

# United States Patent [19]

Marquardt et al.

[11] Patent Number: **4,497,836**

[45] Date of Patent: **Feb. 5, 1985**

[54] **MODIFIED WHEY PRODUCT AND PROCESS INCLUDING ULTRAFILTRATION AND DEMINERALIZATION**

[75] Inventors: **Robert F. Marquardt, Danville; Harold T. Pederson, Jr., Livermore; Leo H. Francis, Burlingame, all of Calif.**

[73] Assignee: **Dairy Technology Ltd., Baraboo, Wis.**

[21] Appl. No.: **405,995**

[22] Filed: **Aug. 6, 1982**

[51] Int. Cl.<sup>3</sup> ..... **A23C 21/00**

[52] U.S. Cl. .... **426/239; 426/491; 426/583; 426/801**

[58] Field of Search ..... **426/583, 491, 495, 239, 426/801**

[56] **References Cited**

**U.S. PATENT DOCUMENTS**

2,465,907	3/1949	Meade et al. ....	426/271
2,604,403	7/1952	Wiechers .....	426/801
2,631,100	3/1953	Aten et al. ....	426/239
2,695,235	11/1954	Goede .....	426/583
3,201,245	8/1965	Clark et al. ....	426/239
3,201,256	8/1965	Clark et al. ....	426/583

3,320,072 5/1967 Clark et al. .... 426/239

**FOREIGN PATENT DOCUMENTS**

7800265 7/1978 Netherlands ..... 426/583  
2044771 10/1980 United Kingdom ..... 426/583

**OTHER PUBLICATIONS**

Marshall et al., 'Fractionation and Concentration of Whey by Reverse Osmosis', *Food Technology*, vol. 22, 974 Aug. 1968.

Horton, B. S., 'Prevents Whey Pollution, Recovers Profitable By-Products', *Food Engineering*, Jul. 1970, pp. 81-83.

*Primary Examiner*—Robert Yoncoskie

*Assistant Examiner*—Elizabeth C. Weimar

*Attorney, Agent, or Firm*—Kenyon & Kenyon

[57] **ABSTRACT**

A process for producing whey derived products suitable for use in infant food formulas from edible cheese whey. The cheese whey is subjected to ultrafiltration to produce a protein-rich retentate and a lactose-rich permeate. The permeate is then partially demineralized as by electro dialysis, and blended with the protein-rich retentate. Also products produced by the process.

**7 Claims, 2 Drawing Figures**