



WORLD CUSTOMS ORGANIZATION
ORGANISATION MONDIALE DES DOUANES

Established in 1952 as the Customs Co-operation Council
Créée en 1952 sous le nom de Conseil de coopération douanière

SCIENTIFIC SUB-COMMITTEE

41.672 E

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13th Session

O.Eng.

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SC3

Brussels, 13 October 1997.

CLASSIFICATION OF ASPARTAME

(Item II.16 on Agenda)

I. BACKGROUND

1. On 1 September 1997, the Secretariat received a note from the Romanian Customs Administration concerning the HS classification of aspartame. The Romanian note is excerpted below.

II. NOTE FROM THE ROMANIAN ADMINISTRATION

2. "I am pleased to communicate to you our desire to study the possible change in classification of [aspartame] from heading 29.24 to heading 29.21 at one of the coming sessions of the Harmonized System Committee. In view of the particular importance of this food additive, we would like to give our point of view.

Description and use

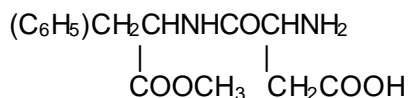
3. The subject of classification is aspartame, which is a food additive used as a sweetener. According to documentation [included with the Romanian note], aspartame is a dipeptide of L-aspartic acid and L-phenylalanine in the form of a methyl ester having a sweetening capacity 200 times as strong as that of sucrose.

Classification

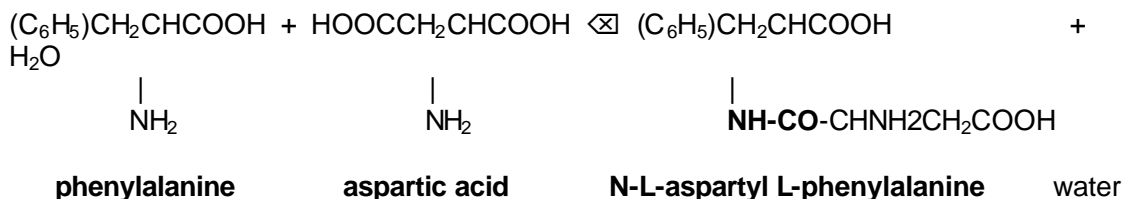
4. According to the classification guide of chemical products based on the Combined Nomenclature, 1 January 1988 version, aspartame is classified in heading 29.24 (subheading 2924.29 90). Heading 29.24 includes "Carboxamide-function compounds; amide-function compounds of carbonic acid". Aspartame, according to documentation [included with the Romanian Note], is N-L-aspartyl L-phenylalanine, 1-methyl ester, and has the following formula ($C_{14}H_{18}N_2O_5$):

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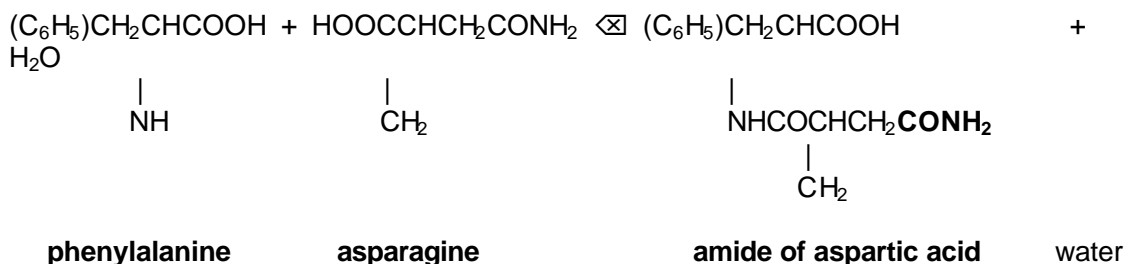


5. Aspartame, therefore, is a biological, cyclic (aromatic) amine which is formed by the following reaction :



This peptide contains the -NH-CO- link which, being esterified, forms aspartame.

6. The amide of L-aspartic acid is formed as the result of the following reaction :



The amide of aspartic acid contains the amide link, -NH₂-CO-.

Conclusions

7. Aspartame, therefore, is not an amide, but an amine which contains a peptide link (-NH-CO-) in its molecule, but not an amide link (-NH₂-CO). For this reason, in our opinion, aspartame should be classified in heading 29.21 (Amine-function compounds), also containing in the molecule the amine group, -NH₂."

III. SECRETARIAT COMMENTS

8. In its note above, the Romanian Administration takes the view that aspartame is classifiable in heading 29.21. However, given the presence of both amine functions and oxygen-functions in the molecule (see paragraph 4 above), aspartame would have to be classifiable at least in heading 29.22 or thereafter, pursuant to Note 3 to Chapter 29.
9. That being the case, it would appear that Romania regards the peptide link (-CO-NH-) in aspartame not as an amide, but as a secondary amine attached to a carbonyl group. As such, Romania would seem to classify this product as an oxygen-function amine compound of heading 29.22, but not as a carboxamide compound of heading 29.24.
10. According to the Explanatory Note to heading 29.24 (page 402, second and third paragraphs), amides are compounds which contain, *inter alia*, the characteristic group

-CONH₂, and in which the hydrogen of the -NH₂ group may be substituted by alkyl or aryl radicals; in this latter case, the products are N-substituted amides. In the Secretariat's view, the peptide link highlighted by Romania in the structure of aspartame in paragraph 5 above would seem to be an N-substituted amide, as described by the Explanatory Note to heading 29.24. The Sub-Committee is invited to give its views on this point.

IV. CONCLUSION

11. The Sub-Committee is invited to give its views on the nature of the peptide link in aspartame and its effect on the classification of aspartame, taking into account the comments by Romania in paragraphs 2 to 7 above and the Secretariat's comments in paragraphs 8 to 10 above.
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