



HARMONIZED SYSTEM
COMMITTEE

-
28th Session
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O. Eng.

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CLASSIFICATION OF FRESH STRAWBERRIES PRESERVED BY MEANS
OF A PROTECTIVE GAS

(Item VIII.18 on Agenda)

I. BACKGROUND

1. On 7 June 2001, the Swiss Customs Administration sent the Secretariat the following note concerning the classification of fresh strawberries preserved by means of a protective gas. The Swiss Customs Administration wished to submit this question to the Harmonized System Committee's 28th Session.
2. The question is whether such strawberries should be classified in heading 08.10 as fresh fruit or in Chapter 20.

II. NOTE BY THE SWISS ADMINISTRATION

3. "The Swiss Customs Administration wishes to submit to the Harmonized System Committee (HSC) a problem concerning the HS classification of fresh fruit and vegetables packed using a protective gas.

Product description

4. The fresh strawberries, cleaned and chopped, are packed in plastic shells, with no other ingredients added, then covered with a plastic sheet by means of a special process. During this process, a vacuum pump removes the oxygen from the packaging and replaces it with a nitrogen-based protective gas. If chilled, the fruit can be kept "fresh" for up to 8 days (according to information from the manufacturer).

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Classification

5. According to the legal text, subheading 0810.10 reads as follows : **Other fruit, fresh, strawberries.** In accordance with the General Explanatory Notes to Chapter 8, exclusion (ii), edible fruit and nuts and peel of melons or citrus fruit, prepared or preserved otherwise than as described in Chapter 8, are not classifiable in that Chapter (Chapter 20).
6. “Preserving” fresh strawberries by means of a protective gas is a special process not mentioned in the Explanatory Notes to Chapter 8. This process does not, however, change the substance of the fruit. It merely changes the atmosphere surrounding the fruit in order to protect it for a given period of time against bacterial rot caused by germs and oxidization and other undesirable deterioration. Such products still retain the typical characteristics of fresh fruit.
7. The storage life of the fruit should scarcely differ from that of ordinary (whole) chilled fruit. The sole advantage to the consumer is that certain preliminary stages (cleaning, chopping) have already been carried out. The range of uses for such fruit is the same as for fresh fruit.
8. In the light of the foregoing, this process cannot strictly speaking be considered a preservation process. Chapter 8 permits fruit to be cleaned and chopped. The Swiss Customs Administration therefore feels that fresh strawberries (cleaned and chopped), packed using a protective gas, remain classified in Chapter 8. They do not have the characteristics of goods of Chapter 20. In accordance with HS General Interpretative Rules 1 and 6, the said strawberries fall to be classified in subheading 0810.10.”

III. SECRETARIAT COMMENTS

9. The “preservation” method referred to above is known in trade as “Modified Atmosphere Packaging” (MAP). A study carried out by the Secretariat, based on information gathered from published sources on Internet Web sites, revealed that modifying the atmosphere in which food is packaged is a quite common preservation technique in world trade. It can have a great effect on the shelf life of the food, and because of this extension of shelf life and other effects many companies are now using modified atmospheres for their products.
10. The Secretariat’s study also showed that various preservation methods involving modified atmospheres are used. These different methods can be described as follows :
Vacuum Packaging
11. In vacuum packaging, the food product is first placed into a gas-impermeable bag. The air within the bag is then vacuumed out and the bag is sealed. This reduces the pressure inside of the bag. Microbes on the food product continue to respire, but there is now a finite amount of oxygen in the bag, and since the bag is impermeable to gases, the carbon dioxide that is given off cannot escape. This build-up of carbon dioxide and the decrease in available oxygen is how vacuum packaging works.

Low Pressure (Hypobaric) Packaging

12. In hypobaric packaging, the food product is stored under low pressure, low temperature, and high humidity. These conditions are tightly controlled by the use of ventilation. This atmospheric state causes the oxygen concentration to be reduced. However, at this time hypobaric packaging is not widely used.

Modified Atmosphere Packaging (MAP)

13. In this type of packaging, the air surrounding the product is a specific mixture of carbon dioxide, oxygen, and nitrogen. The package is of low permeability to gas, so the initial concentrations of the added gases cannot be changed after the package is sealed. There are two types of modified atmosphere packaging : high oxygen MAP and low oxygen MAP.

High oxygen MAP

- (a) In this process, approximately 70 % of the gas that enters the package is oxygen. Carbon dioxide concentrations can be from 20 - 30 %, while nitrogen concentrations can range from 0 – 10 %. Since there is a high percentage of oxygen and a fairly low percentage of other gases, the growth of aerobic (oxygen-loving) organisms is slowed, but not stopped. However, this type of packaging is good for products such as red meat, since the oxygen in the package will continue to combine with the myoglobin in the meat to give a red colour.

Low oxygen MAP

- (b) In this process, oxygen levels in the package may be as low as 10 %. Carbon dioxide concentrations are the same 20 – 30 % as in high oxygen MAP. However, the bulk of the atmosphere is taken up by nitrogen. This process works in the same manner as vacuum packaging.

Equilibrium Modified Atmosphere Packaging (EMA)

14. This type of packaging differs from vacuum packaging and MAP in that it uses a gas-permeable packaging material. The package may or may not be flushed with differing gases. This packaging is simply a barrier to outside contamination. The levels of gas that come into contact with the product do not differ from the concentrations of the gases in the atmosphere that the package is stored in. This type of packaging is used mainly for fresh fruits and vegetables.

Controlled-Atmosphere Packaging (CAP)

15. Controlled-atmosphere packaging is very similar to MAP. However, in MAP, the concentrations of the gases may change after sealing due to use of oxygen and the expelling of carbon dioxide by microbes and from the slightly permeable nature of the package. This does not happen in CAP. The gas concentrations do not change during storage. However, there is a problem with using CAP. Since we do not want the gas concentrations to change, we must use a gas-impermeable package such as metal or glass, and there must be some way of controlling the atmosphere inside of the package. This can prove to be very expensive, so this process is not used widely.
16. Fruit of Chapter 8 “may be fresh (including chilled), frozen (whether or not previously cooked by steaming or boiling in water or containing added sweetening matter) or dried (including dehydrated, evaporated or freeze-dried); provided they are unsuitable for

immediate consumption in that state, they may be provisionally preserved (e.g., by sulphur dioxide gas, in brine, in sulphur water or in other preservative solutions)” – see the General part to the Explanatory Note to Chapter 8. In addition, they may be “whole, sliced, chopped, shredded, stoned, pulped, grated, peeled or shelled” – see the same Explanatory Note.

17. The strawberries at issue are cleaned and chopped. In addition, they are “preserved by means of a protective gas”. Cleaning and chopping are process clearly provided for in Chapter 8. The question to be answered is therefore whether “preserved by means of a protective gas” is a process which can be allowed for products of that Chapter.
18. As pointed out by the Swiss Administration, and confirmed by the Secretariat’s study above, this process merely changes the atmosphere surrounding the fruit in order to protect it for a given period of time against bacterial rot. It seems quite clear that the consistency of the fruit itself is not affected. The Secretariat therefore agrees with the Swiss Administration that these strawberries should be regarded as “fresh” and, accordingly, should be classified in heading 08.10 (subheading 0810.10). However, the Secretariat leaves it to the Committee to decide whether such strawberries should be classified in this subheading or in Chapter 20 (subheading 2008.80).
19. The Secretariat would like to point out that not only fruit of Chapter 8, but also meat, fish and vegetables of Chapters 2, 3 and 7, are frequently “preserved” by “Modified Atmosphere Packaging” (MAP) or other similar methods referred to above. Classifying such products in Chapter 16 or Chapter 20 would, in the Secretariat’s view, be contrary to normal practice and would change the scope of the headings in these chapters referring to “fresh” commodities.

IV. CONCLUSION

20. The Committee is invited to rule on the classification of fresh strawberries preserved by means of a protective gas, on the basis of the remarks and information provided by Switzerland (see paragraphs 3 to 8 above) and the Secretariat’s comments set out in paragraphs 9 to 19 above.
21. The Committee is also invited to indicate what further action should be taken in this regard.

Fresh strawberries, cleaned and chopped, packed in plastic shells and covered with a plastic sheet by means of a special process. During this process, a vacuum pump has removed the oxygen from the packaging and replaced it with a nitrogen-based protective gas. If chilled, the strawberries can be kept “fresh” for up to 8 days.