



EFFICIENT SOLUTIONS
TOTAL NUTRITION™



Zinc Propionate and Chromium Propionate for Modern Dairy

Kemtrace® Optimax

Optimum Combination for Maximum Performance

KEMIN®

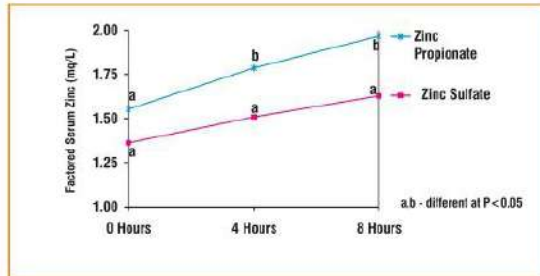
© Kemin Industries, Inc. and its group of companies 2019 All rights reserved. ®™ Trademarks of Kemin Industries, Inc., U.S.A.

Kemtrace® Optimax is a Blend of Scientifically Superior Minerals

Scientific proof

Zn Propionate: Studies on Bioavailability

Bioavailability of Zn from inorganic mineral source and Zn propionate was studied in dairy animals. Animals were fed minerals to provide 300 ppm of supplemental zinc. Plasma serum zinc concentrations were measured at 0, 4 and 8 hours post-bolusing for three days.



At both 4 and 8 hours post mineral feeding, the zinc propionate treatment had a significantly higher bioavailability than inorganic sources of zinc. Zinc propionate fed animals also had the highest serum zinc level 4 hours post-administration.

^{a,b} Superscripts indicate statistically different ($p < 0.05$) serum zinc level (MQ/l) after 4 hours post feeding

Mineral Source	0 Hours	4 Hours
Zinc Sulfate	1.36 ^a	1.51 ^a
Zinc Propionate	1.55 ^a	1.79 ^b

Copper Propionate: Studies on Antagonism with Molybdenum and Sulfur

Groups & Treatment :

Group 1 : 0 ppm Kemtrace® Cu (20 animals, Control)

Group 2 : 10 ppm Kemtrace® Cu (10 animals)

All the experimental groups were supplemented with 5 ppm of molybdenum (from sodium molybdate) and 0.15% sulfur (from calcium sulfate). Interaction and antagonism of Cu-Mb-S was studied.

Jugular blood sample was collected on day 0, 28, 56 and 90 for plasma ceruloplasmin (a copper dependent enzyme) analysis.

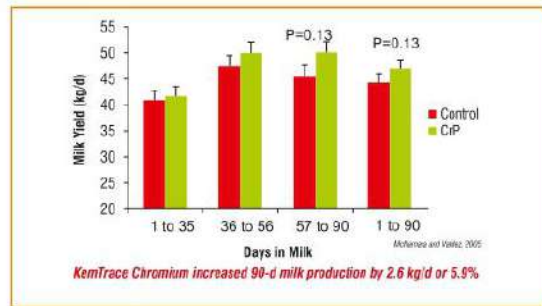
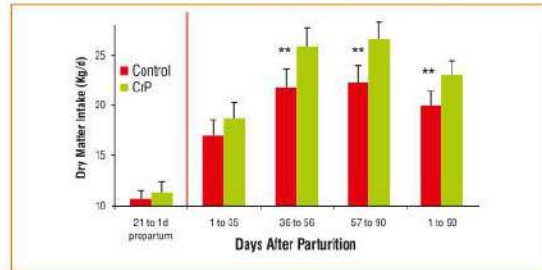
Parameters	Supplemental Kemtrace Cu (ppm)	
	0	10
Plasma Ceruloplasmin, mg/L		
Day 0	25.5	29.8
Day 28	21.3	29.4
Day 56	14.9	22.3
Day 90	12.8	31.6

Results indicate that in the presence of copper antagonist (molybdenum and sulfur), supplementation of copper from copper propionate (10 ppm) to the diet resulted in maintaining plasma ceruloplasmin. However, in control group, it was reduced.

Chromium Propionate (CrP)

Studies on Feed Intake and Milk Production

Increase in dry matter (DM) intake and milk yield was observed in Chromium supplemented dairy animals. Dry matter intake and milk production was higher in Chromium supplemented dairy animals as compared to Control group animals.



Kemtrace® Optimax

Composition

- Calcium, Phosphorus, Magnesium,
- Zinc, Copper, Cobalt, Manganese, Chromium, Iron and Iodine
- Vitamin A, D3 and E

Benefits for Every Phase of Animal Life

Calf : Essential Metal Propionates for better growth

Heifer : Essential Metal Propionates for right time conception

Lactating : Essential Metal Propionates for optimum peak & sustained milk production

Recommended Usage :

Category	Per day/animal or Feed
Lactating Animals	50 g - 100 g
Heifers	20 g
Calves	10 g
Feed	1 kg per Quintal

Please Consult Kemin Personnel for Specific Dose for your animals. Dosage can vary depending upon the lactation stage of the animal.

Presentation

1 kg pack

KEMIN

Location : Gazipur

+91-9466939165, +91-8638801864

mail.india@kemin.com | www.kemin.com

FAMlqs
FAMlqs

CERTIFIED
ISO 22000

CERTIFIED
FSSC 22000

GFSI
Global Food Safety Initiative

FSC 22000

ISO 9001:2015
BUREAU VERITAS
CERTIFIED

GREAT PLACE TO WORK
CERTIFIED
INDIA