



US005620737A

United States Patent [19]

[11] Patent Number: **5,620,737**

Kazemzadeh

[45] Date of Patent: **Apr. 15, 1997**

[54] **PROCESS FOR PREPARING HYDROLYZED FOOD PRODUCT FOR ANIMAL CONSUMPTION**

[75] Inventor: **Massoud Kazemzadeh**, Bloomington, Minn.

[73] Assignee: **Ortech, Inc.**, Bloomington, Minn.

[21] Appl. No.: **648,485**

[22] Filed: **May 15, 1996**

Related U.S. Application Data

[63] Continuation of Ser. No. 332,136, Oct. 31, 1994, abandoned.

[51] Int. Cl.⁶ **A23L 1/31**; A23L 1/314

[52] U.S. Cl. **426/641**; 426/516; 426/517; 426/805

[58] Field of Search 426/641, 644, 426/646, 511, 513, 516, 517, 448, 805, 807

[56] **References Cited**

U.S. PATENT DOCUMENTS

3,000,742	9/1961	Kuster	426/641 X
3,447,929	6/1969	Hale	426/448
3,580,725	5/1971	Kuster	426/641
4,001,452	1/1977	Williams	426/517 X
4,020,187	4/1977	McCulloch et al.	426/448 X
4,162,336	7/1979	Brown et al.	426/448 X
4,310,558	1/1982	Nahm	426/448 X
4,338,340	7/1982	Morimoto et al.	426/104
4,396,158	8/1983	Olsen	241/2
4,482,574	11/1984	Lec	426/7

4,572,839	2/1986	Guitteny et al.	426/646
4,910,038	3/1990	Ducharme	426/641
4,974,504	12/1990	Walraven	99/483
4,997,469	3/1991	Moore	71/11
5,113,755	5/1992	Anderson et al.	99/483
5,120,565	6/1992	Lanter et al.	426/623
5,151,503	9/1992	Fasi et al.	530/412
5,165,950	11/1992	Boehmer et al.	426/559

FOREIGN PATENT DOCUMENTS

2685999	7/1993	France	426/644
59-213367	12/1984	Japan	426/644
59-220167	12/1984	Japan	426/644
2079579	1/1982	United Kingdom	426/641

Primary Examiner—Arthur L. Corbin
Attorney, Agent, or Firm—Frederick W. Niebuhr, Esq.

[57] **ABSTRACT**

A food product for animal consumption is prepared from an animal by-product, preferably a complete avian carcass. A heated hydrolyzing agent is applied by spray or dip coating to the carcass exterior. After initiation of hydrolysis, the carcass is ground, enhanced by additives, then steam heated to a temperature of about 200 degrees F. The heated by-product is provided as a slurry or as dry particulates to a twin screw extruder. As it is transported across several zones of the extruder, the by-product is thoroughly dispersively mixed and subjected to high pressures and temperatures, vented to release moisture, neutralized with a neutralizing agent, and blended under high temperatures and pressures sufficient to completely sterilize what has become a highly uniform and homogeneous by-product mass. The by-product mass is extruded and cut into pellets, which then are dried to a moisture content at or below 10 percent.

21 Claims, 2 Drawing Sheets