

Micro-Cell PB Specification Sheet

MICRO-CELL® PB is a proprietary product of Lallemand Animal Nutrition and contains a specific strain of *Propionibacterium freudenreichii* (P63) that was selected at Oklahoma State University in the early 1990's. In the screening process, **MICRO-CELL® PB** was recognized as the most efficient strain to utilize lactate in the rumen, thus helping to reduce acidosis. The unique strain is licensed exclusively to Lallemand Animal Nutrition and contains lyophilized (freeze-dried) bacteria for use as a probiotic for finishing cattle that are on highly processed rations (high starch/low roughage diets).

ACIDOSIS IN FEEDLOT CATTLE

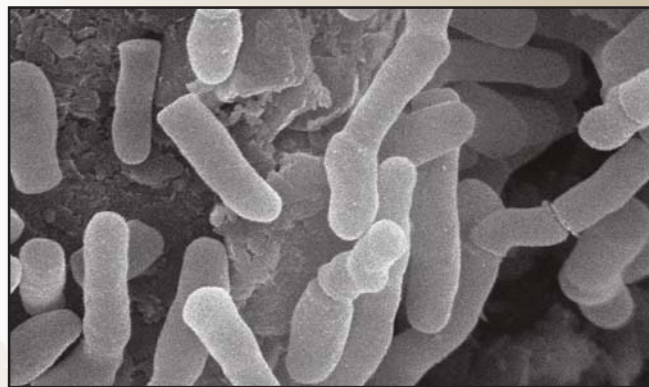
Acidosis results from a series of biochemical and physiological stresses which occur when cattle consume a diet of readily fermentable carbohydrates (growing and finishing rations). The main cause of rumen acidity (low pH) is the accumulation of acids (lactic acid in particular) although other events will have an impact. These include reduced salivary flow, reduced rumen throughput, rapid production of organic acids and reduced feed intake.

Factors that contribute to acidosis include: diet composition, environment, degree of grain processing, changes in diet and any factor that disrupts normal frequency of feeding. Although acute acidosis is more obvious, in terms of visual signs and impaired animal performance, sub-acute (less severe) acidosis is a great problem in feedlot cattle.

Sub-acute acidosis is not visually obvious but leads to reduced feed intake which will have an immediate impact on feed efficiency, average daily gain and ultimately, animal profitability. Control of lactic acid is a common goal of feedyard managers and nutritionists.

WHY DOES THIS STRAIN WORK SO WELL?

MICRO-CELL® PB contains a strain that has a proven ability to utilize lactate in the rumen. This lactate utilizing ability helps control rumen acidosis and ensures that rumen function is optimized. The specific strain utilizes lactate in the rumen and converts it to propionate (the most efficient Volatile Fatty Acid produced in the rumen) helping to reduce acidotic conditions in the rumen.



Scanning electron micrograph of *Propionibacterium freudenreichii*.



FUNCTIONALITY

MICRO-CELL PB is a lyophilized (freeze-dried) bacteria for feeding to finishing cattle on high concentrate finishing rations. Contains a source of live, naturally occurring, stabilized microorganisms.

MICRO-CELL PB contains *Propionibacter freudenreichii* resulting from a comprehensive research and development program.

GUARANTEED ANALYSIS

Lactic acid bacteria not less than 20 billion Colony Forming Units (CFU) per gram from *Propionibacter freudenreichii*. **MICRO-CELL PB** supplies 1 billion CFU *Propionibacter freudenreichii* per head per day.

INGREDIENTS

Sucrose, dried *Propionibacter freudenreichii* fermentation product, sodium aluminosilicate and silicon dioxide.

STORAGE AND HANDLING

Store below 4°C (40°F) preferably in a freezer. Keep all application equipment clean and well maintained.

EXPIRATION DATE

Use within 12 months of date shown on package.

FEEDING RATES

- Apply only with approved equipment or as part of the Micro-Cell DIRECT Program.
- Prevent condensation by removing package from freezer 5 - 10 minutes prior to use.
- Apply to feed at the rate of 0.05 gram per head per day.

PACKAGING

PACKAGE	SHIPPING UNIT
500 g foil pouch	1 x 500 g

