

September 25, 2015

**Express Mail**

Jose A. Moreno Toscano  
President  
ALK-Abello, Inc.  
1700 Royston Lane  
Round Rock, Texas 78664

Dear Mr. Toscano:

Through routine monitoring and surveillance, the Office of Compliance and Biologics Quality in the Center for Biologics Evaluation and Research of the United States Food and Drug Administration (FDA) has reviewed your website [www.alk-abello.com](http://www.alk-abello.com) as well as other information in our records concerning licensed non-standardized allergenic extracts used in the diagnosis and treatment of allergic disease. It has come to our attention that correct and consistent nomenclature is not being used, and that the proportions of non-standardized extracts used in licensed allergen mixtures are not identified. The Federal Food, Drug, and Cosmetic Act provides that a drug, including an allergenic extract, shall be deemed to be misbranded if its labeling is false or misleading in any particular (Section 502(a) Federal Food, Drug, and Cosmetic Act) [21 U.S.C. 352 (a)]. Such a product may also be misbranded if the contents are not described with adequate specificity, as required under regulation (21 CFR 610.14, 610.61, 680.1(b)) and statute [21 U.S.C. 352(c), 352(e)(1)(A)(ii)].

The use of incorrect nomenclature, or multiple descriptors for allergenic extracts derived from the same source material, can lead to mistakes in diagnosis and inappropriate treatment of allergies. For example, an adverse reaction could result if two allergenic extracts identified using inconsistent nomenclature actually contain the same allergen and are administered to the same individual. In addition, the inaccurate identification of the proportions of non-standardized extracts used to make licensed allergen mixtures can lead to mistakes in the diagnosis and inappropriate treatment of allergies. Consistent use of identifying terminology and correct identification of the proportions of each non-standardized extract used to make licensed allergen mixtures are necessary to assure that allergenic extracts are accurately labeled and not misbranded.

Reviews by external panels of data related to the safety, effectiveness, and labeling for non-standardized allergenic extracts took place in 1974-1979 and 1982-1983 and support

the use of full and accurate nomenclature. The first panel's report included the proposal that specific designations and identifiers for the source materials be used and that these appear on the product label for all allergenic extracts. The second panel reviewed the findings of the first panel and further specified that genus/species names be used to identify pollen, mold and plant extracts.

FDA formed an internal committee to review available scientific and medical data from published literature on the safety and effectiveness of non-standardized allergenic extracts. During this review, FDA determined that nomenclature was not consistently applied. For example:

- Information on specific species cannot be ascertained because some products are identified using the term “mixed<sup>1</sup>”
- Manufacturers have multiple listings in the licenses for allergenic extracts derived from the same source material
- The adoption of a different naming convention for the same source material of a specific genus and species licensed by another manufacturer
- The identity of the extract is listed by genus only, so different species may be represented across manufacturers.

This review became the basis for the nomenclature provided in this letter (see Attachments) to fully and accurately identify licensed non-standardized allergenic extracts. Technology is readily available to accurately identify the species of all source materials used for allergenic extract manufacture, so that valid nomenclature can be applied to non-standardized allergenic extracts. As described in this letter (see Attachments), FDA has provided proper identifiers for source materials that, if consistently used, would accurately identify non-standardized allergenic extracts derived from these materials.

Additionally, the identification of licensed mixtures of non-standardized allergenic extracts is ambiguous and leads to confusion and potentially inappropriate use of these extracts in the diagnosis and treatment of allergic disease. Frequently a product is identified by genus only and the species is unknown. Also, even when the component species used to manufacture the licensed allergen mixture are identified, the proportions of each non-standardized extract used to make the licensed allergen mixture are not identified. This inaccurate identification of the proportions of each non-standardized extract used in these licensed allergen mixtures also leads to confusion and potentially inappropriate treatment of allergies.

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<sup>1</sup> Under 21 CFR 610.17, licensed biological products must not be combined with other licensed biological products “either therapeutic, prophylactic or diagnostic,” except as covered by a license obtained for the combined product. All mixes of allergenic extracts, including custom mixes, must be subject of an approved biologics license application or have in effect an investigational new drug application. FDA is addressing prescription sets of allergenic extracts in separate guidance. See Draft Guidance for Industry, Mixing, Diluting, or Repackaging Biological Products Outside the Scope of an Approved Biologics License Application. <http://www.fda.gov/ucm/groups/fdagov-public/@fdagov-drugs-gen/documents/document/ucm434176.pdf>

The nomenclature identifiers provided in this letter (see Attachments) do not necessarily constitute an exhaustive list of your products used in the diagnosis and treatment of allergic disease. It is your responsibility to ensure that the labeling for all of your licensed biological products accurately identifies the products and complies with all applicable laws, regulations, and standards.

Please review the nomenclature identifiers provided in this letter (see Attachments) and notify this office, in writing, of: (1) the steps you have taken or will take to properly identify the non-standardized allergenic extracts that are not identified, or properly identify the proportions of non-standardized extracts used to make licensed allergen mixtures, or both, based on the nomenclature provided in this letter; (2) your proposed timeframes for submitting labeling supplements under 21 CFR 601.12(f)(2)(i)(E) for product labeling that needs revision; and (3) your plans to update your establishment registration and product listing information including all currently manufactured products under Section 510 of the Act [21 U.S.C. 360]. Your response should be sent to me at the following address: U.S. Food and Drug Administration, Center for Biologics Evaluation and Research, 10903 New Hampshire Avenue, WO71-5030, Silver Spring, Maryland, 20993-0002.

In addition, please identify any non-standardized allergenic extracts that you have discontinued manufacturing and have no plans to manufacture in the future. For those non-standardized allergenic extracts that you no longer manufacture or intend to manufacture, if any, we ask you to consider submitting a voluntary request that your biologics license be revoked with regard to those extracts.

If you have questions concerning this matter, you may contact me at (240)-402-9153. Additionally, you may contact Dr. Jay Slater, Director, Division of Bacterial, Parasitic, and Allergenic Products, Office of Vaccines Research and Review at (240)-402-7396.

Sincerely,

Mary A. Malarkey  
Director  
Office of Compliance and Biologics Quality  
Center for Biologics Evaluation and Research

Attachments:

Table 1 – Licensed non-standardized allergenic extracts with incorrect identifiers and recommended correct identifiers

Table 2 – Licensed non-standardized allergenic extracts with correct identifiers

cc:

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Vice President  
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35 Channel Drive  
Port Washington, New York 11050

Steve Haynes  
Authorizing Official  
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35 Channel Drive  
Port Washington, New York 11050

ALK Abello. Table 1 : Licensed non-standardized allergenic extracts with incorrect identifiers and recommended correct identifiers

Current identifier	Recommended identifier	Explanation
Animal Allergens, Cattle Epithelium, Bos sp.	Animal Allergens: Cattle epithelium , Bos taurus	The scientific name is ambiguous. The common name is correct.
Animal Allergens, Chicken Feathers Gallus sp.	Animal Allergens: Chicken feathers, Gallus gallus	The scientific name is ambiguous. The common name is correct.
Animal Allergens, Dog Epithelium Canis familiaris	Animal Allergens: Dog Epithelium, Canis lupus familiaris	The scientific name is incorrect. The common name is correct.
Animal Allergens, Duck Feathers Anas platyrhynchos	Animal Allergens: Duck Feathers, Anas platyrhynchos	The scientific name is misspelled. The common name is correct.
Animal Allergens, Goose Feathers Chen spp.	Animal Allergens: Goose feathers, Chen (species to be specified)	The scientific name is ambiguous. The common name is correct.
Animal Allergens, Guinea Pig Epithelia Cavis porcellus	Animal Allergens: Guinea Pig Epithelia, Cavis porcellus	The scientific name is misspelled. The common name is correct.
Animal Allergens, Hamster Epithelium Cricetus sp.	Animal Allergens: Hamster Epithelium, Cricetus cricetus	The scientific name is ambiguous. The common name is correct.
Food - Animal Products and Poultry Products, Beef Bos sp	Food - Animal Products and Poultry Products: Beef, Bos taurus	The scientific name is ambiguous. The common name is correct.
Food - Animal Products and Poultry Products, Chicken Meat Gallus sp.	Food - Animal Products and Poultry Products: Chicken Meat, Gallus gallus	The scientific name is ambiguous. The common name is correct.
Food - Animal Products and Poultry Products, Egg, White Gallus sp.	Food - Animal Products and Poultry Products: Egg, white , Gallus gallus	The scientific name is ambiguous. The common name is correct.
Food - Animal Products and Poultry Products, Egg, Whole Gallus sp.	Food - Animal Products and Poultry Products: Egg, whole , Gallus gallus	The scientific name is ambiguous. The common name is correct.
Food - Animal Products and Poultry Products, Egg, Yolk Gallus sp.	Food - Animal Products and Poultry Products: Egg, yolk , Gallus gallus	The scientific name is ambiguous. The common name is correct.
Food - Animal Products and Poultry Products, Veal Food - Dairy Products, Casein, Cow's Milk	Food - Animal Products and Poultry Products: Veal, Bos taurus	The scientific name is absent. The common name is correct.
Food - Dairy Products, Lactalbumin alpha, Cow's Milk	Food - Dairy Products: Casein, Bos taurus	The scientific name is absent. The common name is correct.
Food - Dairy Products, Milk, Whole Cow's Food - Dairy Products, Whey, Cow's Milk	Food - Dairy Products: Lactalbumin alpha , Bos taurus	The scientific name is absent. The common name is correct.
Food - Fish and Shellfish, Clam Mya	Food - Dairy Products: Milk , Bos taurus	The scientific name is absent. The common name is correct.
Food - Fish and Shellfish, Clam Venus Mercenaria spp	Food - Fish and Shellfish: Clam, Mya (species to be specified)	The scientific name is ambiguous. The common name, Mya Clam, may be correct if Mya arenaria is the species designated.
Food - Fish and Shellfish, Codfish Gadus callarias	Food - Fish and Shellfish: Clam Venus, Mercenaria (species to be specified)	The scientific name is ambiguous and misspelled. The common name, Venus clam, may be correct depending on the designated species.
Food - Fish and Shellfish, Crab Xiphosurus sowerbyi	Food - Fish and Shellfish: Cod, Atlantic, Gadus morhua	The scientific name is obsolete. The common name is ambiguous.
Food - Fish and Shellfish, Flounder Pleuronectes sp.	Food - Fish and Shellfish: Crab, Horseshoe, (genus and species to be specified)	The scientific name is obsolete. The common name is correct.
Food - Fish and Shellfish, Oyster Ostrea spp.	Food - Fish and Shellfish: Flounder, Pleuronectes (species to be specified)	The scientific name is ambiguous. The common name is correct.
Food - Fish and Shellfish, Shrimp Crago sp.	Food - Fish and Shellfish: Oyster, Ostrea (species to be specified)	The scientific name is ambiguous. The common name is correct.
Food - Fish and Shellfish, Shrimp Penaeus sp.	Food - Fish and Shellfish: Shrimp , Crangon (species to be specified)	The scientific name is misspelled and ambiguous. The common name is correct.
Food - Fish and Shellfish, Tuna Neohunnus sp.	Food - Fish and Shellfish: Shrimp, Penaeus (species to be specified)	The scientific name is ambiguous. The common name is correct.
Food - Fish and Shellfish, Tuna Thunnus sp.	Food - Fish and Shellfish: Tuna, Thunnus (species to be specified)	The scientific name is obsolete and ambiguous. The common name is correct.
Food - Plant Source, Almond Prunus amygdalus	Food - Fish and Shellfish: Tuna, Thunnus (species to be specified)	The scientific name is obsolete. The common name is correct.
Food - Plant Source, Apricot Prunus sp.	Food - Plant Source: Almond, Prunus dulcis	The scientific name is ambiguous. The common name is correct.
Food - Plant Source, Banana Musa sapientum	Food - Plant Source: Apricot, Prunus (species to be specified)	The scientific name is obsolete. The common name is correct.
Food - Plant Source, Bean, Lima Phaseolus limensis	Food - Plant Source: Banana, Musa (species to be specified)	The scientific name is obsolete. The common name is correct.
Food - Plant Source, Broccoli Brassica botrytis (or oleracea var. botrytis)	Food - Plant Source: Bean, Lima, Phaseolus lunatus	The scientific name is obsolete. The common name is correct.
Food - Plant Source, Cabbage Brassica capitata (or oleracea var. capitata)	Food - Plant Source: Broccoli, Brassica oleracea var. botrytis	The scientific name is obsolete. The common name is correct.
Food - Plant Source, Cauliflower Brassica oleracea (or oleracea var. botrytis)	Food - Plant Source: Cabbage, Brassica oleracea var. capitata	The scientific name is obsolete. The common name is correct.
	Food - Plant Source: Cauliflower, Brassica oleracea var. botrytis	The scientific name is obsolete. The common name is correct.

## ALK Abello. Table 1: Licensed non-standardized allergenic extracts with incorrect identifiers and recommended correct identifiers

Food - Plant Source, Cherry Prunus sp.	Food - Plant Source: Cherry, Prunus (species to be specified)	The scientific name is ambiguous. The common name is correct.
Food - Plant Source, Cinnamon Cinnamomum zeylanicum	Food - Plant Source: Cinnamom, Cinnamomum verum	The scientific name is obsolete. The common name is correct.
Food - Plant Source, Corn, Sweet Zea rugosa	Food - Plant Source: Corn, Sweet, Zea mays	The scientific name is incorrect. The common name is correct.
Food - Plant Source, Grape Vitis sp.	Food - Plant Source: Grape, Vitis (species to be specified)	The scientific name is ambiguous. The common name is correct.
Food - Plant Source, Grapefruit Citrus unvcarpa	Food - Plant Source: Grapefruit, Citrus X paradisi	The scientific name is obsolete. The common name is correct.
Food - Plant Source, Lemon Citrus limon	Food - Plant Source: Lemon, Citrus X limon	The scientific name is obsolete. The common name is correct.
Food - Plant Source, Mustard Seed Brassica spp.	Food - Plant Source: Mustard seed, Brassica (species to be specified)	The scientific name is ambiguous. The common name is correct.
Food - Plant Source, Oat Grain Avena spp.	Food - Plant Source: Oat grain, Avena sativa	The scientific name is ambiguous. The common name is correct.
Food - Plant Source, Onion Allium spp.	Food - Plant Source: Onion, Allium cepa	The scientific name is correct.
Food - Plant Source, Orange Citrus sinensis	Food - Plant Source: Orange, Citrus X sinensis	The scientific name is obsolete. The common name is correct.
Food - Plant Source, Pecan Carya illinoensis	Food - Plant Source: Pecan, Carya illinoensis	The scientific name is misspelled. The common name is correct.
Food - Plant Source, Pepper, Green (bell), Piper sp.	Food - Plant Source: Pepper, Green (bell), (species to be specified)	The scientific name is ambiguous, and the genus indicated does not match the common name. The common name is correct.
Food - Plant Source, Rye Grain	Food - Plant Source: Rye Grain, Secale cereale	The scientific name is correct.
Food - Plant Source, Soybean Glycine soja	Food - Plant Source: Soybean, Glycine max	The scientific name is absent. The common name is correct.
Food - Plant Source, Squash, Zucchini, Italian	Food - Plant Source: Squash, Zucchini, Italian, Cucurbita pepo	The scientific name is obsolete. The common name is correct.
Food - Plant Source, Strawberry Fragaria chiloensis	Food - Plant Source: Strawberry, Fragaria X ananassa	The scientific name is absent. The common name is correct.
Food - Plant Source, Tomato Nicotiana spp.	Food - Plant Source: Tomato, (species to be specified)	The scientific name is incorrect. The common name is correct.
Food - Plant Source, Vanilla Vanilla fragrans	Food - Plant Source: Vanilla, Vanilla planifolia	The scientific name is correct.
Food - Plant Source, Watermelon Citrullus vulgaris	Food - Plant Source: Watermelon, Citrullus lanatus	The scientific name is obsolete. The common name is correct.
Food - Plant Source, Wheat Grain	Food - Plant Source: Wheat grain, Triticum aestivum	The scientific name is absent. The common name is correct.
Insects (Whole Body), Cockroach German Blattella germanica	Insects (Whole Body): Blattella germanica	The scientific name is misspelled. The common name is correct.
Insects (Whole Body), Mosquito Culex sp.	Insects (Whole Body): Mosquito, Culex (species to be specified)	The scientific name is ambiguous. The common name is correct.
Molds, Rusts and Smuts, Alternaria tenuis (alternata)	Molds, Rusts and Smuts: Alternaria alternata	Scientific name is obsolete.
Molds, Rusts and Smuts, Aspergillus amstelardami	Molds, Rusts and Smuts: Aspergillus amstelodami	Scientific name is misspelled.
Molds, Rusts and Smuts, Aspergillus sydowii	Molds, Rusts and Smuts: Aspergillus sydowii	Scientific name is misspelled.
Molds, Rusts and Smuts, Barley Smut, Ustilago hordei	Molds, Rusts and Smuts: Barley Smut, Ustilago hordei	Scientific name is misspelled. Common name is correct.
Molds, Rusts and Smuts, Bipolaris spp	Molds, Rusts and Smuts: Bipolaris (species to be specified)	Scientific name is ambiguous.
Molds, Rusts and Smuts, Cephalosporium acremonium	Molds, Rusts and Smuts: Sarocladium strictum	Scientific name is obsolete.
Molds, Rusts and Smuts, Cephalothectium roseum	Molds, Rusts and Smuts: Trichothecium roseum	Scientific name is obsolete.
Molds, Rusts and Smuts, Chaetomium olivaceum	Molds, Rusts and Smuts: Chaetomium globosum	Scientific name is obsolete.
Molds, Rusts and Smuts, Chaetomium sp.	Molds, Rusts and Smuts: Chaetomium (species to be specified)	Scientific name is ambiguous.
Molds, Rusts and Smuts, Cladosporium cladosporioides	Molds, Rusts and Smuts: Cladosporium cladosporioides	Scientific name is misspelled.
Molds, Rusts and Smuts, Drechslera sorokiniana	Molds, Rusts and Smuts: Bipolaris sorokiniana	Scientific name is obsolete.
Molds, Rusts and Smuts, Epicoccum purpurascens	Molds, Rusts and Smuts: Epicoccum nigrum	Scientific name is obsolete.
Molds, Rusts and Smuts, Fusarium	Molds, Rusts and Smuts: Fusarium (species to be specified)	Scientific name is ambiguous.
Molds, Rusts and Smuts, Fusarium moniliforme	Molds, Rusts and Smuts: Gibberella fujikuroi	Scientific name is obsolete.
Molds, Rusts and Smuts, Fusarium roseum	Molds, Rusts and Smuts: Gibberella pulicaris	Scientific name is obsolete.
Molds, Rusts and Smuts, Fusarium sporotrichoides	Molds, Rusts and Smuts: Fusarium sporotrichoides	Scientific name is misspelled.
Molds, Rusts and Smuts, Fusarium vasinfectum	Molds, Rusts and Smuts: Fusarium oxysporum	Scientific name is obsolete.
Molds, Rusts and Smuts, Helminthosporium interseminatum	Molds, Rusts and Smuts: Dendryphiella vlnosa	Scientific name is obsolete.
Molds, Rusts and Smuts, Helminthosporium maydis	Molds, Rusts and Smuts: Bipolaris maydis	Scientific name is obsolete.

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Molds, Rusts and Smuts, Helminthosporium sp.	Molds, Rusts and Smuts: Helminthosporium (species to be specified)	Scientific name is ambiguous.
Molds, Rusts and Smuts, Hormodendrum (Cladosporium)	Molds, Rusts and Smuts: Hormodendrum (species to be specified)	Scientific name is ambiguous.
Molds, Rusts and Smuts, Hormodendrum cladosporioides	Molds, Rusts and Smuts: Cladosporium cladosporioides	Scientific name is obsolete.
Molds, Rusts and Smuts, Hormodendrum pedrosi	Molds, Rusts and Smuts: Fonsecaea pedrosi	Scientific name is obsolete.
Molds, Rusts and Smuts, Mucor lamprospora	Molds, Rusts and Smuts: Beckusella lamprospora	Scientific name is obsolete.
Molds, Rusts and Smuts, Mucor rhizopodiformis	Molds, Rusts and Smuts: Rhizopus microsporus	Scientific name is obsolete.
Molds, Rusts and Smuts, Mucor rouxi	Molds, Rusts and Smuts: Rhizopus arrizus	Scientific name is obsolete.
Molds, Rusts and Smuts, Penicillium bifforme	Molds, Rusts and Smuts: Penicillium camemberti	Scientific name is obsolete.
Molds, Rusts and Smuts, Penicillium carmino-violaceum	Molds, Rusts and Smuts: Penicillium carminoviolaceum	Scientific name is misspelled.
Molds, Rusts and Smuts, Penicillium funiculosum	Molds, Rusts and Smuts: Talaromyces funiculosus	Scientific name is obsolete.
Molds, Rusts and Smuts, Penicillium glaucum	Molds, Rusts and Smuts: Penicillium expansum	Scientific name is obsolete.
Molds, Rusts and Smuts, Penicillium glaucus	Molds, Rusts and Smuts: Penicillium expansum	Scientific name is obsolete.
Molds, Rusts and Smuts, Penicillium luteum	Molds, Rusts and Smuts: Talaromyces luteus	Scientific name is obsolete.
Molds, Rusts and Smuts, Penicillium roseum	Molds, Rusts and Smuts: Clonostachys rosea	Scientific name is obsolete.
Molds, Rusts and Smuts, Penicillium rubrum	Molds, Rusts and Smuts: Talaromyces ruber	Scientific name is obsolete.
Molds, Rusts and Smuts, Penicillium spp.	Molds, Rusts and Smuts: Penicillium (species to be specified)	Scientific name is ambiguous.
Molds, Rusts and Smuts, Penicillium vermiculatum	Molds, Rusts and Smuts: Talaromyces flavus	Scientific name is obsolete.
Molds, Rusts and Smuts, Phoma sp.	Molds, Rusts and Smuts: Phoma (species to be specified)	Scientific name is ambiguous.
Molds, Rusts and Smuts, Rhizopus nigricans	Molds, Rusts and Smuts: Rhizopus stolonifer	Scientific name is obsolete.
Molds, Rusts and Smuts, Rhodotorula rubra	Molds, Rusts and Smuts: Rhodotorula mucilaginosa	Scientific name is obsolete.
Molds, Rusts and Smuts, Spondylocadium atrovirens	Molds, Rusts and Smuts: Helminthosporium solani	Scientific name is obsolete.
Molds, Rusts and Smuts, Wheat Smut, Loose Ustilago tritici	Molds, Rusts and Smuts: (common name to be specified), Ustilago tritici	Scientific name is correct. Common name is uncertain.
Plants and Plant Parts, Cotton Linters	Plants and Plant Parts: Cotton Linters, Gossypium (species to be specified)	The scientific name is ambiguous. The common name is correct.
Plants and Plant Parts, Cottonseed Gossypium spp.	Plants and Plant Parts: Cottonseed, Gossypium (species to be specified)	The scientific name is ambiguous. The common name is correct.
Plants and Plant Parts, Flaxseed or Linseed Linum usitatissimum	Plants and Plant Parts: Flax, Linum usitatissimum	The scientific name is correct. The common name is ambiguous.
Plants and Plant Parts, Gum, Acacia or Arabic Acacia senegal	Plants and Plant Parts: Gum, Arabic, Acacia senegal	The scientific name is correct. The common name is ambiguous.
Plants and Plant Parts, Gum, Karaya or Bassora Cochlospermum religiosum	Plants and Plant Parts: Gum (Karaya or Bassora), Silk-cotton Tree, Cochlospermum religiosum	The scientific name is correct. The common name is ambiguous.
Plants and Plant Parts, Oris Root Iris florentina	Plants and Plant Parts: Oris root, Iris germanica	The scientific name is obsolete. The common name is correct.
Plants and Plant Parts, Pyrethrum Chrysanthemum spp.	Plants and Plant Parts: Pyrethrum, Chrysanthemum cinerarifolium	The scientific name is ambiguous. The common name is correct.
Pollens - Cultivated Farm Plants, Clover, Red Trifolium communis	Pollens - Cultivated Farm Plants: Clover, Red, Trifolium pratense	The scientific name is obsolete. The common name is correct.
Pollens - Cultivated Farm Plants, Clover, Sweet Melilotus alba	Pollens - Cultivated Farm Plants: Clover, Sweet, Melilotus albus	The scientific name is obsolete. The common name is correct.
Pollens - Flowers, Sunflower Helianthus spp.	Pollens - Flowers: Sunflower, Helianthus (species to be specified)	The scientific name is ambiguous. The common name is correct.
Pollens - Grasses, Barnyard Grass Echinochloa crusgalli	Pollens - Grasses: Barnyard Grass, Echinochloa crus-galli	The scientific name is obsolete. The common name is correct.
Pollens - Grasses, Brome Broncho-Ripgut Bromus rigidus	Pollens - Grasses: Brome, Broncho/Ripgut, Bromus diandrus	The scientific name is obsolete. The common name is correct.
Pollens - Grasses, Brome, Corn Millet	Pollens - Grasses: Brome, Corn Millet, (genus and species to be specified)	The scientific is absent. The common name is ambiguous.
Pollens - Grasses, Brome, Soft Cheat Bromus mollis	Pollens - Grasses: Brome, Soft Cheat, Bromus hordeaceus	The scientific name is obsolete. The common name is correct.
Pollens - Grasses, Grama Grass, Tripicum dactyloides	Pollens - Grasses: Grama Grass, Tripsecum dactyloides	The scientific and common names are misspelled.
Pollens - Grasses, Koeler's Grass (Western Junegrass) Koeleria cristata	Pollens - Grasses: Koeler's Grass (Western Junegrass), Koeleria pyramidata	The scientific name is obsolete. The common name is correct.
Pollens - Grasses, Quack (Couch) Grass Agropyron repens	Pollens - Grasses: Quack (Couch) Grass, Elymus repens	The scientific name is obsolete. The common name is correct.
Pollens - Grasses, Ryegrass, Alkali Elymus triticoides	Pollens - Grasses: Ryegrass, Alkali, Elymus triticoides	The scientific name is obsolete. The common name is correct.
Pollens - Grasses, Saltgrass Distichlis sp.	Pollens - Grasses: Saltgrass, Distichlis (species to be specified)	The scientific name is ambiguous. The common name is correct.

## ALK Abello. Table 1: Licensed non-standardized allergenic extracts with incorrect identifiers and recommended correct identifiers

Pollens - Grasses, Sudan Grass Andropogon sudanense	Pollens - Grasses: Sudan Grass, Sorghum X drummondii	The scientific name is obsolete. The common name is correct.
Pollens - Grasses, Sudan Grass Sorghum vulgare sudanense	Pollens - Grasses: Sudan Grass, Sorghum X drummondii	The scientific name is obsolete. The common name is correct.
Pollens - Grasses, Sudan Grass Sorghum vulgare sudanensis	Pollens - Grasses: Sudan Grass, Sorghum X drummondii	The scientific name is obsolete. The common name is correct.
Pollens - Trees, Alder Alnus spp.	Pollens - Trees: Alder, Alnus (species to be specified)	The scientific name is ambiguous. The common name is correct.
Pollens - Trees, Alder, Mountain (Tag-Slender) Alnus tenifolia/incana	Pollens - Trees: Alder, Mountain (Tag-Slender), Alnus incana ssp. tenuifolia.	The scientific name is obsolete. The common name is correct.
Pollens - Trees, Alder, Tag-Smooth Alnus rugosa	Pollens - Trees: Alder, Tag-Smooth, Alnus incana ssp. rugosa.	The scientific name is obsolete. The common name is correct.
Pollens - Trees, Ash Fraxinus spp.	Pollens - Trees: Ash, Fraxinus (species to be specified)	The scientific name is ambiguous. The common name is correct.
Pollens - Trees, Ash, Oregon Fraxinus oregona	Pollens - Trees: Ash, Oregon, Fraxinus latifolia	The scientific name is obsolete. The common name is correct.
Pollens - Trees, Bayberry Myrica cerifera	Pollens - Trees: Bayberry, Morella cerifera	The scientific name is obsolete. The common name is correct.
Pollens - Trees, Birch, Red Betula rubra	Pollens - Trees: Birch, River, Betula nigra	The scientific and common names are ambiguous.
Pollens - Trees, Cedar, Mountain Juniperus sabinoides	Pollens - Trees: Cedar, Mountain, Juniperus ashei	The scientific name is obsolete. The common name is correct.
Pollens - Trees, Cottonwood Populus spp.	Pollens - Trees: Cottonwood, Populus (species to be specified)	The scientific name is ambiguous. The common name is correct.
Pollens - Trees, Cottonwood, Arizona Populus fremontii	Pollens - Trees: Cottonwood, Arizona, Populus fremontii	The scientific name is misspelled. The common name is correct.
Pollens - Trees, Cottonwood, Fremont Populus fremontii	Pollens - Trees: Cottonwood, Fremont, Populus fremontii	The scientific name is misspelled. The common name is correct.
Pollens - Trees, Cottonwood, Western Populus sargentii	Pollens - Trees: Cottonwood, Western, Populus deltoides ssp. Monilifera	The scientific name is obsolete. The common name is correct.
Pollens - Trees, Cypress, Arizona Cupressus arizonica	Pollens - Trees: Cypress, Arizona, Callitropsis arizonica	The scientific name is obsolete. The common name is correct.
Pollens - Trees, Cypress, Monterey Cupressus macrocarpa	Pollens - Trees: Cypress, Monterey, Callitropsis macrocarpa	The scientific name is obsolete. The common name is correct.
Pollens - Trees, Eucalyptus spp.	Pollens - Trees: Eucalyptus, Eucalyptus (species to be specified)	The scientific name is ambiguous. The common name is correct.
Pollens - Trees, Groundsel, Baccharis sp.	Pollens - Trees: Groundsel, Baccharis (species to be specified)	The scientific name is ambiguous. The common name is correct.
Pollens - Trees, Hackberry Celtis spp.	Pollens - Trees: Hackberry, Celtis (species to be specified)	The scientific name is ambiguous. The common name is correct.
Pollens - Trees, Hazelnut, California Corylus californica	Pollens - Trees: Hazelnut, California, Corylus cornuta ssp. californica	The scientific name is obsolete. The common name is correct.
Pollens - Trees, Hickory Carya spp.	Pollens - Trees: Hickory, Carya (species to be specified)	The scientific name is ambiguous. The common name is correct.
Pollens - Trees, Hickory, White Carya alba	Pollens - Trees: Hickory, White, Carya tomentosa	The scientific name is obsolete. The common name is correct.
Pollens - Trees, Maple Acer spp.	Pollens - Trees: Maple, Acer (species to be specified)	The scientific name is ambiguous. The common name is correct.
Pollens - Trees, Melaleuca Leucadendron Blossom	Pollens - Trees: Melaleuca blossom, Melaleuca leucadendra	The scientific name is obsolete. The common name is correct.
Pollens - Trees, Melaleuca Melaleuca leucadendrom	Pollens - Trees: Melaleuca, Melaleuca leucadendra	The scientific name is obsolete. The common name is correct.
Pollens - Trees, Mosquito Prosopis spp.	Pollens - Trees: Mosquito, Prosopis (species to be specified)	The scientific name is ambiguous. The common name is correct.
Pollens - Trees, Palm, Queen Cocos plumosa	Pollens - Trees: Palm, Queen, Syagrus romanoffiana	The scientific name is obsolete. The common name is correct.
Pollens - Trees, Pine, Australian Casuarina spp.	Pollens - Trees: Pine, Australian, Casuarina (species to be specified)	The scientific name is ambiguous. The common name is correct.
Pollens - Trees, Poplar, Lombardy Populus nigra italica	Pollens - Trees: Poplar, Lombardy, Populus nigra	The scientific name is obsolete. The common name is correct.
Pollens - Trees, Privet Ligustrum spp.	Pollens - Trees: Privet, Ligustrum (species to be specified)	The scientific name is ambiguous. The common name is correct.
Pollens - Trees, Sycamore, American (Eastern) Platanus occidentalis	Pollens - Trees: Sycamore, American (Eastern), Platanus occidentalis	The scientific name is misspelled. The common name is correct.
Pollens - Trees, Sycamore, Western Platanus orientalis	Pollens - Trees: Planetree, Oriental, Platanus orientalis	The scientific name is correct. The common name is ambiguous.
Pollens - Trees, Walnut, Hind's California Black Juglans hindsii	Pollens - Trees: Walnut, Hind's California Black, Juglans hindsii	The scientific name is correct. The common name is misspelled.
Pollens - Trees, Willow Salix spp.	Pollens - Trees: Willow, Salix (species to be specified)	The scientific name is ambiguous. The common name is correct.
Pollens - Weeds and Garden Plants, Baccharis spp.	Pollens - Weeds and Garden Plants: (common name to be specified), Baccharis (species to be specified)	The scientific names is ambiguous. The common name is absent.
Pollens - Weeds and Garden Plants, Beach Sandbur Franea chammissonis	Pollens - Weeds and Garden Plants: Beach Sandbur, Ambrosia chammissonis	The scientific name is obsolete. The common name is correct.



## ALK Abello. Table 1: Licensed non-standardized allergenic extracts with incorrect identifiers and recommended correct identifiers

Pollens - Weeds and Garden Plants, Bitterdock, Rumex obtusifolius	Pollens - Weeds and Garden Plants: Bitterdock, Rumex obtusifolius	The scientific name is misspelled. The common name is correct.
Pollens - Weeds and Garden Plants, Cocklebur Xanthium commune	Pollens - Weeds and Garden Plants: Cocklebur, Xanthium strumarium	The scientific name is obsolete. The common name is correct.
Pollens - Weeds and Garden Plants, Cocklebur, Mixed Xanthium spp.	Pollens - Weeds and Garden Plants: Cocklebur, Xanthium (species to be specified)	The scientific name is ambiguous. The common name is correct.
Pollens - Weeds and Garden Plants, Hemp, Western Water Acrida tamariacina	Pollens - Weeds and Garden Plants: Hemp, Western Water, Amaranthus tuberculatus	The scientific name is obsolete. The common name is correct.
Pollens - Weeds and Garden Plants, Marshelder, Burweed (Giant Poverty) Iva xanthifolia	Pollens - Weeds and Garden Plants: Marshelder, Burweed (Giant Poverty), Cyclachaena xanthifolia	The scientific name is obsolete. The common name is correct.
Pollens - Weeds and Garden Plants, Marshelder, True (Rough) Iva ciliata	Pollens - Weeds and Garden Plants: Marshelder, True (Rough), Iva annua	The scientific name is obsolete. The common name is correct.
Pollens - Weeds and Garden Plants, Mugwort Artemisia spp.	Pollens - Weeds and Garden Plants: Mugwort, Artemisia (species to be specified)	The scientific name is ambiguous. The common name is correct.
Pollens - Weeds and Garden Plants, Mugwort, California Artemesia heterophylla	Pollens - Weeds and Garden Plants: Mugwort, California, Artemisia douglasiana	The scientific name is obsolete. The common name is correct.
Pollens - Weeds and Garden Plants, Nettle Urtica sp	Pollens - Weeds and Garden Plants: Nettle, Urtica (species to be specified)	The scientific name is ambiguous. The common name is correct.
Pollens - Weeds and Garden Plants, Parietaria, Parietaria judaica	Pollens - Weeds and Garden Plants: Parietaria, Parietaria judaica	The scientific name is correct. The common name is misspelled.
Pollens - Weeds and Garden Plants, Pickleweed Salicornia ambigua	Pollens - Weeds and Garden Plants: Pickleweed, Sarcocornia perennis	The scientific name is obsolete. The common name is correct.
Pollens - Weeds and Garden Plants, Ragweed, False Franseria acanthicarpa	Pollens - Weeds and Garden Plants: Ragweed, False, Ambrosia acanthicarpa	The scientific name is obsolete. The common name is correct.
Pollens - Weeds and Garden Plants, Ragweed, Slender Franseria tenuifolia	Pollens - Weeds and Garden Plants: Ragweed, Slender, Ambrosia tenuifolia	The scientific name is obsolete. The common name is correct.
Pollens - Weeds and Garden Plants, Sagobrush, Prairie Artemisia gnaphalodes	Pollens - Weeds and Garden Plants: Sagebrush, Prairie, Artemisia ludoviciana ssp. ludoviciana	The scientific name is obsolete. The common name is correct.
Pollens - Weeds and Garden Plants, Scale, Spear Atriplex patula hastata	Pollens - Weeds and Garden Plants: Scale, Spear, Atriplex prostrata	The scientific name is obsolete. The common name is correct.

**ALK Abello. Table 2: Licensed non-standardized allergenic extracts with correct identifiers**

Animal Allergens: Gerbil Epithelia, Meriones unguiculatus

Animal Allergens: Goat Epithelia, Capra hircus

Animal Allergens: Hog Epithelia, Sus scrofa

Animal Allergens: Horse Dander, Equus caballus

Animal Allergens: Mouse Epithelia, Mus musculus

Animal Allergens: Rabbit Epithelia, Oryctolagus cuniculus

Animal Allergens: Rat Epithelia, Rattus norvegicus

Food - Animal Products and Poultry Products: Lamb, Ovis aries

Food - Animal Products and Poultry Products: Pork, Sus scrofa

Food - Animal Products and Poultry Products: Turkey meat, Meleagris gallopavo

Food - Fish and Shellfish: Halibut, Hippoglossus hippoglossus

Food - Fish and Shellfish: Lobster, Homarus americanus

Food - Fish and Shellfish: Salmon, Salmo salar

Food - Plant Source: Apple, Malus pumila

Food - Plant Source: Asparagus, Asparagus officinalis

Food - Plant Source: Avocado, Persea americana

Food - Plant Source: Barley, Whole Grain, Hordeum vulgare

Food - Plant Source: Bean, Navy, Phaseolus vulgaris

Food - Plant Source: Bean, Pinto, Phaseolus vulgaris

Food - Plant Source: Bean, String Green, Phaseolus vulgaris

Food - Plant Source: Beet, Beta vulgaris

Food - Plant Source: Brazil Nut, Bertholletia excelsa

Food - Plant Source: Buckwheat, Fagopyrum esculentum

Food - Plant Source: Cantaloupe, Cucumis melo

Food - Plant Source: Carrot, Daucus carota

Food - Plant Source: Celery, Apium graveolens (or Apium graveolens var. dulce)

Food - Plant Source: Cocoa Bean, Theobroma cacao

Food - Plant Source: Coconut, Cocos nucifera

**ALK Abello. Table 2: Licensed non-standardized allergenic extracts with correct identifiers**

Food - Plant Source: Coffee, <i>Coffea arabica</i>
Food - Plant Source: Cucumber, <i>Cucumis sativus</i>
Food - Plant Source: Garlic, <i>Allium sativum</i>
Food - Plant Source: Ginger, <i>Zingiber officinale</i>
Food - Plant Source: Honeydew melon, <i>Cucumis melo</i>
Food - Plant Source: Lettuce, <i>Lactuca sativa</i>
Food - Plant Source: Mushroom, <i>Agaricus campestris</i>
Food - Plant Source: Olive, Green, <i>Olea europaea</i>
Food - Plant Source: Pea, Green or English, <i>Pisum sativum</i>
Food - Plant Source: Peach, <i>Prunus persica</i>
Food - Plant Source: Peanut, <i>Arachis hypogaea</i>
Food - Plant Source: Pear, <i>Pyrus communis</i>
Food - Plant Source: Pepper, Black-White, <i>Piper nigrum</i>
Food - Plant Source: Pineapple, <i>Ananas comosus</i>
Food - Plant Source: Pistachio Nut, <i>Pistacia vera</i>
Food - Plant Source: Plum, <i>Prunus domestica</i>
Food - Plant Source: Potato, Sweet, <i>Ipomoea batatas</i>
Food - Plant Source: Potato, White, <i>Solanum tuberosum</i>
Food - Plant Source: Raspberry, Red, <i>Rubus idaeus</i>
Food - Plant Source: Rice, <i>Oryza sativa</i>
Food - Plant Source: Sesame seed, <i>Sesamum indicum</i>
Food - Plant Source: Spinach, <i>Spinacia oleracea</i>
Food - Plant Source: Tea, <i>Camellia sinensis</i>
Food - Plant Source: Turnip, <i>Brassica rapa</i>
Food - Plant Source: Walnut, English, <i>Juglans regia</i>
Food - Plant Source: Yeast, Baker's, <i>Saccharomyces cerevisiae</i>
Food - Plant Source: Yeast, Brewer's, <i>Saccharomyces cerevisiae</i>
Insects (Whole Body): Ant, Fire, <i>Solenopsis invicta</i>
Insects (Whole Body): Bee, Honey, <i>Apis mellifera</i>
Insects (Whole Body): Cockroach, American, <i>Periplaneta americana</i>
Molds, Rusts and Smuts: <i>Alternaria solani</i>
Molds, Rusts and Smuts: <i>Aspergillus clavatus</i>
Molds, Rusts and Smuts: <i>Aspergillus flavipes</i>
Molds, Rusts and Smuts: <i>Aspergillus fumigatus</i>

**ALK Abello. Table 2: Licensed non-standardized allergenic extracts with correct identifiers**

Molds, Rusts and Smuts: *Aspergillus nidulans*

Molds, Rusts and Smuts: *Aspergillus niger*

Molds, Rusts and Smuts: *Aspergillus ochraceus*

Molds, Rusts and Smuts: *Aspergillus oryzae*

Molds, Rusts and Smuts: *Aspergillus repens*

Molds, Rusts and Smuts: *Aspergillus restrictus*

Molds, Rusts and Smuts: *Aspergillus terreus*

Molds, Rusts and Smuts: *Aspergillus ustus*

Molds, Rusts and Smuts: *Aspergillus versicolor*

Molds, Rusts and Smuts: *Aureobasidium pullulans*

Molds, Rusts and Smuts: *Botrytis cinerea*

Molds, Rusts and Smuts: *Candida albicans*

Molds, Rusts and Smuts: *Chaetomium globosum*

Molds, Rusts and Smuts: *Chaetomium indicum*

Molds, Rusts and Smuts: *Cladosporium sphaerospermum*

Molds, Rusts and Smuts: Corn Smut, *Ustilago maydis*

Molds, Rusts and Smuts: *Curvularia lunata*

Molds, Rusts and Smuts: *Curvularia spicifera*

Molds, Rusts and Smuts: *Fusarium oxysporum*

Molds, Rusts and Smuts: *Fusarium solani*

Molds, Rusts and Smuts: *Mucor circinelloides*

Molds, Rusts and Smuts: *Mucor mucedo*

Molds, Rusts and Smuts: *Mucor plumbeus*

Molds, Rusts and Smuts: *Mucor racemosus*

Molds, Rusts and Smuts: *Neurospora intermedia*

Molds, Rusts and Smuts: *Nigrospora sphaerica*

Molds, Rusts and Smuts: Oat Smut, *Ustilago avenae*

Molds, Rusts and Smuts: *Penicillium atramentosum*

Molds, Rusts and Smuts: *Penicillium camemberti*

**ALK Abello. Table 2: Licensed non-standardized allergenic extracts with correct identifiers**

Molds, Rusts and Smuts: <i>Penicillium chrysogenum</i>
Molds, Rusts and Smuts: <i>Penicillium digitatum</i>
Molds, Rusts and Smuts: <i>Penicillium expansum</i>
Molds, Rusts and Smuts: <i>Penicillium intricatum</i>
Molds, Rusts and Smuts: <i>Penicillium italicum</i>
Molds, Rusts and Smuts: <i>Penicillium janthinellum</i>
Molds, Rusts and Smuts: <i>Penicillium notatum</i>
Molds, Rusts and Smuts: <i>Penicillium oxalicum</i>
Molds, Rusts and Smuts: <i>Penicillium roqueforti</i>
Molds, Rusts and Smuts: <i>Penicillium roseopurpureum</i>
Molds, Rusts and Smuts: <i>Phoma betae</i>
Molds, Rusts and Smuts: <i>Phoma destructiva</i>
Molds, Rusts and Smuts: <i>Phoma herbarum</i>
Molds, Rusts and Smuts: <i>Phoma hibernica</i>
Molds, Rusts and Smuts: <i>Rhizopus arrhizus</i>
Molds, Rusts and Smuts: <i>Saccharomyces cerevisiae</i>
Molds, Rusts and Smuts: <i>Stemphylium sarciniforme</i>
Molds, Rusts and Smuts: <i>Trichoderma viride</i>
Molds, Rusts and Smuts: <i>Trichophyton mentagrophytes</i>
Plants and Plant Parts: Gum, <i>Tragacanth</i> , <i>Astragalus gummifer</i>
Plants and Plant Parts: <i>Kapok</i> , <i>Ceiba pentandra</i>
Pollens - Cultivated Farm Plants: <i>Alfalfa</i> , <i>Medicago sativa</i>
Pollens - Cultivated Farm Plants: <i>Clover</i> , <i>White</i> , <i>Trifolium repens</i>
Pollens - Cultivated Farm Plants: <i>Corn</i> , <i>Zea mays</i>
Pollens - Cultivated Farm Plants: <i>Wheat</i> , <i>Cultivated</i> , <i>Triticum aestivum</i>
Pollens - Flowers: <i>Dandelion</i> <i>Taraxacum officinale</i>
Pollens - Flowers: <i>Sunflower</i> , <i>Helianthus annuus</i>
Pollens - Grasses: <i>Bahia Grass</i> , <i>Paspalum notatum</i>

ALK Abello. Table 2: Licensed non-standardized allergenic extracts with correct identifiers

Pollens - Grasses: Bluegrass, Annual, Poa annua
Pollens - Grasses: Bluegrass, Canada, Poa compressa
Pollens - Grasses: Brome, California, Bromus carinatus
Pollens - Grasses: Brome, Cheat, Bromus secalinus
Pollens - Grasses: Brome, Smooth, Bromus inermis
Pollens - Grasses: Canarygrass, Phalaris canariensis
Pollens - Grasses: Canarygrass, Reed, Phalaris arundinacea
Pollens - Grasses: Canarygrass, Small, Phalaris minor
Pollens - Grasses: Johnson Grass, Sorghum halepense
Pollens - Grasses: Oat, Wild, Avena fatua
Pollens - Grasses: Ryegrass, Italian, Lolium multiflorum
Pollens - Grasses: Saltgrass, Distichlis spicata
Pollens - Grasses: Velvetgrass, Holcus lanatus
Pollens - Grasses: Wheat, Cultivated, Triticum aestivum
Pollens - Trees: Acacia, Acacia longifolia
Pollens - Trees: Acacia, Bailey's, Acacia baileyana
Pollens - Trees: Alder, Red, Alnus rubra
Pollens - Trees: Alder, White, Alnus rhombifolia
Pollens - Trees: Ash, Arizona (Velvet), Fraxinus velutina
Pollens - Trees: Ash, Black, Fraxinus nigra
Pollens - Trees: Ash, Green, Fraxinus pennsylvanica
Pollens - Trees: Ash, White, Fraxinus americana
Pollens - Trees: Aspen, Populus tremuloides
Pollens - Trees: Beech, American, Fagus grandifolia
Pollens - Trees: Birch, Black-Sweet, Betula lenta
Pollens - Trees: Birch, River, Betula nigra
Pollens - Trees: Birch, White, Betula populifolia
Pollens - Trees: Box Elder, Acer negundo
Pollens - Trees: Cedar, Red, Juniperus virginiana
Pollens - Trees: Cedar, Salt, Tamarix gallica
Pollens - Trees: Cottonwood, Black, Populus trichocarpa
Pollens - Trees: Cottonwood, Common, Populus deltoides

**ALK Abello. Table 2: Licensed non-standardized allergenic extracts with correct identifiers**

Pollens - Trees: Cottonwood, Eastern, <i>Populus deltoides</i>
Pollens - Trees: Cypress, Bald, <i>Taxodium distichum</i>
Pollens - Trees: Cypress, Italian, <i>Cupressus sempervirens</i>
Pollens - Trees: Elm, American, <i>Ulmus americana</i>
Pollens - Trees: Elm, Cedar, <i>Ulmus crassifolia</i>
Pollens - Trees: Elm, Chinese, <i>Ulmus parvifolia</i>
Pollens - Trees: Elm, Siberian, <i>Ulmus pumila</i>
Pollens - Trees: Eucalyptus, Blue Gum, <i>Eucalyptus globulus</i>
Pollens - Trees: Greasewood, <i>Sarcobatus vermiculatus</i>
Pollens - Trees: Gum, Sweet, <i>Liquidambar styraciflua</i>
Pollens - Trees: Hackberry, <i>Celtis occidentalis</i>
Pollens - Trees: Hazelnut, American, <i>Corylus americana</i>
Pollens - Trees: Hickory, Pignut, <i>Carya glabra</i>
Pollens - Trees: Hickory, Shagbark, <i>Carya ovata</i>
Pollens - Trees: Hickory, Shellbark, <i>Carya laciniosa</i>
Pollens - Trees: Hickory, White, <i>Carya tomentosa</i>
Pollens - Trees: Hornbeam, <i>Ostrya virginiana</i>
Pollens - Trees: Juniper, Western, <i>Juniperus occidentalis</i>
Pollens - Trees: Linden (Basswood) <i>Tilia americana</i>
Pollens - Trees: Locust, Black, <i>Robinia pseudoacacia</i>
Pollens - Trees: Maple, Red, <i>Acer rubrum</i>
Pollens - Trees: Maple, Sugar, <i>Acer saccharinum</i>
Pollens - Trees: Mesquite, <i>Prosopis juliflora</i>
Pollens - Trees: Mulberry, Red, <i>Morus rubra</i>
Pollens - Trees: Mulberry, White, <i>Morus alba</i>
Pollens - Trees: Oak, California Live, <i>Quercus agrifolia</i>
Pollens - Trees: Oak, Coast Live, <i>Quercus agrifolia</i>
Pollens - Trees: Oak, Pin, <i>Quercus palustris</i>
Pollens - Trees: Oak, Red, <i>Quercus rubra</i>
Pollens - Trees: Oak, Scrub, <i>Quercus dumosa</i>
Pollens - Trees: Oak, Valley, <i>Quercus lobata</i>
Pollens - Trees: Oak, Virginia Live, <i>Quercus virginiana</i>
Pollens - Trees: Oak, White, <i>Quercus alba</i>
Pollens - Trees: Olive, <i>Olea europaea</i>
Pollens - Trees: Pecan, <i>Carya illinoensis</i>

**ALK Abello. Table 2: Licensed non-standardized allergenic extracts with correct identifiers**

Pollens - Trees: Pepper Tree, Brazilian, Schinus terebinthifolius

Pollens - Trees: Pepper Tree, California, Schinus molle

Pollens - Trees: Pine, Red, Pinus resinosa

Pollens - Trees: Pine, White (Eastern), Pinus strobus

Pollens - Trees: Pine, Yellow, Pinus echinata

Pollens - Trees: Planetree, London, Platanus acerifolia

Pollens - Trees: Poplar, White, Populus alba

Pollens - Trees: Privet, Ligustrum vulgare

Pollens - Trees: Redwood, Sequoia sempervirens

Pollens - Trees: Sycamore, Western, Platanus racemosa

Pollens - Trees: Tree of Heaven, Ailanthus altissima

Pollens - Trees: Walnut, Black, Juglans nigra

Pollens - Trees: Walnut, English, Juglans regia

Pollens - Trees: Walnut, Southern California Black, Juglans californica

Pollens - Trees: Willow, Black, Salix nigra

Pollens - Trees: Willow, Pussy, Salix discolor

Pollens - Weeds and Garden Plants: Alfalfa, Medicago sativa

Pollens - Weeds and Garden Plants: Allscale, Atriplex polycarpa

Pollens - Weeds and Garden Plants: Bassia, Bassia hyssopifolia

Pollens - Weeds and Garden Plants: Careless Weed, Amaranthus palmeri

Pollens - Weeds and Garden Plants: Cattail, Typha latifolia

Pollens - Weeds and Garden Plants: Cocklebur, Xanthium strumarium

Pollens - Weeds and Garden Plants: Cocklebur, Spiny, Xanthium spinosum

Pollens - Weeds and Garden Plants: Dock, Yellow (Curly Dock), Rumex crispus

Pollens - Weeds and Garden Plants: Dog Fennel, Eupatorium capillifolium

Pollens - Weeds and Garden Plants: Goldenrod, Solidago canadensis

Pollens - Weeds and Garden Plants: Hemp, Cannabis sativa



**ALK Abello. Table 2: Licensed non-standardized allergenic extracts with correct identifiers**

Pollens - Weeds and Garden Plants: Iodine Bush, <i>Allenrolfea occidentalis</i>
Pollens - Weeds and Garden Plants: Kochia (Mexican Firebush) <i>Kochia scoparia</i>
Pollens - Weeds and Garden Plants: Lamb's Quarters, <i>Chenopodium album</i>
Pollens - Weeds and Garden Plants: Lenscale Quailbrush, <i>Atriplex lentiformis</i>
Pollens - Weeds and Garden Plants: Marshelder, Narrowleaf, <i>Iva angustifolia</i>
Pollens - Weeds and Garden Plants: Mugwort, Common, <i>Artemisia vulgaris</i>
Pollens - Weeds and Garden Plants: Mugwort, Darkleaved, <i>Artemisia ludoviciana</i>
Pollens - Weeds and Garden Plants: Pigweed, Rough Redroot, <i>Amaranthus retroflexus</i>
Pollens - Weeds and Garden Plants: Pigweed, Spiny, <i>Amaranthus spinosus</i>
Pollens - Weeds and Garden Plants: Plantain, English, <i>Plantago lanceolata</i>
Pollens - Weeds and Garden Plants: Ragweed, Giant (Tall), <i>Ambrosia trifida</i>
Pollens - Weeds and Garden Plants: Ragweed, Southern, <i>Ambrosia bidentata</i>
Pollens - Weeds and Garden Plants: Ragweed, Western, <i>Ambrosia psilostachya</i>
Pollens - Weeds and Garden Plants: Russian Thistle, <i>Salsola kali</i>
Pollens - Weeds and Garden Plants: Sagebrush, <i>Artemisia annua</i>
Pollens - Weeds and Garden Plants: Sagebrush, Coast, <i>Artemisia californica</i>
Pollens - Weeds and Garden Plants: Sagebrush, Common, <i>Artemisia tridentata</i>
Pollens - Weeds and Garden Plants: Sagebrush, Mugwort, <i>Artemisia vulgaris</i>
Pollens - Weeds and Garden Plants: Sagebrush, Pasture, <i>Artemisia frigida</i>
Pollens - Weeds and Garden Plants: Sagebrush, Prairie, <i>Artemisia ludoviciana</i>
Pollens - Weeds and Garden Plants: Sagebrush, White (Prairie), <i>Artemisia ludoviciana</i>
Pollens - Weeds and Garden Plants: Saltbush, Annual, <i>Atriplex wrightii</i>

**ALK Abello. Table 2: Licensed non-standardized allergenic extracts with correct identifiers**

Pollens - Weeds and Garden Plants: Scale, Wing (Shad), *Atriplex canescens*

Pollens - Weeds and Garden Plants: Sedge, *Carex barbarae*

Pollens - Weeds and Garden Plants: Sheep Fat, *Atriplex confertifolia*

Pollens - Weeds and Garden Plants: Sheep Sorrel, *Rumex acetosella*

Pollens - Weeds and Garden Plants: Wormwood, Annual, *Artemisia annua*