



Need for Modernization

Pesticide Impurities in EPA Registered Pesticides PR Notice 96-8

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Pesticide Analytical and Response Center Board Meeting

Oregon Office of State Fire Marshal

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Pesticide Registration

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Pesticide Registration Manual

Fees and Waivers

Registration Information by Type of Pesticide

— Antimicrobial Registration

— Biopesticide Registration

— Conventional

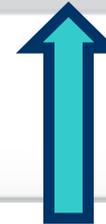
Pesticide Registration Notices by Year

Pesticide Registration Notices are issued by the Office of Pesticide Programs to inform pesticide registrants and other interested persons about important policies, procedures and regulatory decisions. They do not create new legally binding requirements.

[Also see PR Notices grouped by topics covered in the notices.](#)



2018



Contamination which occurs because of manufacturing or production practices

Pesticide Impurities in EPA Registered Pesticides PR Notice 96-8

Why the Interest?

Why would the issue of pesticide contaminates in pesticide products, and a 22 year-old PR Notice draw the attention of a SLA?

- Oregon has a mandated pesticide testing on one crop.
- Though laboratory analysis, occasionally there are the detection of pesticides (including RUPs), that are of concern.
- These instances are flagged, and forwarded to ODA for investigation. Sometimes the grower is adamant that he or she did not use the pesticide detected.
- Because of an initiation allegation of product contamination, ODA started sampling unopened pesticide products.

Levels of various pesticides found in unopened containers of Pesticide AZ in Oregon.

Formulated Product <u>Sample #</u> (Four different lot numbers)	Pesticides (ppm)			
	<u>Permethrin</u>	<u>Bifenthrin</u>	<u>Cyfluthrin</u>	<u>Chlorpyrifos</u>
NUF - 1	2.8	1.1	0.42	0.15
NUF - 2	200	0.37	0.088	0.51
NUF - 3	25	1.1	< 0.10	2.0
NUF - 4	1.0	0.27	< 0.10	< 0.040

Ag Crop Tested*	0.2 - 0.60 **	0.21 - 0.48 ***	--	-
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* There is no related or equivalent crop to the ag crop tested

** Note - tolerance on pome is 0.05 ppm

*** Note tolerance on grapes is 0.20 ppm



Oregon

Kate Brown, Governor

April 6, 2018

Department of Agriculture

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PESTICIDE ADVISORY

Misbranded / Adulterated Pesticide Product Presence of Two Undeclared Pesticide Residues

Partial Advisory

The Oregon Department of Agriculture (ODA) has ordered the stoppage of sale and distribution of a pesticide product manufactured by McLaughlin Gormley King Company (MGK) after finding the presence of two pesticide active ingredients not listed on the product label. Evergreen Pyrethrum Concentrate is labeled for use on various indoor and outdoor crops and ornamentals as an insecticide. The label lists the active ingredient pyrethrins, a botanical insecticide, and is identified by the EPA Registration No. 1021-2560. The product is labeled for organic use by the Organic Materials Review Institute (OMRI). In addition, ODA is asking growers who may have purchased the pesticide product to refrain from using it.

ODA's actions come following an investigation of the product and laboratory analysis that found the presence of the pesticide active ingredients, piperonyl butoxide and MGK-264, which are not listed on the product label.

**Evergreen Pyrethrum Concentrate, EPA Reg. No. 1021-2560
Contains non-disclosed active ingredients.**

Product labeling makes claims for organic production.

Product tested	Piperonyl butoxide (ppm)	MGK-264 (ppm)
From Store	0.85	0.067
From Grower	0.34	0.063

Issue - Statement of Policy Regarding Toxicologically Significant Levels of Pesticide Active Ingredients

- Because of a 1996 policy (PR Notice 96-8):
 - Cross-contamination of active ingredients in pesticide products by contaminants, that are also pesticide active ingredients, is allowed up to a certain level*
- A number of end points were considered. "In most cases phytotoxicity to target plants was the most sensitive endpoint and, therefore the limiting factor ..."

Prior to the policy:

Any level of an impurity that is also an active ingredient in another pesticide was considered "toxicologically significant" and had to be reported to EPA. No quantitative criteria.

* three scenario exclusions

Example portion of table
(Table PR 96-8 has 7 categories)

A contaminant is defined as an active ingredient that is not on the product's CSF, or listed in the discussion of impurities.

Toxicologically Significant Levels of Contaminants

Category	Type of Contaminant	Type of Pesticide that is Contaminated	Toxicologically Significant Level (ppm)*
1	Insecticide, fungicide, molluscicide or nematocide in ...	Any insecticide, fungicide, molluscicide, nematocide, herbicide, plant growth regulator, defoliant or desiccant.	1000
2	Herbicide, plant growth regulator, defoliant or desiccant in ...	<i>Any pesticide where the contaminant is accepted for use on all sites for which the product is labeled.</i>	1000

* The concentration is determined in ppm based on the ratio of the weight of the contaminant to the weight of the formulated product.

ODA is questioning, and now other states are questioning, whether it isn't potentially problematic when:

- Products contain a declared a.i. with a short half-life (and therefore have a short PHI), but are contaminated with a.i.'s with long half-lives.
- Esp. if multiple applications are allowed close to harvest.

Have times changed since 1996?

Is there a lot more testing of food/feed products for pesticides?

- In the US
- Third party certifiers
- By import/export companies
- By other countries



Increased analytical capabilities?

PR Notice 96-8 was pre-National Organic Program.

Issues

Market Barriers

- Despite the levels of the contaminant pesticides all being well below the EPA definition of toxicologically significant levels provided in PR Notice 96-8.
 - The levels of contaminants in a tested crop could possibly exceed the established tolerance levels.
 - May not be any tolerances, including indirect or inadvertent tolerances.



Consumer Confidence and Truth in Labeling

- Pesticide AZ (more than one product) and the pyrethrum product are products that can be used under the National Organic Program. OMRI listed.
- There is a lack of awareness that “organic pesticides” and “organic crops” may potentially contain undeclared conventional pesticides such as, permethrin, bifenthrin, chlorpyrifos, etc.

Tested organically grown crops may potentially be rejected by buyers, resulting in economic hardship.



Herbicide-Resistant Crops

- The number of crops bred to be resistant to over-the-top herbicide use has proliferated since 1996, many are GE crops.
- The levels of herbicide contaminants allowable in herbicide products may no longer meet EPA's risk-based standard.
- Allegations that have been made regarding this topic.



Proposed Remedies

Current Exclusion: Any level of contaminant is considered potentially toxicologically significant for:

- Rodenticides;
- Microbial and biochemical pesticides that are manufactured in fermenters;
- PIPS (example BT corn).

EPA expand *exclusion list in PR 96-8 to include:**

- Products approved for use in organic production.
- Herbicide products labeled for use on herbicide-resistant crops which provide over-the-top use directions.

- **Products with indoor-use directions?
Not yet been recommended to EPA.**



Proposed Remedies

Review

EPA stated in PR Notice 96-8 that they considered unreasonable adverse effects and reviewed the risks for several endpoints, including **adulterated food**.

- EPA re-review the endpoints, particularly the potential adverse effects if food should become adulterated.
- Category 2* has the criterion: “the contaminant needs to be accepted for use on all sites for which the product is labeled”.

This criterion needs to be expanded to all categories.

* Table: “Toxicologically Significant Levels of Contaminants

Proposed Remedies

Review

- EPA conduct a *comprehensive review* of its interpretation of the term "toxicologically significant", & incorporate *further refinements* based on current:
 - Analytical methods (levels of quantification),
 - Pesticide residue tolerance levels, and
 - Agricultural trade practices.
- Require *additional studies* from registrants with products that have *short preharvest intervals* on any crops.
- Review how registrants are implementing PR Notice 96-8.

Increasing Awareness

- December 5, 2017, ODA presented and submitted an Issue Paper to SFIREG.
- The SFIREG Committee voted on December 5, 2017 to send the issue to the working committee POM for the April 2018 meeting.
- Decision: POM will work with EPA and others on the issue.
- ODA Presented to AAPCO in March 2018
- Topic of conversation at a recent industry meeting.
- ODA presented to 2018 Western States Pesticide Meeting (SLAs and Tribes), May 2018.
- Will be discussed again at full SFIREG, June 2018

Organizations composed of State Lead Agencies (SLA) for Pesticide Regulation

- State FIFRA Issues Research and Evaluation Group (SFIREG)
- Pesticide Operations and Management (POM) Working Committee
- Association of American Pesticide Control Officials (AAPCO)

Summary of Concerns

- State Law - Considered adulterated; misbranded; the label has false and misleading claims.
- Could lead to Exceedance in tolerance / MRL level.
- Could lead to possible detection in crop and there is not tolerance for the contaminate a.i.
- Possible health implications??

Truth in labeling – Pesticides marketed for use in organic production, and crops marketed as organic



On SAL and market label



Oregon has Pesticide Advisories online.

Includes pesticide and also fertilizer products that may possibly be purposefully adulterated or misbranded; and also products that could have become contaminated via the manufacturing process.

About Us Oregon Agriculture Licenses FAQs News

For the purpose of pesticide regulation, the Oregon Department of Agriculture (ODA) considers cannabis grown in Oregon to be an agricultural crop.

Updates on pesticide products and cannabis

Pesticide Advisories

- 4/27/18: Plagron Glorious Green, 0-8-9 Green Sensation Additive Universal, by Bertels B.V., contains salicylic acid 
- 4/27/18: Bud Candy (w/magnesium nitrate) by Advance Nutrients contains salicylic acid 
- 4/27/18: Heavy Sixteen 1-10-16 Heavy Fire Professional Plant Additive, by Field 16, contains salicylic acid and indole-3-butyric acid 
- 4/6/18: ODA orders stoppage of sale of Evergreen Pyrethrum Concentrate after finding two active ingredients not on product label 
- 1/31/18: Emerald Triangle's Humboldt County's Own 0-0-3 Snow Storm Ultra Potassium Supplement contains salicylic acid 
- 1/31/18: NPK Industries' Stack contains salicylic acid 
- 1/29/18: ODA orders stoppage of sale of AzaMax after finding two active ingredients not on product label 
- 8/24/17: Bud Factor X Intense Resin Production, by Advanced Nutrients, contains salicylic acid 
- 8/24/17: Green Planet Nutrients, 0.0083-0.011-0.0505 Finisher, by H.I.T. Manufacturing, contains salicylic acid 
- 8/24/17: Snoop's Premium Nutrients, 0-0-0.04 Radical Roots, by Assertive Assimilation, contains Indole-3-butyric acid 
- 8/24/17: Vegamatrix, 1-0-1 boost CaMg (w/ Polysaccharides), by Pure Life Veganix, contains salicylic acid 
- 7/24/17: Neemix 4.5 Insect Growth Regulator Biological Insecticide contains pesticide active ingredients not listed on the product label 
- 7/24/17: Azatin O Biological Insecticide contains pesticide active ingredients not listed on the product label 
- 6/28/17: Azatrol Hydro Botanical Insecticide and Azatrol EC Insecticide contains permethrin, bifenthrin, cypermethrin, cyfluthrin, and chlorpyrifos 
- 3/10/17: Uncle John's Blend 0-0-2 (w/0.1% Fe) by Cutting Edge Solutions contains salicylic acid 

Thank you

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**Oregon Department of
Agriculture**

