United States Patent [19]

Schmidl

[11] **4,414,238**

[45] **Nov. 8, 1983**

[54] **LIQUID ELEMENTAL DIET**

[75] Inventor: **Mary K. Schmidl**, Emeryville, Calif.

[73] Assignee: **Cutter Laboratories, Inc.**, Berkeley, Calif.

[21] Appl. No.: **334,278**

[22] Filed: **Dec. 24, 1981**

[51] **Int. Cl.**[3] **A23D 5/00;** A23J 3/00; A23L 1/00

[52] **U.S. Cl.** **426/602;** 426/654; 426/656; 426/658; 426/72; 426/74

[58] **Field of Search** 426/74, 72, 590, 648, 426/654, 656, 602, 605, 658

[56] **References Cited**

U.S. PATENT DOCUMENTS

2,426,634	9/1947	Melnick	426/656 X
3,081,296	3/1963	Smith et al.	426/654 X
3,238,193	3/1966	Tuschhoff et al.	426/654
3,443,964	5/1969	Marrota et al.	426/579
3,697,287	10/1972	Winitz	426/656 X
3,846,560	11/1974	Hempenius et al.	426/656 X
3,950,547	4/1976	Lamar et al.	426/656 X
4,144,357	3/1979	Mohammed	426/590 X
4,331,689	5/1982	Shemwell	426/592 X

Primary Examiner—Robert A. Yoncoskie
Attorney, Agent, or Firm—James A. Giblin

[57] **ABSTRACT**

A ready-to-use liquid elemental diet comprising a nutritionally acceptable combination of carbohydrate, amino acid, and lipid components, the combination having a pH ranging from about 3.0 to 4.4, being non-browning at elevated temperatures, and including, as the lipid component, a stable emulsion comprising a lipid source, an emulsifier and a starch modified with succinic anhydride in quantities sufficient to maintain emulsion stability in the pH range of about 3.0 to 4.4.

2 Claims, No Drawings