

EASTMAN

Animal nutrition

Eastman Protaq™ Bond

A range of gut health solutions administered through drinking water for swine and poultry and via liquid pig feed

**EMEA****Mode of action****Short-chain fatty acids****Formic acid**

- **High microbial reducing** and controlling effect
- Extremely effective in reducing pH
- Controls fermentation in liquid pig feeding

Propionic acid

- **Active against** yeasts and molds
- Synergistic effect with formic acid against bacteria

Short- and medium-chain monoglycerides

- **Highly amphiphilic**, leading to direct destabilization of bacterial membranes
- **Inhibit growth** of gram-positive and gram-negative bacteria
- Also effective in the small intestine, not limited to the acidic region of the stomach
- Mitigate oxidative stress and inflammation

Eastman Protaq™ Bond — buffered blends of short-chain fatty acids and short- and medium-chain monoglycerides**Composition**

- Propionic acid
- Formic acid
- Sodium formate
- Short- and medium-chain monoglycerides

Technical product characteristics

- Microflora modulation and regulation (helps control *E. coli*, *Salmonella*, *Campylobacter* and *Clostridium*)
- Optimizes intestinal morphology and physiology
- Supports the animal through periods of high stress (weaning and lactation)
- Supports health, welfare and performance
- Synergistic effect between monoglycerides and free organic acids
- User friendly with excellent handling properties (non-ADR) and low odor
- No withdrawal period needed

Packaging

- Available in 25 kg, 220 kg and 1,000 kg

Application through drinking water and liquid pig feeding

- To be applied at 0.5–2.0 L per 1000 L water
- The exact application level should be adapted to the hardness of the water to obtain a pH of 4.0 in the water or liquid feed. **Contact your Eastman representative if support is needed.**

Note: Pipelines need to be flushed and cleaned with sanitizers to remove biofilm before and after application.

Figure 1. pH growth ranges for bacteria, molds and yeasts

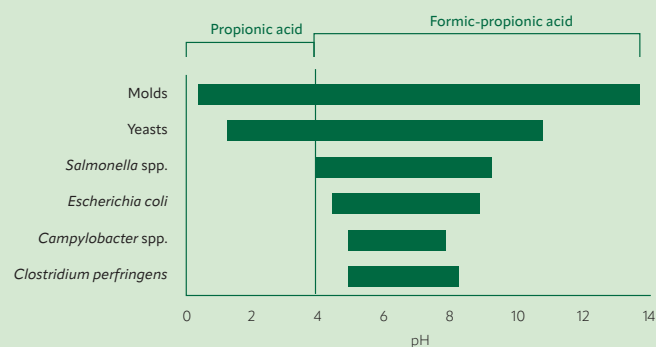
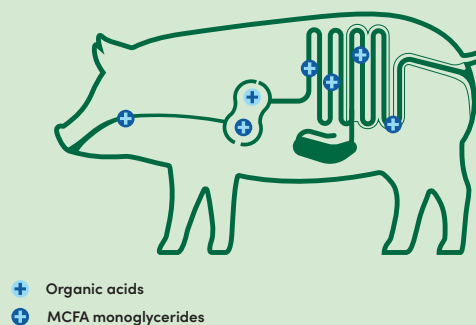


Figure 2. Protaq Bond contains free organic acids and monoglycerides that are active along the GI tract.



Additional data is available on request.

Proven effect in trials

Figure 3. Effect of monoglycerides of caprylic acid vs. free caprylic acid (C8) on MIC values for *E. coli* and *S. typhimurium*

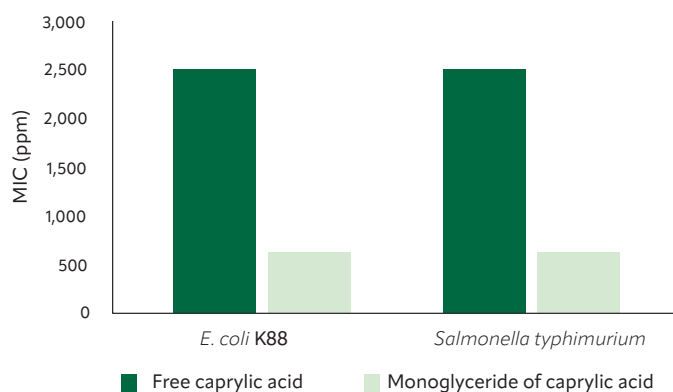
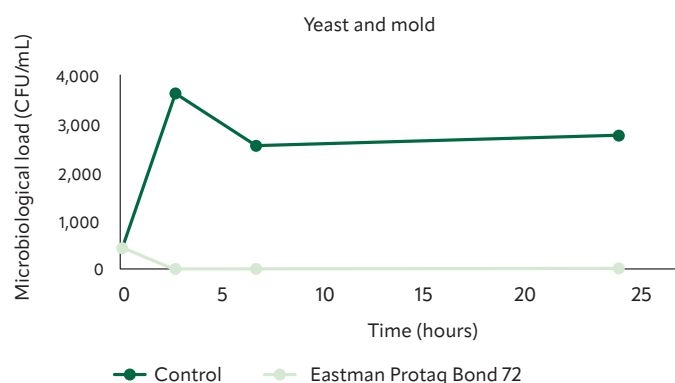


Figure 4. Effect of Protaq Bond 72 on reduction of yeast and molds



Explore these key products from our extensive Protaq Bond portfolio:

- Eastman Protaq Bond 61
- Eastman Protaq Bond 62
- Eastman Protaq Bond 71
- Eastman Protaq Bond 72

Contact Eastman or our distributor to find the perfect fit for your needs.



Certain statements may not be applicable in all geographical regions.

EASTMAN

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