

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](#) - [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}

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| C13B 30/007 | <ul style="list-style-type: none"> • . {Multiple effect evaporation} |
| C13B 30/02 | <ul style="list-style-type: none"> • Crystallisation; Crystallising apparatus |
| C13B 30/021 | <ul style="list-style-type: none"> • . {using chemicals} |
| C13B 30/022 | <ul style="list-style-type: none"> • . {Continuous processes, apparatus therefor (C13B 30/028 takes precedence)} |
| C13B 30/023 | <ul style="list-style-type: none"> • . . {having rotatable means for agitation or transportation} |
| C13B 30/025 | <ul style="list-style-type: none"> • . . {combined with measuring instruments for effecting control of the process} |
| C13B 30/026 | <ul style="list-style-type: none"> • . {Discontinuous processes or apparatus therefor (C13B 30/028 takes precedence)} |
| C13B 30/027 | <ul style="list-style-type: none"> • . . {combined with measuring instruments for effecting control of the process} |
| C13B 30/028 | <ul style="list-style-type: none"> • . {obtaining sugar crystals by drying sugar syrup or sugar juice, e.g. spray-crystallisation} |
| C13B 30/04 | <ul style="list-style-type: none"> • Separating crystals from mother liquor |
| C13B 30/06 | <ul style="list-style-type: none"> • . by centrifugal force |
| C13B 30/08 | <ul style="list-style-type: none"> • . Washing residual mother liquor from crystals |
| C13B 30/10 | <ul style="list-style-type: none"> • . . in centrifuges |
| C13B 30/12 | <ul style="list-style-type: none"> • . Recycling mother liquor or wash liquors |
| C13B 30/14 | <ul style="list-style-type: none"> • . Dissolving or refining raw sugar |
| C13B 35/00 | Extraction of sucrose from molasses |
| C13B 35/005 | <ul style="list-style-type: none"> • {using micro-organisms or enzymes} |
| C13B 35/02 | <ul style="list-style-type: none"> • by chemical means |
| C13B 35/04 | <ul style="list-style-type: none"> • . by precipitation as alkaline earth metal saccharates |
| C13B 35/06 | <ul style="list-style-type: none"> • . using ion exchange |
| C13B 35/08 | <ul style="list-style-type: none"> • by physical means, e.g. osmosis |
| C13B 40/00 | Drying sugar |
| C13B 40/002 | <ul style="list-style-type: none"> • {Drying sugar or syrup in bulk} |
| C13B 40/005 | <ul style="list-style-type: none"> • . {combined with agglomeration} |
| C13B 40/007 | <ul style="list-style-type: none"> • {Drying sugar in compacted form, e.g. cubes} |
| C13B 45/00 | Cutting machines specially adapted for sugar |
| C13B 45/02 | <ul style="list-style-type: none"> • 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 | <ul style="list-style-type: none"> • {Addition of chemicals or other foodstuffs} |
| C13B 50/004 | <ul style="list-style-type: none"> • {Agglomerated sugar products; Agglomeration} |
| C13B 50/006 | <ul style="list-style-type: none"> • {Molasses; Treatment of molasses (extraction of sucrose C13B 35/00)} |
| C13B 50/008 | <ul style="list-style-type: none"> • . {Drying} |
| C13B 50/02 | <ul style="list-style-type: none"> • formed by moulding sugar |

C13B 99/00

Subject matter not provided for in other groups of this subclass