

Generally Recognized as Secret: Chemicals Added to Food in the United States

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[In April 2014, the Natural Resources Defense Council \(NRDC\) released a report](#) raising concerns about a loophole in the Food Additives Amendment of 1958 for substances designated by food manufacturers as “generally recognized as safe” (GRAS). The report identified 56 companies that appeared to market 275 chemicals for use in food based on undisclosed GRAS safety determinations. For each chemical we identified in this study, we did not find evidence that FDA had cleared them for use in food.

The 1958 law exempted from the formal, extended FDA approval process common food ingredients like vinegar and vegetable oil whose use qualifies as GRAS. It may have appeared reasonable at the time, but that exemption has been stretched into a loophole that has swallowed the law. The exemption allows manufacturers to make safety determinations that the uses of their newest chemicals in food are safe without notifying the FDA. The agency’s attempts to limit these undisclosed GRAS determinations by asking industry to voluntarily inform the FDA about their chemicals are insufficient to ensure the safety of our food in today’s global marketplace with a complex food supply. Furthermore, no other developed country in the world has a system like GRAS to provide oversight of food ingredients.

In Table 1 and 2 of the report, NRDC identified the 56 companies and the number of chemicals that each company appeared to market as GRAS without FDA clearance. In this addendum to the report, we identify the 275 chemicals, link them to the company making the apparent undisclosed GRAS safety determination, and provide a hyperlink to the company or the chemical. See the table below.

Please note that we are not saying that these chemicals or their uses are safe or unsafe. Making that decision requires an analysis of the company’s GRAS safety determination which remains undisclosed. Rather, we are saying that we do not know and more importantly, FDA may not. We think FDA and the public should.

“Generally Recognized as SECRET” rather than “Generally Recognized as SAFE” is a better name for the GRAS loophole that has been used to allow manufacturers to sanction the use of hundreds of chemicals in food that Americans eat every day.

List of chemicals with undisclosed GRAS safety determinations.

Table #	Manufacturer	Product Name
2	ADM	Soy isoflavone extract
2	AHD International	Luravida™
1	Albion	Creatine MagnaPower®
1	Albion	DiCalcium Malate
1	Aloecorp	Qmatrix®
2	Ametis JSC	Lavitol®
2	Applied Food Sciences	Calcium D-glucarate
2	Applied Food Sciences	GCA®
1	BASF Cognis Nutrition and Health	Texapon K 12 P PH
1	BASF/Cognis Nutrition and Health	Betatene®

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Table #	Manufacturer	Product Name
1	BioCell Technology	Biocell Collagen®
1	Bioriginal	BioAsteri™
2	CBC Group	TE J FOSHU™
1	ChromaDex	pTeroPure®
1	Cyvex Nutrition	BioVin® 20
1	Cyvex Nutrition	BioVin® Full Spectrum Grape Extract
1	Cyvex Nutrition	Euro Black Currant
2	Davos Life Sciences	tocotrienols, unbranded
1	DSM	resVIDA®
1	DSM	Roche lycopene
1	DSM	ROPUFA®
1	DSM	Teavigo®
1	DSM	GeniVida® (previously, Bonistein)
1	DSM	ALL-Q®
1	DSM Ocean Nutrition Canada	30:20 EE Complex
1	DSM Royal DSM NV; Martek Biosciences Corporation	DHA-O
1	Embria Health Sciences	EpiCor®
1	ESM Technologies	NEM®
1	Frutarom Health	UniK2™
2	FutureCeuticals	CoffeeBerry®
2	Gencor Pacific	Slimaluma™
1	Genosa	Hytolive®
1	GTC Nutrition	Purimmune
2	Hamari Chemicals	BenfoPure®
2	Hanzhong TRG Biotech	Angelica P. E.
2	Hanzhong TRG Biotech	Astragalus P. E.
2	Hanzhong TRG Biotech	Bilberry P.E.
2	Hanzhong TRG Biotech	Bitter Melon P. E.
2	Hanzhong TRG Biotech	Black Cohosh PE.
2	Hanzhong TRG Biotech	Cassia Nomame P. E.
2	Hanzhong TRG Biotech	Curcumin
2	Hanzhong TRG Biotech	Echinacea P.E.
2	Hanzhong TRG Biotech	Epimedium P.E.
2	Hanzhong TRG Biotech	Eucommia bark P.E
2	Hanzhong TRG Biotech	Fructus Cnidii P. E.
2	Hanzhong TRG Biotech	Garcinia Cambogia P. E.
2	Hanzhong TRG Biotech	Ginkgo Biloba P.E
2	Hanzhong TRG Biotech	Grape Seed P.E.
2	Hanzhong TRG Biotech	Green Tea P.E.
2	Hanzhong TRG Biotech	Griffonia seed extract
2	Hanzhong TRG Biotech	Kudzu Root P. E
2	Hanzhong TRG Biotech	Lotus Leaf P. E.
2	Hanzhong TRG Biotech	Milk Thistle P.E.
2	Hanzhong TRG Biotech	Red Clover Extract
2	Hanzhong TRG Biotech	Reishi mushroom P.E
2	Hanzhong TRG Biotech	Resveratrol

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Table #	Manufacturer	Product Name
2	Hanzhong TRG Biotech	Rhodiola P.E.
2	Hanzhong TRG Biotech	Schisandra Fruit P. E
2	Hanzhong TRG Biotech	Synephrine
2	Hanzhong TRG Biotech	Tribulus Terrestris P. E.
2	Hanzhong TRG Biotech	White Kidney Bean P. E
2	Hanzhong TRG Biotech	Wolfberry P.E
2	Hanzhong TRG Biotech	Broccoli P.E.
2	Hanzhong TRG Biotech	Soy bean P.E.
2	Hanzhong TRG Biotech	Red Clover Extract (Alt)
2	Hanzhong TRG Biotech	Epimedium P.E. (Alt)
1	HG&H Pharmaceuticals (Pty) Ltd.	Zembrin®
2	Horizon Science	Benecarb™
1	House Wellness Foods	Heat-killed <i>Lactobacillus plantarum</i>
1	InterHealth Nutraceuticals	Super CitriMax®
1	InterHealth Nutraceuticals	UC-II®
1	InterHealth Nutraceuticals	ZyChrome®
1	InterHealth Nutraceuticals	ChromeMate®
1	Ixoreal Biomed	KSM-66®
1	Jungbunzlauer	Zinc citrate, unbranded
1	Kaneka	KanekaQ10™
1	Kemin	AssuriTEA™ Green
2	Kyowa Hakko	Sustamine™
2	Kyowa Hakko	Cognizin®
2	Laurus Labs	Curcumin
1	Lonza	Carnipure™crystalline
1	Merck Eprova AG	Metafolin®
1	NattoPharma	MenaQ7®
2	Naturex	Viscofiber®
2	Naturex	Cyracos®
2	Naturex	Powergrape®
2	Naturex	Svetol®
2	Nexira	Equacia™
1	NuLiv Science	AstraGin™
1	NutraGenesis	Essentra®
1	NutraGenesis	OptiNutrin™
1	NutraGenesis	Wellberry®
1	NutraGenesis	WellBody 365
2	NutraMax	Acetyl-resveratrol
2	NutraMax	Andrographis Extract 95% Andrographolide
2	NutraMax	Angelica Extract 1% Ligustilides
2	NutraMax	Astragalus Extract 70% Polysacchrides
2	NutraMax	Banaba Leaf Extract 98% Corosolic Acid
2	NutraMax	Bilberry Extract 15%~25% Anthocyanidins
2	NutraMax	Bilberry P.E. 25% Anthocyanidins
2	NutraMax	Bitter Melon Extract 10% Charantin
2	NutraMax	bitter orange extract 98% Hesperidin
2	NutraMax	Bitter Sophora Extract Matrine Oxymatine

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Table #	Manufacturer	Product Name
2	NutraMax	Black Cohosh P.E. 2.5~5% Triterpene glycosides
2	NutraMax	Black Tea Extract 30~60% Polyphenols
2	NutraMax	Black Tea P. E. 40% Theaflavine
2	NutraMax	Blueberry Extract Juice 65 Brix
2	NutraMax	Boewellia Sorrata Extract 60% Boewellie Acids
2	NutraMax	Bupleurum Extract 5% Bupleurum saikosaponins
2	NutraMax	Burdock Seed Extract 40% Arctiin & Arctigenin
2	NutraMax	Calendula officinalis Extract 5%-80% Lutein
2	NutraMax	Cascara Sagrada Extract 8~60% Dimer Flavan
2	NutraMax	Cat's Claw Extract 3~15% Alkaloids
2	NutraMax	Celandine Extract 2% Chelldonine
2	NutraMax	Chasteberry Extract 5% Vitexin 98% Aescin
2	NutraMax	Chondroitin Sulfate 90%
2	NutraMax	Chrysanthemum Extract
2	NutraMax	Chrysin Extract 99% Chrysin
2	NutraMax	Cinnamon Bark P. E. 20:1
2	NutraMax	Cinnamon Extract 20% Cinnamon Flavones
2	NutraMax	Cistanche deserticola Extract 10:1
2	NutraMax	Citrus Aurantium Extract 4~98% Synepherin
2	NutraMax	Coleus Forskohlii Extract 20%~98% Forskohlin
2	NutraMax	Common Cnidium 30%~98% Osthole
2	NutraMax	Common Cnidium Fruit P.E. 30% Osthole
2	NutraMax	Coptis Root Extract 10%~99% Berberine
2	NutraMax	Cordyceps Extract 40% Polysaccharides
2	NutraMax	Coriolus Mushroom Extract 40% Polysaccharides
2	NutraMax	Corydalis Yanhusuo Extract 80% Tetrahydropalmatine
2	NutraMax	Cranberry (Bilberry) Extract 15% anthocyanidins
2	NutraMax	Curcumin 30~95% Curcuminoids
2	NutraMax	Dahurian Rhodoendron Extract 50% Proanthocyanidins
2	NutraMax	Dandelion Extract 5% Flavonoids
2	NutraMax	Echinacea Purpurea Herb Extract 4% Phenolic
2	NutraMax	Epimedium Extract 5%~98% Icarrin
2	NutraMax	Eucommia Bark Extract
2	NutraMax	Eucommia Bark Extract 20:1
2	NutraMax	Eurycoma (Longjack) Powder Extract 100:1
2	NutraMax	Eyebright Extract 8-1
2	NutraMax	Fenugreek Extract 95% 4-Hydroxyisoleucine
2	NutraMax	Flaxseed Hull Extract 20%~80 SDG
2	NutraMax	Fo Ti / Ho Shou Wu Extract 2% Phosphatide
2	NutraMax	Galanthamine Hydrobromide 98%
2	NutraMax	Galanthamine Hydrobromide 99%
2	NutraMax	Garcinia Cambogia Extract 60% Hydroxycitric Acid
2	NutraMax	Garlic Extract 1~2% Allicin
2	NutraMax	Gastrodia Rhizoma Extract 20:1
2	NutraMax	Gentian Root Extract 5% Gentiopicroside
2	NutraMax	Giant Knotweed Extract 98% Resveratrol
2	NutraMax	Ginger Root Extract 5% Gingerols

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2	NutraMax	Ginkgo Biloba Extract 24%/6%/<1ppm
2	NutraMax	Ginkgo Biloba Leaf Extract
2	NutraMax	Ginseng Root (American) Extract
2	NutraMax	Ginseng Root Extract 80% Ginsenosides
2	NutraMax	Golden Rod Extract 5%,10% flavonoids
2	NutraMax	Golden Seal Root Extract
2	NutraMax	Gotu Kola Herb Extract 10~80% Triterpenes
2	NutraMax	Grape seed Extract
2	NutraMax	Grape Seed Extract 95% Proantocyanidins
2	NutraMax	Grape Skin Extract 5% Resveratrol
2	NutraMax	Green Tea Extract EGCG Catechins polyphenes
2	NutraMax	Green Tea P. E. 30% L- Theanine
2	NutraMax	Green Tea Theanine 98%L-theanine
2	NutraMax	Griffonia simplicifolia Seed Extract 5-HTP
2	NutraMax	Gymnema Extract 25% Gymnemic Acids
2	NutraMax	Gymnema Silvestre P.E.
2	NutraMax	Gynostemma Extract 20~90% Gypenosides
2	NutraMax	Hawthorn Berry Extract 2% Vitexins
2	NutraMax	Hibiscus Flower Extract 1% 1% Anthocyanidins
2	NutraMax	Honey Goat Weed Extract
2	NutraMax	Honey Suckle Flower Extract 25% Chlorogenic acid
2	NutraMax	Hop Extract 0.5%~99% Xanthohumol
2	NutraMax	Hops Flower Extract 0.35% Flavonoids
2	NutraMax	Hops Flower Extract 5% ~ 98% xanthohumol
2	NutraMax	Horse Chest Nut Extract 20% Aesbin
2	NutraMax	Horsetail Extract 2~7% Silica
2	NutraMax	Houttuynia Extract 10:1
2	NutraMax	Huperzia Serrata Extract 1%~99% Huperzine A
2	NutraMax	Huperzine Serrate Extract
2	NutraMax	Hydrangea Root Extract 10:1
2	NutraMax	hydroxyzine HCL
2	NutraMax	Inula racemosa Extract 10:1
2	NutraMax	Irvingia Gabonensis Extract 20%
2	NutraMax	Isatis indigotica fort Extract 60% Indirum
2	NutraMax	Jasmine Tea Extract 40% Plyphenols
2	NutraMax	Kava Kava Extract 30% Kavalactones
2	NutraMax	Ligustrum Extract Oleanolic acid
2	NutraMax	Lobelia Intiata Extract 10:1
2	NutraMax	Longan Aril Extract 10% 30% Maslinic acid
2	NutraMax	Loquat Leaves Extract
2	NutraMax	Lovage Extract 10:1
2	NutraMax	Luo Han Guo Concentrated Juice 60° Brix
2	NutraMax	Luo Han Guo Extract 80% Mogrosides
2	NutraMax	Luo Han Guo P.E. 80% Mogrosides
2	NutraMax	Lycium Extract 50% Polysaccharides
2	NutraMax	Lycoris radiata Herb Extract 98% Galanthamine
2	NutraMax	Macleaya cordata Extract 60% Sanguinarine

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2	NutraMax	Magnolia Bark Extract
2	NutraMax	Magnolia Bark Extract Magnolol+Honokiol 90%
2	NutraMax	Maitake Mushroom Extract 10%~50% Polysaccharides
2	NutraMax	Malva Verticillata Extract
2	NutraMax	Marigold Flower Extract 5%~99% Zeaxanthin
2	NutraMax	Medicago Extract 10% Coumestrol
2	NutraMax	Milk Thistle Extract
2	NutraMax	Milk Thistle Extract 80% Silymarin
2	NutraMax	Morinda Root Extract
2	NutraMax	Motherwort Extract
2	NutraMax	Moutan Black Extract Paeonolum 99%
2	NutraMax	Mucuna Extract 20% L-Dopa
2	NutraMax	Mulberry Leaf/Berry Extract 1% ~99% DNJ
2	NutraMax	Mustard Seed Extract
2	NutraMax	Nardostachytis Extract
2	NutraMax	Neohesperidin 95%
2	NutraMax	Nettle Root Extract 1% Silic Acid
2	NutraMax	Notoginseng Root Extract 10%~95% Notoginsenosides
2	NutraMax	Notopterygium Root Extract
2	NutraMax	Nuphar Pumilum Root Extract 10:1
2	NutraMax	Ocimum sanctum Extract 0.2% Alkaloids (HPLC)
2	NutraMax	Oolong Tea Extract 30%-90% Polyphenols
2	NutraMax	Ophiopogonis Extract 10:1
2	NutraMax	Paeonia lactiflora Pall Extract 80% Glycoside
2	NutraMax	Passion Flower Extract 4% FLAVONES
2	NutraMax	Peppermint Extract 12:1
2	NutraMax	Phyllanthus emblica Extract 35% Polyphenols
2	NutraMax	Pine Bark Extract 95% Proanthocyanidins
2	NutraMax	Pinelliae Extract 10:1
2	NutraMax	Piper nigrum Extract 98% piperine
2	NutraMax	Plantago Seed Extract 10:1
2	NutraMax	podophyllotoxin 98% HPLC
2	NutraMax	Pomegranate Seed Oil
2	NutraMax	Poria Cocos Extract 10% Polysacchorides
2	NutraMax	Pu Erh Tea Extract 10%~30% Polyphenols
2	NutraMax	Pueraria (Kudzu Root) P. E. 40% Isoflavnis
2	NutraMax	Pueraria/Kudzu Extract 40~95% Isoflavones
2	NutraMax	Pumpkin Seed Extract 10:1
2	NutraMax	Pygeum Africanum Extract Phytosterols 25%
2	NutraMax	Quercetin 95% 98% (Sophora flavescens Ait)
2	NutraMax	Red Clover Extract 20% Isoflavones
2	NutraMax	Rhodiola Rosae P. E 5% Rosavins/3% Salidroside
2	NutraMax	Rosemary Extract 98% Carnosic Acid Rosmarinic acid
2	NutraMax	Saffron Extract
2	NutraMax	Saffron Extract 0.3% Safranal
2	NutraMax	Scutellaria baicalensis Extract
2	NutraMax	Soy bean Extract 40% Isoflavines

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2	NutraMax	Stevia Extract 98% Rebaudioside A Steviosides
2	NutraMax	Woomwood Extract 99% Artemisinin
2	NutraMax	Yohimbine P.E. 98% Yohimbines HCL
1	OmniLytics	trans-Resveratrol
2	Oxis International	EGT™
1	P.L. Thomas	RhodioLife™
1	Phenofarm	Olive pulp extract
1	RIBUS	Rice hull fiber
1	Sabinsa Corporation	Bioperine®
1	Sabinsa Corporation	Citrin®K
1	Sabinsa Corporation	Cococin™
1	Sabinsa Corporation	Curcumin C3 Complex®
1	Sabinsa Corporation	LactoSpore®
1	Sabinsa Corporation	Saberry®
1	Sabinsa Corporation	SeLECT®
2	Skyherb	Apple extracts
2	Skyherb	Acerola Extracts
2	Skyherb	Bamboo Leaf Extracts
2	Skyherb	Chamomile extracts
2	Skyherb	Grape seed extracts
2	Skyherb	Grape leaf extracts
2	Skyherb	Green coffee bean extracts
1	SoluBlend Technologies	Water-soluble omega-3s, resveratrol, CoQ10, combined fat-soluble vitamins A, D and E, phytosterols, chia oil, cranberry oil, carotenoids (beta-carotene lutein, lycopene) and EGCG
1	Stepan	Clarinol®
2	Terry Laboratories	Aloe vera, unbranded
1	Trace Minerals Research	ConcenTrace®
2	Triarco Industries	BeFlora®
2	Triarco Industries	Aminogen®
1	TSI Health Sciences	PUREFLEX®
2	Unibar Corporation	UniGold™
2	Ventria	Human lysozyme purified from rice
1	Verdure Sciences	Longvida®

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