

CPC COOPERATIVE PATENT CLASSIFICATION

A HUMAN NECESSITIES

FOODSTUFFS; TOBACCO

A23 FOODS OR FOODSTUFFS; THEIR TREATMENT, NOT COVERED BY OTHER CLASSES

(NOTE omitted)

A23B PRESERVING, e.g. BY CANNING, MEAT, FISH, EGGS, FRUIT, VEGETABLES, EDIBLE SEEDS; CHEMICAL RIPENING OF FRUIT OR VEGETABLES; THE PRESERVED, RIPENED, OR CANNED PRODUCTS ([preserving foodstuffs in general A23L 3/00](#); [preserving in general A61L](#); [applying food preservatives in packages B65D 81/28](#))

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

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| 4/00 | General methods for preserving meat, sausages, fish or fish products | 4/044 | . Smoking; Smoking devices |
| 4/002 | . {Preservation in association with shaping (A23B 4/0053 , A23B 4/01 , A23B 4/062 and A23B 4/066 take precedence)} | 4/048 | . . with addition of chemicals other than natural smoke |
| 4/005 | . Preserving by heating | 4/052 | . . Smoke generators {; Smoking apparatus (A23B 4/056 takes precedence)} |
| 4/0053 | . . {with gas or liquids, with or without shaping, e.g. in form of powder, granules or flakes} | 4/0523 | . . . {Smoke generators using wood-pyrolysis or wood-friction} |
| | NOTE | 4/0526 | . . . {Smoke generators or smoking apparatus using liquid smoke in gaseous or liquid form} |
| | The heating means for the gas or liquid are not classified | 4/056 | . . Smoking combined with irradiation or electric treatment, e.g. electrostatic smoking {; Apparatus therefor} |
| 4/0056 | . . . {with packages, or with shaping in the form of blocks or portions} | 4/06 | . Freezing; Subsequent thawing; Cooling |
| 4/01 | . . by irradiation or electric treatment {with or without shaping, e.g. in form of powder, granules or flakes} | 4/062 | . . {the materials being transported through or in the apparatus with or without shaping, e.g. in the form of powder, granules or flakes (moving on the spot only A23B 4/066)} |
| 4/012 | . . . {with packages, or with shaping in the form of blocks or portions} | 4/064 | . . . {with packages or with shaping in the form of blocks or portions} |
| 4/015 | . Preserving by irradiation or electric treatment without heating effect | 4/066 | . . {the materials not being transported through or in the apparatus with or without shaping, e.g. in the form of powder, granules or flakes} |
| 4/02 | . Preserving by means of inorganic salts (apparatus therefor A23B 4/26 , A23B 4/32) | 4/068 | . . . {with packages or with shaping in the form of blocks or portions} |
| 4/021 | . . {with apparatus adapted for gaseous preserving agents} | 4/07 | . . Thawing subsequent to freezing |
| 4/023 | . . by kitchen salt or mixtures thereof with inorganic or organic compounds | 4/08 | . . with addition of chemicals {or treatment with chemicals} before or during cooling {, e.g. in the form of an ice coating or frozen block} |
| 4/0235 | . . . {with organic compounds or biochemical products} | 4/09 | . . . with direct contact between the food and the chemical, e.g. liquid N ₂ , at cryogenic temperature |
| 4/027 | . . by inorganic salts other than kitchen salt, or mixtures thereof with organic compounds, e.g. biochemical compounds | 4/10 | . Coating with a protective layer; Compositions or apparatus therefor (A23B 4/08 takes precedence)} |
| 4/03 | . Drying; Subsequent reconstitution {(drying apparatus in general F26B)} | 4/12 | . Preserving with acids; Acid fermentation |
| 4/031 | . . {Apparatus for drying (A23B 4/037 takes precedence)} | 4/14 | . Preserving with chemicals not covered by groups A23B 4/02 or A23B 4/12 |
| 4/033 | . . with addition of chemicals (A23B 4/037 takes precedence) | 4/16 | . . in the form of gases, e.g. fumigation; Compositions or apparatus therefor |
| 4/037 | . . Freeze-drying {, i.e. cryodesiccation, lyophilisation; Apparatus therefor} | 4/18 | . . in the form of liquids or solids (apparatus therefor A23B 4/26 , A23B 4/32) |

- 4/20 . . . Organic compounds; Microorganisms; Enzymes ([acid fermentation A23B 4/12](#))
- 4/22 Microorganisms; Enzymes; {Antibiotics}
- 4/24 . . . Inorganic compounds
- 4/26 . Apparatus for preserving using liquids {; Methods therefor}
- 4/28 . . by injection of liquids
- 4/285 . . . {with inorganic salts}
- 4/30 . . by spraying of liquids
- 4/305 . . . {with inorganic salts}
- 4/32 . Apparatus for preserving using solids
- 4/325 . . {with inorganic salts}
- 5/00 Preservation of eggs or egg products (preserving dough or bakery products [A21D](#))**
- 5/005 . Preserving by heating
- 5/0052 . . {in the shell}
- 5/0055 . . {without the shell}
- 5/0057 . . . {with packages}
- 5/01 . . by irradiation or electric treatment
- 5/015 . Preserving by irradiation or electric treatment without heating effect
- 5/02 . Drying; Subsequent reconstitution
- 5/022 . . {Drying with use of gas or vacuum}
- 5/025 . . {Drying} with addition of chemicals ([A23B 5/03, A23B 5/035 take precedence](#))
- 5/0255 . . . {Drying with use of liquids, e.g. by extraction}
- 5/03 . . Freeze-drying {, i.e. cryodesiccation, lyophilisation; Apparatus therefor}
- 5/035 . . Spray-drying
- 5/04 . Freezing; Subsequent thawing; Cooling
- 5/041 . . {Freezing or cooling without shell ([A23B 5/05 takes precedence](#))}
- 5/043 . . . {with packages}
- 5/045 . . Thawing subsequent to freezing
- 5/05 . . {Freezing or cooling} with addition of chemicals
- 5/055 . . . with direct contact between the food and the chemical, e.g. liquid nitrogen, at cryogenic temperature
- 5/06 . Coating eggs with a protective layer; Compositions or apparatus therefor
- 5/065 . . {Apparatus for coating}
- 5/08 . Preserving with chemicals
- 5/10 . . in the form of gases, e.g. fumigation; Compositions or apparatus therefor
- 5/12 . . in the form of liquids or solids
- 5/14 . . . Organic compounds; Microorganisms; Enzymes
- 5/16 Microorganisms; Enzymes
- 5/18 . . . Inorganic compounds
- 5/20 . . . Apparatus for preserving using liquids
- 5/22 . . . Apparatus for preserving using solids
- 7/00 Preservation or chemical ripening of fruit or vegetables**
- 7/005 . Preserving by heating
- 7/0053 . . {by direct or indirect contact with heating gases or liquids}
- 7/0056 . . . {with packages}
- 7/01 . . by irradiation or electric treatment
- 7/012 . . . {with packages}
- 7/015 . Preserving by irradiation or electric treatment without heating effect
- 7/02 . Dehydrating; Subsequent reconstitution ([dried cooked potatoes A23L 19/12](#))
- 7/0205 . . {by contact of the material with fluids, e.g. drying gas or extracting liquids}
- 7/021 . . {Foam drying}
- 7/0215 . . {Post-treatment of dried fruits or vegetables}
- 7/022 . . with addition of chemicals {before or during drying, e.g. semi-moist products} ([A23B 7/024 - A23B 7/028 take precedence](#))
- 7/024 . . Freeze-drying {, i.e. cryodesiccation or lyophilisation}
- 7/026 . . Spray-drying
- 7/028 . . Thin layer-, drum- or roller-drying {or by contact with a hot surface}
- 7/03 . . Drying raw potatoes
- 7/04 . Freezing; Subsequent thawing; Cooling
- 7/0408 . . {the material being transported through or in the apparatus with or without shaping, e.g. in the form of powder, granules or flakes ([A23B 7/05 takes precedence; moving on the spot only A23B 7/0425](#))}
- 7/0416 . . . {with packages or with shaping in the form of blocks or portions}
- 7/0425 . . {the material not being transported through or in the apparatus, with or without shaping, e.g. in the form of powder, granules or flakes ([A23B 7/05 takes precedence](#))}
- 7/0433 . . . {with packages or with shaping in the form of blocks or portions}
- 7/0441 . . {Treatment other than blanching preparatory to freezing}
- 7/045 . . Thawing subsequent to freezing
- 7/05 . . with addition of chemicals {or treatment with chemicals other than cryogenics, before or during cooling, e.g. in the form of an ice coating or frozen block}
- 7/055 . . . with direct contact between the food and the chemical, e.g. liquid nitrogen, at cryogenic temperature
- 7/06 . Blanching ([machines therefor A23N 12/00](#))
- 7/08 . Preserving with sugars ([marmalade, jam or fruit jellies A23L 21/10](#))
- 7/085 . . {in a solution of sugar}
- 7/10 . Preserving with acids; Acid fermentation
- 7/105 . . {Leaf vegetables, e.g. sauerkraut}
- 7/12 . . Apparatus for compressing sauerkraut
- 7/14 . Preserving or ripening with chemicals not covered by groups [A23B 7/08](#) or [A23B 7/10](#)
- 7/144 . . in the form of gases, e.g. fumigation; Compositions or apparatus therefor {(cooling without control of atmosphere composition [A23B 7/04](#))}
- 7/148 . . . in a controlled atmosphere, e.g. partial vacuum, comprising only CO₂, N₂, O₂ or H₂O
- 7/152 . . . in a controlled atmosphere comprising other gases in addition to CO₂, N₂, O₂ or H₂O {; Elimination of such other gases}
- 7/153 . . in the form of liquids or solids
- 7/154 . . . Organic compounds; Microorganisms; Enzymes ([acid fermentation A23B 7/10](#))
- 7/155 Microorganisms; Enzymes; {Antibiotics}
- 7/157 . . . Inorganic compounds
- 7/158 . . . Apparatus for preserving using liquids
- 7/159 . . . Apparatus for preserving using solids

- 7/16 . Coating with a protective layer; Compositions or apparatus therefor ([A23B 7/08 takes precedence](#))
- 9/00 Preservation of edible seeds, e.g. cereals**
- 9/005 . {Processes or apparatus using pressure variation or mechanical force, e.g. shock, acceleration, shear stress, contortion}
- 9/02 . Preserving by heating
- 9/025 . . {with use of gases}
- 9/04 . . by irradiation or electric treatment
- 9/06 . Preserving by irradiation or electric treatment without heating effect
- 9/08 . Drying; Subsequent reconstitution
- 9/10 . Freezing; Subsequent thawing; Cooling
- 9/12 . . Thawing subsequent to freezing
- 9/14 . Coating with a protective layer; Compositions or apparatus therefor
- 9/16 . Preserving with chemicals
- 9/18 . . in the form of gases, e.g. fumigation; Compositions or apparatus therefor
- 9/20 . . . in a controlled atmosphere, e.g. partial vacuum, comprising only CO₂, N₂, O₂ or H₂O
- 9/22 . . . in a controlled atmosphere comprising other gases in addition to CO₂, N₂, O₂ or H₂O
- 9/24 . . in the form of liquids or solids
- 9/26 . . . Organic compounds; Microorganisms; Enzymes
- 9/28 Microorganisms; Enzymes; {Antibiotics}
- 9/30 . . . Inorganic compounds
- 9/32 . . . Apparatus for preserving using liquids
- 9/34 . . . Apparatus for preserving using solids