

Public version
Court Registrar

IN THE COMPETITION TRIBUNAL

IN THE MATTER OF an Application by the Director
of Investigation and Research under sections 77,
78 and 79 of the Competition Act, R.S.C. (1985),
c.C-34, as amended;

FILED	S.C. (1985)	TRIBUNAL
	TRIBUNAL DE LA CONCURRENCE	
	CT-89/2	
	JAN 8 1990	RB
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	REGISTRAR	REGISTRAIRE
	OTTAWA, ONT.	<i>[Signature]</i>

B E T W E E N:

THE DIRECTOR OF INVESTIGATION
AND RESEARCH,

OTTAWA, ONT.

COMPETITION TRIBUNAL
TRIBUNAL DE LA CONCURRENCE

Applicant,

- and -

File No. CT-89/2
Director Nutrosweet

THE NUTRASWEET COMPANY

Respondent,

- and -

Exhibit No. 2-54-B
Date Set. 8/90 ; 14h10
Registrar S. Lague

TOSOH CANADA LTD.

Intervenor

A F F I D A V I T

I, THOMAS A. WILSON, of the City of Toronto, and the
Province of Ontario, make oath and say as follows:

1. I have been a professor of economics at the University
of Toronto since 1968. Currently, I am also director of the
Policy and Economic Analysis Programme at the Institute for
Policy Analysis, and am the area coordinator for Business
Economics at the Faculty of Management. I was chairman of the
Department of Economics from 1982-1985.

2. I have taught courses and conducted research in the areas of industrial organization, public finance, macro-economics and the economic environment of business.

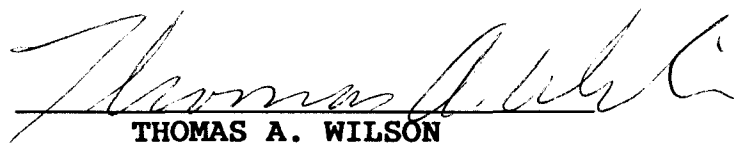
3. I have been retained by the Director of Investigation and Research (the "Director") to advise on the economic and industrial organization aspects of issues raised in the application filed by the Director in this proceeding.

4. I have been provided with information from the Bureau of Competition Policy and its legal counsel on various aspects of the aspartame market and the behaviour of companies in that market. I have also attended meetings with representatives of the Holland Sweetener Company and Tosoh Canada Limited, and participated in an interview with Mr. Abe Bakal. I have also reviewed the confidential affidavit evidence of Professors Globerman and Thompson. I have drawn on information provided in these documents, meetings and interviews in preparing my report.

5. Attached hereto as Exhibit "A" to this my Affidavit is a true copy of the report prepared for the Applicant pursuant to the aforesaid request.

SWORN before me at the
City of Toronto, in the
Province of Ontario
this 5th day of January,
1990

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THOMAS A. WILSON



Commissioner for Taking
Affidavits

EXHIBIT "A"

IN THE COMPETITION TRIBUNAL

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of Investigation and Research under sections 77,
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PUBLIC AFFIDAVIT EVIDENCE OF THOMAS A. WILSON

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4. I have been provided with information from the Bureau of Competition Policy and its legal counsel on various aspects of the aspartame market and the behaviour of companies in that market. I have attended meetings with representatives of the _____, and participated in an interview with _____. I have also reviewed the confidential affidavit evidence of Professors Globerman and Thompson. I have drawn on information provided in these documents, meetings and interviews in preparing my report.

5. My comments are divided into the following categories:

(a) Definition of the relevant product market;

- (b) Appraisal of relevant geographic markets;
 - (c) Consideration of the Prospective role of new products;
and
 - (d) Evaluation of NutraSweet's dominant position.
6. My comments focus on the following questions:
- (a) Does aspartame constitute the relevant product market, for competitive analysis, should the market include other high-intensity sweeteners, or do all sweeteners (including sugars) constitute the relevant product market?
 - (b) What are the relevant geographic markets? How are these relevant markets likely to evolve over time following the expiry of NutraSweet's product patent on aspartame in the U.S.?
 - (c) Which prospective new products may be introduced that could provide significant competition for aspartame? What are the likely time delays for approval of new products? What other barriers to entry must these potentially competitive products overcome?

(d) Is NutraSweet a "dominant firm" within the relevant market(s)?

(e) Is NutraSweet acting to maintain a dominant position?

A. Delineation of the Product Market

7. Aspartame and a large number of sweeteners are obviously potentially substitute products. However, the broad market for sweeteners may be meaningfully partitioned between:

- a) low-intensity, high calorie sweeteners ("sugars"); and
- b) high-intensity, low or zero calorie sweeteners ("intense sweeteners").

This is a fundamental distinction on the demand side of the market in that the production of sweetened diet products necessitates the use of intense sweeteners, rather than sugars. Within the intense sweetener product group, demands are influenced by several characteristics of these products, including: (a) taste (in particular, how closely they replicate the taste of sugar); (b) stability; and (c) solubility.

8. Furthermore, the demand for these products is affected by consumers' perceptions of their safety, and in many jurisdictions is effectively constrained by regulations.

9. The evidence I have reviewed is, in my opinion, inconsistent with the argument that sugars and intense sweeteners form a single relevant product market. If this were the case, we should expect the price of sugar and the price of aspartame (or other intense sweeteners) to move closely together over time and space. In fact, there is no close relationship between the price of aspartame and the price of sugar over time. In recent years, the price of aspartame in Canada has declined significantly, while the price of sugar has risen. This could not occur if these two products lay within a single relevant market.

10. Evidence on prices of sugars and aspartame in Canada and the U.S. provides additional evidence that these two categories of sweeteners are in separate product markets. In the U.S., where aspartame remains protected under a product patent, the current price of aspartame relative to sugars on an adjusted (sweetener-equivalent) basis is higher than in Canada, where the product patent expired in 1987.

B. The End Uses of Aspartame and Other Intense Sweeteners

11. The pattern of end uses of aspartame provides further evidence that this product should be viewed as distinct from sugar. percent of the aspartame sold in Canada is used in the production of diet soft drinks.

percent of the aspartame sold in Canada is used in the production of diet cola soft drinks. Since sugar cannot be used to produce an effective diet soft drink, it cannot be viewed as an effective substitute for aspartame for this major end use product group.

12. Furthermore, for any other end product for which calorie minimization is important (e.g., diet desserts and low-calorie table-top sweeteners) sugar would not be an acceptable substitute for aspartame. Only for end uses where calorie content is unimportant would aspartame face competition from high calorie sweeteners.

13. I now turn to the issue whether other intense sweeteners (i.e., saccharine, cyclamates, Ace-K) should be included in the same product market with aspartame. In the absence of existing national regulatory restrictions, this could be a very difficult issue to resolve. Although existing intense sweeteners (including aspartame) vary in taste and

other characteristics in important ways, there is evidence that other intense sweeteners could be substituted, at least partially, for aspartame to produce diet soft drinks, the major current end use of aspartame. In certain European countries, other intense sweeteners (or blends of other intense sweeteners) are used with aspartame to produce diet soft drinks.

14. Because of product-specific end use regulations, however, competition between aspartame and other intense sweeteners is precluded in Canada and limited in the U.S. In Canada, aspartame is the only intense sweetener permitted in soft drinks. Given that the soft drink industry accounts for approximately of the aspartame sold in Canada, in the core of the market for aspartame there is no alternative intense sweetener. In view of these regulatory restrictions, aspartame itself clearly constitutes a relevant product market within Canada at the present time.

15. One other aspect of product regulations and their associated health testing should be noted. Consumers' perceptions of product safety have become an important product characteristic. Even if the existing bans on certain products were now lifted, they may not gain easy acceptance by consumers.

C. Geographic Extent of the Market

16. Aspartame is currently produced in specialized plants located in the U.S., Japan and the Netherlands. The product has a very high value to weight ratio, so that transportation costs do not segment the market. In the absence of patents, tariffs and product-specific, end-use regulations, the relevant geographic market would be global.

17. However, the U.S. and Australian markets are currently partitioned from the rest of the world (ROW) by product patents. In addition, there is a U.S. tariff of 12%, which will provide market separation even after the expiration of the U.S. product patent in 1992.

18. Does the ROW outside the U.S. and Australia constitute the relevant geographic market, or may individual countries, such as Canada, be viewed as relevant markets? These issues are complex. Although the market in Canada is supplied from plants located in three countries it is nevertheless distinct from the European market. Whether this distinction is attributed solely to different product-specific regulations, or whether the policies of the Nutrasweet company play a key role, cannot be readily determined.

19. However, the fact that the prices of aspartame in Canada are typically higher than in Europe suggests that these markets are currently effectively partitioned.

20. Of course, the regulatory environment plays a key role in motivating market partitioning. As noted earlier, in Canada aspartame faces no competition from other high intensity sweeteners in most end uses including the core diet soft drink market.

21. In some European countries, the regulatory authorities permit the use of other sweeteners, including blends of high intensity sweeteners. Furthermore, NutraSweet faces more effective competition from Holland Sweetener within the European Economic Community. Since, ceteris paribus, competition will be stronger in markets with more permissive regulations, a dominant producer of aspartame would have an incentive to partition the market geographically, in order to protect higher prices established in the more tightly regulated and less competitive markets.

22. One other aspect of the geographic market should be noted. Following the expiration of Nutrasweet's U.S. product patent in 1992, the U.S. tariff will remain the most important barrier to trade in aspartame. However, under the Canada-U.S.

Free Trade Agreement (FTA) the tariff on aspartame produced in Canada will be phased out over a five year period ending January 1, 1993. Hence, in the event that production were initiated in Canada, the Canadian market would occupy a unique geographic position, forming a part of two markets (North America, and the ROW excluding the U.S.) which are segmented by the U.S. tariff. In any case, the Canadian market would not be protected by trade barriers against imports from overseas producers.

D. Prospective New Products

23. Several new high intensity sweetening products are currently undergoing testing, and one of these, Acesulfame-K ("Ace K") has been approved for use in some European countries and for use in dry goods in the U.S. The approval of new intense sweeteners for all end uses in Canada would represent a major development in this market. Some of these sweeteners would be close substitutes for aspartame in certain end uses. Blends of the new sweeteners (including blends of them with aspartame) could perhaps even be superior to aspartame in certain uses.

24. The most likely new sweetener to be approved in the near future is Ace K. However, Ace K is not an effective substitute for aspartame for diet soft drinks. Blends of aspartame and Ace K may be an effective substitute for aspartame even in that important end use, but in that case aspartame retains its key position.

25. Other promising intense sweeteners currently being tested include Alitame and Sucralose. Like Ace-K, Alitame alone is not well suited for diet cola soft drinks. Although Sucralose may be closest in taste to sugar of the high-intensity sweeteners, there may also be safety concerns raised because it includes chlorine.

26. As noted above, the acceptance by the regulatory authorities of new intense sweeteners would fundamentally change the market for aspartame. However, approval for use in Canada is by no means certain, and is in any case subject to substantial and uncertain delays.

27. Even after approval it may take considerable time for new products to gain acceptance in the market. Consumers' concerns about product safety may lead them to continue to use

the product they have become accustomed to. To the extent that the taste for an artificial sweetener is "acquired" through repeated use, product switching may be further discouraged.

28. Since sweeteners represent a relatively small portion of the total cost of the end product soft drink, a large difference between the effective prices of two intense sweeteners would translate into a smaller relative change in the end product price to the final consumer. For example, the cost of the aspartame in a standard (280 ml) container of diet cola would be less than cents.

29. Because of all of these factors, it is therefore quite probable that, for some time at least, aspartame will retain a preferential advantage over any of the new intense sweeteners.

30. The implications of this analysis of product and geographic markets for the state of competition in the aspartame industry should be spelled out. At the present time, competition from other intense sweetener products is limited. Within the core end product market of diet soft drinks, in many countries including Canada, there is no effective alternative to aspartame at the present time. A dominant firm

in this market would be able to maintain price persistently above average unit costs, provided that entry barriers into the industry exist.

31. Over time, the introduction of new products would likely reduce the market power of such a dominant aspartame producer. However, the new products face uncertain delays to approval, and consumer acceptance will not be quickly won.

E. Market Dominance

32. Having established that aspartame itself constitutes the relevant product market, and having noted that the market is geographically partitioned by product patents, a U.S. tariff, and product use regulations, I now turn to the issue of whether The NutraSweet Company is a "dominant firm" within these markets. Industrial organization texts typically define a firm as dominant if its market share is 50% or more, and it faces no other competitor of comparable size.

33. In the U.S. market, NutraSweet has a legal monopoly because of its product patent. When the product patent expires in 1992 the U.S. market will remain partitioned from the rest of the world outside Canada by a 12% tariff. Of course, if new entry should occur within North America, NutraSweet would no longer have a monopoly position in the U.S. market.

34. In Canada and Europe, NutraSweet faces competition from Tosoh Canada and Holland Sweetener, respectively. However, NutraSweet's market share in both Canada and Europe indicates that it is effectively a dominant firm in these markets. In Canada, NutraSweet sells over [redacted] of the aspartame marketed. In the European community NutraSweet's typical market share is over [redacted].

35. It is also instructive to examine NutraSweet's control of the capacity to produce aspartame world-wide. At present, NutraSweet's productive capacity in the United States is approximately [redacted], and [redacted] has plant capacity in [redacted] of about [redacted].

[redacted]. Given that NutraSweet and [redacted] have entered into a cross-licensing agreement for North America and participate in a joint venture in Europe, they can be treated as one group that effectively controls about [redacted] of dedicated world capacity to produce aspartame.

36. Under section 79 of the Competition Act, a "dominant position" in a market is defined as the exercise of "... substantial or complete control ..." in the relevant market. I interpret this to mean that a firm is dominant within a market if that firm acting alone is able to affect total industry

output and price significantly. NutraSweet's very high market shares and large controlled share of dedicated plant capacity gives that firm a dominant position in the aspartame markets. Consider, for example, whether NutraSweet has the power to raise prices (and restrict output) in Canada and Europe. Tosoh and Holland Sweetener, the sole competitor it currently faces in these markets, do not have enough capacity to expand output sufficiently to prevent the price increase.

NutraSweet's Competitive Strategy

37. A firm in a dominant position may choose not to exploit fully its market power in the short run. Such a strategy would encourage the expansion of rivals and possibly the entry of new firms. In order to maximize profits over time (net present value maximization) the firm may instead attempt to maintain its market share by aggressive pricing, marketing, and other strategies. The latter strategies will likely be chosen where barriers to entry can provide sufficient protection to profit margins over time.

38. NutraSweet's behaviour in markets outside the United States indicates that it has been pursuing such aggressive strategies. Following the expiration of its product patents

outside the U.S., prices of aspartame were reduced substantially, indicating that NutraSweet decided to maintain rather than "harvest" its dominant market share position.

39. The policy of heavy advertising and promotion of the trademark also contributes to the strategy of market share maintenance. A major threat to NutraSweet's dominant position after the end of its U.S. product patent would be vertical integration (or a vertical joint venture) by either or both major cola soft drink producers. The successful promotion of the NutraSweet brand name to final consumers will provide some protection against this type of entry.

40. Various provisions of NutraSweet's contracts with its customers are consistent with an aggressive strategy to maintain market share. Exclusive supply contracts will deter small and moderate scale entry. Meet-or-release clauses in contracts provide "red alerts" to intrusions by a competitor, allowing for a prompt price or marketing response. Price discounts for the display and promotion of the NutraSweet logo reinforce exclusive supply provisions by effectively discriminating against blends of aspartame from other sources and against blends with other sweeteners. Furthermore, the display of the logo on the end product increases product switching costs and reinforces consumers' association of the trademarks of NutraSweet and branded end products.

41. As noted above, the choice of a strategy of maintaining market share is more profitable in the long-run if barriers to entry exist or can be created. The evidence reviewed by Professor Globerman indicates that there are barriers to entry into the aspartame industry. Production of aspartame in dedicated plants is subject to economies to scale, and necessitates incurring significant sunk capital costs. Because of process patents, significant research and development expenditures will also likely be required.

42. Finally, to the extent that product differentiation associated with trademarks is important, extensive marketing costs may be necessary to attain a large enough share of the market to realize scale efficiencies in production. The evidence reviewed by Professor Thompson suggests that NutraSweet's marketing practices have established a product differentiation barrier to entry or expansion of competitive producers of aspartame.

43. Although "hit-and-run" entry from non-specialized plants remains a possibility, it is my understanding that the unit costs of production in such plants is above the unit costs of production in dedicated plants. The possibility of this type of entry, therefore, at most serves to limit market power, but not to eliminate it.