



## Zinc and Manganese Methionine Organic Trace Mineral for Broilers, Layers & Turkeys

**Liquitrace® ZM helps fill essential nutrient gaps to meet performance and profitability goals.**

Liquitrace® ZM is a combination of two trace mineral products, zinc and manganese, chemically bonded with the essential amino acid methionine to form a distinct organic trace mineral complexes. These highly bioavailable complexes ensure that the minerals and amino acid are more effectively absorbed by the animal, with less mineral secreted into the environment.

### Proven Utilization for Predictable Results

Research demonstrates that chemically bonding zinc and manganese to methionine results in greater absorption and utilization of both all 3 nutrients in the animal.

In trials conducted at university and private research facilities, Liquitrace® ZM:

**Trials with partial replacement of ZnSO<sub>4</sub>+MnSO<sub>4</sub>**



**Trials with partial replacement of Hydroxy-chloride Zn & Mn**



### More Benefits of LiquiTrace® ZM

- Improved immune and reproductive health.
- Easily adaptable to different feeding regimes.
- Liquid Liquitrace® ZM is less expensive and better dispersed in rations than comparable dry products.
- Liquid form is also more sustainable, with less energy use in production, no bags and no dust.

### Nutrients with Purpose: Zinc, Manganese and Methionine

**Zinc is a trace mineral that plays a major role in immune and reproductive health in poultry:**

- Activates over 200 enzymes and helps maintain over 2000 biochemical pathways essential for health and productivity.
- Limited storage in the body means diets must contain enough absorbable zinc to meet requirements—and most feedstuffs are zinc deficient.

**Manganese is a trace mineral required for growth, bone and connective tissue health and egg shell formation:**

- Required for normal lipid and carbohydrate metabolism and a component of key enzymes necessary for antioxidant functions, blood clotting, bone deposition and cartilage formation.
- Poorly stored in the body, so diets must contain enough absorbable manganese to meet requirements.

**Methionine is a sulfur-containing amino acid required for normal growth and development:**

- Supplementation is essential because it cannot be synthesized in enough quantity to meet daily requirements.
- One of the most limiting amino acids, meaning normal protein synthesis will stop until the methionine requirement is met.

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## Liquitrac<sup>®</sup> ZM

A light-tan to lavender colored aqueous solution of ManMet<sup>®</sup> manganese methionine complex, and Zinmet<sup>®</sup> zinc methionine complex.

### Packaging:

Bulk delivery  
330 gallons (1,250 liters) totes

Liquitrac<sup>®</sup> ZM is compatible with all animal feeds and processed feed ingredients. Liquitrac<sup>®</sup> dispersing equipment is required for application.

Temperature monitoring and agitation are required.

### Analysis:

Zinc (Zn) .....	4.64% (46,400 ppm)
Manganese (Mn) .....	4.64% (46,400 ppm)
Methionine .....	21.79%
Moisture .....	50%
pH.....	4.0
Bulk Density.....	11.7 lbs./gal (1.40 kg/liter)
Viscosity.....	1,250 centipoise at 100°F

### Feeding Rates:

Beef and Dairy Cattle .....	8.6 grams/head/day
Horses.....	8.6 grams/head/day
Poultry .....	780 grams/ton of finished feed (1.72 lbs/ton)
Small Ruminants.....	2 grams/head/day
Companion Animals .....	780 grams/ton of finished feed (1.72 lbs/ton)

Liquitrac ZM is manufactured by Austasia Animal Products in Forbes, NSW in our state-of-the-art facility under strict quality control.

The final product is analysed by independent laboratories to ensure maximum quality and consistency.

