

SECTION C — CHEMISTRY; METALLURGY

C13 SUGAR INDUSTRY

Note(s)

1. In class C13, the following terms or expressions are used with the meanings indicated:
 - "sugars" are a class of edible, water-soluble crystalline carbohydrates, having a characteristic sweet taste, including mono-, di- and oligosaccharides, e.g. sucrose, lactose and fructose. A more specific meaning of the term "sugar" is defined in the note of subclass C13B.
2. Processes using enzymes or micro-organisms in order:
 - i. to liberate, separate or purify a pre-existing compound or composition, or
 - ii. to treat textiles or clean solid surfaces of materials
 are further classified in subclass C12S.

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) [2011.01]

Note(s) [2011.01]

In subclass C13B, 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.

5/00 **Reducing the size of material from which sugar is to be extracted** (for extraction of starch C08B 30/02) [2011.01]

- 5/02 • Cutting sugar cane [2011.01]
- 5/04 • • Shredding sugar cane [2011.01]
- 5/06 • Slicing sugar beet [2011.01]
- 5/08 • Knives; Adjustment or maintenance thereof [2011.01]

10/00 **Production of sugar juices** (tapping of tree-juices A01G 23/10; tapping-spouts, receptacles for juices A01G 23/14) [2011.01]

- 10/02 • Expressing juice from sugar cane or similar material, e.g. sorghum saccharatum [2011.01]
- 10/04 • • combined with imbibition [2011.01]
- 10/06 • • Sugar-cane crushers [2011.01]
- 10/08 • Extraction of sugar from sugar beet with water [2011.01]
- 10/10 • • Continuous processes [2011.01]
- 10/12 • • Details of extraction apparatus, e.g. arrangements of pipes or valves [2011.01]
- 10/14 • using extracting agents other than water, e.g. alcohol or salt solutions [2011.01]

15/00 **Expressing water from material from which sugar has been extracted** (from starch-extracted material C08B 30/10) [2011.01]

- 15/02 • between perforated moving belts [2011.01]

20/00 **Purification of sugar juices** [2011.01]

Note(s) [2011.01]

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.

- 20/02 • using alkaline earth metal compounds [2011.01]
- 20/04 • • followed by saturation [2011.01]
- 20/06 • • • with carbon dioxide or sulfur dioxide [2011.01]
- 20/08 • by oxidation or reduction [2011.01]
- 20/10 • • using sulfur dioxide or sulfites [2011.01]
- 20/12 • using adsorption agents, e.g. active carbon [2011.01]
- 20/14 • using ion-exchange materials [2011.01]
- 20/16 • by physical means, e.g. osmosis or filtration [2011.01]
- 20/18 • by electrical means [2011.01]
- 25/00 **Evaporators or boiling pans specially adapted for sugar juices; Evaporating or boiling sugar juices** [2011.01]
- 25/02 • Details, e.g. for preventing foaming or for catching juice [2011.01]
- 25/04 • • Heating equipment [2011.01]
- 25/06 • combined with measuring instruments for effecting control of the process [2011.01]
- 30/00 **Crystallisation; Crystallising apparatus; Separating crystals from mother liquors** [2011.01]
- 30/02 • Crystallisation; Crystallising apparatus [2011.01]
- 30/04 • Separating crystals from mother liquor [2011.01]
- 30/06 • • by centrifugal force [2011.01]

C13B

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|-------|--|-------|---|
| 30/08 | • • Washing residual mother liquor from crystals [2011.01] | 40/00 | Drying sugar [2011.01] |
| 30/10 | • • • in centrifuges [2011.01] | 45/00 | Cutting machines specially adapted for sugar [2011.01] |
| 30/12 | • • Recycling mother liquor or wash liquors [2011.01] | 45/02 | • in combination with sorting and packing machines [2011.01] |
| 30/14 | • • Dissolving or refining raw sugar [2011.01] | 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) [2011.01] |
| 35/00 | Extraction of sucrose from molasses [2011.01] | 50/02 | • formed by moulding sugar [2011.01] |
| 35/02 | • by chemical means [2011.01] | 99/00 | Subject matter not provided for in other groups of this subclass [2011.01] |
| 35/04 | • • by precipitation as alkaline earth metal saccharates [2011.01] | | |
| 35/06 | • • using ion exchange [2011.01] | | |
| 35/08 | • by physical means, e.g. osmosis [2011.01] | | |

C13K SACCHARIDES, OTHER THAN SUCROSE, OBTAINED FROM NATURAL SOURCES OR BY HYDROLYSIS OF NATURALLY OCCURRING DI-, OLIGO- OR POLYSACCHARIDES (chemically synthesised sugars or sugar derivatives C07H; polysaccharides, e.g. starch, derivatives thereof C08B; malt C12C; fermentation or enzyme-using processes for preparing compounds containing saccharide radicals C12P 19/00)

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| 1/00 | Glucose (separation from invert sugar C13K 3/00); Glucose-containing syrups [2] | 3/00 | Invert sugar; Separation of glucose or fructose from invert sugar |
| 1/02 | • obtained by saccharification of cellulosic materials (manufacture of fodder A23K 1/12) | 5/00 | Lactose |
| 1/04 | • • Purifying | 7/00 | Maltose |
| 1/06 | • obtained by saccharification of starch or raw materials containing starch | 11/00 | Fructose (separation from invert sugar C13K 3/00) [2] |
| 1/08 | • • Purifying | 13/00 | Sugars not otherwise provided for in this class [2] |
| 1/10 | • Crystallisation | | |