United States Patent [19]

Puski et al.

[11] **Patent Number: 4,697,004**

[45] **Date of Patent: Sep. 29, 1987**

[54] **PROCESS FOR PREPARING LOW PHYTATE SOY PROTEIN ISOLATE**

[75] Inventors: **Gabor Puski**, Newburgh; **Grant H. Hartman, Jr.**, Evansville; **Robert D. Talbott**, Newburgh, all of Ind.

[73] Assignee: **Bristol-Myers Company**, New York, N.Y.

[21] Appl. No.: **773,481**

[22] Filed: **Sep. 6, 1985**

[51] **Int. Cl.**[4] **A23J 1/14**

[52] **U.S. Cl.** **530/378**; 426/656; 435/69

[58] **Field of Search** 435/69; 530/378; 426/656

[56] **References Cited**

U.S. PATENT DOCUMENTS

2,732,395	1/1956	Bolley et al.	260/461
3,001,875	9/1961	Sair	99/17
3,261,822	7/1966	Robbins et al.	260/123.5
3,397,991	8/1968	Johnson et al.	99/17
3,594,192	7/1971	Mullen et al.	530/378 X
3,645,745	2/1972	Magnino, Jr. et al.	530/378
3,736,147	5/1973	Iacobucci et al.	99/17
3,995,071	11/1976	Goodnight, Jr. et al.	530/378 X
4,072,670	2/1978	Goodnight	260/123.5
4,375,431	3/1983	Bradford et al.	435/69 X

OTHER PUBLICATIONS

McKinney, et al., *J. Biol. Chem.*, vol. 178, pp. 117–132 (1949).

Primary Examiner—Howard E. Schain
Attorney, Agent, or Firm—Robert H. Uloth

[57] **ABSTRACT**

A high quality soy protein isolate with significantly reduced aluminum content and substantially free of phytic acid and phytate complexes is prepared by aqueous extraction of defatted particulated soybeans at pH 8 to 10, and at a temperature above 65° C., separating the extract and then precipitating the protein out of solution, at a pH slightly higher than its isoelectric point, i.e., pH 5.3.

23 Claims, No Drawings