IntelliBond®
a Selko product

Selko

The abilities of IntelliBond trace minerals

Digestability

Impact of trace minerals on rumen microbe function

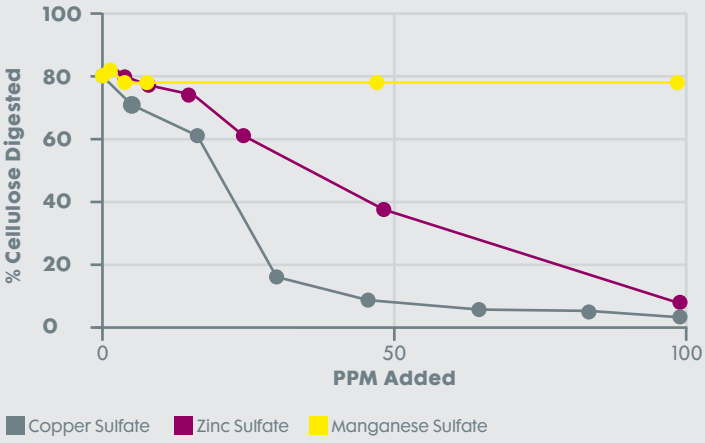
- Weak ionic bonds originating from sulfate based trace minerals causes dissociation of metal when exposed to moisture (rumen fluid) and release free metal ions..
- These free metals have the ability to negatively affect microbe function.
- It is not the sulfate portion that is harmful to rumen microbes, it's the free metal ions like copper and zinc that are highly oxidative and antimicrobial - which is why copper sulfate and zinc sulfate are used as antimicrobial agents in applications such as footbaths.

trouw nutrition
a Nutreco company

Microbial Requirements

Sala (1957) found that when copper and zinc sulfate were added to an in vitro rumen fermentation system, cellulose (fibre) digestion was significantly reduced. This indicates that copper and zinc content of the basal diet ingredients is adequate to meet rumen microbes requirements need to optimize fibre digestibility. Any additional supplementation of reactive sulfate sources can negatively impact fibre digestion.

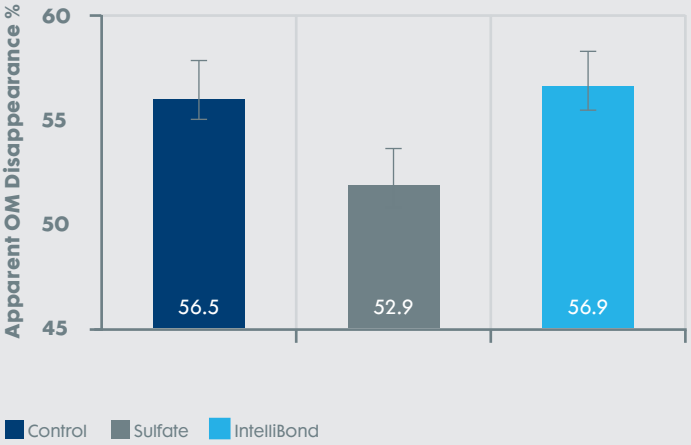
Effect of Trace Minerals on Cellulose Digestion in Rumen Fluid



Sulfates Reduce Ruminal Digestion

Copper, zinc, and manganese sulfate reduced apparent Organic Matter disappearance (6-7%) compared to no added trace minerals and IntelliBond copper, zinc, and manganese in a 48h in vitro fermentation system (Micronutrients Trial#2019RI 31 CACZM, 2019).

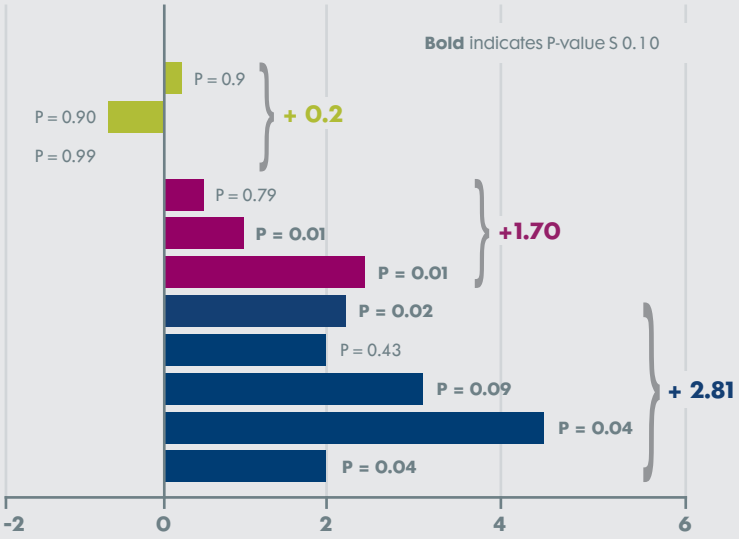
Apparent Organic Maffer Disappearance (24 observations/trt)



Trace mineral source effects fiber digestibility

Recent studies have shown that ruminants fed copper sulfate, zinc sulfate, and manganese sulfate have lower NDF digestibility compared to cows fed a ration containing IntelliBond trace minerals at iso-metal levels.

Trace mineral source affects fiber digestibility



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Digestibility Test Method

In Situ | uNDF240 In Vivo | Total Tract In Vivo

Selko is a brand of Trouw Nutrition, a Nutreco company.
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