OFFICE OF FAIR TRADING

Completed acquisition by Danisco A/S of the food ingredients business of Rhodia S.A.

The OFT's decision on reference under section 22 given on 3 June 2004

PARTIES

Danisco A/S (Danisco) is an international producer of food ingredients that is based in Denmark. It develops and produces food ingredients, feed ingredients, sweetners and sugar and has a presence in approximately 40 countries. In the year ended 30 April 2003, Danisco achieved a worldwide turnover of 16,551 million DKK (approximately £1.4 billion).

Rhodia Food (Rhodia) is an international food ingredients business that is based in France and owned by **Rhodia S.A.**, a global manufacturer of speciality chemicals. Rhodia is active in over 40 countries wordwide and supplies cultures, natural texturants and food protection solutions to food processing companies. In 2003 Rhodia achieved a worldwide turnover of approximately €214 million (£148 million), of which [ ] (see note 1) was generated in the UK.

TRANSACTION

The transaction will take the form of the acquisition of a combination of assets and shares from Rhodia S.A.. It does not involve the acquisition of any UK assets or shares. The transaction was notified on 31 March 2004 and completed on 1 June 2004. The 40 day administrative deadline is 3 June 2004 and the statutory deadline expires on 30 September 2004.

JURISDICTION

As a result of this transaction Danisco and Rhodia have ceased to be distinct. The parties overlap in the supply of cultures in the UK and the share of supply test in section 23 of the Enterprise Act 2002 (the Act) is met. A relevant merger situation has been created.

RELEVANT MARKET

The parties principally overlap in the UK in the supply of the following products:

- *Cultures* – a range of different yeasts, moulds and bacteria species which are used in food to perform a range of different functions. These include cheese,

dairy, meat, probiotic and protective cultures[1] (although there is no overlap with respect to meat and probiotic cultures in the UK).

- *Media* – a blend of dry ingredients consisting of milk powder, whey powder, yeast extracts, vitamins and various salts. When cultivating bulk starters (see discussion below) a nutrient broth (media) is used to support the growth of the culture. The parties submit that all ingredients are readily available; the blending process is low cost, low tech; customers can use skimmed milk instead of media[2]; and customers can set up their own media production. The parties' combined EEA share of all media (including skimmed milk) would be [5-15] per cent (see note 1) (increment [less than 10] per cent (see note 1)). No third parties raised any competition concerns. While one third party did note that the parties' share of supply of commercial media (i.e. excluding skimmed milk) were high, they submitted that barriers to entry are low, customer switching is relatively easy and skimmed milk was a viable substitute. It is not expected that this element of the transaction will raise competition concerns and therefore it is not considered further.

- *Functional systems* – a combination of food ingredients (primarily emulsifiers and stabilizers) which provide certain foods with functional characteristics such as mouthfeel, gelling, viscosity and clingability. The parties' combined share in UK would be [0-10] per cent (see note 1) (increment [less than 5] per cent (see note 1)). No third parties raised concerns. It is not expected that this element of the transaction will raise competition concerns and therefore it is not considered further.

- *Hydrocolloids* – texturing and thickening agents used to improve the organoleptic (sensory) qualities of food. The parties overlap in the supply of locust bean gum (LBG). The parties' combined share of supply of LBG in UK would be [10-20] per cent (see note 1) (increment [less than 5] per cent (see note 1)). No third parties raised concerns. It is not expected that this element of the transaction will raise competition concerns and therefore it is not considered further.

- *Food protection products* – solutions to preserve food from spoilage (food preservation) and protect against infections from microbial pathogens (food safety). The parties both produce antioxidants and protective cultures for sale in the EU. However, Rhodia only makes a relatively small amount of sales to UK customers (about [less than 5] per cent (see note 1) of the supply in the UK) and Danisco's sales equate to around [less than 5] per cent (see note 1)of supply in the UK. It is not expected that there will be any competition concerns in this area and therefore it is not considered further.

Product market

The main issue to consider in establishing the relevant product scope in relation to the manufacture and supply of cultures is the extent of any demand and supply side substitutability between:

- meat, cheese, dairy, probiotic and protective cultures;

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[1] Protective cultures can also be considered in the context of food protection products.
[2] The parties estimate that skimmed milk accounts for over 50 per cent of media usage.

- liquid, freeze dried and frozen cultures;
- DVIs (Direct Vat Innoculum - concentrated cultures) and bulk starters.

On the demand side, there does not appear to be any substitution between meat, cheese, dairy, probiotic and protective cultures. Although Danisco submitted that there are some culture strains that have cross end-use applications e.g. dairy and cheese.

The production process for cultures consists of: securing and purification of micro organisms; fermentation; and finalisation. Danisco submitted that on the supply side, therefore, the principal culture suppliers already have the ability to design and manufacture a wide range of cultures for numerous end products. Danisco supplied examples of manufacturers expanding into different types of cultures. Danisco considered that supply side switching would take six months. Other manufacturers agreed that it would be easy to switch to manufacturing a different type of culture e.g. from dairy to meat cultures and this could take place in less than a year at no significant cost. One third party considered that there was no real distinction between the production process for cheese and dairy cultures.

However, another third party contended that although suppliers could easily switch production between meat, cheese and dairy cultures, in practice customers would not consider new entrants. New cultures may affect the texture and flavour of the product and there may be a risk of contamination, therefore various trials and possibly market testing with consumers is needed. The third party maintained that this acted as a barrier to switching, especially for customers of cheese cultures where the trial and testing process is longer, and therefore supply-side switching would not occur.

Customer responses did not support this. Customers agreed that a trial period is required to ensure the product quality is not altered. They noted that some suppliers offer free trials and may even underwrite the value of the cheese. Estimates of testing periods appeared to vary between different products and suppliers, one customer submitted a 12 week period was needed whist another estimated a couple of years. Moreover, the majority of customers did not raise any concerns about changing culture suppliers and provided evidence of switching. For example, one third party shifted the ratio between suppliers over the last couple of years and another customer recently engaged in a number of trials and successfully converted to dual sourcing. Danisco also provided a number of other examples of customer switching.

Cultures can be supplied in liquid, frozen or freeze dried formats. Although freeze dried cultures take longer to begin working, Danisco submitted that all three categories were interchangeable. The majority of third parties concurred with this view.

Customers that manufacture fermented foods have a choice between purchasing a highly concentrated starter culture (a Direct Vat Innoculum – DVI) or purchasing a bulk starter, which is propagated locally by the customer using milk or some other form of media. While bulk starters are approximately half the cost of DVIs, the customer will also require a separate tank to propagate the bulk starter and suitably trained staff. In addition, DVIs are simpler to use, more reliable than bulk starters and provide the customer with greater flexibility. The parties considered that DVIs are fully substitutable with the use of bulk starters and vice versa and supplied examples of customers switching between DVI and bulk starters. Most third parties agreed, although one customer said it would not switch if the price of DVIs increased by 5-10 per cent because it would need another facility to use bulk starters and there is the

potential for contamination. Another third party submitted that due to a lack of demand side substitution bulk starters and DVIs should be considered under separate frames of reference. However, the same third party also maintained that it is easy to switch production from bulk starters to DVIs and vice versa. Danisco also submitted that the production process for DVIs and bulk starter was essentially the same and supply side switching was relatively simple.

Overall, evidence suggests that there is demand side substitution between liquid, frozen and freeze dried cultures and demand side and supply side substitution between DVIs and bulk starters. However, although there is evidence that there is supply side substitution between different types of cultures e.g. cheese, dairy, no firm conclusion can be drawn on how quickly supply side substitution would take place. Consequently, three potential frames of reference for examining the merger have been considered – all cultures and a more cautious approach of the cheese and dairy cultures segments separately[3].

Geographic market

Neither of the parties have production facilities in the UK and consider that the geographic scope is at least EEA wide if not global. The reasons given for this included: no need to have national manufacturing or distribution capability; customers demonstrated ability and willingness to switch to suppliers from other countries; transport costs of less than 5 per cent of the average ex-factory price; and, no trade barriers in the EEA in terms of tariffs and regulatory requirements.

The geographic scope appears to be wider than the UK. Although two competitors thought a national presence was required in order to provide advertising and technical support, no customers said they required a UK presence and most indicated that they would consider purchasing cultures from international suppliers. Therefore, the appropriate frame of reference for examining this transaction is considered to be the EEA, although it is recognised that the geographic scope may be wider, e.g. global.

HORIZONTAL ISSUES

Market shares

Post merger the parties will have an EEA combined share of supply for all types of cultures of [25-35] per cent (see note 1) (increment [5-15] per cent (see note 1)) and will face competition from three main competitors. In the narrower segments of cheese and dairy, post merger, the parties will have a combined EEA share of supply of [30-40] per cent (see note 1) (increment [10-20] per cent) for dairy cultures and [30-40] per cent (see note 1) (increment [less than 10] per cent (see note 1)) for cheese cultures. One third party provided alternative EEA share of supply estimates which indicated the parties would have a combined EEA share of [35-45] per cent (see note 1) (increment [15-25] per cent (see note 1)) in cheese and dairy cultures[4]. Following the acquisition,

[3] There is no overlap in the UK in the supply of meat and probiotic cultures. Therefore, this segment is not considered in the competition assessment. Protective cultures have been considered earlier within the context of food protection products (where the parties' shares of supply are small), however, it has been included in the consideration of 'all cultures' due to the presence of supply side substitutability.

[4] It should be noted that both the total market value and the individual sales values attributed to the parties which used by the third party to estimate the shares of supply differed significantly

the merged entity would be the second largest player and, together with Christian Hansen, would account for over [55-65] per cent (see note 1) of supply. One third party raised concerns that for dairy cultures, the merger reduces from four to three the number of main suppliers. However, as discussed earlier, the ability of manufacturers of different types of cultures to start producing dairy cultures should act as a constraint on the behaviour of the parties.

As the merger reduces the number of major suppliers of all cultures in the EEA from five to four the OFT has considered whether this could enhance the potential for coordinated effects. However, prices are not transparent – they are negotiated on an individual basis –and therefore firms are unable to monitor the prices of their competitors. The chances that there could be effective tacit collusion in such circumstances are remote. In addition, the ability of smaller firms to expand production could de-stabilise any coordinated behaviour.

Barriers to entry and expansion

Danisco considered that there are no significant technical or patent barriers to entry and that the raw materials required to manufacture cultures are readily available. It estimated that it would cost approximately €150,000 to set up a small scale production plant to supply liquid cultures to local markets, particularly if existing laboratory facilities or an old dairy could be used and independent hauliers are used to transport cultures. To manufacture frozen cultures would require €3 million. In addition, given most culture plants are on old dairy sites and Danisco contends that the assets necessary for culture production are not sunk costs because they can be sold to dairy or biotechnology industries. To set up a manufacturing plant capable of supplying the largest global customers would cost about €14 million and would take about 6-9 months to set up. An extra investment of €2-4 million would be needed for freeze drying equipment. R&D is considered important in the development of cultures with Danisco's annual expenditure on R&D is about [ ] per cent of turnover. One competitor thought that the cost of setting up a production plant (€15-20 million) and investing in R&D represented a significant barrier to entry.

Danisco cites a number of examples of recent entry into the EEA e.g. Biogaia, Probi and Medipharm (all based in Sweden) and Kerry Group plc who have recently acquired Quest Food Ingredients. However, no third parties identified any new entry or exit. One felt that the sector was declining and smaller firms were being bought up by larger firms.

Danisco submits that there are no significant barriers to expansion as existing players have spare capacity. This view was supported by a number of third parties. Two smaller culture suppliers thought that they would be able to expand production if prices were to increase. One third party increased its capacity significantly this year and estimated it had taken 12 months to do.

Overall, it appears that while there are barriers to de novo entry, there are no significant barriers to expansion by smaller culture suppliers.

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to that calculated by the parties. These differences most likely arose due to the lack of independent industry data available in the sector.

Buyer power

In the UK, Danisco and Rhodia's top five customers account for approximately [ ] per cent and [ ] per cent of sales, respectively. Both large and small customers will have a number of alternative suppliers post merger. In addition, Danisco contend that larger customers could take production in-house. One customer confirmed that it already produces cultures in-house and that it could expand production.

Third parties, including customers, considered that there was countervailing buyer power due to ability to switch to alternative suppliers and, in the case of dairy cultures, to take production in-house.

VERTICAL ISSUES

The transaction does not raise any vertical issues.

THIRD PARTY VIEWS

Overall, third parties were not concerned that the merger would lead to a substantial lessening of competition. The reasons given for this were that: the merged entity would continue to face competition from Christian Hansen and other competitors; smaller firms could expand production; and the existence of buyer power.

A competitor raised concerns relating to the supply of dairy cultures in the UK. However as discussed earlier, the appropriate geographic frame of reference is considered to be EEA wide and the parties still continue to face competition from a number of players throughout the EEA.

ASSESSMENT

Post merger the parties will have an EEA combined share for all cultures of [25-35] per cent (see note 1) (increment [5-15] per cent (see note 1)) and face competition from three major suppliers and a number of smaller suppliers with spare capacity. On the basis of a narrower segmentation of dairy and cheese cultures the parties combined EEA shares of supply are [30-40] per cent (see note 1) (increment [10-20] per cent (see note 1)) and [30-40] per cent (see note 1) (increment [less than 10] per cent (see note 1)) respectively. However, as with the supply of cultures, the parties will face competition from two or three other major suppliers and a number of smaller players. In addition, there is evidence that manufacturers of different types of cultures are able to switch production and would therefore act as a constraint on the behaviour of the merged entity. While for both the supply of cultures and the separate dairy and cheese segments, there appear to be some barriers to new entry, low barriers to expansion allow smaller competitors to expand production relatively quickly. Moreover, customers seem to possess some degree of negotiating strength stemming from their ability to switch to other suppliers or to bring production in-house.

Consequently, the OFT does not believe that it is or may be the case that the merger has resulted or may be expected to result in a substantial lessening of competition within a market or markets in the United Kingdom.

DECISION

This merger will therefore **not be referred** to the Competition Commission under section 22(1) of the Act.

NOTES

1 Actual figures replaced by a range, or deleted, at the request of the parties for reasons of commercial confidentiality.