

CPC**COOPERATIVE PATENT CLASSIFICATION****A23L**

FOODS, FOODSTUFFS, OR NON-ALCOHOLIC BEVERAGES, NOT COVERED BY SUBCLASSES [A23B](#) TO [A23J](#); THEIR PREPARATION OR TREATMENT, e.g. COOKING, MODIFICATION OF NUTRITIVE QUALITIES, PHYSICAL TREATMENT ([shaping or working](#), not fully covered by this subclass, [A23P](#)); PRESERVATION OF FOODS OR FOODSTUFFS, IN GENERAL

A23L 1/00

Foods or foodstuffs; Their preparation or treatment ([preservation thereof in general A23L 3/00](#); { [mechanical aspects A23P](#) })

WARNING

Groups [A23L 1/0002](#) to [A23L 1/0097](#) might be incomplete as a number of documents presently classified in groups [A23P 1/00](#) to [A23P 1/16](#), still needs reclassification to groups [A23L 1/0002](#) to [A23L 1/0097](#)

- [A23L 1/0002](#) . { [Concentration](#) }
- [A23L 1/0005](#) . { [Foodstuffs fixed on a non-edible supporting member \(\[confectionery\]\(#\), \[chocolate\]\(#\), \[ice-cream A23G\]\(#\) \)](#) }
- [A23L 1/0008](#) . { [Rehydration or dissolving of foodstuffs](#) }
- [A23L 1/0011](#) . { [Chemical peeling or cleaning of harvested fruit, vegetables, or other foodstuffs \(\[mechanical aspects A23N\]\(#\), \[A23P\]\(#\) \)](#) }
- [A23L 1/0014](#) . { [Specially shaped or worked food or foodstuffs](#) }
- [A23L 1/0017](#) .. { [Agglomerated; Granulated; Tabletted](#) }
- [A23L 1/002](#) ... { [Agglomerated or granulated with pulverisation of the solid particles, e.g. by the free-falling curtain method](#) }
- [A23L 1/0023](#) ... { [Agglomerated or ganulated by extrusion or by pressing, e.g. through small holes, through sieves, between surfaces](#) }
- [A23L 1/0026](#) ... { [Tabletted; Food bars made by compressing of a dry powdered mixture](#) }
- [A23L 1/0029](#) .. { [Encapsulated particles, e.g. foodstuff additives \(\[flavouring agents A23L 1/22\]\(#\) \)](#) }
- [A23L 1/0032](#) ... { [encapsulated with oils, lipids or mono- or diglycerides](#) }
- [A23L 1/0035](#) .. { [Free-flowing or instant powder \(\[A23L 1/0017\]\(#\), \[A23L 1/0029\]\(#\) take precedence \)](#) }
- [A23L 1/0038](#) ... { [comprising anti-caking or free-flowing agents](#) }
- [A23L 1/0041](#) ... { [comprising additives other than anti-caking or free-flowing agents, e.g. emulsifiers, wetting agents; dust binding agents](#) }
- [A23L 1/0044](#) .. { [Coated foodstuffs; Coatings therefor; Laminated, Multilayered or stuffed foodstuffs](#) }
- [A23L 1/0047](#) ... { [Coating with edible coatings](#) }
- [A23L 1/005](#) { [Coating with powdered or particulate coatings; Coating with batters or other similar liquid or semi-liquid compositions containing a substantial amount of vegetable flour or starch or starch derivatives other than sugars \(\[A23L 1/0052\]\(#\) and \[A23L 1/0055\]\(#\) take precedence \)](#) }

- A23L 1/0052 { Coating with compositions containing vegetable or microbial fermentation gums, e.g. cellulose or derivatives; Coating with edible polymers, e.g. polyvinylalcohol }
- A23L 1/0055 { Coating with compositions containing a majority of oils, fats, mono/diglycerides, fatty acids, mineral oils, waxes or paraffins }
- A23L 1/0058 { using dip-coating processes in a liquid or semi-liquid bath }
- A23L 1/0061 { using processes other than dip-coating for coating with liquid or semi-liquid products, e.g. spray-coating, fluidised-bed coating, coating by casting (combined with [breeding A23L 1/005](#)) }
- A23L 1/0064 . . . { Coating with non-edible coatings ([A23L 1/0055](#) takes precedence) }
- A23L 1/0067 . . . { Laminated, multi-layered, stuffed or hollow foodstuffs, e.g. wrapped in a preformed edible dough sheet, edible food containers }
- A23L 1/007 { Filled or stuffed cored food pieces }
- A23L 1/0073 . . { Shaped or worked products not covered by groups [A23L 1/0017](#) to [A23L 1/0044](#) , [A23L 1/0082](#) or [A23L 1/0097](#) , e.g. moulded }
- A23L 1/0076 . . { Extruded products }
- A23L 1/0079 . . . { Co-extruded products }
- A23L 1/0082 . . { Puffed or expanded products ([A23L 1/164](#), [A23L 1/18](#), [A23L 1/217](#) take precedence) }
- A23L 1/0085 . . . { made by pressure release, e.g. explosion puffing or by vacuum treatment }
- A23L 1/0088 { made by extrusion-expansion }
- A23L 1/0091 { in a discontinuous process }
- A23L 1/0094 . . . { made by heating without pressure release or without vacuum treatment }
- A23L 1/0097 . . { Foamed or whipped ([cream substitutes A23L 1/19](#)) }
- A23L 1/01 . . General methods of cooking foods, e.g. by roasting or frying ([methods specialised to particular food, see the relevant sub-groups; apparatus for baking, roasting, grilling or frying A47J 37/00](#))
- A23L 1/0107 . . { with oil }
- A23L 1/0114 . . . { Processes other than deep fat-frying or float-frying using cooking oil in direct contact with the food }
- A23L 1/0121 . . { with water or steam }
- A23L 1/0128 . . { by wave energy, irradiation, electrical means or magnetic fields; including oven cooking or roasting with radiant dry heat }
- A23L 1/0135 . . { in a gaseous atmosphere with forced air or gas circulation, in vacuum or under pressure }
- A23L 1/0142 . . { using chemicals before or during cooking, including liquid cooking media other than water or oil; Cooking with inert particles or fluidised bed cooking ([using additives to cooking oil A23L 1/0107](#)) }
- A23L 1/015 . . Removal of unwanted matter, e.g. deodorisation, detoxification ([A23L 1/211](#) takes precedence)
- A23L 1/0151 . . { by heating without chemical treatment, e.g. steam treatment, cooking }
- A23L 1/0152 . . { by extraction with solvents }
- A23L 1/0153 . . { using enzymes }
- A23L 1/0155 . . { by chemical treatment, adsorption or absorption }
- A23L 1/0156 . . . { using adsorption or absorption agents, resins, synthetic polymers, or ion exchangers }

- A23L 1/0157 . . . { Treatment with inorganic compounds ([A23L 1/0156](#) takes precedence)}
- A23L 1/0158 . . { using micro-organisms }
- A23L 1/025 . Physical treatment, e.g. with wave energy, irradiation, electrical means, magnetic fields ([cooking A23L 1/01](#); [preserving A23L 3/00](#), [A23B](#))
- A23L 1/0252 . . { by wave energy other than microwaves, e.g. sound or ultrasonic waves }
- A23L 1/0255 . . { by microwaves }
- A23L 1/0257 . . { by irradiation with frequencies more than 10 MHz }
- A23L 1/03 . containing additives ([A23L 1/05](#), [A23L 1/30](#), [A23L 1/308](#) take precedence)

NOTE

In this group, in the absence of an indication to the contrary, an invention is classified in the last appropriate place

- A23L 1/0305 . . { Inorganic compounds }
- A23L 1/031 . . { Organic compounds }
- A23L 1/0315 . . . { containing oxygen (gums [A23L 1/053](#); sugar or sugar alcohols [A23L 1/09](#))}
- A23L 1/032 { Fatty acids or derivatives }
- A23L 1/0325 . . . { containing nitrogen }
- A23L 1/033 . . . { containing phosphorus }
- A23L 1/0335 . . . { containing sulfur }
- A23L 1/034 . . { Enzymes }
- A23L 1/0345 . . { Micro-organisms (addition of bacteria for nutritional purposes [A23L 1/3014](#))}
- A23L 1/035 . . Emulsifiers ([emulsifiers in general B01F 17/00](#))
- A23L 1/05 . containing gelling or thickening agents ([A23L 1/06](#) takes precedence)
- A23L 1/052 . . of vegetable origin
- A23L 1/0522 . . . Starch; Modified starch; Starch derivatives, e.g. esters, ethers (([A23L 1/095](#) takes precedence))
- A23L 1/05223 { Chemically modified starch; Reaction or complexation products of starch with other chemicals }
- A23L 1/05226 { Farinaceous thickening agents other than isolated starch or derivatives, e.g. oat meal }
- A23L 1/0524 . . . Pectin; Derivatives thereof
- A23L 1/0526 . . . from seeds, e.g. locust bean gum, guar gum ([A23L 1/0522](#), [A23L 1/0524](#) take precedence)
- A23L 1/0528 . . . from corms, tubers or roots, e.g. glucomannan ([A23L 1/0522](#) takes precedence)
- A23L 1/053 . . . Exudates, e.g. gum arabic, gum acacia, gum karaya, tragacanth
- A23L 1/0532 . . . from seaweeds, e.g. alginates, agar, carrageenan
- A23L 1/0534 . . . Cellulose; Derivatives thereof, e.g. ethers
- A23L 1/054 . . of microbial origin, e.g. xanthan, dextran
- A23L 1/0541 . . . { Xanthan not combined with other microbial gums }
- A23L 1/0543 . . . { Curdlan; beta-1-3 glucan; Polysaccharides produced by agrobacterium or alcaligenes }

A23L 1/0545	... { Gellan }
A23L 1/0546	... { Dextran; Polysaccharides produced by leuconostoc }
A23L 1/0548	... { Pullulan }
A23L 1/056	.. of animal origin, e.g. chitin
A23L 1/0562	... Proteins, e.g. gelatin, collagen
A23L 1/05625	.... { Gelatin, collagen }
A23L 1/058	.. Synthetic resins, e.g. polyvinylpyrrolidone
A23L 1/059	.. Inorganic additives, e.g. silica
A23L 1/06	. Marmalades; Jams; Jellies; Other similar fruit or vegetable compositions; Simulated fruit products
A23L 1/062	.. { obtained by enzymatic digestion of fruit or vegetable compositions }
A23L 1/064	.. derived from fruit or vegetable solids ({ A23L 1/062 and A231/24B take precedence })
A23L 1/068	.. derived from fruit or vegetable juices
A23L 1/072	.. Simulated fruit products { without a substantial amount of fruit solids }
A23L 1/076	. Products from apiculture, e.g. royal jelly or pollen (apiculture A01K 47/00 to A01K 59/00); Substitutes therefor
A23L 1/08	.. Honey; Honey substitutes
A23L 1/085	... { Honey substitutes }
A23L 1/09	. containing carbohydrate syrups; containing sugars; containing sugar alcohols, e.g. xylitol; containing starch hydrolysates, e.g. dextrin (A23L 1/076 , A23L 1/236 take precedence)
A23L 1/092	.. { Processes or apparatus for dissolving of sugars (dissolving and refining C13F 1/14) }
A23L 1/095	.. { Degradation products of starch, e.g. hydrolysates, dextrins; Enzymatically modified starches }
A23L 1/097	.. { Sugar alcohols }
A23L 1/10	. containing cereal-derived products (treating or baking of doughs containing flour A21D)
A23L 1/1008	.. { Addition of antibiotics, vitamins, amino-acids, minerals }
A23L 1/1016	.. { Cereal fibre products, e.g. bran, husk }
A23L 1/1025	.. { Treatment of whole grains not provided for in groups A23L 1/164 to A23L 1/182 (preservation A23B 9/00) }
A23L 1/1033	... { Cooking or roasting }
A23L 1/1041	.. { Dry unshaped finely divided cereal products, not provided for in groups A23L 1/05226 and A23L 1/164 to A23L 1/182 , e.g. meal, flour, powder, dried cereal creams or extracts }
A23L 1/105	.. Fermentation of farinaceous cereal or cereal material; Addition of enzymes or micro-organisms (A23L 1/16 , A23L 1/185 , A23L 1/238 take precedence)
A23L 1/1055	... { Addition or treatment with enzymes not combined with fermentation with micro-organisms }
A23L 1/16	.. Types of pasta, e.g. macaroni, noodles (machines for making A21C ; devices for drying F26B)
A23L 1/1606	... { Filled, stuffed or multilayered pasta }

- A23L 1/1613 . . . { Semi-moist, i.e. containing about 20% of moist, or moist packaged or frozen pasta; Pasta fried or prefried in a non-aqueous frying medium, e.g. oil; Packaged pasta to be cooked directly in the package }
- A23L 1/162 . . . Par-boiled or instant pasta
- A23L 1/164 . . Flakes or other shapes of the ready-to-eat type ([A23L 1/18](#) takes precedence)
- A23L 1/1641 . . . { coated, filled, multilayered or hollow and closed ready-to-eat cereals }
- A23L 1/1643 . . . { Snacks or chips obtained by binding, shaping or compacting together whole cereals or cereal pieces, e.g. Granola bars }
- A23L 1/1645 . . . { Snacks or chips obtained by oil frying of a formed cereal dough; Half-products therefor to be fried }
- A23L 1/1646 . . . { Flakes, granules or other shapes of comparable size }
- A23L 1/1648 { made from whole grains or grain pieces without meal or dough making }
- A23L 1/168 . . Cereal granules or flakes to be cooked and eaten hot, e.g. oatmeal; { Reformed rice products }
- A23L 1/1685 . . . { made from whole grains or grain pieces without meal or dough making }
- A23L 1/172 . . Cereal germ products
- A23L 1/176 . . Farinaceous granules for dressing meat, fish, or the like
- A23L 1/18 . . Puffed cereals, e.g. popcorn, puffed rice
- A23L 1/1802 . . . { Making puffed cereals, comprising meal or dough making as an intermediate step (oil-fried snacks [A23L 1/1645](#)) }
- A23L 1/1805 { by extrusion }
- A23L 1/1807 . . . { Making puffed cereals from whole grains or grain pieces without meal or dough forming }
- A23L 1/181 { by pressure release }
- A23L 1/1812 { by heating without pressure release, e.g. corn popping }
- A23L 1/1815 { Discontinuously-working apparatus }
- A23L 1/1817 . . . { After-treatment of puffed cereals, e.g. coating, salting }
- A23L 1/182 . . Products in which the original granular shape is maintained, e.g. par-boiled rice
- A23L 1/1823 . . . { coated with a layer }
- A23L 1/1826 . . . { cooked, precooked, fried or prefried in a non-aqueous liquid frying medium, e.g. oil }

- A23L 1/185 . Malt products (malt products or pulse [A23L 1/202](#); preparation of malt for brewing [C12C](#))
- A23L 1/186 . . Fermentation of cereal malt, or of cereal by malting

- A23L 1/187 . Puddings; Dry powder puddings
- A23L 1/1875 . . { Ready-to-eat liquid or semi-liquid desserts or puddings not to be mixed with water, milk or other liquids }

- A23L 1/19 . Cream substitutes (milk substitutes, coffee whitener compositions [A23C 11/00](#))
- A23L 1/193 . . { containing non-milk fats but no proteins other than milk proteins }
- A23L 1/196 . . { containing non-milk fats and non-milk proteins, e.g. eggs or soybeans }

- A23L 1/20 . Treatment of pulse, i.e. fruits of leguminous plants, for production of fodder or food; Preparation of products from legumes; Chemical means for rapid cooking of these foods, e.g. treatment with phosphates (animal foods [A23K](#))

- A23L 1/2001 .. { Pulses or legumes in form of whole pieces or fragments thereof, without mashing or comminuting ([A23L 1/201](#) and [A23L 1/211](#) take precedence) }
- A23L 1/2003 ... { Soya beans, e.g. full-fat soya bean flakes or grits }
- A23L 1/2005 .. { Mashed or comminuted pulses or legumes; Products made therefrom ([A23L 1/211](#) takes precedence; soya milk [A23C 11/103](#); tofu or soya cheese [A23C 20/025](#)) }
- A23L 1/2006 ... { Soya beans, e.g. oil-extracted soya bean flakes (removing undesirable substances [A23L 1/211](#)) }
- A23L 1/2008 .. { Fermented pulses or legumes, e.g. miso, tempeh; Addition of micro-organisms ([A23L 1/2118](#) takes precedence; treatment with enzymes [A23L 1/2113](#); soya sauce [A23L 1/238](#); fermented soya milk [A23C 11/103](#); cheese-like products [A23C 20/025](#)) }
- A23L 1/201 .. Rapid cooking pulse { in whole pieces or fragments without comminuting; Reducing cooking time of whole pulses; Precooked dehydrated whole pulses }
- A23L 1/202 .. Malt products; Fermented malt products ([A23L 1/22](#) takes precedence; malt products of cereals [A23L 1/185](#))
- A23L 1/211 .. Removing bitter or other undesirable substances { from pulses, legumes or oilseeds }
- A23L 1/2111 ... { by heating without chemical treatment, e.g. steam treatment, cooking }
- A23L 1/2112 ... { by extraction with solvents }
- A23L 1/2113 ... { using enzymes; Enzymatic transformation of pulses or legumes }
- A23L 1/2115 ... { by chemical treatment, adsorption or absorption }
- A23L 1/2116 { combined with heat treatment }
- A23L 1/2117 ... { by wave energy, irradiation, electrical means or magnetic fields }
- A23L 1/2118 ... { using micro-organisms }
- A23L 1/212 . Preparation of fruits or vegetables (of pulse [A23L 1/20](#); treating harvested fruit or vegetables in bulk [A23N](#))
- A23L 1/2121 .. { Instant products; Powders; Flakes; Granules ([A23L 1/214](#) and [A23L 1/216](#) take precedence) }
- A23L 1/2123 .. { consisting of whole pieces or fragments without mashing the original pieces }
- A23L 1/2125 ... { Stuffed or cored products; Multilayered or coated products; Binding or compressing of original pieces }
- A23L 1/2126 .. { Fruit waste products, e.g. from citrus peel or seed }
- A23L 1/2128 .. { Mashed or comminuted products, e.g. pulp, purée, sauce, or products made therefrom, e.g. snacks ([A23L 1/06](#), [A23L 1/2121](#), [A23L 1/214](#), [A23L 1/243](#) take precedence) }
- A23L 1/214 .. of tuberous or like starch containing root crops
- A23L 1/2142 ... { Sweet potatoes }
- A23L 1/2145 ... { Cassava, manioc, tapioca, or fermented products thereof, e.g. gari }
- A23L 1/2147 ... { Konjak; Konntaku }
- A23L 1/216 ... of potatoes
- A23L 1/2161 { Mashed potato products }
- A23L 1/2162 { Preformed edible shells filled with mashed potatoes; Stuffed mashed potato products }
- A23L 1/2163 { Original non-roasted or non-fried potato pieces }
- A23L 1/2165 Unshaped dry products, e.g. powders, flakes, granules or agglomerates

- A23L 1/217 Roasted or fried products, e.g. snacks or chips; { Other snacks or chips from potatoes }
- A23L 1/2175 { from powdered or mashed potato products ([A23L 1/2162](#) takes precedence) }
- A23L 1/218 . . . by pickling, e.g. sauerkraut, pickles
- A23L 1/22 . . . Spices; Flavouring agents or condiments; Artificial sweetening agents; Table salts; Dietetic salt substitutes; { Other taste or flavour affecting agents }
- A23L 1/22008 . . . { Fixation, conservation, or encapsulation of flavouring agents }
- A23L 1/22016 . . . { Encapsulation }
- A23L 1/22025 . . . { with a synthetic polymer matrix or excipient, e.g. vinylic, acrylic polymers }
- A23L 1/22033 . . . { the flavouring agents being bound to a host by chemical, electrical or like forces, e.g. use of precursors }
- A23L 1/22041 . . . { Use of inorganic solid carriers, e.g. silica }
- A23L 1/2205 . . . { in the form of films }
- A23L 1/22058 . . . { Emulsions }
- A23L 1/22066 . . . { Acid flavourants }
- A23L 1/22075 . . . { Flavour masking or reducing agents }
- A23L 1/22083 . . . { Addition of bitterness inhibitors }
- A23L 1/22091 . . . { Taste or flavour enhancing agents }
- A23L 1/221 . . . Natural spices, flavouring agents or condiments; Extracts thereof ([natural coffee or tea flavour A23F 3/40](#), [A23F 5/46](#))
- A23L 1/2212 . . . { from liliaceae, e.g. onions, garlic }
- A23L 1/2215 . . . { Solvent extraction }
- A23L 1/2217 . . . { Distilling, stripping, or recovering of volatiles }
- A23L 1/222 . . . from fruit, e.g. essential oils ([essential oils in general C11B 9/00](#))
- A23L 1/2225 { from citrus fruits }
- A23L 1/223 . . . Dried spices
- A23L 1/224 Onions
- A23L 1/225 . . . Mustard
- A23L 1/226 . . . Synthetic spices or flavouring agents or condiments
- A23L 1/22607 . . . { Compounds of unspecified constitution characterised by the chemical reaction for their preparation ([A23L 1/2275](#) takes precedence) }
- A23L 1/22614 . . . { Aliphatic compounds }
- A23L 1/22621 { containing S }
- A23L 1/22628 { having O as the only hetero atom }
- A23L 1/22635 { Hydroxy compounds }
- A23L 1/22642 { Carboxy compounds }
- A23L 1/2265 . . . { alicyclic }
- A23L 1/22657 . . . { aromatic }
- A23L 1/22664 . . . { heterocyclic }
- A23L 1/22671 { having O or S as the only hetero atoms }
- A23L 1/22678 { having N as the only hetero atom }
- A23L 1/22685 { having at least two different hetero atoms, at least one being an N atom }

A23L 1/22692	...	{ Dairy flavours }
A23L 1/227	...	containing amino acids
A23L 1/2275	....	{ heated in the presence of reducing sugars or the like, e.g. Maillard's non-enzymatic browning }
A23L 1/228	....	containing glutamic acids
A23L 1/229	...	containing nucleotides {(A23L 1/3018 takes precedence)}
A23L 1/2295	....	{ containing also amino acids }
A23L 1/23	...	prepared by fermentation {(yeast extracts A23L 1/3016)}
A23L 1/2305	....	{ Dairy flavours }
A23L 1/231	...	Meat flavours
A23L 1/232	...	Smoke flavours
A23L 1/234	...	Coffee or cocoa flavours
A23L 1/235	...	Fruit flavours
A23L 1/236	..	Artificial sweetening agents
A23L 1/2361	...	{ containing amino acids, nucleotides, peptides or derivatives }
A23L 1/2362	....	{ containing dipeptides or derivatives }
A23L 1/2363	...	{ containing sugars or derivatives }
A23L 1/2364	....	{ Sugar alcohols }
A23L 1/2365	....	{ Starch hydrolysates }
A23L 1/2366	....	{ Terpene glycosides }
A23L 1/2367	....	{ Halogenated sugars }
A23L 1/2368	....	{ L-sugars }
A23L 1/2369	...	{ Addition of sweetness inhibitors }
A23L 1/237	..	Table salts; Dietetic salt substitutes
A23L 1/2375	...	{ Salt substitutes completely devoid of sodium chloride }
A23L 1/238	..	Soya sauce
A23L 1/24	..	Salad dressings; Mayonnaise; Ketchup
A23L 1/243	...	{ Ketchup }
A23L 1/246	...	{ Use of milk products or milk derivatives in the preparation of dressings }
A23L 1/27	.	Colouring or decolouring of foods
A23L 1/272	..	Retaining or modifying natural colour by use of additives, e.g. optical brighteners (A23L 1/275 takes precedence)
A23L 1/275	..	Addition of dyes or pigments with or without optical brighteners
A23L 1/2751	...	{ using naturally occurring organic dyes or pigments, including synthetically duplicated natural extracts, e.g. carotenoids }
A23L 1/2753	....	{ using carotenoids or xanthophyles }
A23L 1/2755	...	{ using dyes or pigments from microbial origin, including from algae }
A23L 1/2756	...	{ using other synthetic organic dyes or pigments }
A23L 1/2758	....	{ Compounds of unspecified constitution characterised by the chemical reaction for their preparation }
A23L 1/277	..	Removing colour by chemical reaction, e.g. by bleaching (bleaching flour A21D 2/00)
A23L 1/28	.	Edible extracts or preparations of fungi (for medicinal purposes A61K)

- A23L 1/29 . Modifying nutritive qualities of foods; Dietetic products ([A23L 1/09](#) takes precedence; dietetic salt substitutes [A23L 1/22](#); enriched flour [A21D 2/00](#); milk preparations [A23C 9/00](#))
- A23L 1/293 .. { dietetic or nutritional methods, e.g. for losing weight ([A23L 1/296](#) takes precedence; Reducing nutritive value [A23L 1/307](#)) }
- A23L 1/296 .. { complete food formulations for specific consumer groups or specific purposes, e.g. infant formula ([A23L](#) takes precedence) }
- A23L 1/30 .. containing additives ([A23L 1/308](#) takes precedence)
- A23L 1/3002 ... { Plant extracts, e.g. synthetically duplicated plant extracts }
- A23L 1/3004 { Plant sterols or derivatives thereof, e.g. phytosterols }
- A23L 1/3006 ... { Fatty acids or derivatives thereof; Fats or oils }
- A23L 1/3008 { Fatty acids or derivatives thereof }
- A23L 1/301 ... { Antibiotics }
- A23L 1/3012 ... { Nucleic acids or derivatives ([A23L 1/3018](#) takes precedence) }
- A23L 1/3014 ... { Bacteria or derivatives, e.g. probiotics }
- A23L 1/3016 ... { Yeasts or derivatives }
- A23L 1/3018 { Extracts }
- A23L 1/302 ... Vitamins
- A23L 1/303 Vitamins A or D
- A23L 1/304 ... Inorganic salts, minerals, trace elements
- A23L 1/3045 { Complexes or chelates }
- A23L 1/305 ... Amino acids, peptides or proteins ([working-up proteins for foodstuffs A23J 3/00](#))
- A23L 1/3051 { Amino acids }
- A23L 1/3053 { Peptides; Protein hydrolysates }
- A23L 1/3055 { Vegetable proteins }
- A23L 1/3056 { Dairy proteins }
- A23L 1/3058 { Proteins from micro-organisms }
- A23L 1/307 .. Reducing nutritive value; Dietetic products with reduced nutritive value
- A23L 1/308 ... Addition of substantially indigestible substances, e.g. dietary fibres ([A23L 1/05](#) takes precedence)
- A23L 1/3081 { Comminuted fibrous parts of plants, e.g. bagasse, pulp }
- A23L 1/3082 { Cellulose or derivatives }
- A23L 1/3084 { Synthetic polymers, e.g. vinylic or acrylic polymers }
- A23L 1/3085 { Substances of animal origin, e.g. gelatin, collagen }
- A23L 1/3087 { Mineral substances, including mineral oils, e.g. paraffin, clay }
- A23L 1/3088 { Polyol polyesters, e.g. sucrose polyesters; Synthetic sugar polymers, e.g. polydextrose }
- A23L 1/31 . Meat products; Meat meal ([working-up proteins for foodstuffs A23J 3/00](#))
- A23L 1/3103 .. { Coating with a layer, stuffing, laminating, binding, or compressing of original meat pieces }
- A23L 1/3106 .. { with gravy or sauce }
- A23L 1/311 .. Meat meal or powder; Granules, agglomerates or flakes

- A23L 1/312 .. from offal, e.g. rinds, skins, marrow, tripes, feet, ears or snouts ([glands or bones as ingredients of processed meat A23L 1/317](#))
- A23L 1/313 .. Meat extracts
- A23L 1/314 .. containing additives
- A23L 1/31409 ... { using additives other than enzymes or micro-organisms in comminuted meat products }
- A23L 1/31418 { Addition of natural plant hydrocolloids, e.g. gums of cellulose derivatives or of microbial fermentation gums }
- A23L 1/31427 { Addition of non-meat animal protein material, e.g. blood, egg, dairy products, fish or addition of proteins from micro-organisms, yeasts or fungi }
- A23L 1/31436 { Addition of proteins, carbohydrates or fibrous material from vegetable origin other than sugars or sugar alcohols ([A23L 1/31418 takes precedence](#)) }
- A23L 1/31445 { Addition of flavours, spices, sweeteners, e.g. sugars or sugar alcohols, colours, amino acids or their salts, peptides, vitamins, yeast extract or autolysate, nucleic acid or derivatives, organic acidifying agents or their salts or acidogens; Alcohol-containing products }
- A23L 1/31454 { Addition of vegetable or non-meat animal fats or oils; Addition of fatty acids }
- A23L 1/31463 { Addition of inorganic compounds, e.g. minerals; oligoelements }
- A23L 1/31472 ... { Addition of, or treatment with, micro-organisms ([A23L 1/3185 takes precedence](#)) }
- A23L 1/31481 { Addition of, or fermentation with yeasts, or fungi; Enrichment with dried biomass other than starter cultures }
- A23L 1/3149 ... { Addition of, or treatment with, enzymes ([A23L 1/3185 takes precedence](#)) }
- A23L 1/315 .. Poultry products, e.g. poultry sausages
- A23L 1/3152 ... { Comminuted, emulsified or processed products; Pastes; Reformed or compressed products from poultry meat }
- A23L 1/3155 ... { Treatment of original pieces or parts ([binding meat pieces in a compact form A23L 1/3152](#)) }
- A23L 1/3157 { Coating with a layer or stuffing }
- A23L 1/317 .. Comminuted or emulsified meat products, including sausages; Reformed meat from comminuted meat products
- A23L 1/3172 ... { Coating with a layer, stuffing or laminating }
- A23L 1/3175 ... { Sausages }
- A23L 1/3177 ... { Reformed meat products other than sausages }
- A23L 1/318 .. Tenderised or flavoured meat pieces, e.g. obtained by injecting solutions; Macerating solutions
- A23L 1/3182 ... { using additives, including micro-organisms or enzymes, e.g. injection solutions }
- A23L 1/3185 { using micro-organisms or enzymes }
- A23L 1/3187 ... by treatment in a gaseous atmosphere, e.g. aging, ripening; by electrical treatment or irradiation or wave treatment
- A23L 1/32 . Egg products
- A23L 1/3204 .. { Addition of proteins, including hydrolysates, fats, or carbohydrates, including natural plant hydrocolloids or animal or vegetable substances containing proteins, fats, or carbohydrates }
- A23L 1/3208 .. { Addition or treatment with micro-organisms or enzymes }

- A23L 1/3212 .. { Addition of other substances }
- A23L 1/3216 .. { Egg substitutes }
- A23L 1/322 .. Egg rolls

- A23L 1/325 . Food-from-the-sea products; Fish products; Fish meal; Fish-egg substitutes
- A23L 1/3252 .. { Addition of, or treatment with, micro-organisms or enzymes }
- A23L 1/3255 .. { Comminuted, e.g. emulsified, fish products; Processed products therefrom such as pastes, reformed or compressed products ([A23L 1/3252](#), [A23L 1/326](#), [A23L 1/327](#), [A23L 1/33](#), [A23L 1/333](#) take precedence) }
- A23L 1/3257 .. { Coating with a layer, stuffing, laminating, binding or compressing of original fish pieces }
- A23L 1/326 .. Fish meal or powder; Granules, agglomerates or flakes
- A23L 1/327 .. Fish extracts
- A23L 1/328 .. Fish eggs, e.g. caviar; Fish-egg substitutes
- A23L 1/3285 ... { Fish-egg substitutes }
- A23L 1/33 .. Shell-fish
- A23L 1/333 .. Molluscs
- A23L 1/337 .. Edible seaweed

- A23L 1/36 . Food consisting mainly of nut meats or seeds
- A23L 1/362 .. { consisting of whole seeds or seed fragments }
- A23L 1/364 ... { coated with a layer }
- A23L 1/366 .. { Mashed or comminuted products, e.g. pulp, pastes, meal, powders; Products made therefrom, e.g. blocks, flakes, snacks; Liquid or semi-liquid products ([A23L 1/368](#) and [A23L 1/38](#) take precedence) }
- A23L 1/368 .. { Fermented products; Treatment with micro-organisms or enzymes }
- A23L 1/38 .. Peanut butter { or other nut butters }

- A23L 1/39 . Soups; Sauces ([A23L 1/238](#), [A23L 1/24](#) take precedence)
- A23L 1/40 .. Soup concentrates, e.g. powders, cakes

- A23L 1/48 . Food compositions or treatment thereof not covered by the preceding subgroups, { e.g. complete meals }
- A23L 1/483 .. { Emulsified foodstuffs }
- A23L 1/486 .. { No-fat spreads }

- A23L 2/00** **Non-alcoholic beverages; Dry compositions or concentrates therefor; Their preparation** ([soup concentrates A23L 1/40](#); { introducing gases into liquids in general, apparatus for impregnating liquids with gases per se, [B01F 3/04099](#) }; preparation of non-alcoholic beverages by removal of alcohol { [C12G 3/08](#) })

- A23L 2/02 . containing fruit or vegetable juices
- A23L 2/04 .. Extraction of juices ([machines or apparatus for extracting juice A23N 1/00](#), [A47J 19/00](#))
- A23L 2/06 ... from citrus fruits
- A23L 2/08 .. Concentrating or drying of juices
- A23L 2/082 ... { by membrane processes }

- A23L 2/085 { by osmosis, reverse osmosis, electrodialysis }
- A23L 2/087 { by ultrafiltration, microfiltration }
- A23L 2/10 . . . by heating or contact with dry gases
- A23L 2/102 { Spray-drying }
- A23L 2/105 { Foam-drying }
- A23L 2/107 { Electric or wave heating }
- A23L 2/12 . . . by freezing
- A23L 2/14 and sublimation

- A23L 2/38 . Other non-alcoholic beverages ({ mineral supplements [A23L 1/304](#) }; milk products [A23C](#); coffee, tea or their substitutes [A23F](#))
- A23L 2/382 . . { fermented (fermented nut meats or seeds [A23L 1/368](#); fermented milk preparations [A23C 9/12](#); other foodstuffs containing micro-organisms [A23L 1/0345](#); addition of bacteria for nutritional purposes [A23L 1/3014](#)) }

- A23L 2/385 . Concentrates of non-alcoholic beverages
- A23L 2/39 . . Dry compositions
- A23L 2/395 . . . in a particular shape or form

- A23L 2/40 . Effervescence-generating compositions

- A23L 2/42 . Preservation of non-alcoholic beverages
- A23L 2/44 . . by adding preservatives
- A23L 2/46 . . by heating
- A23L 2/48 . . . by irradiation or electric treatment
- A23L 2/50 . . by irradiation or electric treatment without heating

- A23L 2/52 . Adding ingredients (adding preservatives [A23L 2/44](#))
- A23L 2/54 . . Mixing with gases
- A23L 2/56 . . Flavouring or bittering agents (sweeteners [A23L 2/60](#))
- A23L 2/58 . . Colouring agents
- A23L 2/60 . . Sweeteners
- A23L 2/62 . . Clouding agents; Agents to improve the cloud-stability
- A23L 2/64 . . Re-adding volatile aromatic ingredients
- A23L 2/66 . . Proteins
- A23L 2/68 . . Acidifying substances

- A23L 2/70 . Clarifying or fining of non-alcoholic beverages; Removing unwanted matter (purifying water [C02E](#), e.g. by ion-exchange [C02F 1/42](#))
- A23L 2/72 . . by filtration
- A23L 2/74 . . . using membranes, e.g. osmosis, ultrafiltration
- A23L 2/76 . . by removal of gases
- A23L 2/78 . . by ion-exchange
- A23L 2/80 . . by adsorption
- A23L 2/82 . . by flocculation
- A23L 2/84 . . using micro-organisms or biological material, e.g. enzymes

A23L 3/00	Preservation of foods or foodstuffs, in general, e.g. pasteurising, sterilising, specially adapted for foods or foodstuffs (preservation of flour or bread A21D; processes specially adapted for particular foods or foodstuffs, see the relevant groups for the foods or foodstuffs in A23; preserving foods or foodstuffs in association with packaging B65B 55/00; preservation of alcoholic beverages C12H)
A23L 3/001	. { Details of apparatus, e.g. for transport, for loading or unloading manipulation, pressure feed valves }
A23L 3/003	. { Control or safety devices for sterilisation or pasteurisation systems }
A23L 3/005	. by heating using irradiation or electric treatment (drying or kilning A23L 3/40)
A23L 3/0055	.. { with infra-red rays }
A23L 3/01	.. using micro-waves or dielectric heating
A23L 3/015	. by treatment with pressure variation, shock, acceleration or shear stress { or cavitation }
A23L 3/0155	.. { using sub- or super-atmospheric pressures, or pressure variations transmitted by a liquid or gas }
A23L 3/02	. by heating materials in packages which are progressively transported, continuously or stepwise, through the apparatus (A23L 3/005 takes precedence)
A23L 3/022	.. { with packages moving on the spot while being transported }
A23L 3/025	.. { with packages on a drum with horizontal axis (A23L 3/022 takes precedence) }
A23L 3/027	... { transported in a hydrostatic chamber }
A23L 3/04	.. with packages on endless chain or band conveyers {(A23L 3/022 takes precedence) }
A23L 3/045	... { transported in a hydrostatic chamber }
A23L 3/06	.. with packages transported along a helical path {(A23L 3/022 takes precedence) }
A23L 3/065	... { transported in a hydrostatic chamber }
A23L 3/08	.. with packages on a revolving platform {(A23L 3/022 takes precedence) }
A23L 3/085	... { transported in a hydrostatic chamber }
A23L 3/10	. by heating materials in packages which are not progressively transported through the apparatus (A23L 3/005 takes precedence)
A23L 3/12	.. with packages in intercommunicating chambers through which the heating medium is circulated
A23L 3/14	.. with packages moving on the spot
A23L 3/16	. by heating loose, unpacked materials (A23L 3/005 takes precedence)
A23L 3/165	.. { in solid state }
A23L 3/18	.. while they are progressively transported through the apparatus
A23L 3/185	... { in solid state }
A23L 3/20	... with transport along plates
A23L 3/205	.... { in solid state }
A23L 3/22	... with transport through tubes
A23L 3/225	.... { in solid state }

A23L 3/24	..	with the materials in spray form
A23L 3/245	...	{ in solid state }
A23L 3/26	.	by irradiation without heating
A23L 3/263	..	{ with corpuscular or ionising radiation, i.e. X, alpha, beta or omega radiation (laser plasma radiation A23L 3/26) }
A23L 3/266	..	{ with corona irradiation }
A23L 3/28	..	with ultra-violet light
A23L 3/30	..	by treatment with ultrasonic waves
A23L 3/32	.	by treatment with electric currents without heating effect
A23L 3/325	..	{ by electrolysis }
A23L 3/34	.	by treatment with chemicals
A23L 3/3409	..	in the form of gases, e.g. fumigation; Compositions or apparatus therefor
A23L 3/34095	...	{ Details of apparatus for generating or regenerating gases }
A23L 3/3418	...	in a controlled atmosphere, e.g. partial vacuum, comprising only CO ₂ , N ₂ , O ₂ or H ₂ O
A23L 3/3427	....	in which an absorbent is placed or used (packages for foodstuffs with provision for absorbing fluids B65D 81/26)
A23L 3/3436	.....	Oxygen absorbent
A23L 3/3445	...	in a controlled atmosphere comprising other gases in addition to CO ₂ , N ₂ , O ₂ or H ₂ O
A23L 3/3454	..	in the form of liquids or solids
A23L 3/3463	...	Organic compounds; Micro-organisms; Enzymes
A23L 3/34635	....	{ Antibiotics }

NOTE

In groups [A23L 3/3472](#) to [A23L 3/3562](#), in the absence of an indication to the contrary, classification is made in the last appropriate place

A23L 3/3472	....	Compounds of undetermined constitution obtained from animals or plants
A23L 3/3481	....	Organic compounds containing oxygen
A23L 3/349	.....	with singly-bound oxygen
A23L 3/3499	.....	with doubly-bound oxygen
A23L 3/3508	.....	containing carboxyl groups
A23L 3/3517	.....	Carboxylic acid esters
A23L 3/3526	....	Organic compounds containing nitrogen
A23L 3/3535	....	Organic compounds containing sulfur
A23L 3/3544	....	Organic compounds containing hetero rings
A23L 3/3553	....	Organic compounds containing phosphorus
A23L 3/3562	....	Sugars; Derivatives thereof
A23L 3/3571	....	Micro-organisms; Enzymes
A23L 3/358	...	Inorganic compounds
A23L 3/3589	...	Apparatus for preserving using liquids

- A23L 3/3598 . . . Apparatus for preserving using solids
- A23L 3/36 . Freezing; Subsequent thawing; Cooling
- A23L 3/361 . . { the materials being transported through or in the apparatus, with or without shaping, e.g. in form of powder, granules, or flakes ([moving on the spot only A23L 3/363](#)) }
- A23L 3/362 . . . { with packages or with shaping in form of blocks or portions }
- A23L 3/363 . . { the materials not being transported through or in the apparatus with or without shaping, e.g. in form of powder, granules, or flakes }
- A23L 3/364 . . . { with packages or with shaping in form of blocks or portions }
- A23L 3/365 . . Thawing subsequent to freezing
- A23L 3/37 . . with addition of { [or treatment with](#) } chemicals
- A23L 3/375 . . . with direct contact between the food and the chemical, e.g. liquid nitrogen, at cryogenic temperature
- A23L 3/40 . by drying or kilning; Subsequent reconstitution
- A23L 3/405 . . { [Fractionated crystallisation](#) }
- A23L 3/42 . . with addition of chemicals before or during drying
- A23L 3/44 . . Freeze-drying
- A23L 3/46 . . Spray-drying
- A23L 3/48 . . Thin layer-, drum- or roller-drying
- A23L 3/485 . . . { [Drum- or roller-drying](#) }
- A23L 3/50 . . Fluidised-bed drying
- A23L 3/52 . . Foam-drying
- A23L 3/54 . . using irradiation or electrical treatment, e.g. ultrasonic waves