

Lignocellulose fibres

Products with high content of total dietary fibres (TDF), marketed under the brand names OptiCell® and FibreCell®. Rawfibre is the organic sediment of a substance, that remains after an acid-, and following alkali treatment. The content of rawfibre in the feed determines the quantity and period of the feed-intake.



It has influence on the remain of the feed in the stomach and therefore also on the solubility and digestibility of the components.

Stimulates the production of stomach and intestinal acid (HCl and lactic acid) and has impact on the pH-value. By decreasing the pH-value, rawfibre helps to prevent the growth of E. Coli and other unwelcome bacterias. Protecting from constipation, it has dietetic effects as well.

Commonly used rawfibre components unfortunately creates problems quite often:

Sugar beet pulp contains just about 15-18% rawfibre and has a high calcium content too. Wheat bran ensures an even lower fibre content, additionally it is often contaminated with mycotoxins. Barley contains about 5% rawfibre, thus it is not suitable to use as an exclusive fibre carrier. Oat is available in smaller quantities only and the risk of mycotoxin contamination is rather high.

Sunflower meal and lucerne meal have higher fibre content comparing to the previous raw materials, but mycotoxins, protein content and taste (in sunflower meal), potassium content (in lucerne) requires attention when calculating with them as fibre sources.

Lignocellulose fibres are absolutely mycotoxin-free, made from natural ingredients.

Component	Raw fibre content	Inclusion rate needed to increase the final volume of raw fibre by 1%
Sugar beet pulp	18%	5,5%

Bran	10%	10%
Lucerne meal	21,5%	4,7%
Malt sprout pellet	13%	7,7%
Oat	10%	10%
OptiCell®	53%	1,9%
FibreCell®	65%	1,5%

OptiCell® provides optimal combination of slowly fermentable and fermentable dietary fibres based on natural lignocellulose.

Total dietary fibre (TDF)	cca. 85%
Acid detergent lignin (ADL)	cca. 30%

The content of TDF and ADL are extremely high and not comparable to well known rawfibre components!

TDF and ADL are basically responsible for dietetic effects in the digestion.

OptiCell® serves all the advantages of classical lignocellulose (FibreCell®) and a lot of more positive aspects:

Classical effects of lignocellulose (FibreCell®)

- Kiváló vízmegkötő képesség és térfogatnövekedés. High content of crude fibre (53%) and insoluble dietary fibre like lignin and cellulose.
- Reduces the gastric emptying and that prolongs the impact of gastric acid and enzymes.
- Shifts the fermentation of easily fermentable dietary fibre further in the distal regions of the colon, thereby it comes to a higher butyrate and lower ammonia concentration.
- Better water reabsorption in the colon.
- High water binding capacity and excellent swelling effect.

Additional features of OptiCell®

- Protection against multiplication of pathogens. Due to bacterial fermentation of OptiCell® in the intestinal flora an increase of lactic acid follows. The combination of OptiCell® and lactic acid leads to a higher protection of the intestine against pathogens.
- Due to combination of slowly fermentable and fermentable dietary fibres shifts the fermentable parts to the distal regions of the colon and supports

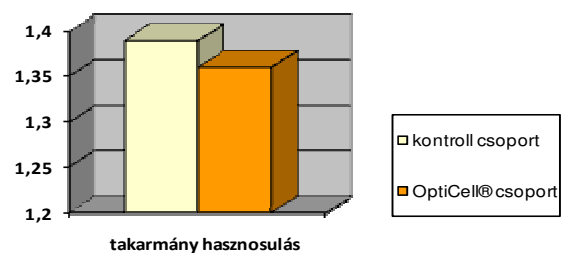
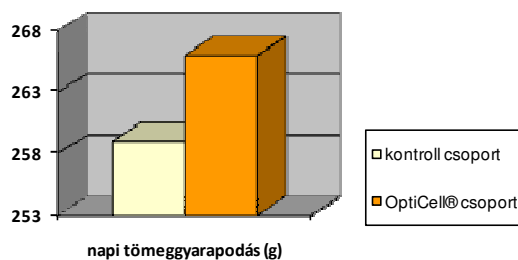
the production of butyrate. Improves the energy metabolism, the quality of intestinal mucosa and water reabsorption.

- The higher production of acids reduces the multiplication of ammonia producing bacteria. Ammonia changes to non-toxic ammonium.

FibreCell® and OptiCell® products are manufactured according the strict criterias of quality assurance systems ISO and GMP-13. They are almost indigestible, free of other nutrients and mycotoxins.

They provide low acid binding capacity (approximately 30 meq/kg feed at pH-value 4) and are GMO-free.

Lignocellulose fibres have positive effect on feed conversion rate and daily weight gain. The following diagrams show the measured values in piglets:



Recommended dosage for OptiCell®

Gestating sows	2-3%
Gestating sows ad libitum	3-6%
Fattening pigs	0,5-1,5%
Piglets	1-2%
Broiler	0,5-1,5%
Turkey	1-2% (a kritikus periódusban 2%)
Rabbit	2-5%
Storage	keep in a clean and cool and dry place
Shelf-life	min. 12 months from date of production