

**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;
- “syrups” 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**