Megazyme

High Quality Diagnostics for Animal Feed

Nutritional and Prebiotics Analysis

Enzyme Ingredient Analysis

Anti-nutrients Measurement

Megazyme | NEOGEN®

Animal Feed

We understand the challenges of an ever-changing animal feed market and the various needs of livestock during different stages of their life. The increasing demand for meat and animal products and the concern for animal welfare, combined with a gradual worldwide ban on the use of antibiotics, makes animal nutrition of paramount importance. Our test kits, reagents and substrates are designed to help enzyme manufacturers for animal feed, animal nutritionists and feed manufacturers monitor the properties of their raw materials, the efficiency of their processes and the quality of their finished product.

We offer a range of solutions for the following analytes:

Starch	**Sugars**	**β-Glucan (cereal & yeast)**
Phytic Acid	**Xylanase**	**β-Glucanase**
Phytase	***endo*-Cellulase**	**Mannanase**

Our Focus

We strive to meet the analytical requirements of animal feed and animal feed ingredient manufacturers and offer a range of often unique products that are suitable for the measurement of key nutritional analytes, anti-nutrients, nutraceuticals and enzyme-based processing agents.

Our range for the animal feed manufacturing industry includes products to measure:

- key enzyme activities that improve animal digestion and growth, which also require monitoring both at enzyme manufacturing and feed production stages
- starch, the principal nutrient in all animal diets
- prebiotic content such as yeast β-glucans
- free sugars content in feed
- anti-nutrients such as phytic acid and cereal β-glucan

We have developed accurate and specific methods and substrates for the measurement of nutrients, anti-nutrients, prebiotics and key enzymes in animal feed.

Nutritional Qualities of Feed

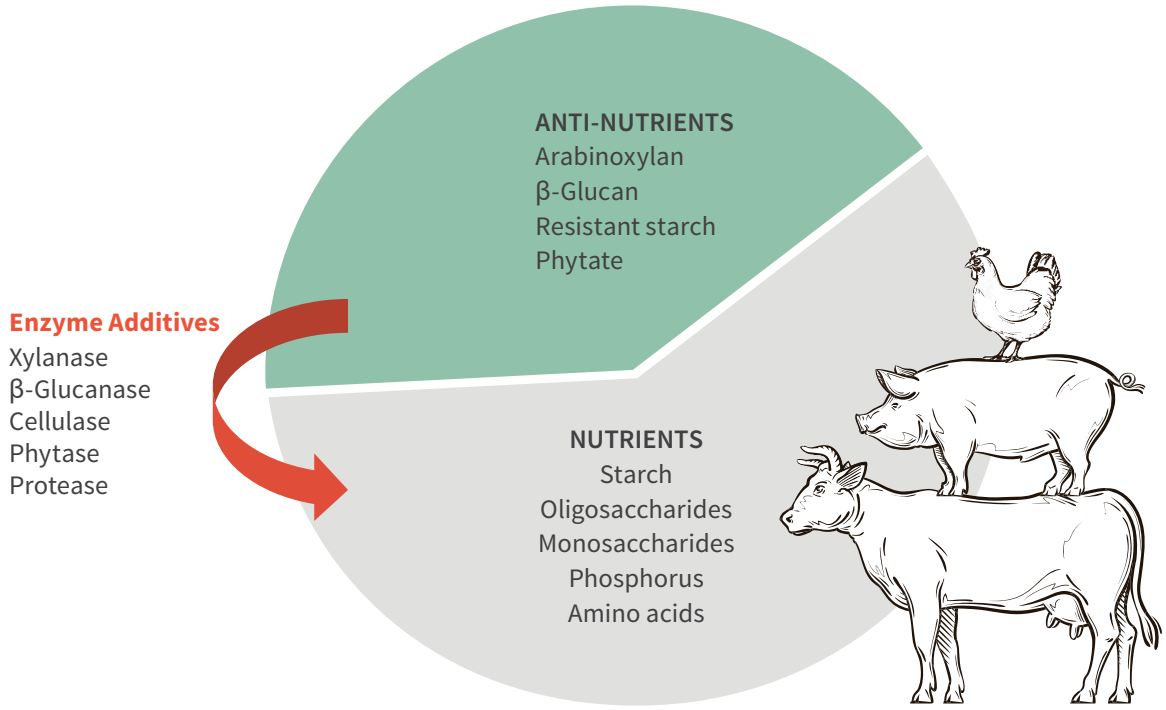
Grasses, grains and legumes are major components of animal feed formulations. These raw materials contain starch which is the main source of energy for animals but also anti-nutrients such as dietary fiber components that are not easily digestible by animals.

Use of Enzyme Additives in Feed

Commercial enzyme preparations are often used by feed manufacturers as additives. The addition of appropriate enzymes to feed degrades anti-nutrients, thereby improving the digestibility of the feed and increasing its nutritional value.

Prebiotics in Animal Feed

With the gradual phasing out of antibiotic usage in livestock, the addition of prebiotic ingredients in feed is an increasingly common trend. One such prebiotic ingredient, Yeast β-Glucan, has shown efficacy equivalent to some antibiotics in poultry. Whether naturally occurring in raw materials (e.g. fructans) or added ingredients such as Fructo-oligosaccharides (FOS) and yeast β-glucans, prebiotic component measurement is key for appropriate and cost-effective dosage in feed.



Analysis	Analyte Significance	Megazyme Product
Nutrients and Prebiotics Analysis		
Total Starch	Main source of energy for animal nutrition	K-TSTA (AOAC 2014.10)
D-Fructose / D-Glucose	Major digestible carbohydrates in feeds	K-FRUGL K-FRGLQR
Yeast β-Glucan	Common prebiotic used as additive in animal feed (esp. poultry)	K-YBGL K-EBHLG
Fructan and (FOS)	Fructans and FOS are prebiotic ingredients commonly found in grasses and also used as feed ingredients	K-FRUC (AOAC 2018.07)
Anti-nutrients Analysis		
Cereal β-Glucan	Major cell-wall polysaccharide of barley and oats. Negatively affects the digestibility of feed in mono-gastric animals (especially poultry) due to its viscosity	K-BGLU
Raffinose / D-Galactose	Found in high levels in legume seeds. Causes discomfort and flatulence in pigs	K-RAFGA
Resistant Starch	Starch that is not digested in the small intestine of monogastric animals, thereby not a source of energy like digestible starch	K-RSTAR
Enzyme Activity Measurement		
β-Glucanase	β-Glucanase used in animal feed products (especially poultry) to degrade cereal β-glucan	K-MBG4 T-BGZ
endo-β-Xylanase	β-Xylanase used in feed to degrade arabinoxylans into xylo-oligosaccharides (XOS) thereby improving feed digestibility and creating prebiotic sugars	K-XylX6 T-XAX
Protease	*endo*-Protease added to feed to improve protein digestibility	T-PRAK
Phytase	Phytases are added to animal feed to remove phytic acid and improve phosphate and calcium bioavailability	K-PHYTASE
Other Feed Analytes		
Ammonia	Commonly found in feed or fermented feed	K-AMIAR
L-Lactic Acid		K-LATE
Phytic Acid	Major form of bound phosphate in plant materials. This phosphate is not accessible by the animal and in addition phytic acid reduces the bioavailability of important minerals	K-PHYT

Contact your local sales representative for further details

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