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Comments on

Initial Assessment Report

Application A605

Yeast Mannoproteins as a Food Additive for wine (23 May 2007)

Submitted by

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The Netherlands

12th June 2007

Preamble

DSM Food Specialties, Delft, the Netherlands is the global market leader in the manufacturing and distribution of nutritional ingredients and processing aids. In particular, the business supplies food and wine enzymes, wine yeast, preservatives for the dairy industry, cultures, arachidonic acid oil and various savory ingredients such as yeast extracts and process flavors. Therefore we have expertise in these food products and their uses. DSM Food Specialties N.V. and its affiliate offices have actively participated in developing food ingredients, food additives and enzymes regulations or guidelines at the individual country, EU, OIV and Codex levels.

General comment on the Application A605 for yeast mannoproteins as food additive for wine

DSM Food Specialties is very much interested in the Application A605 from Laffort Services. We support this Application for the permission to use mannoproteins extracted from yeast cell walls as a food additive in wine to inhibit the crystallization of potassium bitartrate.

DSM Food Specialties in fact has developed the product Claristar™ for the same application. The adoption of the OIV resolution OENO 26/2004 is in line with our aim to produce a product meeting specifications set out in this resolution. Our product is obviously also derived from yeast cell walls but is actually produced using a different technology than that outlined in the Application A605. Instead of enzymic extraction, we use a number of filtration steps to isolate the mannoproteins from the yeast cell walls. The physico-chemical techniques used are fully compliant with those described in the OIV resolution OENO 26/2004.

Moreover our product does meet the specifications as outlined in the OIV Codex. In this Codex no specification is set for the molecular size of the mannoproteins. Instead the mannoproteins are described as “different structures depending on their molecular weight, their degree and type of glycosylation, and their load size”.

We would like to emphasize that we assume that the adoption of the OIV resolution into the Australian standards 1.3.1 and 4.5.1 implicates no changes regarding the molecular weight and production methods.

Please find below our comments in more detail on the various points of the Initial Assessment Report.

1. Comments on chapter 5: Safety Assessment

- In the Application A605 the production of mannoproteins is described. The technology used is based on an enzyme treatment of cell walls. The enzyme used in the process is betaglucanase and it is emphasized in the above mentioned chapter that especially the safety of the enzyme is the subject of the safety assessment. Using another technology for the extraction of mannoproteins by which no additional processing aids or other materials are introduced would not lead to such an additional specific assessment. Our alternative technology is further outlined in chapter 2 ii.

2. Comments asked for in the chapter 10.1

i. Treatment of wine with mannoproteins:

- In the OIV International Oenological Codex the level of mannoprotein to treat wine is maximized at 400 mg/L expressed as dry matter of wine. This level is also mentioned in the tests for the efficacy of the mannoproteins.

ii. Production of mannoproteins:

- In the Application A605 the production of mannoproteins is described. The technology used is based on an enzyme treatment of cell walls.
- The OIV resolution however also mentions physico-chemical technology for the production of mannoproteins. In our case the technology used for isolation of mannoproteins is based on a number of consecutive filtration steps. These filtration steps consist of micro- and ultra- filtration steps to isolate the mannoproteins fraction from the cell walls. We hold internationally recognized patents for the preparation of mannoproteins using filtration technology. The scope of Application A605 should also include both production technologies for mannoproteins.

iii. Inclusion of the OIV International Oenological Codex:

- The OIV International Oenological Codex is a secondary source for specifications. This Codex forms the basis for the MannostabTM product of Laffort Services and also for our own product, ClaristarTM. We support the proposal to adopt the Codex into Australian legislation, i.e. the Standard 1.3.1 – Food Additives and 4.5.1 – Wine Production Requirements. The adoption would add to the consistency between the domestic Australian and international food standards.
- Molecular mass of the mannoproteins is mentioned in the Application A605. However, in the OIV resolution, no reference is made to any molecular mass, i.e. size of the mannoproteins. We therefore like to point out that there would be no specification required for the size of the mannoproteins. The stabilizing effect is used as criteria in the specifications as mentioned in

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the OIV resolution OENO 26/2004. In chapter 4.13 of the resolution the specification "Mannoprotein efficiency test with regards to tartaric precipitation" is listed and the method is described in the protocol. The criteria for size of mannoproteins are to our opinion not relevant.

iv. International approval and use of mannoproteins

- As already indicated in the Application, the EU and also Argentina have accepted the use of mannoprotein in wine stabilization. These approvals are based on the resolution OENO 26/2004 of the OIV.

3. Supportive data from efficacy trials

- We have independently shown in our laboratories the efficacy of the mannoproteins obtained through our process. The product also meets the specifications set by the OIV.

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