C12H

PASTEURISATION, STERILISATION, PRESERVATION, PURIFICATION, CLARIFICATION OR AGEING OF ALCOHOLIC BEVERAGES; METHODS FOR ALTERING THE ALCOHOL CONTENT OF FERMENTED SOLUTIONS OR ALCOHOLIC BEVERAGES (simulation ageing by flavouring C12G 3/06)

Relationships with other classification places

Beer per se, brewing of beer, fermentation processes and post fermentation treatments for beer are classified in subclass C12C.

C12C deals with the process of making beer with a low alcohol content

Low alcohol beer is classified in C12C 12/04.

Low alcohol wine is classified in C12G 1/14 and other low alcohol beverages are classified in C12G 3/00.

Post-fermentation treatment such as carbonation is subject matter of this subclass but is classified in C12H when combined with subject matter of that subclass.

When classifying in this subclass, classification is also made in group B01D 15/08 insofar as subject matter of general interest relating to chromatography is concerned.

References

Limiting references

This place does not cover:

| Simulation of ageing by flavouring | C12G 3/06 |

Informative references

Attention is drawn to the following places, which may be of interest for search:

| Preserved of foods or foodstuffs, in general | A23L 3/00 |
| Distillation or rectification of fermented solutions to obtain pure alcohol | B01D 3/00 |
| Recovery of by-products from wine or beer | C12F 3/06 |
| Preparation of alcoholic beverages other than wine or beer by varying the composition of fermented solutions | C12G 3/08 |

Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

| Adsorption | Capability of all solid substances to attract to their surfaces molecules of gases or solutions with which they are in contact |
| Clarification | Removal of the suspended material during aging |
| Lagering | Ageing or ripening of the beer by storing. During lagering, fermentation and clarification take place |
| Sulfiting | Process for adding sulfur dioxide (SO$_2$) |
C12H 1/00
Pasteurisation, sterilisation, preservation, purification, clarification, or ageing of alcoholic beverages (simulating ageing by flavouring C12G 3/06)

Definition statement
This place covers:
Methods as well as apparatus pertaining to pasteurisation, sterilisation, preservation, purification, clarification, ageing of alcoholic beverages (typically wine, beer, distilled alcoholic beverages).

References

Limiting references
This place does not cover:

<table>
<thead>
<tr>
<th>Method or Apparatus</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation of beer</td>
<td>C12C</td>
</tr>
<tr>
<td>Simulation of ageing by flavouring</td>
<td>C12C 3/06</td>
</tr>
<tr>
<td>Recovery of by-products from fermented solutions (in particular derived from the preparation of alcoholic beverages)</td>
<td>C12F</td>
</tr>
<tr>
<td>Preparation of wine and alcoholic beverages other than beer and wine</td>
<td>C12G</td>
</tr>
<tr>
<td>Pitching / depitching machines and cellar tools</td>
<td>C12L</td>
</tr>
</tbody>
</table>

Informative references
Attention is drawn to the following places, which may be of interest for search:

| Subject-matter of general interest relating to chromatography | B01D 15/08 |

Special rules of classification
Filtration is always to be classified in C12H 1/063, irrespective of precipitation, adsorption, or the nature of the material to be separated.

C12H 1/003
{by a biochemical process}

Definition statement
This place covers:
Methods or apparatus pertaining to pasteurisation, sterilisation, preservation, purification, clarification or ageing of alcoholic beverages, e.g. wine, beer or distilled alcoholic beverages, by a biochemical process.

C12H 1/006
{using bacterial cultures}

Definition statement
This place covers:
Methods or apparatus pertaining to pasteurisation, sterilisation, preservation, purification, clarification or ageing of alcoholic beverages, e.g. wine, beer or distilled alcoholic beverages, wherein bacterial cultures are used.
**C12H 1/02**

combined with removal of precipitate or added materials, e.g. adsorption material

Definition statement

This place covers:

Methods or apparatus pertaining to pasteurisation, sterilisation, preservation, purification, clarification or ageing of alcoholic beverages, e.g. wine, beer or distilled alcoholic beverages, wherein the precipitate, e.g. protein haze or colloidal haze, and/or added materials, e.g. PVPP or silica gel is/are removed.

References

Limiting references

This place does not cover:

Removal of yeast from (sparkling) wine by "degorgeage"  C12G 1/08

**C12H 1/04**

with the aid of ion-exchange material or inert clarification material, e.g. adsorption material

Definition statement

This place covers:

Methods or apparatus pertaining to pasteurisation, sterilisation, preservation, purification, clarification or ageing of alcoholic beverages, e.g. wine, beer or distilled alcoholic beverages, wherein ion-exchange and/or inert clarification material is removed.

**C12H 1/0408**

{with the aid of inorganic added material}

Definition statement

This place covers:

Methods as well as apparatus pertaining to pasteurisation, sterilisation, preservation, purification, clarification or ageing of alcoholic beverages e.g. wine, beer or distilled alcoholic beverages, wherein inorganic added clarification material is removed.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Silicon derived materials used in clarification, e.g. silica hydrogels and xerogels  C01B 33/00

**Synonyms and Keywords**

In patent documents, the following words/expressions are often used with the meaning indicated:

Silica gel  Silica hydrogel
Xerogel | Silica xerogel

C12H 1/0416
{with the aid of organic added material}

Definition statement
This place covers:
Methods or apparatus pertaining to pasteurisation, sterilisation, preservation, purification, clarification
or ageing of alcoholic beverages, e.g. wine, beer or distilled alcoholic beverages, wherein added
organic clarification material is removed.

C12H 1/0424
{with the aid of a polymer}

Definition statement
This place covers:
Methods or apparatus pertaining to pasteurisation, sterilisation, preservation, purification, clarification
or ageing of alcoholic beverages, e.g. wine, beer or distilled alcoholic beverages, wherein added
polymeric organic clarification material is removed.

References
Limiting references
This place does not cover:
Use of ion-exchange material (in so far as the ion-exchange functionality
is of essential importance) C12H 1/0432

C12H 1/0432
{with the aid of ion-exchange material}

Definition statement
This place covers:
Methods or apparatus pertaining to pasteurisation, sterilisation, preservation, purification, clarification
or ageing of alcoholic beverages, e.g. wine, beer or distilled alcoholic beverages, wherein an ion-
exchange material is removed.

Special rules of classification
C12H 1/0432 takes precedence over C12H 1/0408, C12H 1/0416 and C12H 1/0424, in so far as
the ion-exchange functionality is of essential importance (factually and/or according to the disclosed
information)

Synonyms and Keywords
In patent documents various trademarks are often used: Amberlite or Dowex
C12H 1/06

Precipitation by physical means, e.g. by irradiation, vibrations

Definition statement

This place covers:
Methods or apparatus pertaining to pasteurisation, sterilisation, preservation, purification, clarification or ageing of alcoholic beverages, e.g. wine, beer or distilled alcoholic beverages, wherein precipitate is generated by physical means (in particular by irradiation and/or vibration) and/or separated by filtration.

Special rules of classification

Until further notice, a large interpretation for the term "irradiation" is given. For instance the application of electric fields and magnetic fields is covered.

C12H 1/061

{Separation by centrifugation}

Definition statement

This place covers:
Methods or apparatus pertaining to pasteurisation, sterilisation, preservation, purification, clarification or ageing of alcoholic beverages, e.g. wine, beer or distilled alcoholic beverages, wherein precipitate is generated by physical means, in particular by irradiation and/or vibration, and removed by centrifugation.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Centrifuges in general

C12H 1/063

{Separation by filtration}

Definition statement

This place covers:
Methods or apparatus pertaining to pasteurisation, sterilisation, preservation, purification, clarification or ageing of alcoholic beverages, e.g. wine, beer or distilled alcoholic beverages, wherein

(a) precipitation is generated by physical means, in particular by irradiation and/or vibration, and removed by filtration, or (more generally)

(b) filtration is performed, irrespective of precipitation, adsorption, or the nature of the material to be separated.
References

Limiting references

This place does not cover:

<table>
<thead>
<tr>
<th>Reference</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post fermentation treatment of beer involving filtration</td>
<td>C12C 11/11</td>
</tr>
<tr>
<td>Yeast removal in wine or champagne production by degorgage type methods</td>
<td>C12G 1/08</td>
</tr>
</tbody>
</table>

C12H 1/08

by heating

Definition statement

This place covers:

Methods or apparatus pertaining to pasteurisation, sterilisation, preservation, purification, clarification or ageing of alcoholic beverages, e.g. wine, beer or distilled alcoholic beverages, wherein precipitate is generated by heating.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

<table>
<thead>
<tr>
<th>Reference</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling and cooling of beer wort (whereby haze is formed)</td>
<td>C12C 7/20, C12C 7/24</td>
</tr>
</tbody>
</table>

C12H 1/10

Precipitation by chemical means

Definition statement

This place covers:

Methods or apparatus pertaining to pasteurisation, sterilisation, preservation, purification, clarification or ageing of alcoholic beverages, e.g. wine, beer or distilled alcoholic beverages, wherein precipitate is generated by chemical means.

C12H 1/12

without precipitation

Definition statement

This place covers:

Methods or apparatus pertaining to pasteurisation, sterilisation, preservation, purification, clarification or ageing of alcoholic beverages, e.g. wine, beer or distilled alcoholic beverages not relying on or involving precipitation and/or removal of added materials.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

<table>
<thead>
<tr>
<th>Reference</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pasteurisation with non-precipitating compounds, by heating</td>
<td>C12H 1/14, C12H 1/18</td>
</tr>
</tbody>
</table>
C12H 1/14

with non-precipitating compounds, e.g. sulfiting; Sequestration, e.g. with chelate-producing compounds

Definition statement

This place covers:

Methods or apparatus pertaining to pasteurisation, sterilisation, preservation, purification, clarification or ageing of alcoholic beverages, e.g. wine, beer or distilled alcoholic beverages not relying on or involving precipitation and/or removal of added materials, wherein non-precipitating compounds e.g. sulfite or chelating agents, are used.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

<table>
<thead>
<tr>
<th>Preserving agents for non-alcoholic beverages</th>
<th>A23L 2/44</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preserving agents for beer</td>
<td>C12C 5/02</td>
</tr>
<tr>
<td>Sulfiting must in winemaking</td>
<td>C12G 1/04</td>
</tr>
</tbody>
</table>

C12H 1/16

by physical means, e.g. irradiation

Definition statement

This place covers:

Methods or apparatus pertaining to pasteurisation, sterilisation, preservation, purification, clarification or ageing of alcoholic beverages, e.g. wine, beer or distilled alcoholic beverages not relying on or involving precipitation and/or removal of added materials, wherein physical means (in particular irradiation and/or vibration) are applied.

C12H 1/165

{by irradiation}

Definition statement

This place covers:

Methods or apparatus pertaining to pasteurisation, sterilisation, preservation, purification, clarification or ageing of alcoholic beverages, e.g. wine, beer or distilled alcoholic beverages not relying on or involving precipitation and/or removal of added materials, wherein irradiation is applied.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

<table>
<thead>
<tr>
<th>Preservation of non-alcoholic beverages by heating by irradiation or electric treatment</th>
<th>A23L 2/48</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preservation of non-alcoholic beverages by irradiation or electric treatment without heating</td>
<td>A23L 2/50</td>
</tr>
</tbody>
</table>
Special rules of classification
Until further notice, a large interpretation for the term "irradiation " is given. For instance the application of electric fields and magnetic fields is covered.

C12H 1/18
by heating

Definition statement
This place covers:
Methods or apparatus pertaining to pasteurisation, sterilisation, preservation, purification, clarification or ageing of alcoholic beverages, e.g. wine, beer or distilled alcoholic beverages not relying on or involving precipitation and/or removal of added materials, wherein heating is applied.

References
Informative references
Attention is drawn to the following places, which may be of interest for search:

<table>
<thead>
<tr>
<th>Preservation of non-alcoholic beverages by heating</th>
</tr>
</thead>
</table>

C12H 1/20
in containers allowing for expansion of the contents

Definition statement
This place covers:
Methods or apparatus pertaining to pasteurisation, sterilisation, preservation, purification, clarification or ageing of alcoholic beverages, e.g. wine, beer or distilled alcoholic beverages not relying on or involving precipitation and/or removal of added materials, wherein heating is applied and a flexible container allowing for expansion of the contents is used.

C12H 1/22
Ageing or ripening by storing, e.g. lagering of beer

Definition statement
This place covers:
Methods for ageing of alcoholic beverages, e.g. wine, beer or distilled alcoholic beverages.

Apparatus, e.g. tanks or barrels, specifically adapted for ageing of alcoholic beverages.

References
Informative references
Attention is drawn to the following places, which may be of interest for search:

<table>
<thead>
<tr>
<th>Containers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beer flavouring preparations</td>
</tr>
</tbody>
</table>

| B65D |
| C12C 5/026 |
**Special rules of classification**
If flavouring with wood material and storing are essential aspects, both symbols C12H 1/22 and C12G 3/07 should be given.

**C12H 3/04**
**using semi-permeable membranes**

**Definition statement**
*This place covers:*
Methods for reducing the alcohol content of fermented solutions or alcoholic beverages to obtain low alcohol or non-alcoholic beverages other than beer, wine (derived from grapes) or sparkling wine (derived from grapes) wherein membranes are used (e.g. ultrafiltration, dialysis, electrodialysis, osmosis, reverse osmosis), and apparatus specifically adapted therefor.

**References**

**Informative references**
*Attention is drawn to the following places, which may be of interest for search:*

<table>
<thead>
<tr>
<th>Reference</th>
<th>Classification Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reverse osmosis process</td>
<td>B01D 65/00</td>
</tr>
<tr>
<td>Semi-permeable membrane for separation processes</td>
<td>B01D 67/00 - B01D 71/00</td>
</tr>
</tbody>
</table>

**C12H 6/00**
**Methods for increasing the alcohol content of fermented solutions or alcoholic beverages**

**Definition statement**
*This place covers:*
Methods for preparing alcoholic beverages other than beer, wine (derived from grapes) or sparkling wine (derived from grapes), by increasing the alcohol content; Apparatus specifically adapted therefor.

**C12H 6/02**
**by distillation**

**Definition statement**
*This place covers:*
Methods for preparing alcoholic beverages other than beer, wine (derived from grapes) or sparkling wine (derived from grapes), by increasing the alcohol content by distillation. Apparatus specifically adapted therefor.

**References**

**Informative references**
*Attention is drawn to the following places, which may be of interest for search:*

<table>
<thead>
<tr>
<th>Reference</th>
<th>Classification Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processes specially adapted for distillation or rectification of fermented solutions</td>
<td>B01D 3/001</td>
</tr>
</tbody>
</table>
C12H 6/04
by freezing

Definition statement

*This place covers:*

Methods for preparing alcoholic beverages other than beer, wine (derived from grapes) or sparkling wine (derived from grapes), by increasing the alcohol content by refrigeration and separation of the crystals thus formed (i.e. freeze-concentration);

Apparatus specifically adapted therefor.