

TRADERS[®] PROTEIN

COTTONSEED NUTRIENTS FOR INDUSTRIAL FERMENTATION

THE SCIENCE BEHIND THE ART

Fermentation media development is a mixture of art and science. The science is based on the fundamental biochemical metabolism of microorganisms which is general to various species. The art rests in the microbiologists' experience and judgment to determine the environmental conditions which best allow the microorganism to express characteristics of commercial importance. At Archer Daniels Midland Company, our Traders[®] Protein line of cottonseed-derived nutrients is the science behind the art of industrial fermentation. Our products, PHARMAMEDIA[®] and PROFLO[®], may improve yields and recoverability in many fermentation processes.

QUALITY AND CONSISTENCY

The consistent quality and uniformity of protein in PHARMAMEDIA and PROFLO offers fermentation operations optimal yields. Traders' production facilities are located in Texas where much of the United States' cotton crop is produced. Traders uses selective raw material purchasing as the first step in its quality control program. The unique low-temperature oil extraction process practiced by Traders leaves the nutritional value of the solids intact producing excellent protein quality. Finally, rigid in-plant quality control assures only uniform, high-quality finished products are shipped.

The breadth of nutritional spectrum and consistency of protein composition are special attributes of PHARMAMEDIA and PROFLO products.



KEY BENEFITS
▪ Readily metabolized by microorganisms
▪ Flexibility in applications
▪ U.S. sourced cottonseed
▪ Uniform, high quality proteins

COST EFFECTIVE

Developing a cost-effective commercial-scale fermentation medium is key to profitable industrial fermentation. PHARMAMEDIA and PROFLO have a shelf life of three years from date of manufacture, lowering material handling costs. The consistent nutrient quality helps attain reproducible yields. Finally, Traders PHARMAMEDIA and PROFLO high nitrogen concentration is readily metabolized by a variety of microorganisms allowing for flexibility in application.



For customers around the world, ADM draws on its resources—its people, products, and market perspective—to help them meet today's consumer demands and envision tomorrow's needs.

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PHARMAMEDIA®

Code: 069059

PHARMAMEDIA is an economical, finely ground, yellow flour made from the embryo of cottonseed using Traders' special oil extraction process, resulting in excellent quality protein. Rigid quality control and raw material standards account for PHARMAMEDIA's remarkable uniformity in batch after batch. PHARMAMEDIA contains a minimum of 55 percent protein on a moisture-free basis and is widely used in the production of tetracycline and penicillin as well as many other commercial fermentation products. PHARMAMEDIA is also an excellent nutrient for microbial screening programs due to its ability to support the growth of various bacterial strains and other microorganisms.

Many of our customers have conducted extensive tests using PHARMAMEDIA and PROFLO. Based upon results from such tests, some have concluded that particular strains of organisms prefer PHARMAMEDIA. In the final analysis, each organism will ultimately determine which nutrient is most suitable. For this reason, we recommend that both PROFLO and PHARMAMEDIA be tested in each application to determine which nutrient best suits your needs.

ANALYSIS (TYPICAL):

Nutrient	Percent
Protein, MFB (N x 6.25), min.	55%
Fat (P.E. Extract), max.	5%
Moisture, max.	4%
Particle Size (Thru 200 Mesh screen), min.	90%

SHELF LIFE:

Recommended shelf life is three years from date of manufacture if stored below 75°F (25°C) and 60% relative humidity.

PACKAGING:

Available in bulk
1,000 kilogram bag
500 kilogram bag
25 kilogram sack

PROFLO®

Code: 069061

PROFLO is a premium-quality, finely ground, yellow flour made from the embryo of cottonseed. The principle component of PROFLO is nonhydrolyzed globular protein. PROFLO is made only from excellent quality, high-protein cottonseed to meet the finished product minimum of 58 percent protein on a moisture-free basis with a plate count of no more than 5,000 cfu/gram. PROFLO is widely used as a protein nutrient for microorganisms that produce antibiotics, enzymes, steroids and vitamins as well as many other commercial fermentation products.

Many of our customers have conducted extensive tests using PHARMAMEDIA and PROFLO. Based upon results from such tests, some have concluded that particular strains of organisms prefer PROFLO. In the final analysis, each organism will ultimately determine which nutrient is most suitable. For this reason, we recommend that both PROFLO and PHARMAMEDIA be tested in each application to determine which nutrient best suits your needs.

ANALYSIS (TYPICAL):

Nutrient	Percent
Protein, MFB (N x 6.25), min.	58%
Fat (P.E. Extract), max.	5%
Moisture, max.	3%
Particle Size (Thru 200 Mesh Screen), min.	90%

SHELF LIFE:

Recommended shelf life is three years from date of manufacture if stored below 75°F (25°C) and 60% relative humidity.

PACKAGING:

Available in bulk
1,000 kilogram bag
500 kilogram bag
25 kilogram sack