

# 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](#))

<b>1/00</b>	<b>Preparation of malt</b>	5/04	. . Colouring additives
1/02	. Pretreatment of grains, e.g. washing, steeping	<b>7/00</b>	<b>Preparation of wort (malt extract <a href="#">C12C 1/18</a>)</b>
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 ( <a href="#">C12C 7/067</a> 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 <a href="#">A23L</a> )	7/165	. . . in mash filters
<b>3/00</b>	<b>Treatment of hops</b>	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 <a href="#">C12C 13/02</a> )
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 ( <a href="#">C12C 11/00</a> takes precedence)}
<b>5/00</b>	<b>Other raw materials for the preparation of beer</b>	7/282	. . {Concentration or beerwort}
5/002	. {Brewing water}	7/285	. . {Drying beerwort}
5/004	. {Enzymes}	7/287	. . {Treating beerwort with hopextract ( <a href="#">C12C 7/205</a> takes precedence)}
5/006	. . {Beta-glucanase or functionally equivalent enzymes}	<b>9/00</b>	<b>{Methods specially adapted for the making of beerwort}</b>
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}		

- 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, or concentration (methods for reducing the alcohol content after fermentation [C12H 3/00](#); methods for increasing the alcohol content after fermentation [C12H 6/00](#))

#### **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 (methods for reducing the alcohol content after fermentation [C12H 3/00](#))

#### **WARNING**

Group [C12C 12/04](#) is impacted by reclassification into groups [C12H 3/00](#), [C12H 3/02](#), and [C12H 3/04](#).

All groups listed in this Warning should be considered in order to perform a complete search.

#### **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