Consulting & Advisory Services Webinar: Hot Topics in Food Contaminants

Moderator:

Kevin C. Kenny, J.D., LL.M. - Founder, Executive Chairman, Decernis SVP Managed Services, FoodChain ID

Speakers:

Christie Gray - VP Content, Decernis, Subject Matter Expert, Contaminants **Adrián Varela Álvarez -** Director, Regulatory Affairs & Subject Matter Expert, Latin America

Karen Everstine - Senior Manager, Scientific Affairs, Subject Matter Expert Contaminants & Food Fraud









MODERATOR: Kevin C. Kenny, J.D., LL.M.

Founder, Executive Chairman, Decernis SVP Managed Services, FoodChain ID





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Meet the Speakers



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Christie Gray VP Content, Decernis, Subject Matter Expert, Contaminants



Adrián Varela Álvarez

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Learn more about our services:

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🔀 <u>foodchainid.com</u>

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FoodChain ID Business Capabilities Snapshot



DNA-based

- ✓ GMO
- ✓ Metagenomics
- \checkmark Animal Speciation

Chemistry

- ✓ Pesticide-residue
- ✓ PCB's / Dioxins
- ✓ Mycotoxins
- ✓ Cannabinoids

Microbiological





Certification

Food Safety

- ✓ BRC, SQF, GLOBALG.A.P., IFS, FSSC 22000 & ISO 22000
- ✓ HACCP & GMP
- ✓ McDonalds & Costco Audits
- ✓ U.S. Hemp Authority® Certification

Sustainability Standards

- ✓ Non-GMO Project Verification
- ✓ USDA Organic & EU Organic
- ✓ VLOG & FoodChain ID Non-GMO
- ✓ ProTerra, Bonsucro & Europe Soya
- ✓ ProFarm & RTRS



Tech-Enabled Services & Consulting

Risk Assessment

- ✓ HorizonScan[™] Risk Assessment System
- ✓ Food Fraud Database

Regulatory Compliance

- ✓ gComply / gComply Plus
- ✓ Praedixi / Predictive Analytics
- ✓ NOL Data Solution / NOL Compliance

Supply Chain Management

Training & Consulting

Integrated Solution

FoodChain ID currently offers the most extensive pesticide screens in the industry and are adding tests on a regular basis Decernis, a FoodChain ID company, offers the most comprehensive global regulatory compliance database

Accreditations:

- USDA Accredited Laboratory for Over 40 Years
- ISO 17025 Certification

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Instrumentation: LC-MS/MS & GC-MS/MS and more
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Method: Official AOAC, USDA, FDA methods and more

Limit of Detection: As low as 10 ppb

- gComply Plus covers regulations in 221 countries
- Maintains & updates contaminant regulations in its **cloud-based database**
- Translates regulations in 40 different
 languages
- Helps identify authoritative bodies for more exotic countries which may not have their own published regulations based on global hierarchy
- Can provide contaminant consulting expertise







Available in our core competency areas in 224 countries & for 28 organizations

Rapid integration of compliance solutions into your business systems & processes

Customized data management tools

FOODCHAIN (ID)

Global expert support

Decernis Advisory & Consulting Services

Services:

- **Food Additives:** colors, flavors, sweeteners, enzymes, and many more
- Food Contaminants: for example, heavy metals, pesticides, and microbial • contaminants
- **Dietary Supplements:** ingredient evaluation for botanicals, herbals, vitamins/ • minerals, probiotics, prebiotics, and novel ingredients
- Food Contact: all aspects of food packaging from substrate evaluation to • sustainability
- **Consumer Products [CPG]:** e.g., consumer paper products, consumer cleaning • products, cosmetics, personal care products
- **Market Entry Information**: Assessments of both established countries / markets • as well as emerging markets
- Surrogate Countries Analysis: for markets without regulations or standards of their own
- FDA Practice: FCN Food Contact
- Advocacy

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gComply & gComply Plus

The Decernis Food Contaminants Regulatory Systems allow a client to understand all contaminant requirements around the world for their products in a single search.

The systems contain the following topics:

- Dioxins & PCBs
- Filth

NATEX ETABULAR

S CREATE CERTING

United States

2 Restricted

1 Restricted

1 litted

- General
- Guidance Documents
- Heavy Metals
- Hormonal Substances
- Marine Biotoxins
- Methods of Analysis
- Microbiological Contaminants
- Mycotoxins
- Nitrates & Nitrites
- Other Chemicals
- Pesticide Residues
- Veterinary Drug Residue

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Example: Carbendazim in Oranges

Substance name

Carbendazim (ALL)

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Market Entry Reports: Pesticide Residues

- Across 79 Countries, Decernis SMEs summarize National Regulatory Systems, Regulations, Agencies, and any Default Limits that exist
- Summarized in detail in English
- Packaged with gComply Contaminants Module, 200+ Countries

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FOODCHA

Seeing Food Clearly



Market Entry Report | Argentina Pesticide Requirements

<u>Regulatory Authority for Establishing Pesticide Thresholds for Commodities and Food Products (MRLs)</u> - <u>Regulations (and Adoption of Regional Requirements Where Applicable)</u> - <u>Agency responsible for</u> <u>regulations</u>

The Argentine National Service of Agricultural Health and Quality (SENASA) is the government department responsible for establishing pesticides residues MRL's and registering the active ingredients for use.

Resolutions No 608 of 2012 and No 934 of 2010, Annex 1, lists the permitted pesticides and corresponding MRL's (in mg/kg) by crop/commodity/food type.

While the MRL's are established primarily for foods grown in Argentina there is an acknowledgement that imported foods, and those not traditionally grown in Argentina, may contain pesticide residues other than those listed in these Resolutions.

Default limits

For domestic products if there is no Maximum Residue Limit for products listed in Annex 1 there is a default value of 0.01 mg/kg corresponding to the Limit of Detection of the analysis method.

There is a default to Codex Alimentarius for imported agricultural products and by-products not normally cultivated in Argentina (and for which no MRL has been established) which are permitted only if there is an MRL established by the Codex Alimentarius. In addition, if there is no Maximum Residue Limit approved by Codex Alimentarius for these products, a default value of 0.01 mg/kg corresponding to the Limit of Detection of the analysis method is permitted.

Annex 2 to Resolution 934 lists those substances that are exempt from maximum residue limits.

Annex 3 to Resolution 934 lists those substances which are prohibited or restricted. For those residues of persistent compounds in the environment that were used as pesticides but are no longer registered as such and that may cause food contamination, the values established by the Codex Alimentarius as maximum limits apply.

Deferral policies

Codex Alimentarius is the deferral policy in the absence of local regulations.

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Food Fraud Database

Sunflower Oil (3074244 3076478 3171932)

FFD Decernis News of Interest

TRAINING VIDEOS are available at https://bit.ly/2XgjYdU. Download FFD NEWSLETTERS at https://decernis.com/shop/. NEED ASSISTANCE? Email us at FFDSupport@Decernis.com.

Ingredients added (as of 11/15/20) include: Olive Oil (Extra Virgin, Organic, Koroneiki), Pineapple (Preserved in Sulfur Dioxide and Calcium Chloride), Herbal Tea (Anise), Herbal Tea (Fennel), Herbal Tea (Peppermint), Herbal Tea (Hibiscus), Herbal Tea (Sage), Acai Pulp (Freeze Dried), Lard (PDO, Valle d'Aosta Arnad), Corn (Hard Endosperm), Scallops (Pecten spp.), Common Japanese Scallop, Guayusa Extract, Zinc Chloride, Sodium Iodide, Boric Acid, Sesame Seed (Organic), Flour (Whole Wheat, Organic), Brown Rice Flour (Indica), Brown Rice (Indica), Brown Rice (Long Grain, Cracked, Organic), Brown Rice (Long Grain, Cracked), Bleaching Earth, Parsley Flakes (Organic), Tomatoes (Dehydrated), Rosemary (Powdered, Organic), Torula Yeast (Smoked), Poppy Seed (Organic), Wheat Bran (Organic), Sunflower Oil (Organic), Barley (Cracked), Triticale (Cracked), Rye ... Read More

TOTAL NUMBER OF RECORDS | 12.079

What's new with FFD

New Decernis FFD Record	ds		Geographic Distribution of New Inci	dents	
Week Month Quarter Year			-		
Number of new adulteration	on records	352		Turkey	United States of Ame
Inference	137 Method	153		Spain	e Albania
Incident	43 Surveillance	19		Greece Poland	Pakistan
				Czech Republic	Morocco
Number of new potentially	hazardous adulterants	128			
Number of new adulterant	s	252			

What's New with My Saved Searches

Q What's New with My Saved Searches (Manage Searches) Q New Adulterants by Ingredients in My Saved Searches Geographic Distribution of New Incidents in My Saved Searches Week Month Quarter Year Week Month Quarter Year Indicates potentially hazardous adulterant SEARCH NAME TYPE NEW MEW NEW INGREDIENTS ADULTERANTS RECORDS ADULTERANTS HAZARDS Olive Oil (Extra Virgin) beta-Carotene (3076478). Organic Incident & 1 0 Canola Oil (3076478, 3171932), Inference Color (Unspecified) (3074244), Copper Chlorophyllin (3076478), Seeds Incident & 0 0 0 Corn Oil (3171932). Inference Hazelnut Oil (3076478), Olive Oil ("Lampante") (3074244), Juices Incident & 1 2 2 Olive Oil (3119695). Inference Olive Pomace Oil (3076478, 3119695)



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About this Webinar...

- Please participate in surveys
- Ask questions any time via the "Questions" tab
- Recording will be emailed to registrants & available at foodchainid.com/webinars following the live event



Contaminants Overview



Christie Gray

VP Content, Decernis, Subject Matter Expert, Contaminants



Pesticides & Safety

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Seeing Food Clearly



- Neonicotinoids
- Glyphosate
- Chlorpyrifos & Chlorpyrifos-methyl

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Neonicotinoids

- History first applied commercially in 1990s
- Definition & function
 - Insecticides chemically related to nicotine also known as 'neonics'
 - Systemic pesticides
 - Much more toxic to invertebrates
 - Affect central nervous system of insects
- Impacts on Bee health
- Controversy
- Types:
 - Acetamiprid
 - Clothianidin
 - Dinotefuran
 - Imidacloprid
 - Nitenpyram
 - Thiacloprid
 - Thiamethoxam
 - Sulfoxaflor



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Neonicotinoids in the European Union

- First neonic approved in EU in 2005
- 2013
 - Five neonicotinoid insecticides approved as active substances in the EU for use in plant protection products: Clothianidin, Imidacloprid, Thiamethoxam, Acetamiprid and Thiacloprid
 - Regulation (EU) No 485/2013
 - Severe restriction of Clothianidin, Imidacloprid and Thiamethoxam to protect honeybees
 - All outdoor uses are banned
 - Only use in permanent greenhouses
 - Emergency authorizations
 - Current status
- Current status of Acetamiprid
 - Low risk to bees
- Current status of Thiacloprid
 - Candidate for substitution
- Current status of Dinotefuran, Nitenpyram



- Proposed Interim Decisions for Several Neonicotinoid Pesticides <u>85 FR 5953</u>; 3 February 2020
- Proposed Interim Decisions for Several Neonicotinoid Pesticides; Re-Opening of Comment Period - <u>85 FR 29942</u>; 19 May 2020
- 31 August 2020; <u>85 FR 45883</u> EPA received petition by Natural Resources Defense Council to revoke all tolerances for residues of neonicotinoid pesticides acetamiprid, clothianidin, dinotefuran, imidacloprid, and thiamethoxam
- Current status of Acetamiprid (40 CFR 180.578)
 - MRLS currently established for several food commodities
- Current status of Clothianidin (40 CFR 180.586), Dinotefuran (40 CFR 180.603) and Sulfoxaflor (40 CFR 180.668)
 - MRLS currently established for several food commodities
 - Few emergency exemptions (time-limited tolerances)
- Current status of Thiacloprid (40 CFR 180.594)
 - No US registrations for commodities listed since 6 August 2014
 - EPA proposed to revoke tolerances <u>80 FR 43373</u>, 22 July 2015
 - EPA did not revoke thiacloprid tolerances in final rule 81 FR 34902, 1 June 2016
- Current status of Nitenpyram (21 CFR 520.1510)
 - Regulated as an animal drug



Glyphosate in the European Union

- Most frequently used herbicide worldwide & in the EU
- Thoroughly accessed by Member States, the <u>European Chemicals Agency</u> (ECHA) & the <u>European Food Safety Authority</u> (EFSA)
- Glyphosate Renewal Group sent renewal application
- Currently approved in EU until 15 December 2022 <u>https://eur-lex.europa.eu/legal-</u> <u>content/AUTO/?uri=CELEX:32017R2324</u>
- European Citizens' Initiative to Ban Glyphosate REGULATION (EU) 2019/1381
- Controversy
 - IARC





Glyphosate in the United States

• History

- Registered as pesticide in US since 1974
- Every 15 years pesticide registrations are reviewed per section 3(g) of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)

Current Status

- 30 January 2020; <u>85 FR 5957</u> EPA concluded "no risks of concern to human health when glyphosate is used according to the label and that it is not a carcinogen."
- 27 November 2020; <u>85 FR 76071</u> Glyphosate Registration Review
 - EPA announced availability of their draft biological evaluation for the registration review of glyphosate and asked for public comments







Chlorpyrifos & Chlorpyrifos-methyl in the EU

- Insecticides used to control pests on a range of crops
- Chlorpyrifos-methyl also used to treat stored cereal grain & empty warehouses
- Current status
 - 6 Dec 2019 Member States voted to not renew
 - Concerns related to human health possible genotoxicity and developmental neurotoxicity
 - 10 January 2020 European Commission formally adopted Regulations
 - Within one-month Member States must withdraw all authorisations for plant products containing the active substances
 - 3-month period of grace for final storage, disposal and use could be granted
 - <u>Reg. (EU) 2020/1085</u>
 - Lower the MRLs to the lowest level that can be measured by analytical laboratories (0.01 PPM)
 - Applies to both food produced in EU and also imports



Chlorpyrifos & Chlorpyrifos-methyl in the US

• History of Chlorpyrifos

- Registered for use in United States since 1965
- Prohibited for residential uses since 2001
- Registration review and assessment of hazard and exposure to chlorpyrifos
- 6 November 2015 EPA <u>Proposal</u> to ban Chlorpyrifos
 - Proposed to revoke all tolerances as contained in <u>40 CFR 180.342</u>
 - EPA could not determine that aggregate exposure to residues of chlorpyrifos was safe
- 17 November 2016 Additional documentation and request for comments on new risk assessment <u>81 FR</u> <u>81049</u>
- History of Chlorpyrifos-methyl
 - Registered for use in United States in 1985
 - EPA cancelled several registrations for the use of chlorpyrifos-methyl in December 2007 <u>72 FR 68580</u>



Chlorpyrifos & Chlorpyrifos-methyl in the US

Current status of Chlorpyrifos

- 2019 Environmental Protection Agency (EPA) decided not to ban Chlorpyrifos <u>84 FR 35555</u>
- Registration Review 85 FR 60455, 25 September 2020
- California
 - Growers will no longer be allowed to possess or use chlorpyrifos products in California after Dec. 31, 2020
- Hawaii <u>https://hdoa.hawaii.gov/pi/main/act45/</u>
 - All uses and sale of chlorpyrifos in Hawaii banned on 1 January 2023
- Other states New York (vetoed by Governor), Oregon (in committee), Maryland (committee), Connecticut (committee)
- Current status of Chlorpyrifos-methyl
 - Current MRLs established at <u>40 CFR 180.419</u> for various food commodities





Pesticide Regulations by Country



Adrián Varela Álvarez

Director, Regulatory Affairs & Subject Matter Expert, Latin America



LATAM REGULATORY: Pesticide Residues

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LATAM 2020



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ARGENTINA

2010:

• Resolution No 934/2010: LMR for Agricultural Products and by-Products (All products)

2012:

• Resolution No 608/2012: Maximum Residue Limits for Certain Products (few vegetables)

2020:

- Resolution No 934/2010: Annex I Maximum Residue Limit (MRL) for Phytosanitary Products and Fertilizers (Updated July 2020)
- Default limit: YES: 0.01 mg/Kg
- Deferral Policies: YES: Codex // (GMC/RES 15/16 not adopted)
- NATIONAL BODY: SENASA (National Service of Agri-Food Health and Quality)

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BRAZIL

2017:

• Joint Normative Instruction No 1/2017: Technical Regulation on the criteria for the recognition of maximum residue limits of pesticides in vegetal products in natura (Portuguese)

ANVISA MONOGRAPHS:

- Monografias Autorizadas search
- Monografias Excluídas search
- Default limit: NO
- Deferral Policies: None
- **NATIONAL BODY:** ANVISA (National Health Surveillance Agency)

BRASIL	CORONAVÍRUS (COVID-19)	Simplifique!	Participe	Acesso à informação	Legislação	Canais	*
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Consulte a situação de documentos Peticionamento Eletrônico Sistema Eletrônico de Informações (SEI) SNGPC REGISTROS E AUTORIZAÇÕES	Monografias a Monografias Autor As monografias aqui apresentadas sã uso agrícola, domissanitário, não agrí Trazem, entre outras informações, os quais os ingredientes ativos encontrat	utoriza izadas io o resultado da cola, ambientes nomes comum e m-se autorizados	avaliação e re aquáticos e pr e químico, a cl s, com seus re	eavaliação toxicológica dos eservante de madeira. asse de uso, a classificaçã spectivos limites máximos	s ingredientes at to toxicológica e de resíduo.	tivos destina e as culturas	idos ao para as
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Alimentos							
Cosméticos	A02 – Acefato						
Embarcações	A04 - Ácido Giberélico						
Farmácias e							

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Regulation Search: Browse Select					
- Caraban	Publish Date	Topic	Sub-Topic	Country	Citation/Title
Archive	2020-11-03	Food Contaminants	Pesticide Residues	Brazil	ANVISA Authorized Monograph C66 Cyazofamid [Resolução RE nº 4.453 de 29/10/20 (DOU de 03/11/20)] (Portuguese)
By Countral	2020-11-03	Food Contaminants	Pesticide Residues	Brazil	ANVISA Authorized Monograph E29 Ethiorole [Resolução RE nº 4 442 de 29/10/20 (DOU de 03/11/20)] (Portuguese)
Bahamas V Go	2020-11-03	Food Contaminants	Pesticide Residues	Brazil	ANVISA Authorized Monopraph B55 Emanectin Benzoate [Resolução RE nº 4.438 de 29/10/20 (DOU de 03/11/20)] (Portuguese)
	2020-11-03	Food Contaminants	Pesticide Residues	Brazil	ANVISA Authorized Monopraph D36 Difenoconazole [Resolução RE nº 4.439 de 29/10/20 (DCU de 03/11/20) (Portuguese)
Or By Topic:	2020-11-03	Food Contaminants	Pesticide Residues	Brazil	ANVISA Authorized Monopraph E44 Elufenoxuron (Resolução RE nº 4.445 de 29/10/20 (DOU de 02/11/20) (Portuguesa)
Animal Feed	2020-11-03	Food Contaminants	Pesticide Residues	Brazil	ANVISA Authorized Monograph F66 Flubendiamide [Resolução RE nº 4 450 de 29/10/20 (DOU de 02/11/20) (Portuguese)
Or By Citation/Title: anvisa monogra	2020-11-03	Food Contaminants	Pesticide Residues	Brazil	ANVISA Authorized Monograph G05 Glufosinate [Resolução RE nº 4.437.de 29/10/20 (DOU de 03/11/20) (Portuguese)
	2020-11-03	Food Contaminants	Pesticide Residues	Brazil	ANVISA Authorized Monograph C80 Clonostachys rosea [Resolução RE nº 4.447 de 29/10/20 (DOU de 03/11/20) (Redupuese)
	2020-11-03	Food Contaminants	Pesticide Residues	Brazil	ANVISA Authorized Monograph P13 Profenotos (Resolução RE nº 4 444 de 29/10/20 (DOU de 03/11/201) (Portuguese)
	2020-11-03	Food Contaminants	Pesticide Residues	Brazil	ANVISA Authorized Monograph A26 Azoxystrobin [Resolução RE nº 4.441 de 29/10/20 (DOU de 03/11/201) (Portuguese)
	2020-11-03	Food Contaminants	Pesticide Residues	Brazil	ANVISA Authorized Monograph P34 Pyriproxyfen (Resolução RE nº 4 449 de 29/10/20 (DOU de 03/11/20)) (Portuguese)
	2020-11-03	Food Contaminants	Pesticide Residues	Brazil	ANVISA Authorized Monograph F36 Flutriafol [Resolução RE nº 4 448 de 29/10/20 (DOU de 03/11/20)] (Portuguese)
	2020-11-03	Food Contaminants	Pesticide Residues	Brazil	ANVISA Authorized Monograph T32 Tebuconazole [Resolução RE nº 4.440 de 29/10/20 (DOU de 03/11/201] (Portuguese)
	2020-11-03	Food Contaminants	Pesticide Residues	Brazil	ANVISA Authorized Monograph A41 Amicarbazone [Resolução RE nº 4.443 de 29/10/20 (DOU de 03/11/20)] (Portuguese)
	2020-11-03	Food Contaminants	Pesticide Residues	Brazil	ANVISA Authorized Monopraph S17 Sophora Flavescens [Resolução RE nº 4.452.de 29(10/20 (DOU de 03(11/20)) (Portuguese)
	2020-11-03	Food Contaminants	Pesticide Residues	Brazil	ANVISA Authorized Monopraph C25 Cartap. Resolução RE nº 4.451 de 29/10/20 (DOU de 03/11/20) (Portuguese)
	2020-11-03	Food Contaminants	Pesticide Residues	Brazil	ANVISA Authorized Monograph H07 Haloxylop-P [Resolução RE nº 4 446 de 29/10/20 (DOU de 03/11/20)] (Portuguese)
	2020-09-28	Food Contaminants	Pesticide Residues	Brazil	ANVISA Authorized Monopraph F73 Fenpyrazamine [Resolução RE nº 3.838 de 24/09/20 (DOU de 28/09/20)] (Portuguese)
	2020-09-28	Food Contaminants	Pesticide Residues	Brazil	ANVISA Authorized Monograph D21 Diguat [Resolução RE nº 3 849 de 24/09/20 (DOU de

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CHILE

2010:

Resolution No 33/2010: Sets maximum tolerances for pesticide residues
 in food

2020:

• SAG Chile - List of Prohibited pesticides for agricultural use (Updated February 2020)

Resolution No 892/2020: Sets Maximum tolerances for Pesticide Residues (MRLs) in Food

- Approved on Nov 28, 2020 → Entry in force: May 29, 2021
- Default limit: YES: 0.01 mg/Kg
- Deferral Policies: YES: Codex
- NATIONAL BODY: SAG (Agricultural and Livestock Service)

COLOMBIA

2007:

Resolution No 2906/2007: MRL of pesticide residues in food for human consumption and feed

2018:

Resolution No 5897/2018: Permanence of Resolution No 2906/2007: MRL of pesticide residues in food for human consumption and feed

2020:

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- Draft Resolution on Maximum Residue Limits (MRL) of Pesticides in Food and Feed (Nov 5-Dec 7)-6 months from approval.
- Default limit: NO
- Deferral Policies: YES: Codex
- NATIONAL BODY: MINSAL (Ministry of Health) & MINAGRICULTURA (Ministry of Agriculture)

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MEXICO

1991:

- CICOPLAFEST: 1991 2005
- Official Journal January 3, 1991 List of Prohibited Pesticides in Mexico (Spanish) (21 prohibitions)
- Official Journal August 19, 1991 List of Restricted Pesticides in Mexico (Spanish) (+ 10 restrictions)

2017:

• NOM-082-SAG-FITO/SSA1-2017: MLR Technical guidelines and procedure for authorization and review → References CDX, US, CA, EU members, OECD members, BR, AR, JP.

2020:

- NEW ONLINE DATABASE: <u>Sanitary Records of Pesticides, Plant Nutrients and MRLs</u>
- Default limit: NO
- Deferral Policies: None
- NATIONAL BODY: COFEPRIS (Federal Commission for Protection Against Health Risks)

Mexico

Seleccione:			
LMR			~
Búsqueda:			
CEBADA			
			Q Buscar Limpiar
Siguiente »			Registros 1 a 20 de 101
Siguiente » Ingrediente activo	Cultivo	LMR	Registros 1 a 20 de 101
Siguiente » Ingrediente activo 2,4-D	Cultivo	LMR 0.5	Registros 1 a 20 de 101
Siguiente » Ingrediente activo 2,4-D ALFACIPERMETRINA	Cultivo CEBADA CEBADA	LMR 0.5 2	Registros 1 a 20 de 101
Siguiente » Ingrediente activo 2,4-D ALFACIPERMETRINA ATRAZINA	Cultivo CEBADA CEBADA CEBADA	LMR 0.5 2 0.1	Registros 1 a 20 de 101
Siguiente » Ingrediente activo 2,4-D ALFACIPERMETRINA ATRAZINA AZADIRACTINA	Cultivo CEBADA CEBADA CEBADA CEBADA	LMR 0.5 2 0.1 EXENTO	Registros 1 a 20 de 101

PERU

20XX:

• SENASA: Restricted and prohibited pesticides in Peru (Accessed on 2020) (Spanish)

2016:

- Ministerial Resolution No 1006/2016 (NTS 128): Sanitary Standard that establishes the Maximum Residue Limits (MRLs) of pesticides in foods for human consumption
- Default limit: NO
- Deferral Policies: YES: Codex, EPA, EU
- NATIONAL BODY: DIGESA

Market Entry Report | Peru Pesticide Requirements

Regulatory Authority for Establishing Pesticide Thresholds for Commodities and Food Products (MRLs) - Regulations (and Adoption of Regional Requirements Where Applicable) - Agency responsible for regulations

The General Directorate of Environmental Health and Food Safety of the Ministry of Health (DIGESA) is the government agency responsible for administration of pesticides issues in food.

Peruvian *Ministerial Resolution No 1006/2016 (NTS 128)* has defined pesticide chemical (by common name and permitted residue), the specific foods or commodities, and subsequent MRL (expressed in ppm) for each of those listed foods or commodities.

The pesticide MRLs of this standard are automatically modified in accordance with the updates made by the Codex Alimentarius.

Default limits

Codex Alimentarius is the default position for Peru.

In the absence of an MRL in the Codex Alimentarius pesticides regulated by the United States Environmental Protection Agency (EPA) and in the absence of this by the regulation of the European Union will be the default.

Deferral policies

Codex Alimentarius is the deferral policy.

Citations for Commodities of concern

Ministerial Resolution No 1006/2016 (NTS 128): Sanitary Standard that establishes the Maximum Residue

Intentional Food Contaminants & Adulterants

Karen Everstine

Senior Manager, Scientific Affairs, Subject Matter Expert, Contaminants and Food Fraud

Factors that Increase Fraud Vulnerability

Source: usp.org/sites/default/files/usp/document/our-work/Foods/food-fraud-mitigation-guidance.pdf

COVID-19 Threats to Trade

Sources: fao.org/3/ca8975en/CA8975EN.pdf

usp.org/sites/default/files/usp/document/our-work/Foods/food-fraud-mitigation-guidance.pdf

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Vulnerabilities in Spices

- High value
- Long, complex supply chains
- Shelf-stable
- Physical form ground
- Quality attributes (color)

Everstine, K. Supply Chain Complexity and Economically Motivated Adulteration. In: Food Protection and Security - Preventing and Mitigating Contamination during Food Processing and Production. Shaun Kennedy (Ed.) Woodhead Publishing: 26th October 2016. Data source: Food Standards Agency of the U.K. National Archives and The Guardian.

Public Health Risks

Practice Full Report

A Spoonful of Lead: A 10-Year Look at Spices as a Potential Source of Lead Exposure

Paromita Hore, PhD, MPH; Kolapo Alex-Oni, MPH; Slavenka Sedlar, MA; Deborah Nagin, MPH

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"A total of 1496 samples of more than 50 spices from 41 countries were collected during investigations of lead poisoning cases among New York City children and adults and local store surveys. More than 50% of the spice samples had detectable lead, and more than 30% had lead concentrations greater than 2 ppm. Average lead content in the spices was significantly higher for spices purchased abroad than in the United States."

China Melamine Incident

Figure 2 Share of milk production by farm size, 2006 (number of cows)

Source: Dairy Industry Yearbook

Reference: Supply Chain Issues in China's Milk Adulteration Incident. Fred Gale and Dinghuan Hu. Contributed Paper prepared for presentation at the International Association of Agricultural Economists' 2009 Conference, Beijing, China, August 16-22, 2009.

Olive Oil

Botanical Ingredients

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- "Record breaking" U.S. herbal supplement sales predicted for 2020 (American Botanical Council"
- "We've been getting reports on adulteration of elderberry and saw palmetto. They suggest the situation has actually worsened to some degree, especially with elderberry" – Stefan Gafner, head of the Botanical Adulterants Prevention Program
- http://cms.herbalgram.org/herbalgram/issue127/hg127mktrpt-2019.html
- https://www.nutraingredients.com/Article/2020/07/06/ Elderberry-demand-continues-so-does-adulteration

Data Sources

- Media reports
- Government websites
- Recalls
- Scientific Literature
- Trade Associations

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Etc

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Food Chemistry 210 (2016) 551-557

A comprehensive strategy to detect the fraudulent adulteration of herbs: CrossMark The oregano approach

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ABSTRACT

Fraud in the global food supply chain is becoming increasingly common due to the huge profits associated with this type of criminal activity. Food commodities and ingredients that are expensive and are part of complex supply chains are particularly vulnerable. Both herbs and spices fit these criteria perfectly and yet strategies to detect fraudulent adulteration are still far from robust. An FT-IR screening method coupled to data analysis using chemometrics and a second method using LC-HRMS were developed, with the latter detecting commonly used adulterants by biomarker identification. The two tier testing strategy was applied to 78 samples obtained from a variety of retail and on-line sources. There was 100% agreement between the two tests that over 24% of all samples tested had some form of adulterants present. The innovative strategy devised could potentially be used for testing the global supply chains for fraud in many different forms of herbs.

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1. Introduction

Globally, herbs and spices play a significant part in the diets of many as they are important ingredients in a multitude of foods, beverages, medicines and cosmetics. With consumers having greater access and a desire to use these products, the demand has increased vastly over the last thirty years making it a multibillion dollar industry (Furth & Cox, 2004). Marieschi, Torelli, Poli, Sacchetti, and Bruni (2009) stated that the global herb and spice trade was worth \$2.97 billion with the EU market amounting to 520 thousand tonnes and a value of €1.8 billion. Sales in 2014 at ments e.g. parsley and thyme. Supply and demand is a fundamental economic principle which determines the price of all commodities. However, as well as this, the price of spices is also dictated by the intensity of their colours and therefore, common adulteration of spices had been the addition of illegal dyes such as Sudan dves, which are group 3 genotoxic carcinogens (Cornet, Govaert, Moens, Van Loco, & Degroodt, 2006; Ruf, Walter, Kandler, & Kaufmann, 2012). However, since this issue was highlighted in 2003, the addition of Sudan dyes as a food additive has been banned worldwide. Herbs are not traded on colour and so there is no economic advantage gained from adding dyes. Instead,

Oregano Example

LC-ESI-MS/MS IDENTIFICATION OF OLEUROPEIN AS MARKER OF OLEA EUROPAEA L. LEAVES USED AS A BULKING AGENT IN GROUND OREGANO AND SAGE

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Drabova, L., Alvarez-Rivera, G., Suchanova, M., Schusterova, D., Pulkrabova, J., Tomaniova, M., ... Hajslova, J. (2019). Food fraud in oregano: Pesticide residues as adulteration markers. Food Chemistry, 276, 726–734. doi: 10.1016/j.foodchem.2018.09.143

Food Fraud Mitigation Best Practices

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- Pre-screen is helpful for large portfolios of ingredients
- Take vertical integration into account
- Risk is best managed at the ingredient level
- Strong supplier relationships are important
- You know more about your supply chain than anyone
- Pay particular attention to claims
- The process should be routinely monitored & updated

Food Fraud Newsletter

(ID)

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Food Fraud Newsletter

November 2020

What is the true cost of Food Fraud?

It is very difficult to estimate the cost of food fraud to society, both for individual incidents and overall. Ten years ago, GMA (now the Consumer Brands Association) and AT. Kearney <u>estimated</u> that all consumer product fraud cost the U.S. \$10-15 billion per year. PwC subsequently estimated food fraud costs <u>at \$30-40 billion</u> globally per year, based on using data on counterfeit products as a proxy. Finally, the Center for Counter Fraud Studies/BDO estimated costs of fraud to the food industry in the U.K. at <u>£11.2 billion</u> per year.

The Food Standards Agency of the U.K. released a <u>report</u> about a research project aimed at developing an economic model for estimating the "full range of costs attributed to food crime in UK society." The report reviews previous estimates of the cost of food crime and proposes an economic framework that would consider a wide range of effects resulting from food fraud and food crime:

- Victim costs: Direct economic losses suffered by crime victims, including medical care costs and lost earnings.
- Criminal justice system costs: Costs of anti-food crime activities, legal and
- adjudication services, and corrections programs including incarceration.
- 3. Crime career costs: Opportunity costs associated with the criminal's choice to
- engage in illegal rather than legal and productive activities.
- 4. Intangible costs: Indirect losses suffered by crime victims, including pain and
- suffering, decreased quality of life, and psychological distress

Market costs: Loss of profits¹ for genuine firms.

Source: Cox, A., Wohlschlegel, A., Jack, L., and Smart, E. The cost of food crime FS 301065. U.K. Food Standards Agency, 3 June 2020. Available at https://www.food.gov.uk/stas/default/files/media/document/the-cost-of-food-crime.pdf

If funded, this project would require many varied sources of data to construct a strong estimate. FFD is cited as one possible source to support some of the elements of the model, including health care costs and decreased quality of life.

Did you know...

We now have 12,062 records in the database. We have added quite a few new System Ingredient Groups over the past year and are now up to 46 groups total. Some of the new ingredient groups include Fruit and Vegetable Purees, Fruit and Vegetables (Dehydrated and Freeze Dried), Enzymes, Cultures, and Botanical Adulterants Prevention Program Ingredients. Look out for a group focused on **fresh produce coming soon!**

What new Ingredients are in the Database?

Ingredients recently added (as of 10/15/20) include: Olive Oil (Extra Virgin, Organic, Koroneiki), Pineapple (Preserved in Sulfur Dioxide and Calcium Chloride), Herbal Tea (Anise), Herbal Tea (Fennel), Herbal Tea (Peppermint), Herbal Tea (Hibiscus), Herbal Tea (Sage), Acai Pulp (Freeze Dried), Lard (PDO, Valle d'Aosta Arnad), Corn (Hard Endosperm), Scallops (Pecten spp.), Common Japanese Scallop, Guayusa Extract, Zinc Chloride, Sodium Iodide, Boric Acid, Sesame Seed (Organic), Flour (Whole Wheat, Organic), Brown Rice Flour (Indica), Brown Rice (Indica), Brown Rice (Long Grain, Cracked, Organic), Brown Rice (Long Grain, Cracked), Bleaching Earth, Parsley Flakes (Organic), Tomatoes (Dehydrated), Rosemary (Powdered, Organic)

Survey Question #1

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Q & A

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