

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.

Guidance heading:

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**