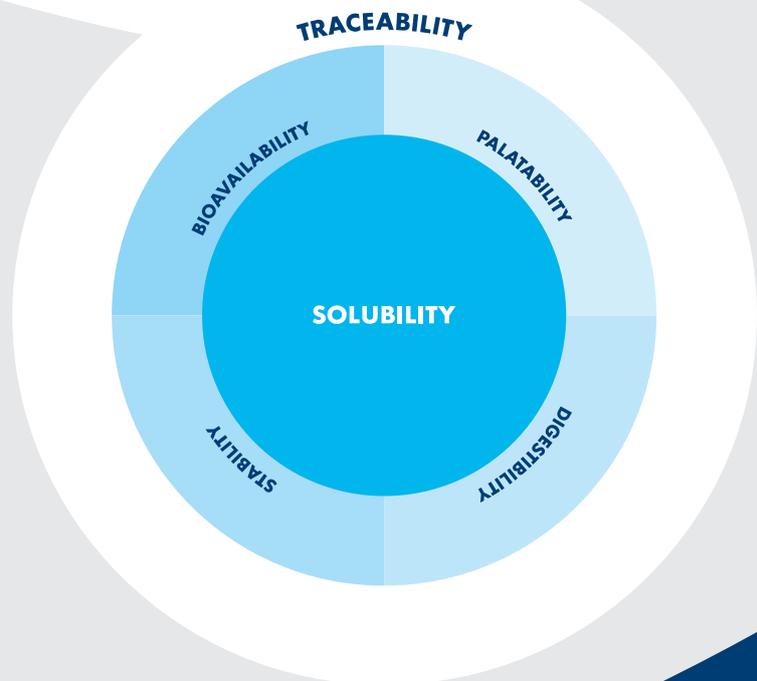




## The abilities of IntelliBond trace minerals **Bioavailability**

### Trace Minerals and Bioavailability

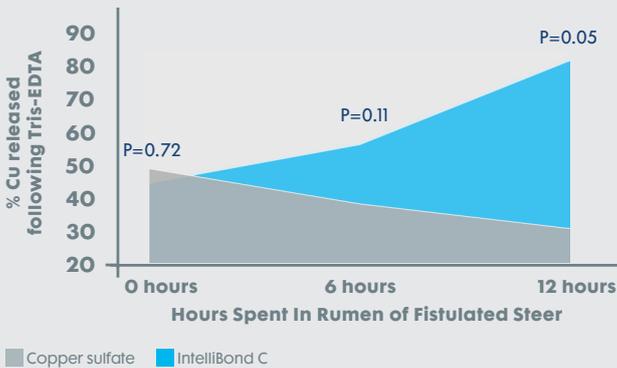
- Trace metal absorption is dynamic and depends on many factors - both animal related (mineral status and homeostatic control) and dietary related (source and antagonists).
- Bioavailability is a measure of how much of a specific trace metal is absorbed across the intestinal wall relative to another trace mineral source.
- The unique crystalline structure of IntelliBond works to facilitate a significant increase in trace metal absorption from the intestinal tract across the intestinal wall and into the blood system where it is readily available to the animal to better support animal productivity and health.



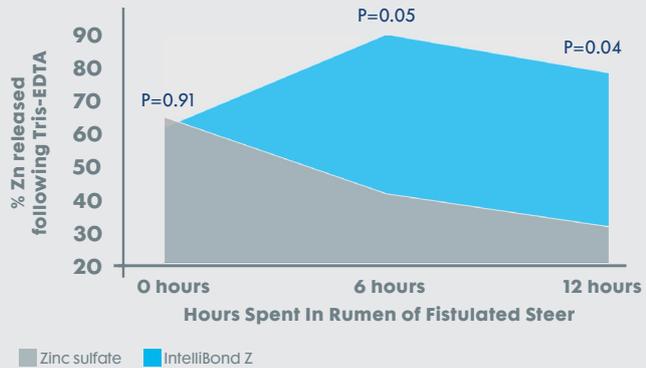
## IntelliBond is more available than sulfates

In the rumen of fistulated steers, the solid digesta was exposed to a strong chelator to mimic the absorption sites present within the small intestine. Rumen stability results clearly indicate that more metal originating from IntelliBond Z and C would be more available for absorption within the intestinal tract than copper and zinc coming from the sulfate sources for a greater period of time. Results show that a significant amount of the metal coming from sulfate sources was bound to antagonists, preventing its eventual absorption (Caldera et al., 2019).

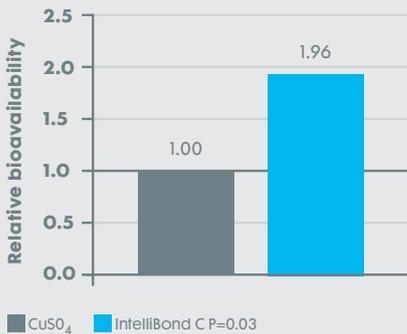
### Copper release



### Zinc release

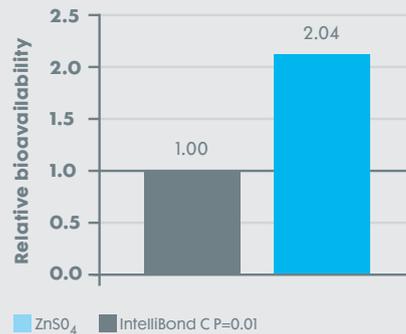


### Spears et al., 2004



**Figure 1:** 98 day depletion period. 60 steers. 10 steers/treatment. 0, 5, & 10 ppm Cu. 5 ppm Mo & 0.15% S.

### Shaeffer et al., 2017



**Figure 3:** 14 day depletion period. 16 steers. 25 ppm Zn.

## Reactive vs. non-reactive

### Reactive

- Subject to antagonistic interactions in the rumen.
- High metal load in the proximal small intestine with rapid mineral release.
- Metal bound to antagonists remains bound throughout the rest of the tract.

### Non-Reactive

- Low solubility in the rumen so rumen antagonists are avoided.
- More soluble in abomasum (low pH).
- Slow, stable release throughout the entire gastrointestinal tract.