement #5
Exhibit 5 Manufacturing Processes

FruitGard

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Manufacturing Process – FruitGard

400 lb. load

Sodium Chlorite Impregnate

Batch Production Record – Inventory Qty. = 223,200 grams

Materials:

Zeolite	Material 1
Chlorite Solution 25 wt % (31.25 wt %)	Material 2

Procedure:

ZEOLITE Confirm Correct Zeolite Size _____ PPE– SAFETY GOGGLES, DUST MASK, STEEL TOE BOOTS, GLOVES, EAR PROTECTION,	**CHEMICALS** Confirm Chemicals (Name, Lot # amount) _____ PPE: GOGGLES, GLOVES, PROTECTIVE CLOTHING
Make sure mixer is in "locked" or "tow" position. Pour zeolite into mixer and cover mixer. CONFIRM CORRECT AMOUNT OF ZEOLITE.	Dispense chemicals into drum. CONFIRM CHEMICALS INJECTED (Name, Lot #, amount) Gently mix chemicals with stir bar.

◯ Turn on mixer and engage blades.
◯ Confirm that spray heads are properly positioned. Turn on sprayer.
◯ When all chemicals have been applied to the zeolite, (1)turn off sprayer, (2)disengage mixer blades, (3) Turn off mixer.
◯ Empty the mixer into drums – put media into proper receptacle.
◯ Keep media covered when not in use.

TAP DENSITY TEST PROCEDURE: Weigh out 100 grams ZC. Put ZC into plastic graduated cylinder. Tap cylinder firmly on its base 25 times. Record level of ZC on chart below.

TAP DENSITY TEST 100 GMS	
INITIALS	**Cylinder Reading**

TAP DENSITY TEST 100 GMS	
INITIALS	**Cylinder Reading**

TAP DENSITY TEST 100 GMS	
INITIALS	**Cylinder Reading**

SODIUM CHLORITE LOT #

OTHER NAME

LOT#

Production Lot Number: **ZC3.0- -006**	**No. Batches Produced:**
PRODUCTION MANAGER:	

Place FINAL FruitGard Lot# Label Here:

ICA TriNova, LLC
Intellectual Capital Associates
1 BEAVERS STREET - SUITE B - NEWNAN, GEORGIA 30263 - PHONE 678.850.8844 - EMAIL - sales@icatrinova.com

Exhibit a
Statement #7

Commercial Labels and Instructions

FruitGard

Post-Harvest Treatment Bactericide/Fungicide
For Indoor Use Only

Active ingredient - Sodium Chlorite	3.2%
Other Ingredients	96.8%
Total	100.0%

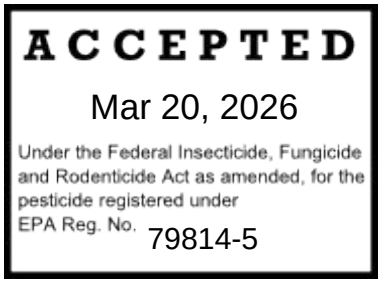
KEEP OUT OF REACH OF CHILDREN
CAUTION

See back panel for additional precautionary statements and First Aid statements.

NET WT __lbs (__ kg)

EPA Reg. No. 79814-5

EPA Est. No. 79814-GA-001



ICA-TriNova, LLC
1 Beavers St., Suite B
Newnan, GA 30263 USA

(770) 683 9181
sales@icatrinova.com

PRECAUTIONARY STATEMENTS

KEEP OUT OF REACH OF CHILDREN
CAUTION

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Causes moderate eye irritation. Avoid contact with eyes or clothing. Wear (specify protective eyewear, if applicable). Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Harmful if inhaled. Avoid breathing vapors. Remove and wash contaminated clothing before reuse. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

USER SAFETY RECOMMENDATIONS: After handling wash hands thoroughly with soap and water and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing immediately and wash clothing before reuse. Remove PPE immediately after handling this product, wash outside of gloves before removing.

PERSONAL PROTECTIVE EQUIPMENT (PPE)
Mixers, loaders, applicators and other handlers must wear: Long-sleeved shirt and long pants, Shoes plus socks; and Waterproof gloves.

ENGINEERING CONTROLS
DO NOT mix with acid or other chemicals except as provided for in the "Directions for Use". Uncontrolled mixing with acids or other chemicals may cause evolution of chlorine dioxide gas that may be poisonous or explosive. NEVER trap chlorine dioxide gas in a closed container, trapped gas may overpressure and decompose releasing enough heat to cause fire.

FIRST AID	
If in Eyes	• Hold eyes open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, and then continue rinsing. • Call a poison control center or doctor for treatment advice.
If Inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice.
If on Skin	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
Have the product container or label with you when calling a poison control center, or doctor, or going for treatment. You may also contact: 1-800-373-7542 for emergency medical treatment information.	

ENVIRONMENTAL HAZARD
This product is toxic to fish, aquatic invertebrates, oysters and shrimp.

DIRECTIONS FOR USE

It is a violation of Federal law to use the product in a manner inconsistent with its labeling.

For Commercial/Industrial Users Only
Not For Residential/Household Use

Do not apply this product in a way that will contact workers or other persons.

Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

Personnel must vacate the treatment space during the fumigation process until chlorine dioxide levels are at or below the EPA RfC 0.1 ppm or wear a NIOSH/MSHA approved respirator for chlorine dioxide. Chlorine dioxide levels in air can be measured with a Model C16 Pota Sans II chlorine dioxide gas leak detector or equivalent measuring device.

Personal Protective Equipment required for early entry to treated areas is:

- NIOSH/MSHA approved respirator for chlorine dioxide;
- Long-sleeved shirt and long pants;
- Shoes plus socks; and
- Waterproof gloves.

Notify workers of the application by warning them orally and by posting warning signs at entrances to treated areas.

FruitGard granules are designed to release low levels of chlorine dioxide (ClO_2) gas. Chlorine dioxide gas generated from FruitGard is effective in the control of microorganisms responsible for contamination, decay and spoilage of listed crops during the storage and shipment of these raw agricultural commodities. Required dosages vary depending on the commodity to be treated and as outlined in the table below. These directions address the use and activation of these granules for treating raw agricultural commodities.

Treat in a suitable dark space (less than 5 lumens). Two such treatment sites are Storage Rooms and Shipping Containers. Fill treatment space with the commodity to be treated. Chlorine dioxide gas condenses rapidly on the surfaces of raw agricultural commodities, so it is necessary to have air circulation over and through produce during fumigation.

Acid activation increases the release rate of chlorine dioxide from FruitGard. To activate FruitGard add liquid food grade acid or solid acid impregnate material only at the point of application. Your sales representative can guide you in the application techniques.

AVOID BREATHING FUMES.

DO NOT combine or mix acidifiers and FruitGard in closed containers or mixers. NEVER trap chlorine dioxide gas in a closed container, trapped gas may overpressure and decompose releasing enough heat to cause fire.

Commodities, Application Rates, and Application Times

FruitGard Application Table:

Crop Group or Subgroup Number and Name		Representative Raw Agricultural Commodity (RAC)	Post-Harvest Indoor Fumigation Use		
			Application Rate (grams of product/ Kg Crop)	Minimum Treatment Time	Applications Notes
1.0	Root and Tuber Vegetables	Carrot	0.01-1.0	6 Hours	Use Maximum Rate for Severe Decay Conditions
		Potato	0.01-1.0	6 Hours	Use Maximum Rate for Severe Decay Conditions
		Radish	0.01-1.0	6 Hours	Use Maximum Rate for Severe Decay Conditions
		Sugar Beet	0.01-1.0	6 Hours	Use Maximum Rate for Severe Decay Conditions
3.0	Bulb Vegetables, Bulbs	Onion, bulb	0.01-1.5	6 Hours	Use Maximum Rate for Severe Decay Conditions
		Garlic, bulb	0.01-1.5	6 Hours	Use Maximum Rate for Severe Decay Conditions
		Shallot, Bulb	0.01-1.5	6 Hours	Use Maximum Rate for Severe Decay Conditions
8.0	Fruiting Vegetables	Tomato, standard size	0.01-6.6	3 Hours	Use Maximum Rate for Severe Decay Conditions
		Small tomato	0.01-1.0	3 Hours	Use Maximum Rate for Severe Decay Conditions
		Bell pepper	0.01-1.0	3 Hours	Use Maximum Rate for Severe Decay Conditions
		Small non-bell pepper	0.01-1.0	3 Hours	Use Maximum Rate for Severe Decay Conditions
9.0	Cucurbit Vegetables	Cantaloupes	0.01-12	6 Hours	Use Maximum Rate for Severe Decay Conditions
		Cucumber	0.01-1.0	6 Hours	Use Maximum Rate for Severe Decay Conditions
		Muskmelon	0.01-12	6 Hours	Use Maximum Rate for Severe Decay Conditions
		Summer squash	0.01-1.0	6 Hours	Use Maximum Rate for Severe Decay Conditions

10.0	Citrus	Orange, sweet	0.01-1.0	3 Hours	Use Maximum Rate for Severe Decay Conditions
		Lemon	0.01-1.0	3 Hours	Use Maximum Rate for Severe Decay Conditions
		Grapefruit	0.01-1.0	3 Hours	Use Maximum Rate for Severe Decay Conditions
11.0	Pome Fruits	Apple	0.01-1.0	3 Hours	Use Maximum Rate for Severe Decay Conditions
		Pear	0.01-1.0	3 Hours	Use Maximum Rate for Severe Decay Conditions
12.0	Stone Fruits	Plum	0.01-1.0	3 Hours	Use Maximum Rate for Severe Decay Conditions
		Cherry (sweet or tart)	0.01-1.0	3 Hours	Use Maximum Rate for Severe Decay Conditions
		Peach	0.01-1.0	3 Hours	Use Maximum Rate for Severe Decay Conditions
13.0	Berries	Raspberry	0.01-0.5	3 Hours	Use Maximum Rate for Severe Decay Conditions
		Strawberry	0.01-0.5	3 Hours	Use Maximum Rate for Severe Decay Conditions
		Highbush blueberry	0.01-1.0	3 Hours	Use Maximum Rate for Severe Decay Conditions
		Fuzzy Kiwifruit	0.01-1.0	3 Hours	Use Maximum Rate for Severe Decay Conditions
		Grape	0.01-1.0	3 Hours	Use Maximum Rate for Severe Decay Conditions
		Elderberry	0.01-1.0	3 Hours	Use Maximum Rate for Severe Decay Conditions
14.0	Tree Nuts	Almonds	0.01-3.0	3 Hours	Use Maximum Rate for Severe Decay Conditions
		Pecan	0.01-3.0	3 Hours	Use Maximum Rate for Severe Decay Conditions
16.0	Forage, Fodder and Straw of Cereal Grains	Corn	0.01-3.0	6 Hours	Use Maximum Rate for Severe Decay Conditions
		Rice	0.01-3.0	6 Hours	Use Maximum Rate for Severe Decay Conditions
		Sorghum	0.01-3.0	6 Hours	Use Maximum Rate for Severe Decay Conditions
		Wheat	0.01-3.0	6 Hours	Use Maximum Rate for Severe Decay Conditions
17.0	Grass Forage, Fodder, and Hay	Bermuda grass	0.01-0.5	6 Hours	Use Maximum Rate for Severe Decay Conditions
		Blue Grass	0.01-0.5	6 Hours	Use Maximum Rate for Severe Decay Conditions
		Fescue	0.01-0.5	6 Hours	Use Maximum Rate for Severe Decay Conditions

18.0	Non-Grass Animal Feeds	Alfalfa	0.01-0.5	6 Hours	Use Maximum Rate for Severe Decay Conditions
		Clover	0.01-0.5	6 Hours	Use Maximum Rate for Severe Decay Conditions
21.0	Edible Fungi	White Button	0.01-0.5	3 Hours	Use Maximum Rate for Severe Decay Conditions
		Shitake	0.01-0.5	3 Hours	Use Maximum Rate for Severe Decay Conditions
23.0	Tropical and Subtropical Fruits, Edible Peel	Olive	0.01-1.0	3 Hours	Use Maximum Rate for Severe Decay Conditions
		Fig	0.01-1.0	3 Hours	Use Maximum Rate for Severe Decay Conditions
		Guava	0.01-1.0	3 Hours	Use Maximum Rate for Severe Decay Conditions
		Date	0.01-1.0	3 Hours	Use Maximum Rate for Severe Decay Conditions
24.0	Tropical and Subtropical Fruits. Inedible Peel	Avocado	0.01-1.0	6 Hours	Use Maximum Rate for Severe Decay Conditions
		Pomegranate	0.01-1.0	3 Hours	Use Maximum Rate for Severe Decay Conditions
		Banana, hand	0.01-1.0	3 Hours	Use Maximum Rate for Severe Decay Conditions
		Pineapple	0.01-2.0	3 Hours	Use Maximum Rate for Severe Decay Conditions
		Hemp	0.01-0.5	6 Hours	Use Maximum Rate for Severe Decay Conditions

Treatment Procedure:

1. Place modified reactor in the Treatment Container holding the listed commodity to be treated in a way that allows gas to freely migrate across the produce. A modified reactor is a breathable sachet (such as Tyvek®), an open mixer, or a plastic container (pail, drum, box, etc.) with a vented cover that allows for the release of chlorine dioxide gas. For very large quantities of produce, use of multiple reactors is recommended.
2. Place the measured amount of FruitGard® into the modified reactor.
3. When activating FruitGard, add the measured amount of either liquid food grade acid or solid acid impregnate material to the modified reactor containing the FruitGard as shown below:
   a) Liquid food grade acid:
      i. Add 1 ounce of 50% (wt/wt) citric acid solution per 2.2 lbs (1,000 grams) of FruitGard®, or
      Add ½ ounce of 75% (wt/wt) phosphoric acid per 2.2 lbs (1,000 grams) of FruitGard®.

b) Solid acid impregnate:

i. Mix equal weights of FruitGard and the solid acid impregnate material.

4. Mix the materials. - chlorine dioxide released from FruitGard will accelerate once mixed.

5. Close the Treatment Container and provide signage about no entry without specified PPE prior to end of treatment. Treat commodity for the time specified in the FruitGard Application Table.

6. When the fumigation is complete, unseal the space. (To confirm the chlorine dioxide concentration is at or below 0.1 ppm using ClO_2 detection coupons or a Model C16 Pota Sans II chlorine dioxide gas leak detector or equivalent measuring device.)

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

STORAGE: Store in a cool (preferably <75°F), dry, well-ventilated area away from heat, or open flame or combustible materials. Keep container sealed when not in use. Keep dry.

PESTICIDE DISPOSAL: Pesticide wastes from unused, partially used or spilled material are acutely hazardous. Improper disposal of excess pesticide is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

{For Non-Refillable Containers 5 Gallons or smaller} CONTAINER HANDLING: Nonrefillable container. Do not reuse or refill this container. Triple rinse as follows: Fill container 1/4 full with water and recap. Shake for 10 seconds. Drain for 10 seconds after the flow begins to drip. Follow Pesticide Disposal instructions for rinsate disposal. Page 5 Repeat procedure two more times. Then offer for reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by incineration.

{For Non-Refillable Containers larger than 5 Gallons}
CONTAINER HANDLING: Nonrefillable container. Do not reuse or refill this container. Triple Rinse as follows: Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Follow Pesticide Disposal instructions for rinsate disposal. Repeat this procedure two more times. Then offer for reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by incineration.

WARRANTY CONDITIONS OF SALE

OUR RECOMMENDATIONS FOR THE USE of this product are based upon tests believed reliable. Follow directions carefully. Buyer assumes all risks of use, storage and handling of this material not in strict accordance and direction given herewith. In no case shall ICA-TriNova, LLC or the seller be liable for consequential, special or indirect damage resulting from the use or handling of this product when use and/or handling is not in strict accordance with directions given herewith. The foregoing is a condition of sale by ICA-TriNova, LLC and is accepted by the buyer.

ICATriNova, LLC
Intellectual Capital Associates

1 BEAVERS STREET - SUITE B - NEWNAN, GEORGIA 30263 - PHONE 78.850.8844 – EMAIL - sales@icatrinova.com

Exhibit b
Statement #7

EPA Tolerance Exemption

PART 39—AIRWORTHINESS DIRECTIVES

■ 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

■ 2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2026–02–12 Airbus Helicopters Deutschland GmbH (AHD): Amendment 39–23248; Docket No. FAA–2026–0731; Project Identifier MCAI–2025–01864–R.

(a) Effective Date

This airworthiness directive (AD) is effective February 17, 2026.

(b) Affected ADs

None.

(c) Applicability

This AD applies to all Airbus Helicopters Deutschland GmbH (AHD) Model MBB–BK117 D–3 helicopters.

(d) Subject

Joint Aircraft System Component (JASC) Code 6230, Main Rotor Mast/Swashplate.

(e) Unsafe Condition

This AD was prompted by a report of excessive wear on the bearing bolts, installed on the swashplate, connecting the cardan ring and the control ring assembly. The FAA is issuing this AD to prevent failure of the bearing bolts. The unsafe condition, if not addressed, could lead to loss of control of the helicopter.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

Except as specified in paragraphs (h) and (i) of this AD: Comply with all required actions and compliance times specified in, and in accordance with, European Union Aviation Safety Agency Emergency AD 2025–0298–E, dated December 23, 2025 (EASA Emergency AD 2025–0298–E).

(h) Exceptions to EASA Emergency AD 2025–0298–E

(1) Where EASA Emergency AD 2025–0298–E refers to its effective date, this AD requires using the effective date of this AD.

(2) Where EASA Emergency AD 2025–0298–E requires compliance in terms of flight hours, this AD requires using hours time-in-service.

(3) Where EASA Emergency AD 2025–0298–E uses the term ''new'', this AD requires replacing that term with ''new (zero hours time-in-service)''.

(4) This AD does not adopt the ''Remarks'' section of EASA Emergency AD 2025–0298–E.

(i) No Reporting Requirement

Although the material referenced in EASA Emergency AD 2025–0298–E specifies to submit certain information to the manufacturer, this AD does not require any of these actions.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the International Validation Branch, send it to the attention of the person identified in paragraph (k) of this AD and email to: *AMOC@faa.gov.*

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(k) Additional Information

For more information about this AD, contact Steven Warwick, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: (817) 222–5225; email: *steven.r.warwick@faa.gov.*

(l) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference of the material listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this material as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) European Union Aviation Safety Agency (EASA) Emergency AD 2025–0298–E, dated December 23, 2025.

(ii) [Reserved]

(3) For EASA material identified in this AD, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; phone: +49 221 8999 000; email: *ADs@easa.europa.eu;* website: *easa.europa.eu.* You may find the EASA material on the EASA website at *ad.easa.europa.eu.*

(4) You may view this material at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Parkway, Room 6N–321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222–5110.

(5) You may view this material at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, visit *www.archives.gov/federal-register/cfr/ibr-locations* or email *fr.inspection@nara.gov.*

Issued on January 22, 2026.

Steven W. Thompson,

Acting Deputy Director, Compliance & Airworthiness Division, Aircraft Certification Service.

[FR Doc. 2026–01878 Filed 1–29–26; 8:45 am]

BILLING CODE 4910–13–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 180

[EPA–HQ–OPP–2021–0516; FRL 13148–01–OCSPP]

Chlorate; Exemption From the Requirement of a Pesticide Tolerance

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This regulation establishes an exemption from the requirement of a tolerance for residues of chlorate (CAS Reg. No. 7775–09–9) in or on several food commodities. Under the Federal Food, Drug, and Cosmetic Act (FFDCA), TriNova LLC submitted a petition to EPA requesting an exemption from the requirement of a tolerance. This regulation eliminates the need to establish a maximum permissible level for residues of this pesticide when used in accordance with the terms of the exemption.

DATES: This rule is effective on January 30, 2026. Objections and requests for hearings must be received on or before March 31, 2026, and must be filed in accordance with the instructions provided in 40 CFR part 178 (see also Unit I.C. of this document).

ADDRESSES: The docket for this action, identified by docket identification (ID) number EPA–HQ–OPP–2021–0516, is available online at *https://www.regulations.gov.* Additional information about dockets generally, along with instructions for visiting the docket center in person, is available at *https://www.epa.gov/dockets.*

FOR FURTHER INFORMATION CONTACT: Kristen Willis, Antimicrobials Division (7510M), Office of Pesticide Programs, Environmental Protection Agency, 1200 Pennsylvania Ave. NW, Washington, DC 20460–0001; main telephone number: 202–566–0793; email address: *ADFRNotices@epa.gov.*

SUPPLEMENTARY INFORMATION:

I. General Information

A. Does this action apply to me?

You may be potentially affected by this action if you are an agricultural producer, food manufacturer, or pesticide manufacturer. The following list of North American Industrial Classification System (NAICS) codes is not intended to be exhaustive, but rather provides a guide to help readers determine whether this document might apply to them:

- Crop production (NAICS code 111).

- Animal production (NAICS code 112).
- Food manufacturing (NAICS code 311).
- Pesticide manufacturing (NAICS code 32532).

B. What is EPA's authority for taking this action?

EPA is issuing this rulemaking under section 408 of the Federal Food, Drug, and Cosmetic Act (FFDCA), 21 U.S.C. 346a. FFDCA section 408(c)(2)(A)(i) allows EPA to establish an exemption from the requirement for a tolerance (the legal limit for a pesticide chemical residue in or on a food) only if EPA determines that the exemption is ''safe.'' FFDCA section 408(c)(2)(A)(ii) defines ''safe'' to mean that ''there is a reasonable certainty that no harm will result from aggregate exposure to the pesticide chemical residue, including all anticipated dietary exposures and all other exposures for which there is reliable information.'' This includes exposure through drinking water and in residential settings but does not include occupational exposure. Pursuant to FFDCA section 408(c)(2)(B), in establishing or maintaining in effect an exemption from the requirement of a tolerance, EPA must take into account the factors set forth in FFDCA section 408(b)(2)(C), which require EPA to give special consideration to exposure of infants and children to the pesticide chemical residue in establishing a tolerance and to ''ensure that there is a reasonable certainty that no harm will result to infants and children from aggregate exposure to the pesticide chemical residue . . . .'' Additionally, FFDCA section 408(b)(2)(D) requires that the Agency consider, among other things, ''available information concerning the cumulative effects of a particular pesticide's residues'' and ''other substances that have a common mechanism of toxicity.''

C. How can I file an objection or hearing request?

Under FFDCA section 408(g), 21 U.S.C. 346a(g), any person may file an objection to any aspect of this regulation and may also request a hearing on those objections. If you fail to file an objection to the final rule within the time period specified in the final rule, you will have waived the right to raise any issues resolved in the final rule. You must file your objection or request a hearing on this regulation in accordance with the instructions provided in 40 CFR part 178. To ensure proper receipt by EPA, you must identify the docket ID number EPA–HQ–OPP–2021–0516 in the subject line on the first page of your submission. All objections and requests for a hearing must be in writing and must be received by the Hearing Clerk on or before March 31, 2026.

EPA's Office of Administrative Law Judges (OALJ), in which the Hearing Clerk is housed, urges parties to file and serve documents by electronic means only, notwithstanding any other particular requirements set forth in other procedural rules governing those proceedings. *See* ''Revised Order Urging Electronic Filing and Service,'' dated June 22, 2023, which can be found at *https://www.epa.gov/system/files/documents/2023-06/2023-06-22%20%20revised%20order%20urging%20electronic%20filing%20and%20service.pdf.* Although EPA's regulations require submission via U.S. Mail or hand delivery, EPA intends to treat submissions filed via electronic means as properly filed submissions; therefore, EPA believes the preference for submission via electronic means will not be prejudicial. When submitting documents to the OALJ electronically, a person should utilize the OALJ e-filing system at *https://yosemite.epa.gov/oa/eab/eab-alj_upload.nsf.*

In addition to filing an objection or hearing request with the Hearing Clerk as described in 40 CFR part 178, please submit a copy of the filing (excluding any Confidential Business Information (CBI)) for inclusion in the public docket at *https://www.regulations.gov.* Follow the online instructions for submitting comments. Do not submit electronically any information you consider to be CBI or other information whose disclosure is restricted by statute. If you wish to include CBI in your request, please follow the applicable instructions at *https://www.epa.gov/dockets/commenting-epa-dockets#rules* and clearly mark the information that you claim to be CBI. Information not marked confidential pursuant to 40 CFR part 2 may be disclosed publicly by EPA without prior notice.

II. Summary of Petitioned-For Exemptions

In the **Federal Register** of January 13, 2025 (90 FR 2661) (FRL 11682–11–OCSPP), EPA issued a document pursuant to FFDCA section 408(d)(3), 21 U.S.C. 346a(d)(3), announcing the filing of a pesticide petition (PP 1F8916) by ICA TriNova LLC, 1 Beavers Street Suite B, Newman, GA 30263. The January 13, 2025 document superseded the Notice of Filing published on November 23, 2021 (86 FR 66152) (FRL 879–05–OCSPP) regarding PP 1F8916. The petition requested that 40 CFR 180.1364 be amended by expanding the exemption from the requirement of a tolerance for residues of chlorate to include the following crop groups: Crop Group 1 (root and tuber vegetables), Crop Group 3 (bulb vegetables, bulbs), Crop Group 8 (fruiting vegetables), Crop Group 9 (cucurbit vegetables), Crop Group 10 (citrus), Crop Group 11 (pome fruits), Crop Group 12 (stone fruits), Crop Group 13 (berries), Crop Group 14 (tree nuts), Crop Group 16 (forage, fodder, and straw of cereal grains), Crop Group 17 (grass forage, fodder, and hay), Crop Group 18 (non-grass animal feeds), Crop Group 21 (edible fungi), Crop Group 23 (tropical and subtropical fruits, edible peel), and Crop Group 24 (tropical and subtropical fruits, inedible peel). A summary in support of the petition is available in the docket (EPA–HQ–OPP–2021–0516), *https://www.regulations.gov.* Two public comments were received on the first Notice of Filing submitted on November 23, 2021, and one public comment was received on the Notice of Filing submitted on January 13, 2025, that superseded the November 23, 2021 Notice of Filing. The comment period for the November 13, 2021 Notice of Filing ended on December 23, 2021. The comment period for the January 13, 2025 Notice of Filing ended on February 12, 2025.

III. Final Tolerance Action

Consistent with FFDCA section 408(b)(2)(D), and the factors specified in FFDCA section 408(b)(2)(D), EPA has reviewed the available scientific data and other relevant information in support of this action. EPA has sufficient data to assess the hazards of and to make a determination on aggregate exposure for chlorate, including exposure resulting from the exemption established by this action. EPA's assessment of exposures and risks associated with chlorate follows.

In an effort to streamline its publications in the **Federal Register**, EPA is not reprinting sections that repeat what has been previously published for tolerance rulemaking of the same pesticide chemical. Where scientific information concerning a particular chemical remains unchanged, the content of those sections would not vary between tolerance rulemaking and republishing the same sections is unnecessary. EPA considers referral back to those sections as sufficient to provide an explanation of the information EPA considered in making its safety determination for the new rulemaking.

EPA previously published a tolerance rulemaking for chlorate on December 26, 2018, in which the Agency

concluded that there is a reasonable certainty that no harm would result from aggregate exposure to chlorate and established exemptions for residues on tomatoes and cantaloupes. The publication of the rulemaking can be found at 83 FR 66138 (FRL–9986–85). EPA's assessment of safety in support of the 2018 rulemaking, *Risk Assessment of Tomato and Cantaloupe Fumigation with Sodium Chlorite 3.2% (chlorine dioxide gas)* (hereafter 2018 EPA Risk Assessment), is included in the docket for this current rulemaking, as it also supports this current rulemaking.

Since the time of the initial tolerance exemption, EPA has evaluated the potential for dietary exposures to chlorates in three different assessments: (1) an Agency memo that was signed on November 10, 2020, titled ''Sodium Chlorate: Summary of Hazard and Science Policy Council (HASPOC) Meeting of October 15, 2020: Recommendations on Conducting a Qualitative Assessment of Chlorate and Waiving All Crop Chlorate Residue Data (hereafter ''2020 EPA HASPOC memo''); (2) the Inorganic Chlorates Revised Draft Human Health Risk Assessment (DRA) in Support of Registration Review (hereafter ''2021 EPA Revised DRA''), and (3) the 2022 crop expansion assessment titled Review of Petition, Residue Data Waiver, and Risk Assessment of 3.2% Sodium Chlorite (Chlorine Dioxide Gas) Fumigation for Crop Expansion (hereafter ''2022 EPA Risk Assessment''), all of which are part of the docket for this current rulemaking. The Agency has concluded that there are no risks of concern from aggregate exposure to chlorate from currently registered uses. This conclusion is based on the following relevant conclusions from the three assessments mentioned above: (1) Chlorate residues in food are generally low and can be removed by washing, (2) aggregate exposure from food and drinking water were not of concern when quantitatively assessed in the 2018 EPA Risk Assessment; and (3) the main driver of the dietary assessment is from drinking water exposures from sanitation treatment.

A. Toxicological Profile and Points of Departure/Levels or Concern

Inorganic chlorates (also known as chlorate salts) encompass all chlorates, including sodium chlorate. As an antimicrobial pesticide, sodium chlorate (Pesticide Code (PC code) 073301) is used to generate a chlorine dioxide (PC Code 020503) solution in post-harvest applications to various crops. Sodium chlorate is also generated as a by-product of sodium chlorite (PC Code 020502) when it is used to generate chlorine dioxide for fumigation of crops post-harvest and during storage and shipment. Inorganic chlorates encompass all chlorates including the most abundant salt, sodium chlorate.

The toxicological profile for chlorate remains unchanged from the December 26, 2018 rulemaking and is available in the 2018 EPA Risk Assessment and the 2021 EPA Revised DRA. As discussed in the 2020 EPA HASPOC Memo, EPA conducted a qualitative assessment as part of the current tolerance action.

B. Exposure Assessment

1. *Dietary exposure from food and drinking water.* In support of the 2018 rulemaking, EPA performed a quantitative risk assessment on sodium chlorite at a 3.2% application rate as well as other uses with potential chlorate residue exposure (paper mill, drinking water, and conventional food uses). Based on the 2018 EPA Risk Assessment, the total dietary risks (including the use on tomatoes and cantaloupe, conventional herbicidal uses, paper mill dietary uses, and drinking water) are not of concern. The most highly exposed population was children 1–2 years of age which occupied 8.4% of the chronic population adjustment dose (cPAD) and was thus not of concern.

Following the 2018 EPA Risk Assessment and 2018 rulemaking, EPA determined that it would be more appropriate to assess the safety of chlorate tolerances with a qualitative dietary (food and drinking water) assessment for the reasons noted above (see ''2021 EPA Revised DRA'' and ''2020 EPA HASPOC Memo''). The use of sodium chlorite on the additional crops at issue in this rule are not expected to meaningfully impact the previously assessed risk estimates, since residues can be washed off and the main driver of the dietary assessment is from drinking water exposures from sanitation treatment, which is not expected to change upon approval of these additional uses.

2. *From non-dietary exposure.* There are no residential (non-occupational) exposures associated with the new proposed uses and there are no registered uses of chlorate that result in non-occupational, residential exposure.

3. *Cumulative effects from substances with a common mechanism of toxicity.* EPA has not found inorganic chlorates to share a common mechanism of toxicity with any other substances, and sodium chlorate does not appear to produce a toxic metabolite produced by other substances. For a discussion, see Unit III (C)(4) of the December 26, 2018 rulemaking.

C. Safety Factor for Infants and Children

Section 408(b)(2)(C) of FFDCA provides that EPA shall apply an additional tenfold (10X) margin of safety for infants and children in the case of threshold effects to account for prenatal and postnatal toxicity and the completeness of the data base unless EPA concludes that a different margin of safety will be safe for infants and children. Because EPA is conducting a qualitative assessment without uncertainty factors, the additional 10X safety factor cannot be applied.

D. Aggregate Risks and Determination of Safety

In a quantitative risk assessment, EPA determines whether acute and chronic dietary pesticide exposures are safe by comparing aggregate exposure estimates to the acute PAD (aPAD) and chronic PAD (cPAD). For linear cancer risks, EPA calculates the lifetime probability of acquiring cancer given the estimated aggregate exposure. Short-, intermediate-, and chronic-term risks are evaluated by comparing the estimated aggregate food, water, and residential exposure to the appropriate PODs to ensure that an adequate Margin of Exposure (MOE) exists.

The 2022 EPA Risk Assessment in support of this action is based on the 2018 EPA Risk Assessment (*e.g.,* drinking water, pulp mill, FruitGard dietary use, drinking water), the 2021 EPA Revised DRA, the 2020 EPA HASPOC memo, and the supportive materials submitted with this petition. That assessment evaluates the aggregate exposure from existing uses and the new proposed fumigation uses on the additional crop groups. EPA has determined that the fumigation of additional crops is not expected to meaningfully increase dietary (food or drinking water) exposures or risks of chlorate from the active ingredient sodium chlorite (chlorine dioxide). This is primarily because (1) residues on food are expected to be low, based on other residue studies indicating that use on food results in low residues and the fact that residues can be removed by washing; (2) the drinking water from water treatment systems is the primary source of exposure to chlorate, which would not change based on these additional crops; and (3) EPA's Risk Assessment 2018, which already accounted for the drinking water exposure and limited expectation of residues on food, found that the residues would be safe.

A. Executive Order 12866: Regulatory Planning and Review

This action is exempt from review under Executive Order 12866 (58 FR 51735, October 4, 1993), because it establishes or modifies a pesticide tolerance or a tolerance exemption under FFDCA section 408 in response to a petition submitted to the Agency. The Office of Management and Budget (OMB) has exempted these types of actions from review under Executive Order 12866.

B. Executive Order 14192: Unleashing Prosperity Through Deregulation

Executive Order 14192 (90 FR 9065, February 6, 2025) does not apply because actions that establish a tolerance under FFDCA section 408 are exempted from review under Executive Order 12866.

C. Paperwork Reduction Act (PRA)

This action does not impose an information collection burden under the PRA 44 U.S.C. 3501 *et seq.,* because it does not contain any information collection activities.

D. Regulatory Flexibility Act (RFA)

This action is not subject to the RFA, 5 U.S.C. 601 *et seq.* The RFA applies only to rules subject to notice and comment rulemaking requirements under the Administrative Procedure Act (APA), 5 U.S.C. 553, or any other statute. This rule is not subject to the APA but is subject to FFDCA section 408(d), which does not require notice and comment rulemaking to take this action in response to a petition.

E. Unfunded Mandates Reform Act (UMRA)

This action does not contain an unfunded mandate of $100 million or more (in 1995 dollars and adjusted annually for inflation) as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. The action imposes no enforceable duty on any State, local, or Tribal governments or the private sector.

F. Executive Order 13132: Federalism

This action does not have federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999), because it will not have substantial direct effects on the States, on the relationship between the National Government and the States, or on the distribution of power and responsibilities among the various levels of government.

G. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This action does not have Tribal implications as specified in Executive Order 13175 (65 FR 67249, November 9, 2000), because it will not have substantial direct effects on tribal governments, on the relationship between the Federal Government and the Indian Tribes, or on the distribution of power and responsibilities between the Federal Government and Indian Tribes.

H. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

This action is not subject to Executive Order 13045 (62 FR 19885, April 23, 1997) because it is not a significant regulatory action under section 3(f)(1) of Executive Order 12866, and because EPA does not believe the environmental health or safety risks addressed by this action present a disproportionate risk to children.

However, EPA's 2021 *Policy on Children's Health* applies to this action. This rule finalizes tolerance actions under the FFDCA, which requires EPA to give special consideration to exposure of infants and children to the pesticide chemical residue in establishing a tolerance and to ''ensure that there is a reasonable certainty that no harm will result to infants and children from aggregate exposure to the pesticide chemical residue . . .'' (FFDCA 408(b)(2)(C)). The Agency's consideration is documented in the pesticide-specific review documents, located in the applicable docket at *https://www.regulations.gov.*

I. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution or Use

This action is not subject to Executive Order 13211 (66 FR 28355) (May 22, 2001) because it is not a significant regulatory action under Executive Order 12866.

J. National Technology Transfer Advancement Act (NTTAA)

This action does not involve technical standards that would require Agency consideration under NTTAA section 12(d), 15 U.S.C. 272.

K. Congressional Review Act (CRA)

This action is subject to the CRA, 5 U.S.C. 801 *et seq.,* and EPA will submit a rule report to each House of the Congress and to the Comptroller General of the United States. This action is not a ''major rule'' as defined by 5 U.S.C. 804(2).

List of Subjects in 40 CFR Part 180

Environmental protection, Administrative practice and procedure, Agricultural commodities, Pesticides and pests, Reporting and recordkeeping requirements.

Dated: January 26, 2026.

Edward Messina,

Director, Office of Pesticide Programs.

Therefore, for the reasons stated in the preamble, EPA is amending 40 CFR chapter I is amended as follows:

PART 180—TOLERANCES AND EXEMPTIONS FOR PESTICIDE CHEMICAL RESIDUES IN FOOD

■ 1. The authority citation for part 180 continues to read as follows:

Authority: 21 U.S.C. 321(q), 346a and 371.

■ 2. Revise § 180.1364 to read as follows:

§ 180.1364 Chlorate; exemption from the requirement of a tolerance.

Residues of chlorate in or on commodities in the following crop groups are exempt from the requirement of a tolerance when resulting from the application of gaseous chlorine dioxide as a fungicide, bactericide, or antimicrobial pesticide: Vegetable, root and tuber, group 1; Vegetable, bulb, group 3–07; Vegetable, fruiting, group 8–10; vegetable, cucurbit, group 9; Fruit, citrus, group 10–10; Fruit, pome, group 11–10; Fruit, stone, group 12–12; Berry and small fruit, group 13–07; Nut, tree, group 14–12; Grain, cereal, forage, hay, stover, and straw, group 16–22; Grass, forage, fodder and hay, group 17; Animal feed, nongrass, group 18; Fungi, edible, group 21; Fruit, tropical and subtropical, edible peel, group 23; and Fruit tropical and subtropical, inedible peel, group 24.

[FR Doc. 2026–01902 Filed 1–29–26; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 180

[EPA–HQ–OPP–2024–0157; FRL–13197–01–OCSPP]

PDHP 68949; Exemption From the Requirement of a Tolerance

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This regulation establishes an exemption from the requirement of a

Given that the previous quantitative assessment indicated a very low risk estimate, EPA concludes that aggregate exposure would continue to be safe with these new exemptions. Therefore, EPA concludes that there is a reasonable certainty that no harm will result to the general population, or to infants and children from aggregate exposure to chlorate residues.

IV. Other Considerations

A. Analytical Enforcement Methodology

An analytical method is not required for enforcement purposes since the Agency is establishing an exemption from the requirement of a tolerance without any numerical limitation for residues of chlorate in or on the listed food commodities.

B. Response to Comments

Two public comments were received on the first Notice of Filing that was published on November 23, 2021 and one public comment was received on the Notice of Filing that was published on January 13, 2025 that superseded the November 23, 2021 Notice of Filing. The comment period for the November 23, 2021 Notice of Filing ended on December 23, 2021. The comment period for the January 13, 2025 revised Notice of Filing ended on February 12, 2025.

Two public comments were received in response to the Notice of Filing published on November 23, 2021 (located under the Docket ID EPA–HQ–OPP–2021–0516 at *https://www.regulations.gov*). The first comment was submitted by the United Fresh Produce Association supporting the expansion of crop groups for products containing the active ingredient sodium chlorite as a post-harvest application of gaseous chlorine dioxide. The Agency acknowledges the comment from United Fresh Produce Association and support for the expansion of crop groups for the active ingredient sodium chlorite. The second comment was submitted by a member of the general public, and raised issues related to the safety of the tolerance exemption in this action, including the potential for thyroid gland tumors and neurotoxic effects in the available toxicity database for sodium chlorate. Furthermore, the commenter noted that chlorate has been banned in the European Union due to concerns that chlorate can decrease iodine uptake, causing thyroid problems.

With regard to potential thyroid effects, EPA explained in the 2018 rulemaking (and supporting risk assessments) that while there was some evidence of thyroid gland tumors found in the drinking water study, EPA concluded that exposure to chlorate would not likely pose cancer risk because the Agency was regulating exposure at doses lower than the high doses required to induce tumors. *See* Chlorate; Pesticide Exemptions From Tolerance, 83 FR 66138, 66139 (FRL–9986–85, December 26, 2018). EPA conducted a quantitative assessment in which it concluded that risks would not exceed safe levels, (*i.e.,* the levels at which no chronic nor carcinogenic effects would be expected) and thus there is no expectation that exposure to chlorate would result in cancer. In this rule, EPA has concluded that the additional uses will not meaningfully increase residues of chlorate on food, and thus there is similarly no expectation that exposure to chlorate would result in thyroid gland tumors.

The commenter (Docket ID EPA–HQ–OPP–2021–0516) also states that sodium chlorate has not been evaluated for neurotoxic effects. As discussed in the 2018 EPA Risk Assessment, neurotoxic effects were not observed in any of the available acute, subchronic, and reproduction toxicity studies. Therefore, the potential for neurotoxic effects is not a concern for chlorate.

Regarding the supporting materials provided by the commenter, it is unclear to the Agency what specific points the materials are meant to support. The Dobson (2002) citation is a publication from the International Programme on Chemical Safety (IPCS)—a cooperative program of the World Health Organization (WHO), the International Labour Organization (ILO), and the United Nations Environment Programme (UNEP). It is not a study; therefore, the results reported in the publication cannot be used to reassess EPA's toxicological endpoints. Furthermore, none of the Agency's risk assessments found risk levels of concern for humans for the currently registered pesticidal uses of sodium chlorate. The Trinetta et al. (2011) study cited concludes, ''(c)hlorine dioxide technology leaves minimal to no detectable chemical residues in several food products, thus result in no significant risks to consumers.'' Therefore, the Trinetta study seems to support the conclusions from the Agency's recent risk assessments (2021 EPA Revised DRA, 2022 EPA Risk Assessment).

Furthermore, the Agency acknowledges the commenter's concerns about environmental impacts, including potential toxicity to algae, but notes that this topic is not required for consideration for an EPA determination of safety under the FFDCA, which stipulates only that EPA consider human health risks.

There was one public comment that was received in response to the revised Notice of Filing submitted on January 13, 2025 (located under the Docket ID EPA–HQ–OPP–2021–0516 at *https://www.regulations.gov*), from a member of the general public, supported the expansion of crop groups for products containing the active ingredient sodium chlorite as a post-harvest application of gaseous chlorine dioxide. The Agency acknowledges the public commenter's submission in support of expanding the tolerance exemption to cover certain crop groups for the active ingredient sodium chlorite.

In conclusion, the public comments do not include any information that alters the Agency's conclusion regarding the safety of the chlorate tolerance exemption.

C. Revisions to Petitioned-For Tolerances

The petitioner requested tolerances on several crop groups that have been updated. Specifically, crop groups 3, 8, 10, 11, 12, 13, 14, and 16 have been updated. As stated in EPA's regulations (40 CFR 180.40(j)(4)), once the revised crop group is established, EPA will no longer establish tolerances under pre-existing crop groups. As such, EPA is establishing the requested tolerance exemptions with the updated crop groupings which are supported by the Agency's qualitative assessments.

V. Conclusion

Therefore, an exemption from the requirement of a tolerance is established for residues of chlorate in or on commodities in the following crop groups: Vegetable, root and tuber, group 1; Vegetable, bulb, group 3–07; Vegetable, fruiting, group 8–10; vegetable, cucurbit, group 9; Fruit, citrus, group 10–10; Fruit, pome, group 11–10; Fruit, stone, group 12–12; Berry and small fruit, group 13–07; Nut, tree, group 14–12; Grain, cereal, forage, hay, stover, and straw, group 16–22; Grass, forage, fodder and hay, group 17; Animal feed, nongrass, group 18; Fungi, edible, group 21; Fruit, tropical and subtropical, edible peel, group 23; and Fruit tropical and subtropical, inedible peed, group 24.

VI. Statutory and Executive Order Reviews

Additional information about these statutes and Executive Orders can be found at *https://www.epa.gov/laws-regulations/and-executive-orders.*

ICA TriNova, LLC
Intellectual Capital Associates
1 BEAVERS STREET - SUITE B - NEWNAN, GEORGIA 30263 - PHONE 678.850.8844 - EMAIL - sales@icatrinova.com

Exhibit b
Statement #10

Safety Data Sheet

FruitGard

SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER **ICA-Trinova, LLC**
1 Beavers Street, Suite B
Newnan, GA 30263 USA

REVISION DATE **September 5, 2017**

EMERGENCY TELEPHONE HAZMAT Services, Inc. **800-373-7542**, Contract # 1055

TO REQUEST AN SDS *sales@icatrinova.com*

CUSTOMER SERVICE **770-683-9181** **M-F 9:00 -5:00 EST**

PRODUCT IDENTIFIER **FruitGard Precursor for Chlorine Dioxide**

SYNONYMS ZC Impregnate, Air Filtration Media, Blower Media, Part A

RECOMMENDED USES **Technical Sodium Chlorite is a registered antimicrobial pesticide (EPA Registration Number: 79814-5).** For use in potato storage facilities to fumigate against non-pathogenic spoilage organisms, such as yeasts and molds. It is a violation of Federal law to use this product in a manner inconsistent with its labeling. FruitGard is effective for use in controlling microbiological growth such as late blight, brown rot, and others on potatoes during storage and shipment.

USES ADVISED AGAINST Anything inconsistent with package instructions.
This is a pesticide product, do not use it in a pesticide application that is not included on its label.

2. HAZARDS IDENTIFICATION

CLASSIFICATION This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

COLOR Off-white to tan

PHYSICAL STATE Solid

APPEARANCE Granules

ODOR Slight chlorine odor

GHS CLASSIFICATION

Table A3.1.2 (p. 270) G.H.S. of Classifying and Labeling Chemicals; Sixth Revised Edition

HEALTH HAZARD STATEMENT	HAZARD CATEGORY
MAY BE HARMFUL IF SWALLOWED	5
MAY BE HARMFUL IN CONTACT WITH SKIN	5
CAUSES EYE IRRITATION	2B
HARMFUL IF INHALED	4

UNKNOWN ACUTE TOXICITY

0% of the mixture consists of ingredient(s) of unknown toxicity

GHS SYMBOL



SIGNAL WORD **WARNING**

PHYSICAL HAZARDS

Oxidizer. Avoid contact with organic matter. Direct contact with acids will result in release of chlorine dioxide gas.

PRECAUTIONARY STATEMENTS

PREVENTION

Under normal conditions of use, no health effects are expected. Carefully follow use instructions.

RESPONSE Seek medical attention for any persistent symptom or if you feel unwell.

IF SWALLOWED

Rinse mouth. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a physician.

IF ON SKIN (OR HAIR)

Brush off loose particles. Rinse with water.

IF IN EYES

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for as long as possible or at least 15 minutes.

IF INHALED

Move person to fresh air and keep comfortable for breathing.

STORAGE

Store in original container. Store in a well-ventilated place. Keep container tightly closed. Protect from moisture and water to retain product integrity.

DISPOSAL

Dispose of contents and container in accordance with applicable local, regional, national, and/or international regulations.

MAJOR HEALTH HAZARDS

Premature or accidental product activation, mishandling, improper storage of the package or the contact of package components may cause the evolution of corrosive fumes.

HAZARDS NOT OTHERWISE CLASSIFIED

None Identified

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Synonyms	CAS No.	Weight % Range
Sodium Chlorite	Sodium Chlorite, Chlorous Acid, Sodium Salt, Active Sodium Chlorite	7758-19-2	1-15
Zeolite	---	12173-10-3	80-98
Other Ingredients - Not Classified	---	---	1-5

4. FIRST AID MEASURES

GENERAL ADVICE

When medical attention is required, show this SDS to the attending physician.

INGESTION (IF SWALLOWED)

Rinse mouth. Drink plenty of water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a physician.

SKIN CONTACT (IF ON SKIN OR HAIR)

Brush off loose particles from skin and clothing. Wash skin with plenty of water. If irritation develops or persists call a physician.

EYE CONTACT (IF IN EYES)

Immediately flush with plenty of water, including under the eyelids. Remove any contact lenses if present and easy to do. Continue to rinse for at least 15 minutes. Keep eye wide open while rinsing. Get medical attention .

INHALATION (IF INHALED)

Move person to fresh air. Get medical attention if needed.

SIGNS AND SYMPTOMS OF EXPOSURE

INGESTION (IF SWALLOWED)

Exposure by ingestion may cause irritation, nausea, and vomiting.

SKIN CONTACT (IF ON SKIN OR HAIR)

Skin exposure may cause redness, rash or irritation.

EYE CONTACT (IF IN EYES)

Exposure to eyes may cause irritation and burns to the eye.

INHALATION (IF INHALED)

Inhalation of airborne material may cause irritation, redness of upper and lower airways, coughing.

NOTES TO PHYSICIAN

Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. There is no specific antidote. Treat symptomatically.

SELF-PROTECTION FOR FIRST AID PERSONNEL

Use personal protective equipment as required. Avoid contact with skin, eyes, or clothing.

5. FIRE-FIGHTING MEASURES

FIRE HAZARD

Not a fire hazard.

SUITABLE EXTINGUISHING MEDIA

Use measures that are appropriate to local circumstances and the surrounding environment.

UNSUITABLE EXTINGUSHING MEDIA

Dry chemical, CO2

FIRE FIGHTING

Wear NIOSH approved positive-pressure self-contained breathing apparatus. Consider evacuation of personnel located downwind. Keep unnecessary people away, isolate hazard area and deny entry. Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Flood with fine water spray. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

HAZARDOUS COMBUSTION PRODUCTS	Chlorine, Oxides of sodium
SENSITIVITY TO MECHANICAL IMPACT	Not Sensitive
SENSITIVITY TO STATIC DISCHARGE	Not Sensitive
LOWER FLAMMABILITY LEVEL (AIR)	Not Flammable
FLASH POINT	Not Flammable
AUTO-IGNITION TEMPERATURE	Not Applicable

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS

Wear protective gloves, safety glasses and approiate clothing to minimize skin contact. Avoid breating dust or fumes.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

Pick up spilled material and place in appropriate containers for disposal. Avoid mixing spilled material with other chemicals or debris when cleaning up. Dispose of in accordance with all applicable regulations.

ENVIRONMENTAL PRECAUTIONS

Avoid release into the environment. Do not flush into surface water or sanitary sewer system.

7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes, or clothing.

SAFE STORAGE CONDITIONS

Store in tightly closed labeled containers in a dry, well-ventilatd area, out of direct sunlight. Store and handle in accordance with all current regulations and standards. Keep separated from incompatible substances (see below or Section 10 of the Safety Data Sheet).

IMCOMPATIBILITIES/MATERIALS TO AVOID

Acids, reducing agents, combustible material.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE GUIDELINES

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

ENGINEERING CONTROLS

Ensure adequate ventilation, especially in confined areas.

GENERAL HYGENE CONSIDERATIONS

Do not eat, drink, or smoke while using this product. Keep away from food, drink, and animal feeding stuffs. Regular cleaning of equipment, work area, and clothing is recommended. Do not taste or swallow.

SKIN AND BODY PROTECTION

Wear protective clothing to minimize skin contact. Contaminated clothing should be laundered before reuse.

HAND PROTECTION

Impervious gloves are recommended.

PROTECTIVE MATERIAL TYPES

Neoprene

EYE AND FACE PROTECTION

Safety glasses or goggles.

RESPIRATORY PROTECTION

Use a dust mask to avoid breathing particulate.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid	**pH**	Not Applicable to Solids
Appearance	Granules	**Kinematic Viscosity**	Not Applicable to Solids
Color	Off-white, tan, light brown	**Water Solubility**	1% to 10% at 25° Centigrade
Odor	Slight chlorine odor	**Partition Coefficient**	Not Applicable
Melting Point/Freezing Point	Not Applicable to Solids	**Vapor Pressure**	No Information available
Boiling Point/Range	Not Applicable to Solids	**Density**	Range 80 to 110 lbs./ft^3
Flammability (solid, gas)	No Information available	**Vapor Density (air=1)**	No Information available
Lower Flammability Level (air)	Not Applicable to Solids	**Particle Characteristics**	Median 30 mesh, Range 6 - 80 mesh
Upper Flammability Level (air)	Not Applicable to Solids	**Molecular Weight**	No Information available
Flash point	None	**Molecular Formula**	No Information available
Auto-ignition Temperature	Not Applicable to Solids	**Evaporation Rate (ether=1)**	Not Applicable to Solids
Decomposition Temp.	250° - 300° Centigrade	**(n-octanol/water)**	No Information available

10. STABILITY AND REACTIVITY

REACTIVITY	Not reactive
CHEMICAL STABILITY	Stable
POSSIBILITY OF HAZARDOUS REACTIONS	If exposed to acids, this product may release corrosive fumes.
CONDITIONS TO AVOID	Improper storage in open containers.
INCOMPATIBLE MATERIALS	Not applicable.
HAZARDOUS DECOMPOSITION PRODUCTS	None.
HAZARDOUS POLYMERIZATION	Will not occur

11. TOXICOLOGICAL INFORMATION

LIKELY ROUTES OF EXPOSURE AND POTENTIAL HEALTH EFFECTS5

Table A3.1.2 (p. 270) G.H.S. of Classifying and Labeling Chemicals; Sixth Revised Edition

	HAZARD CLASS	HEALTH HAZARD STATEMENT	CATEGORY
(a.)	Acute Toxicity, Oral	**MAY BE HARMFUL IF SWALLOWED**	5
(b.)	Skin corrosion/irritation	**MAY BE HARMFUL IN CONTACT WITH SKIN**	5
(c.)	Serious Eye Damage/eye irritation	**CAUSES EYE IRRITATION**	2B
(d.)	Acute toxicity , inhalation	**HARMFUL IF INHALED**	4
(e.)	Germ Cell Mutagenicity	No information available	
(f.)	Carcinogenity	Category 3 - Not classifiable as a carcinogen by IARC	
(g.)	Reproductive Toxicity	No information available	
(h.)	STOT - Single Exposure	No information available	
(i.)	STOT-repeated exposure	No information available	
(j.)	Aspiration Hazard	No information available	

SIGNS AND SYMPTOMS OF EXPOSURE

INGESTION (IF SWALLOWED)

Exposure by ingestion may cause irritation, nausea, and vomiting.

SKIN CONTACT (IF ON SKIN OR HAIR)

Skin exposure may cause redness, rash or irritation.

EYE CONTACT (IF IN EYES)

Exposure to eyes may cause irritation and burns to the eye.

INHALATION (IF INHALED)

Inhalation of airborne material may cause irritation, redness of upper and lower airways, coughing.

12. ECOLOGICAL INFORMATION

ECOTOXICITY DATA

0% of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Zeolite 12173-10-3	18: 96 h Desmodesmus subspicatus mg/L EC50	1800: 96 h Brachydanio rerio mg/L LC50 semi-static 3200-5600: 96 h Oryzias latipes mg/l LC50 semi-static 1800-3200: 96 h Poecilia reticulata mg/l Lc50 semi-static.	1000-1800: 48 h Daphnia magna mg/LEC50
Sodium Chlorite 7758-19-2	---	100 - 500: 96 h Brachydanio rerio mg/L LC50 static 100: 96 h Lepomis macrochirus mg/L LC50 static 100: 96 h Oncorhynchus mykiss mg/L LC50 static	0.026: 48 h Daphnia magna mg/L EC50 0.25 - 0.33: 48 h Daphnia magna mg/L EC50 Flow through 0.012 - 0.018: 48 h Daphnia magna mg/L EC50 Static

BIODEGRADATION

Chlorite ions are reduced by some bacteria under anaerobic conditions.

PERSISTENCE

This material will eventually degrade to sodium chloride.

BIOACCUMULATIVE POTENTIAL

This material will not bioaccumulate.

MOBILITY IN SOIL

No Information Available.

OTHER ADVERSE EFFECTS

None Known.

13. DISPOSAL CONSIDERATIONS

CONTAINER MANAGEMENT

Do not reuse container.

WASTE FROM MATERIAL

Disposal should be in accordance with applicable regional, national, and local laws and regulations. Avoid sewage disposal.

14. TRANSPORT INFORMATION

DOT

Not regulated.

15. REGULATORY INFORMATION

INTERNATIONAL INVENTORIES

TSCA	United States Toxic Substances Control Act Section 8(b) Inventory	COMPLIES	This product is not subject to export notification.	
DSL/NDSL	Canadian Domestic Substances List/Non-Domestic Substances List	COMPONENT	**DSL**	**NDSL**
		Zeolite 12173-10-3	NS - Not Subject/Naturally occurring substances	
		Technical Sodium Chlorite 7758-19-2	Listed	___
		Other Ingredients	Listed	___
EINECS/ELINCS	European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances	COMPLIES	---	
AICS	Australian Inventory of Chemical Substances	COMPLIES	---	

US FEDERAL REGULATIONS

CWA (CLEAN WATER ACT)	This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)
CERCLA	This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material
SARA 311/312	Acute Health Hazard

16. OTHER INFORMATION

Prepared by ICA-Trinova, LLC

IMPORTANT

The information presented herein, while not guaranteed, was prepared by technical personnel and is true and accurate to the best of our knowledge. NO WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, OR WARRANTY OR GUARANTY OF ANY OTHER KIND, EXPRESSED OR IMPLIED, IS MADE REGARDING PERFORMANCE, SAFETY, SUITABILITY, STABILITY, OR OTHERWISE. This information is not intended to be all-inclusive as to the manner and conditions of use, handling, storage, disposal, and other factors that may involve other or additional legal, environmental, safety or performance considerations, and ICA-Trinova, LLC assumes no liability whatsoever for the use of or reliance upon this information. While our technical personnel will be happy to respond to questions, safe handling and use of the product remains the responsibility of the customer. No suggestions for use are intended as, and nothing herein shall be construed as, a recommendation to infringe any existing patents or to violate any Federal, State, local, or foreign laws.

OSHA Standard 29 CFR 1910.1200 requires that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheets, training and access to written records. We request that you, and it is your legal duty to, make all information in this Safety Data Sheet available to your employees.

End of Safety Data Sheet

ICATriNova, LLC
Intellectual Capital Associates

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Exhibit b
Statement #11

Substance Research Information

Bibliography

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