



HARMONIZED SYSTEM  
COMMITTEE

-  
23<sup>rd</sup> Session

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O. Eng.

H9-3

Brussels, 15 April 1999.

CLASSIFICATION OF TROPICAL FRUIT PRESERVED

BY THE ADDITION OF SUGAR AND DRYING

(Item V.3 on the Agenda)

Reference documents :

39.720 (HSC/16)  
39.600, Annex IJ/26 (HSC/16 - Report)  
40.084 (HSC/17)  
40.293 (HSC/17)  
40.295 (HSC/17)  
40.260, Annex IJ/1 (HSC/17 - Report)  
40.451 (HSC/18)  
40.645 (HSC/18)  
40.699 (HSC/18)  
40.795 (HSC/18)  
40.600, Annex H/2 (HSC/18 - Report)  
41.173 (HSC/19)  
41.100, Annex G/1 (HSC/19 - Report)  
42.403 (HSC/22)  
42.490 (HSC/22)  
42.750, Annex G/34 (HSC/22 - Report)  
42.804 (SSC/14)  
42.829 (SSC/14)  
42.841 (SSC/14)  
42.850, Annex A/12 (SSC/14 - Report)

I. BACKGROUND

1. The classification of dried tropical fruit (pineapple and papaya cubes) manufactured by osmotic dehydration, followed by air dehydration, has been examined at the 17<sup>th</sup>, 19<sup>th</sup> and 22<sup>nd</sup> Sessions of the Harmonized System Committee.

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2. When the Committee first examined the matter at its 17<sup>th</sup> Session, it decided to have samples of the products in question analysed by three independent Customs laboratories to determine, inter alia, the extent of the destruction of the cell walls of the fruits, the sugar/ash ratio, sugar/acid ratio, sugar/protein ratio, loss of minerals or acids and the extent of added sugar.
3. Consequently, Customs laboratories in Korea, Japan and the United States examined four samples. Korea found that the samples had a higher sugar content than that of the reference materials, while Japan and the USA did not submit conclusive data in this regard (see Docs. 40.795 and 40.699, paragraph 2.2). Japan reported that the cell walls were not destroyed in all samples (see Doc. 40.451, paragraph 6).
4. At its 19<sup>th</sup> Session, when the Committee re-examined the classification question, taking into account the analytical results, it was not in a position to take a final decision on the classification. Instead, the Committee discussed the possibility of carrying out further studies with regard to the extent of added sugar to be allowed in the dried fruit of Chapter 8, on the basis of information and comments to be submitted by administrations. However, the study could not proceed in the absence of sufficient data.
5. At its 22<sup>nd</sup> Session, the Committee once again examined this classification question at the request of the EC. The EC also submitted some additional information based on isotopic analyses carried out by the French Customs Laboratory (see Doc. 42.403). However, after discussion the Committee decided to seek the advice of the Scientific Sub-Committee on several technical questions.
6. In this regard the Thai Administration was requested to procure samples of fresh fruit and the corresponding fruit preserved by the addition of sugar and drying, to be tested by the Customs laboratories of Canada, Japan and France.

## II. EXAMINATION BY THE SCIENTIFIC SUB-COMMITTEE

7. At its 14<sup>th</sup> Session (February 1999), the Scientific Sub-Committee examined five technical questions concerning tropical fruit preserved by the addition of sugar and drying.
8. During the examination of this item, the Delegate of Thailand stated that her Administration had not been in a position to supply the requested samples, because the fresh fruit in question was out of season.
9. Upon examination of the questions from the Harmonized System Committee, it was revealed that definitive answers were difficult to obtain with regard to all questions, but the answers (or comments) could be summarized as follows :  
  
The desirability of prescribing an added sugar content criterion to distinguish between fruit products of Chapter 8 (whether or not with a small quantity of added sugar) and Chapter 20
10. The Scientific Sub-Committee was not in favour of this criterion, since sugar content depended upon the variety of the fruit, the place it was grown, season, maturity, etc. The sugar content was not considered to be a reliable criterion.

Whether the osmotic dehydration process described by Thailand was basically a drying process for fruit (whether or not with small quantities of added sugar) or was intended to produce fruit preserved by sugar (drained, glacé or crystallised)

11. The majority of the delegates were of the view that the osmotic dehydration process was basically not a drying process. Since this process allowed the sugar of the syrup to diffuse into the fruit and to replace completely the sugar of the fruit, and since water was exchanged by sugar, it must be regarded as something more than simply drying. It was also stated that sugar played an important role in the preservation process (close to the crystallisation described in the Explanatory Note to heading 20.06).
12. Some delegates were, however, of the view that osmotic dehydration was a drying process which should be considered as a pre-treatment process before conventional drying in a tunnel dryer, vacuum dryer, etc. The moisture content of 50 % after osmotic dehydration also indicated that this process must be combined with other processes for preservation.

The analytical method for determining the quantities of added sugar (excluding replacement) in dried fruit

13. The Swiss method, referred to in Doc. 42.829, although it did not enable laboratories to determine the amount of sugar, revealed that the content of mineral salts was much lower in fruit which had undergone the osmotic dehydration process than in fresh fruit. In the view of the Swiss Delegate, this method could, therefore, be an alternative method for determining added sugar in dried fruit.

Whether the isotopic method applied by France was a reliable method for the determination of the exact quantity of added sugar and whether it could be uniformly applied for all fruit

14. The Sub-Committee agreed that the isotopic method was a reliable method for the determination of the quantity of replaced sugar, but it was pointed out that the use of this method was limited depending on the biological cycle of the fruit in question, as pointed out by the French Customs Laboratory (Annex II to Doc. 42.804). It was also stated that this method was quite expensive and, therefore, was not used on a frequent basis.

Whether determination of the amount of minerals, in particular, potassium, could be used as a criterion for distinguishing between (i) dried fruit with small quantities of added sugar and (ii) fruit preserved by sugar

15. Most delegates were of the opinion that determination of the amount of minerals could be used as a criterion. In this respect, it was pointed out that the dried fruit of Chapter 8 did not lose minerals in the same way as fruit subjected to the osmotic dehydration process.
16. However, one delegate was of the view that using the amount of minerals as the criterion was not suitable because the losses or change of mineral content could occur during the handling processes, such as cleaning, blanching etc., which were allowed for fruit of Chapter 8.

### III. SECRETARIAT COMMENTS

17. The Customs laboratories of Canada, Japan and France were requested to test fresh fruit and fruit preserved by the addition of sugar and drying, but because the fresh fruit in question was out of season in Thailand, this could not be done. However, the Scientific Sub-Committee was still able to consider the issues raised by the HSC at its 22<sup>nd</sup> Session.
18. The Secretariat leaves it to the Harmonized System Committee to decide whether the SSC's technical considerations give sufficient information to allow the Committee to take a final decision on the classification issue. It seems clear that the Scientific Sub-Committee was not in favour of an added sugar content criterion to distinguish between fruit products of Chapter 8 and Chapter 20 (see paragraph 10 above). Consequently, the analytical methods for determining the quantities of added sugar seem not to be important in this respect.
19. For purposes of the classification of the tropical fruit in question, it would therefore seem more important to decide whether the osmotic drying process can be regarded as something more than simply drying, as expressed by the majority of the delegates at the SSC's last session (see paragraph 12 above). In this respect, it should be noted that most delegates were of the opinion that the determination of the amount of minerals in the fruit could be used as a criterion for distinguishing between dried fruit with small quantities of added sugar and fruit preserved by sugar (see paragraph 15 above).

### IV. CONCLUSIONS

20. The Committee is requested to consider the classification of tropical fruit preserved by the addition of sugar and drying, taking account of the comments of the Scientific Sub-Committee (paragraphs 10 to 16 above) and the Secretariat (paragraphs 17 to 19 above).
  21. Depending on the Committee's decision on the classification, it is also invited to decide what further action should be taken to reflect its decision.
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