

**CPC****COOPERATIVE PATENT CLASSIFICATION****C13B**

**PRODUCTION OF SUCROSE; APPARATUS SPECIALLY ADAPTED THEREFOR** (chemically synthesised sugars or sugar derivatives [C07H](#) ; fermentation or enzyme-using processes for preparing compounds containing saccharide radicals [C12P 19/00](#))

**NOTE**

In this subclass, the following terms or expressions are used with the meanings indicated :

“sugar” is used in its non-scientific meaning and refers to sucrose, also called “table sugar” or saccharose”, a white crystalline disaccharide;

“sugar juices” are solutions of sugar, essentially comprising sucrose, which are derived from different plants, e.g. beet, cane or maple;

“syrops” are highly concentrated sugar juices.

**C13B 5/00**

**Reducing the size of material from which sugar is to be extracted** (for extraction of starch [C08B 30/02](#))

**C13B 5/02**

- . Cutting sugar cane

**C13B 5/04**

- . Shredding sugar cane

**C13B 5/06**

- . Slicing sugar beet

**C13B 5/08**

- . Knives; Adjustment or maintenance thereof

**C13B 10/00**

**Production of sugar juices** (tapping of tree-juices [A01G 23/10](#); tapping-spouts, receptacles for juices [A01G 23/14](#))

**C13B 10/003**

- . { using chemicals other than extracting agents}

**C13B 10/006**

- . { Conservation of sugar juices}

**C13B 10/02**

- . Expressing juice from sugar cane or similar material, e.g. sorghum saccharatum

**C13B 10/025**

- .. { Treatment of sugar cane before extraction ([C13B 5/00](#) takes precedence)}

**C13B 10/04**

- .. combined with imbibition

**C13B 10/06**

- .. Sugar-cane crushers

**C13B 10/08**

- . Extraction of sugar from sugar beet with water

**C13B 10/083**

- .. { Treatment of sugar beet before extraction ([C13B 5/00](#) takes precedence)}

**C13B 10/086**

- .. { Processes or apparatus with discontinuous loading}

**C13B 10/10**

- .. Continuous processes

- C13B 10/102 . . . { having rotatable means for agitation or transportation}
- C13B 10/105 . . . { Rotating apparatus}
- C13B 10/107 . . . { with transportation in the form of thin layers, e.g. by endless chains}
- C13B 10/12 . . Details of extraction apparatus, e.g. arrangements of pipes or valves
- C13B 10/14 . using extracting agents other than water, e.g. alcohol or salt solutions
- C13B 15/00** **Expressing water from material from which sugar has been extracted** (from starch-extracted material [C08B 30/10](#))
- C13B 15/02 . between perforated moving belts
- C13B 20/00** **Purification of sugar juices**
- NOTE**
- When classifying in this group, classification is also made in group [B01D 15/08](#) insofar as subject matter of general interest relating to chromatography is concerned
- C13B 20/002 . { using micro-organisms or enzymes}
- C13B 20/005 . { using chemicals not provided for in groups [C13B 20/02](#) to [C13B 20/14](#)}
- C13B 20/007 . . { Saturation with gases or fumes, e.g. carbon dioxide}
- C13B 20/02 . using alkaline earth metal compounds
- C13B 20/04 . . followed by saturation
- C13B 20/06 . . . with carbon dioxide or sulfur dioxide
- C13B 20/08 . by oxidation or reduction
- C13B 20/10 . . using sulfur dioxide or sulfites
- C13B 20/12 . using adsorption agents, e.g. active carbon
- C13B 20/123 . . { Inorganic agents, e.g. active carbon}
- C13B 20/126 . . { Organic agents, e.g. polyelectrolytes}
- C13B 20/14 . using ion-exchange materials
- C13B 20/142 . . { Mixed bed ([C13B 20/148](#) takes precedence)}
- C13B 20/144 . . { using only cationic ion-exchange material ([C13B 20/148](#) takes precedence)}
- C13B 20/146 . . { using only anionic ion-exchange material ([C13B 20/148](#) takes precedence)}
- C13B 20/148 . . { for fractionating, adsorption or ion exclusion processes combined with elution or desorption of a sugar fraction}
- C13B 20/16 . by physical means, e.g. osmosis or filtration
- C13B 20/165 . . { using membranes, e.g. osmosis, ultrafiltration ([electrodialysis C13B 20/18](#))}

C13B 20/18 . by electrical means

**C13B 25/00** **Evaporators or boiling pans specially adapted for sugar juices; Evaporating or boiling sugar juices**

C13B 25/001 . { with heating tubes or plates}

C13B 25/003 . { with heating plates}

C13B 25/005 . { with heating coils}

C13B 25/006 . { rotating apparatus}

C13B 25/008 . { with direct contact between heating medium and sugar solution}

C13B 25/02 . Details, e.g. for preventing foaming or for catching juice

C13B 25/04 . . Heating equipment

C13B 25/06 . combined with measuring instruments for effecting control of the process

**C13B 30/00** **Crystallisation; Crystallising apparatus; Separating crystals from mother liquors; { Evaporating or boiling sugar juice}**

C13B 30/002 . { Evaporating or boiling sugar juice}

C13B 30/005 . . { using chemicals}

C13B 30/007 . . { Multiple effect evaporation}

C13B 30/02 . Crystallisation; Crystallising apparatus

C13B 30/021 . . { using chemicals}

C13B 30/022 . . { Continuous processes, apparatus therefor ([C13B 30/028](#) takes precedence)}

C13B 30/023 . . . { having rotatable means for agitation or transportation}

C13B 30/025 . . . { combined with measuring instruments for effecting control of the process}

C13B 30/026 . . { Discontinuous processes or apparatus therefor ([C13B 30/028](#) takes precedence)}

C13B 30/027 . . . { combined with measuring instruments for effecting control of the process}

C13B 30/028 . . { obtaining sugar crystals by drying sugar syrup or sugar juice, e.g. spray-crystallisation}

C13B 30/04 . Separating crystals from mother liquor

C13B 30/06 . . by centrifugal force

C13B 30/08 . . Washing residual mother liquor from crystals

C13B 30/10 . . . in centrifuges

C13B 30/12 . . Recycling mother liquor or wash liquors

C13B 30/14 . . Dissolving or refining raw sugar

**C13B 35/00                    Extraction of sucrose from molasses**

- C13B 35/005                . { using micro-organisms or enzymes}
- C13B 35/02                . by chemical means
- C13B 35/04                .. by precipitation as alkaline earth metal saccharates
- C13B 35/06                .. using ion exchange
- C13B 35/08                . by physical means, e.g. osmosis

**C13B 40/00                    Drying sugar**

- C13B 40/002                . { Drying sugar or syrup in bulk}
- C13B 40/005                .. { combined with agglomeration}
- C13B 40/007                . { Drying sugar in compacted form, e.g. cubes}

**C13B 45/00                    Cutting machines specially adapted for sugar**

- C13B 45/02                . in combination with sorting and packing machines

**C13B 50/00                    Sugar products, e.g. powdered, lump or liquid sugar; Working-up of sugar**  
(C13B 40/00, C13B 45/00 take precedence; confectionery [A23G 3/00](#))

- C13B 50/002                . { Addition of chemicals or other foodstuffs}
- C13B 50/004                . { Agglomerated sugar products; Agglomeration}
- C13B 50/006                . { Molasses; Treatment of molasses (extraction of sucrose [C13B 35/00](#))}
- C13B 50/008                .. { Drying}
- C13B 50/02                . formed by moulding sugar

**C13B 99/00                    Subject matter not provided for in other groups of this subclass**