

**Literature-based inventory of chemical substances concentrations
measured in organic foods consumed in Europe**

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Table S1: Criteria for selection based on language, title, abstract and data availability.

Question	Description	Response	
		Yes	No
Level 1 : Language			
Q1	Is the paper written in French or English?	1	0
L1= Q1 ; Eligible for L1=1			
Level 2 : Title			
Q1	Does the title mention terms related to organic food OR organic products?	1	0
Q2	Does the title mention terms related to any of the following terms : Pesticide* OR contaminant* OR pollutant* OR chemical* OR herbicide* OR fertilizer* OR fungicide* OR insecticide* OR metals* OR residue* OR contamination* OR Food Safety*?	1	0
L2=Q1+ Q2; Eligible for L2=2			
Level 3 : Abstract			
Q1	Does the abstract describe a focused analysis on contamination or residues in organic products?	1	0
Q2	Quantification notion* : Value, data, level, concentration, measure, profile, quantification, composition, sampling, sample, amount	1	0
L3= Q2*Q1 ; Eligible for L3=1			
Level 4: Data availability			
Q1	Does the article contain contamination values ?	1	0
Q2	Does these values correspond to organic food from EU markets ?	1	0
L4=Q1+Q2 ; Eligible for L4=2			

Table S2: Elements of the FoodEx 2 level 2 groups

FoodEx2 L2 group	Food Matrices
Algae and prokaryotes organisms	Algae and prokaryotes organisms
Animal and vegetable fats/oils	Oil seeds; Olive oil
Bulb vegetables	Garlic; Kohlrabies; Onions
Cereals and cereal primary derivatives	Barley; buckwheat; Buckwheat and other pseudo-cereals; Cereals, not specified; Maize; Oats; Rice; Rye grain; Wheat flour; Wheat grain
Cheese	Cheese
Coffee, cocoa, tea and herbal ingredients	Camomille flowers; Chamomile; Cocoa beans; Coffee beans; Dried herbal infusions; Herbal infusions; Rooibos leaves; Tea; Tea (green, black)
Flowering brassica	Broccoli; Cauliflowers
Food products for young population	Baby food
Fruit / vegetable juices and nectars	Apples ; Granate apples/pomegranates ; Oranges
Fruit used as fruit	Apples; Apricot; Avocados; Bananas; Cherries; Citrus fruits; Figs; Grapefruit; Grapes; Guavas; Kiwi; Lemons; Limes; Lychee; Mandarins; Oranges; Papaya; Passion fruit; Peaches; Pears; Pineapples; Plums; Pomegranates; Raspberries; Strawberries; Table grapes; Wine grapes
Fruiting vegetables	Chili peppers; Courgettes; Cucumbers; Eggplant; Goji berries; Melons; Peppers; Pumpkins; Sweet bell pepper; tomato
Fungi, mosses and lichens	Cultivated fungi; Fungi, not specified; Wild fungi
Herbs and edible flowers	Basil (holy, sweet); Basil and edible flowers; Celery; Coriander leaves; Curry leaves; Dry parsley; Fresh herbs; Herbs and edible flowers; Laurel/bay leave; Mint; Oregano; Parsley; Sage; Thyme
Infant and follow-on formulae	Baby Follow-on formulae
Leafy vegetables	Brussels sprouts; Cabbage; Cauliflowers; Chards; Chards/beet leaves; Endive lettuce; Grape leaves and similar species; Head cabbage; Lamb's lettuces; Land cresses; Leafy brassica, not specified; Lettuces; rocket, Rucola; Rucola; Scarole; Sea beat; Spinach; Swiss chard
Legumes	Beans ; Beans (dry) ; Lentils ; Lentils, dry ; Pulses (dry), not specified
Legumes with pod	Beans with pods; French beans; Green lentil; Peas
Mammals and birds meat	Bovine meat; Cattle; Meat; Porcine meat; Poultry; Poultry meat
Milk and dairy products	cattle milk and milk products; Milk and milk products
Milk, whey and cream	Milk (sheep)

Nuts, oilseeds and oilfruits	Brazil nuts; Castor beans; Coconuts; Hemp seeds; Linseeds; Pine nuts; Poppy seeds; Pumpkin seeds; Rapeseeds; Soyabeans
Processed cereal-based food for infants and young children	Baby Processed cereal-based foods
Processed fruit products	Apricot; Dates; Dried apricots; Figs; Kiwi; Small fruit and berries; Strawberries; Table grapes; Wine grapes
Processed or preserved vegetables and similar	Lettuces; Spinach; Sweet bell peppers; Tomato; Vegetables
Ready-to-eat meal for infants and young children	Baby foods other than processed cereal-based foods
Root and tuber vegetables (excluding starchy- and sugar-)	Beetroots; Carrots; Horseradishes; Radishes; Turnips
Savoury extracts and sauce ingredients	vegetable marrow
Spices	Coriander seed; Cumin seed; Fennel seed; Ginger; Peppercorn (black, green and white); Spices; Thyme; Vanilla pods
Sprouts, shoots and similar	Cresses and other sprouts and shoots
Starchy roots and tubers	Potatoes, Sweet potato
Stems/stalks eaten as vegetables	Artichoke; Asparagus; Fennels; Leek
Sugar and other sweetening ingredients (excluding intensive sweeteners)	Honey
Unprocessed eggs	Eggs
Wine and wine-like drinks	Red wine; White wine; Wine

Table S3: Elements of the database table columns

Country of origin	Unknown, South Korea, Italy, France, Germany, EU, Turkey, Spain, Mexico, Netherlands, Switzerland, Bulgaria, UK, Ecuador, Dominican Republic, Norway, India, China, Greece, Egypt, Poland, Bolivia, Peru, Lituania, USA, EU, AUS, Israel, USA, Portugal, Serbia, Colombia, Nicaragua, New Zealand, Sri Lanka, Belgium, Iran, Thailand, Romania, Slovenia, Czech republic, Extra-EU, Chile, South Africa, Kazakhstan, Hungary, Russia, Finland, Cyprus, Denmark, Nepal, Togo, Benin, Austria, Estonia, Croatia, Pakistan, Canada, Albania, Malta, Uzbekistan, Japan, Brazil, Vietnam, Madagascar
Continents	Unknown, Asia, Europe, North America, South America, Africa, Australia/Oceania
FX_L2	Algae and prokaryotes organisms, Fruit used as fruit, Fruit / vegetable juices and nectars, Processed fruit products, Stems/stalks eaten as vegetables, Infant and follow-on formulae Food products for young population, Ready-to-eat meal for infants and young children, Processed cereal-based food for infants and young children, Cereals and cereal primary derivatives, Herbs and edible flowers Legumes, Legumes with pods, Root and tuber vegetables (excluding starchy- and sugar-), Mammals and birds meat, Nuts, oilseeds and oilfruits, Flowering brassica, Leafy vegetables, Coffee, cocoa, tea and herbal ingredients, Milk and dairy products, Cheese, Unprocessed eggs, Fruiting vegetables, Spices, Sprouts, shoots and similar, Fungi, mosses and lichens, Bulb vegetables Sugar and other sweetening ingredients (excluding intensive sweeteners), Processed or preserved vegetables and similar, Milk, whey and cream, Animal and vegetable fats/oils, Starchy roots and tubers, Wine and wine-like drinks, Savoury extracts and sauce ingredients
code_FX	A00VA, A04RK, A0BX9, A01ML, A00RR, A03PY, A03PV, A03RC, A03QX, A000K, A00VQ, A04RG, A00PB, A00QF, A0EYH, A04RH, A00FL, A00KR, A03GH, A02LR, A02QE, A04NY, A00HN, A014K, A016S, A00SF, A00TC, A00GX, A00FY, A04PA, A00ZA, A04NN, A00XZ, A0F3D, A0BX10, A00JA, A00ZS, A03MS, A0EQE
Food matrix	Algae and prokaryotes organisms, Apples, Apricot, Artichoke, Asparagus, Avocados, Baby Follow-on formulae, Baby food, Baby foods other than processed cereal-based foods, Baby Processed cereal-based foods, Bananas, Barley, Basil (holy, sweet), Basil and edible flowers, Beans, Beans (dry), Beans with pods, Beetroots, Bovine meat, Brazil nuts, Broccoli, Brussels sprouts, buckwheat, Buckwheat and other pseudo-cereals, Cabbage, Camomille flowers, Carrots, Castor beans, Cattle, cattle milk and milk products, Cauliflowers, Celery, Cereals, not specified, Chamomile, Chards, Chards/beet leaves, Cheese, Cherries, Chicken eggs, Chili peppers, Citrus fruits, Cocoa beans, Coconuts, Coffee beans, Coriander leaves, Coriander seed, Courgettes, Cresses and other sprouts and shoots, Cucumbers, Cultivated fungi, Cumin seed, Curry leaves, Dates, Dried apricots, Dried herbal infusions, Dry parsley, Eggplant, Eggs, Endive lettuce, Fennel seed, Fennels, Figs, French beans, Fresh herbs, Fungi, not specified, Garlic, Ginger, Goji berries, Granate, apples/pomegranates, Grape leaves and similar species, Grapefruit, Grapes, Green lentil, Guavas, Head cabbage, Hemp seeds, Herbal infusions, Herbs and edible flowers, Honey, Horseradishes, Kiwi, Kohlrabies, Lamb's lettuces, Land cresses, Laurel/bay leave, Leafy brassica, not specified, Leek, Lemons, Lentils, Lentils, dry, Lettuces, Limes, Linseeds, Lychee, Maize, Mandarins, Meat, Melons, Milk (sheep), Milk and milk products, Mint, Oats, Oil seeds, Olive oil, Onions, Oranges, Oregano, Papaya, Parsley, Passion fruit, Peaches, Pears, Peas, Peppercorn (black, green and white), Peppers, Pine nuts, Pineapples, Plums, Pomegranates, Poppy seeds, Porcine meat, Potatoes,

	Poultry, Poultry meat, Pulses (dry), not specified, Pumpkin seeds, Pumpkins, Radishes, Rapeseeds, Raspberries, Red wine, Rice, rocket, Rucola, Rooibos leaves, Rucola, Rye, Rye grain, Sage, Scarole, Sea beat, Small fruit and berries, Soyabeans, Spices, Spinach, Strawberries, Sweet bell peppers, Sweet potato, Swiss chard, Table grapes, Table olives, Tea, Tea (green, black), Tea leaves, Thyme, Tomato, Turnips, Vanilla pods, vegetable marrow, Vegetables, Wheat, Wheat flour, Wheat grain, White wine, Wild fungi, Wine, Wine grapes
Chemical Substance	Methacrifos, Diuron, Prometryn, Terbutylazine, Cadmium, Lead, Chlorate, Chlorpyrifos, Chlorpropham, Azinophos methyl, Dimethoate, Diphenylamine (DPA), Carbaryl, Carbendazim, Boscalid, Iprodione, 2-phenylphenol, Thiabendazole, Acetamiprid, Cypermethrin, Spinosad, Fenhexamid, Dithiocarbamate, Glyphosate, Bromide ion, Permethrin BAC (RD), DDAC, DDT (RD), Endosulfans, Hexachlorobenzene, λ -cyhalothrin, Fosetyl-Al, Trimethyl-sulfonium cation, Difenoconazole, Chlormequate, Tridemorph, Gibberellic acid, Imazalil, Fenpropimorph, Dikegulac, Dichlorvos, Tetramethrin, Cyprodinil, Cobalt, Chromium, Nitrate, Copper, Manganese, Zinc, Iron, Epoxiconazole, Nicotine, Profenofos, Propargite, PCB 105, PCB 138, PCB 118, PCB 157, PCB 180, PCB 81, PCB 77, PCB 101, PCB 153, PCB 126, PCB 28, PCB 156, DDE o,p', PCB 52, α -HCH, DDD p,p', DDT o,p', β -HCH, DDE p,p', Dieldrin, DDT p,p', Endrin, Lindane, Heptachlor, Aldrin, Σ HBCD, PCDD/F, DL-PCB, Σ NDL-PCB, Mercury, Arsenic, Anthraquinone, Carbofuran (sum of carbofuran (including any carbofuran generated from carbosulfan, benfuracarb or furathiocarb) and 3-OH carbofuran expressed as carbofuran), Phenthoate, Haloxypop, PCB 169, PCB 114, Fludioxonil, Metalaxyl, Methoxyfenozide, Imidacloprid, Bifenazate, Fluopicolide, Propamocarb, PCB 167, α -endosulfan, Methoxychlor, Σ DDTs, Σ OCP residues, Chlorothalonil, Pyrimethanil, Pirimiphos-methyl, Chlordane (sum of cis- and trans-chlordane), Flutriafol, Cyproconazole, Hexaconazole, Clothianidin, Thiamethoxam, Aldrin and Dieldrin (Aldrin and dieldrin combined expressed as dieldrin), Piperonyl butoxide, Monocrotophos, Kresoxim-methyl, Propiconazole (sum of isomers), Tricyclazole, Quinalphos, Clofentezine, Thiophanate methyl, Quinoxifen, Flonicamid, Flupyradifurone, Malathion, Propoxur, Prometon, Phoxim, Tebufenpyrad, Azoxystrobin, Fenvalerate, Metrafenone, Biphenyl, Mandipropamid, Formetanate, Spiroxamine, Penconazole, Dimethomorph, Pyraclostrobin, Pendimethalin, Propyzamide, Prothioconazole: prothioconazole-desthio (sum of isomers), Coumaphos, Diazinon, Amitraz, Thiacloprid, Thymol, Isoproturon, Methiathion, Fenitrothion, 2,4-D (sum of 2,4-D, its salts, its esters and its conjugates, expressed as 2,4-D), Triadimenol, Isofenphos-methyl, Fenthion, Deltamethrin, Phosmet, Bromopropylate, Fluazifop, Methamidophos, Acephate, Prosulfocarb, Carboxin, Fenazaquin, Tetradifon, Dicofol, Trifluralin, Bitertanol, Azadirachtin, Pyrethrins, Free sulphite, Total sulphite, Pyrethrins (Cinerine 1), Triflumizole, Fenpyrazamine, Phorate, Nitrite, β -endosulfan, Tebuconazole, Fenpropidin, Dinotefuran, Chlorfluazuron, Ametryn, Fenobucarb, Fipronil, Hexaflumuron, Buprofezin, Fenbuconazole, Lufenuron, Teflubenzuron, Quintozene, Rotenone, Pyridaben, Chlorantraniliprole, Tolfenpyrad, Flubendiamide, MCPA, 2-Naphthoxyacetic acid, Esfenvalerate, Cyfluthrin, Triasulfuron, Veratridine, Diflubenzuron, Pyrethrins (Cinerine 2), Pyrethrins (Jasmoline 1), Ethephon, Atrazine desethyl, Aluminium, Isoprothiolane, Iprovalicarb
Substance group	Organophosphate, Phenylamide, Triazine, Inorganic contaminants, Chlorates, Carbamate, Amine, Benzimidazole, Carboxamide, Hydroxybiphenyls, Neonicotinoid, Pyrethroid, Micro-organism derived, Hydroxyanilide, Dithiocarbamate, Quaternary ammonium compounds (QACs), Organochlorine, Triazole, Morpholine, Imidazoles, Anilino-pyrimidine,

	Minerals, Nitrate, Plant derived, Sulfite Ester, PCB, Brominated compounds, Dioxins/Furans , PAH, Aryloxyphenoxypropionate, Phenylpyrrole, Diacylhydrazine, Hydrazine carboxylate, Benzamides, Chloronitrile, Cyclic aromatic, Strobilurin, Triazolobenzothiazole, Tetrazine, Quinolines, Pyridine compound, Butenolide, Methoxytriazine, Pyrazolium, Benzophenone, Aromatic hydrocarbon, Mandelamides, Formamidine, Dinitroaniline, Triazolinthione, Amidine, Urea, Alkylchlorophenoxy, Phenol, Benzylate, Thiocarbamate, Oxathiin, Quinazolines, Bridged diphenyl, Sulphite, Piperidines, Benzoylurea, Phenylpyrazole, Thiadiazine, Chlorophenyl, Pyridazinone , Anthranilic diamide, Pyrazole, Benzene-dicarboxamide, Aryloxyalkanoic acid, Synthetic auxin, Sulfonylurea, Phosphorothiolate
General Group	Pesticides, Minerals, Inorganic contaminants, PCBs, Dioxins, Brominate flame retardants
Statistics	Median, mean, range
Residue/Contaminant	Contaminant, residue

Table S4: Elements of the substance groups

Substance group	Chemical substance
Alkylchlorophenoxy	2,4-D (sum of 2,4-D, its salts, its esters and its conjugates, expressed as 2,4-D)
Amidine	Amitraz
Amine	Diphenylamine (DPA)
Anilino-pyrimidine	Cyprodinil, Pyrimethanil
Anthranilic diamide	Chlorantraniliprole
Aromatic hydrocarbon	Biphenyl
Aryloxyalkanoic acid	MCPA
Aryloxyphenoxypropionate	Haloxypop, Fluazifop
Benzamides	Fluopicolide, Propyzamide
Benzene-dicarboxamide	Flubendiamide
Benzimidazole	Carbendazim, Thiabendazole, Thiophanate methyl
Benzophenone	Metrafenone
Benzoylurea	Chlorfluazuron, Diflubenzuron, Hexaflumuron, Lufenuron, Teflubenzuron
Benzylate	Bromopropylate
Bridged diphenyl	Tetradifon
Brominated compounds	3 Σ HBCD
Butenolide	Flupyradifurone
Carbamate	Chlorpropham, Iprovalicarb, Carbaryl, Carbofuran (sum of carbofuran (including any carbofuran generated from carbosulfan, benfuracarb or furathiocarb) and 3-OH carbofuran expressed as carbofuran), Propamocarb, Propoxur, Fenobucarb
Carboxamide	Boscalid, Iprodione
Chlorates	Chlorate
Chloronitrile	Chlorothalonil
Chlorophenyl	Quintozene
Cyclic aromatic	Piperonyl butoxide
Diacylhydrazine	Methoxyfenozide
Dinitroaniline	Pendimethalin, Trifluralin
Dioxins/Furans	PCDD/F
Dithiocarbamate	Dithiocarbamate
Formamidine	Formetanate
Hydrazine carboxylate	Bifenazate
Hydroxyanilide	Fenhexamid
Hydroxybiphenyls	2-phenylphenol
Imidazoles	Imazalil, Triflumizole
Inorganic contaminants	Cadmium, Lead, Bromide ion, Cobalt, Mercury, Arsenic, Aluminium
Mandelamides	Mandipropamid
Methoxytriazine	Prometon
Micro-organism derived	Spinosad, Gibberellic acid
Minerals	Chromium, Copper, Manganese, Zinc, Iron
Morpholine	Tridemorph, Fenpropimorph, Spiroxamine, Dimethomorph

Neonicotinoid	Acetamiprid, Imidacloprid, Clothianidin, Thiamethoxam, Thiacloprid, Dinotefuran
Nitrate	Nitrate
Not specified	Dikegulac
Organochlorine	DDT (RD), Endosulfans, Hexachlorobenzene, DDE o,p', α -HCHDDD, p,p'DDT, o,p'DDE, β -HCH, p,p'DDT, Dieldrin, p,p'DDT (RD), α -endosulfan, Σ DDTs, Σ OCP residues, Methoxychlor, Chlordane (sum of cis- and trans-chlordane), Aldrin and Dieldrin (Aldrin and dieldrin combined expressed as dieldrin), Dicofol, Phorate, β -endosulfan, Endrin, Lindane, Heptachloraldrin
Organophosphate	Methacrifos, Chlorpyrifos, Azinophos methyl, Glyphosate, Dimethoate, Fosetyl-Al, Trimethyl-sulfonium cation, Dichlorvos, Profenofos, Phenthoate, Pirimiphos-methyl, Monocrotophos, Quinalphos, Malathion, Phoxim, Coumaphos, Diazinon, Methiadathion, Fenitrothion, Isufenphos-methyl, Fenthion, Phosmet, Methamidophos, Acephate, Ethephon
Oxathiin	Carboxin
PAH	Anthraquinone
PCB	PCB 105, PCB 138, PCB 118, PCB 157, PCB 180, PCB 81, PCB 77, PCB 101, PCB 153, PCB 126, PCB 28, PCB 156, PCB 52, DL-PCB, 6 Σ NDL-PCB, PCB 169, PCB 114, PCB 167
Phenylamide	Diuron, Metalaxyl
Phenylpyrazole	Fipronil
Phenylpyrrole	Fludioxonil
Phosphorothiolate	Isoprothiolane
Piperidines	Fenpropidin
Plant derived	Nicotine, Thymol, Azadirachtin, Pyrethrins, Pyrethrins (Cinerine 1), Rotenone, Veratridine, Pyrethrins (Cinerine 2), Pyrethrins (Jasmoline 1)
Pyrazole	Tolfenpyrad
Pyrazolium	Tebufenpyrad, Fenpyrazamine
Pyrethroid	Cypermethrin, Permethrin, λ -cyhalothrin, Fenvalerate, Tetramethrin, Deltamethrin, Esfenvalerate, Cyfluthrin
Pyridazinone	Pyridaben
Pyridine compound	Flonicamid
Quaternary ammonium compounds (QACs)	BAC (RD), DDAC, Chlormequate
Quinazolines	Fenazaquin
Quinolines	Quinoxifen
Strobilurin	Kresoxim-methyl, Azoxystrobin, Pyraclostrobin
Sulfite Ester	Propargite
Sulfonylurea	Triasulfuron
Sulphite	Total sulphite, Free sulphite
Synthetic auxin	2-Naphthoxyacetic acid
Tetrazine	Clofentezine
Thiadiazine	Buprofezin
Thiocarbamate	Prosulfocarb
Triazine	Prometryn, Terbutylazine, Ametryn, Atrazine desethyl

Triazole	Difenoconazole, Epoxiconazole, Flutriafol, Cyproconazole, Hexaconazole, Propiconazole (sum of isomers), Penconazole, Triadimenol, Bitertanol, Tebuconazole, Fenbuconazole
Triazolinthione	Prothioconazole: prothioconazole-desthio (sum of isomers)
Triazolobenzothiazole	Tricyclazole
Urea	Isoproturon



