

CPC COOPERATIVE PATENT CLASSIFICATION

C CHEMISTRY; METALLURGY

(NOTES omitted)

CHEMISTRY

C12 BIOCHEMISTRY; BEER; SPIRITS; WINE; VINEGAR; MICROBIOLOGY; ENZYMOLOGY; MUTATION OR GENETIC ENGINEERING

(NOTES omitted)

C12C BREWING OF BEER (cleaning of raw materials [A23N](#); pitching and depitching machines, cellar tools [C12L](#); propagating yeasts [C12N 1/14](#); non-beverage ethanolic fermentation [C12P 7/06](#))

- | | | | |
|-------------|---|-------------|---|
| 1/00 | Preparation of malt | 5/04 | . . Colouring additives |
| 1/02 | . Pretreatment of grains, e.g. washing, steeping | 7/00 | Preparation of wort (malt extract C12C 1/18) |
| 1/027 | . Germinating | 7/01 | . Pretreatment of malt, e.g. malt grinding |
| 1/0275 | . . {on single or multi-stage floors} | 7/04 | . Preparation or treatment of the mash |
| 1/033 | . . in boxes or drums | 7/042 | . . {Mixing malt with water} |
| 1/047 | . . Influencing the germination by chemical or physical means | 7/044 | . . {Cooling the mash (C12C 7/067 takes precedence)} |
| 1/053 | . . . by irradiation or electric {or wave energy} treatment | 7/047 | . . part of the mash being unmalted cereal mash |
| 1/067 | . Drying | 7/053 | . . part of the mash being non-cereal material |
| 1/073 | . . Processes or apparatus specially adapted to save or recover energy | 7/06 | . . Mashing apparatus |
| 1/10 | . . Drying on fixed supports | 7/062 | . . . {with a horizontal stirrer shaft} |
| 1/12 | . . Drying on moving supports | 7/065 | . . . {with a vertical stirrer shaft} |
| 1/125 | . Continuous or semi-continuous processes for steeping, germinating or drying | 7/067 | . . . {with cooling means} |
| 1/13 | . . with vertical transport of the grains | 7/14 | . Clarifying wort (Läuterung) |
| 1/135 | . . with horizontal transport of the grains | 7/16 | . . by straining |
| 1/15 | . Grain or malt turning, charging or discharging apparatus | 7/161 | . . . {in a tub with a perforated false bottom} |
| 1/16 | . After-treatment of malt, e.g. malt cleaning, detachment of the germ | 7/163 | . . . {with transport of the mash by or relative to a filtering surface} |
| 1/18 | . Preparation of malt extract or of special kinds of malt, e.g. caramel, black malt (malt products for use as foodstuffs A23L) | 7/165 | . . . in mash filters |
| 3/00 | Treatment of hops | 7/17 | . . . in lautertuns {, e.g. in a tub with perforated false bottom} |
| 3/02 | . Drying | 7/175 | . . by centrifuging |
| 3/04 | . Conserving; Storing; Packing | 7/20 | . Boiling the beerwort (brew kettles C12C 13/02) |
| 3/06 | . . Powder or pellets from hops | 7/205 | . . {Boiling with hops} |
| 3/08 | . . Solvent extracts from hops | 7/22 | . . . Processes or apparatus specially adapted to save or recover energy |
| 3/085 | . . . {Extraction of hops with beerwort} | 7/24 | . Clarifying beerwort between hop boiling and cooling |
| 3/10 | . . . using carbon dioxide | 7/26 | . Cooling beerwort; Clarifying beerwort during or after the cooling |
| 3/12 | . Isomerised products from hops | 7/28 | . After-treatment {, e.g. sterilisation (C12C 11/00 takes precedence)} |
| 5/00 | Other raw materials for the preparation of beer | 7/282 | . . {Concentration or beerwort} |
| 5/002 | . {Brewing water} | 7/285 | . . {Drying beerwort} |
| 5/004 | . {Enzymes} | 7/287 | . . {Treating beerwort with hopextract (C12C 7/205 takes precedence)} |
| 5/006 | . . {Beta-glucanase or functionally equivalent enzymes} | 9/00 | {Methods specially adapted for the making of beerwort} |
| 5/008 | . {Hop surrogates} | 9/02 | . {Beerwort treatment; Boiling with hops; Hop extraction} |
| 5/02 | . Additives for beer | | |
| 5/023 | . . {enhancing the vitamin content} | | |
| 5/026 | . . {Beer flavouring preparations} | | |

C12C

- 9/025 . . {Preparation of hop extracts (extraction with beerwort [C12C 9/02](#)); Isomerisation of these extracts; Treatment of beerwort with these extracts; Surrogates of the hop}

11/00 Fermentation processes for beer (preparation of wine [C12G 1/00](#))

- 11/003 . {Fermentation of beerwort}
- 11/006 . . {Fermentation tanks therefor}
- 11/02 . Pitching yeast
- 11/06 . Acidifying the wort
- 11/07 . Continuous fermentation
- 11/075 . . {Bioreactors for continuous fermentation}
- 11/09 . Fermentation with immobilised yeast
- 11/11 . Post fermentation treatments, e.g. carbonation, concentration ([C12H](#) takes precedence; containers with means specially adapted for effervescing potable liquids [B65D 85/73](#))

12/00 Processes specially adapted for making special kinds of beer

- 12/002 . {using special microorganisms}
- 12/004 . . {Genetically modified microorganisms}
- 12/006 . . {Yeasts (processes for seeding [C12C 11/02](#))}
- 12/008 . . {Lactic acid bacteria}
- 12/02 . Beer with low calorie content ([C12C 12/04](#) takes precedence)
- 12/04 . Beer with low alcohol content {(removal of alcohol after fermentation [C12G 3/08](#))}

13/00 Brewing devices, not covered by a single group of [C12C 1/00](#) - [C12C 12/04](#)

- 13/02 . Brew kettles {([C12C 11/075](#) takes precedence)}
- 13/025 . . {heated with steam}
- 13/06 . . heated with fire
- 13/08 . . with internal heating elements
- 13/10 . Home brew equipment

2200/00 Special features

- 2200/01 . Use of specific genetic variants of barley or other sources of fermentable carbohydrates for beer brewing
- 2200/05 . Use of genetically modified microorganisms in the preparation of beer
- 2200/31 . Clarifying wort before or during or after cooling
- 2200/35 . Dissolving, reconstituting or diluting concentrated or dried wort