

We're Not Just Producing Probiotics We Are *Perfecting* Them.

Host-Specific, Custom Probiotics

At the heart of every probiotic is the microbe. Some companies select theirs because they are inexpensive, and some are selected to withstand pelleting conditions. We believe the microbe of choice must produce results. It must also be compatible with its host. In this type of symbiotic relationship both host and microbe provide benefits to each other. Only in this manner can a long term relationship exist; with bacteria colonizing the gut, multiplying and replenishing their kind. In return, the host has a competitive edge.

We also feel that the most desired microbe must withstand "natural" challenges of the gut, like bile salts and "unnatural" challenges like antibiotics. Our strains are evaluated to determine their threshold to these challenges.

As certain pathogens are known to be prominent in the intestinal tract. we have developed co-culture tests. These in-vitro tests, along with other screening tests we have developed, are essential in keeping our microbes one generation ahead of the others.

Compare these features, then put these technologies to work in your probiotics.



LA 88 - Bovine host specific strains, hydrophobic encapsulated to provide stability in feed mixtures.



LA 66 - Porcine host specific strains, hydrophobic encapsulated for feed inclusion.



LA 22 - Avian host specific strains, available as hydrophobic encapsulated for feed or water inclusion.


These host specific strains are color coded for easy identification - **LA 88** (green), **LA 66** (pink) and **LA 22** (yellow).

Other specific strains and encapsulation materials are available upon request.

At A/BT our focus will continue to be in the development of probiotics technology. Each of these will be available as a component, allowing you to develop a probiotic exactly fitting your needs.

A/BT Probiotics

*Fully Tested and
Documented*



Micro-encapsulation - feed components such as moisture, minerals, etc., have the potential to reduce the viability of the bacteria during mixing and storage. Micro-encapsulation protects the bacteria by creating a physical barrier until the bacteria reaches the gut. At that time, enzymes break down the capsule and release the bacteria.

Bile salt tolerance - in the gut, bile salt concentrations are inhibitory to many bacteria. Each of our strains can withstand up to 350 ug/ml concentration of bile salts.

pH stable - Acidic (low pH) conditions in gastric juices also inhibit many bacteria. We have documented the pH stability in gastric juices at different pH's.

Compatibility with antibiotics - Antibiotics historically have been fed to animals and would be present in the intestinal tract. Many strains of lactic acid bacteria are sensitive to these antibiotics. We have selected strains that are compatible with common feeding levels of antibiotics and evaluated their compatibility.

Storage stability - Each of the bacteria has been evaluated for viability during storage under different conditions. Also pelleting stability studies have been conducted at 60° C and 70° C.

Co-culture studies - In-vitro co-culture studies have been conducted with common pathogenic organisms. In these studies, the degree of competitive advantage is determined.

Field Studies - Actual field rearing conditions of animals and poultry were used to evaluate a multitude of factors and synergistic effects.

Direct fed microbial concentrates available only to the feed and animal health industries.

