



BRELACTIS™

Product Comparison

Merrick's BRELACTIS provides a unique, patented blend of lactic acid bacteria that can be found only in this product. The six strains of bacteria in BRELACTIS are normal inhabitants of the small intestines of young calves. They were selected for their ability to colonize the digestive tract, their activity against pathogens, their compatibility with antibiotics, and their ability to reduce scours.

Other direct-fed microbial products use off-the-shelf bacteria derived from fermentation processes such as cheese and yogurt manufacturing. Most contain *Lactobacillus acidophilus*, which is commercially readily available and has good name recognition. It is associated with intestinal health in many animal species including humans. *Enterococcus faecium* is commonly added, being a hardy organism with good survivability. Although it is not a common inhabitant of the young calf's digestive tract, including this organism helps bolster lactic acid bacteria count in the product, especially as it ages. These products may also contain a variety of other organisms including yeasts and fungi.

BRELACTIS is specifically designed for calves. Other products provide a collection of organisms that may not relate to the unique conditions in the young calf's digestive tract. BRELACTIS targets this dynamic, changing environment.

	BRELACTIS	Probios®	Priority Calf DFM	Fastrack® Ruminant Bolus	Lira Gold Calf Powder	Calf RD Formula	TDN Mini Rockets™	Health Assure™
Lactic Acid Bacteria	<i>Lactobacillus acidophilus</i>	✓	✓	✓	✓	✓	✓	✓
	<i>Lactobacillus brevis</i> AJ25	✓						
	<i>Lactobacillus brevis</i> HE17	✓						
	<i>Lactobacillus brevis</i> spp.			✓				
	<i>Lactobacillus casei</i>		✓	✓		✓	✓	
	<i>Lactobacillus fermentum</i>							
	<i>Lactobacillus lactis</i> JD19	✓						
	<i>Lactobacillus lactis</i> CI15	✓						
	<i>Lactobacillus lactis</i> spp.					✓		✓
	<i>Lactobacillus plantarum</i>		✓				✓	
	<i>Lactococcus lactis</i> DJ6	✓						
	<i>Lactococcus lactis</i> ID7	✓						
	<i>Bifidobacterium bifidum</i>							✓
	<i>Bifidobacterium longum</i>					✓		
	<i>Bifidobacterium thermophilum</i>					✓		
	<i>Enterococcus Faecium</i>		✓	✓	✓	✓	✓	✓
	<i>Bacillus licheniformis</i>							✓
	<i>Bacillus subtilis</i>				✓			✓
	<i>Saccharomyces cerevisiae</i>				✓			
	<i>Aspergillus oryzae</i>				✓			

Colony-Forming Units (CFU)

The numbers of viable (living) bacteria, yeast and fungi contained in a product are expressed as colony-forming units. CFU is most often expressed as CFU/gram of product. As shown in the table below, some products list CFU/oz and CFU/bolus in their label guarantee instead. Other products actually list CFU/pound.

Products typically provide a guarantee of the total CFU of lactic acid bacteria. If the product contains yeasts, fungi or non-lactic acid bacteria, these counts will be separate from the total lactic acid bacteria guarantee. Some product labels actually lump all organisms together and list the total CFU of all microbials in the product. This labeling technique makes it virtually impossible to determine the nature of the product. Obviously, with all of these differences in labeling, care needs to be exercised when evaluating a product or comparing different products.

The CFU consumed by the calf is a function of both the CFU in the product and the product's feeding instructions. The table below provides both the total CFU of lactic acid bacteria guaranteed on the label and the amount a calf would consume each day if label instructions were followed. There are large differences among products, with daily CFU consumption varying from 50 million to 10 billion. Merrick's BRELACTIS provides from 5 to 200 times more CFU/day of lactic acid bacteria than other microbial products. When evaluating different direct-fed microbial products, be sure to consider the cost per CFU, not just the price of the product.

Product	Label Guarantee (CFU)	CFU/Day
BRELACTIS	2 billion/g	10 billion
Probios	10 million/g	50 million
Priority One	250 million/g	750 million
Fastrack Ruminant Bolus	3 billion/bolus	1.5 billion
Lira Gold Calf Powder	50 million/g	500 million
Calf RD Formula	250 million/g	1 billion
TDN Mini Rockets	750 million/bolus	1.5 billion
Health Assure	4 billion/oz	2 billion

CFU values were obtained from product literature/labels available in July 2004

Probios® is a product of Vets Plus™, Inc.; Priority Calf DFM is a product of Priority IAC; Fastrack® Ruminant Bolus is a product of The Conklin Co. Inc.; Lira Gold Calf Powder is a product of Lira Management LLC; Calf RD Formula is a product of TechMix, Inc.; TDN Mini Rockets™ is a product of Vets Plus™, Inc.; Health Assure™ is a product of SAV A CAF® Products

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