

ORAL-PRO™

Vitamin D3 *plus* E500 Dispersible Liquid Concentrate

Highly Concentrated Vitamin D3 *plus* E500 Supplement
for Oral Use in Baby Pigs and
in Drinking Water of Nursery and Finishing Pigs



32 OZ. BOTTLE — REORDER NO: 21018

Aurora Pharmaceutical, LLC
NORTHFIELD, MINNESOTA 55057
888-215-1256
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IN 50-1305
06/2013
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FEATURES AND BENEFITS

- Flexible dosing as a 1 mL oral product for baby pigs or diluted in a stock solution at 2–4 ounces per gallon for administration to nursery and finishing pigs.
- Unique, water-stable emulsion for easy mixing in water.
- Minimum 40,000 IU per mL of vitamin D3 to meet the piglets' needs in the farrowing crate.
- Provides vitamin E to reduce the oxidative effects of iron dextran when given at processing.

ORAL-PRO™ Vitamin D3 <i>plus</i> E500					
Dose	Vitamin D Blood Levels Day 0, 5, 12 and 19 by IU Using RIA				5-Day Treatment
	Day 0	Day 5	Day 12	Day 19	Total Cost/16# Pig
2 oz./gallon	14	44	31	32	4 cents
4 oz./gallon	14	63	45	37	8 cents



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Aurora Pharmaceutical Research Summary

Vitamin D supplementation in pigs has become nutritionally important due to the lack of sunlight in modern pork production. D3 is the preferred form of vitamin D over the plant-based D2, which has poor bioavailability in pigs. Many supplemental vitamin D products have recently emerged on the market. ORAL-PRO Vitamin D3 plus E500 is one such product. It is easy to give as a 1 mL pump in the mouth of the piglet or delivered in the drinking water to nursery age pigs. Comparison with competitor products given at label directions showed ORAL-PRO Vitamin D3 plus E500 was superior in raising and maintaining higher vitamin D serum blood levels (data not shown). Aurora Pharmaceutical has the following research and field trial data to support our dosage recommendation of 2 to 4 oz. per gallon stock solution to maintain normal (25–30 ng/mL)¹ vitamin D3 blood levels. In both studies below, typical nursery ration levels of vitamin D3 were present in the feed.

¹ Goff, JP; Horst, L; Littlelike, ET, Effect of sow vitamin D status at parturition on the vitamin D status of neonatal piglets. J Nutr. 1984; 114:163–169.

Dose titration study nursery

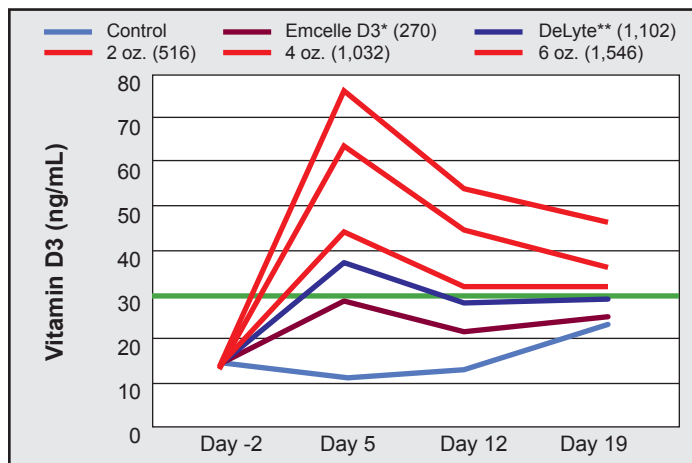
Table 1. Average serum levels of Vitamin D3 by dose and day. X (Emcelle D3) and Y (DeLyte) are competitor products.

Serum (ng/mL)	Dose: oz./gal. stock solution (IU/mL/day)					
	Con (0)	X (270)	Y (1102)	2 (516)	4 (1032)	6 (1546)
Day -2	14	15	15	15	13	13
Day 5	11	29	37	44	63	77
Day 12	13	21	28	32	45	53
Day 19	22	25	29	32	37	47

Take home message from this research:

- Vitamin D3 in feed (Con-0) does not get pigs to normal blood levels at a time in the nursery when the immune system is challenged through vaccination and/or disease organisms.
- Product X (Emcelle D3) given at label directions does not result in normal vitamin D3 levels.
- Product Y (DeLyte) should be similar to ORAL-PRO Vitamin D3 plus E at 4 oz./gallon stock solution. These data show there is a problem with bioavailability and absorption. This product does not deliver.
- ORAL-PRO Vitamin D3 plus E does reach normal blood levels at the recommended dose of 2–4 oz./gallon stock solution metered at 1:128.
- Optimal dose levels (2–4 oz./gallon) depend on the starting level of serum vitamin D3 in the wean pig. Our recommendations are:
 - Less than 9 — use 4 oz./gallon of stock solution for 7 days.
 - 9 to 14 — use 3 oz./gallon of stock solution for 7 days.
 - Greater than 14 — use 2 oz./gallon of stock solution for 7 days.

Nursery pig vitamin D3 serum levels



* Emcelle D3 — registered trademark of Stuart Products.
 ** DeLyte — registered trademark of Ralco Animal Health.

USES:
 For use in swine as a supplement during periods of reduced feed intake or stress.

INGREDIENTS:
 Vitamin D3, min greater than or equal to 40,000 IU/mL
 Vitamin E, min greater than or equal to 500 IU/mL

OTHER INGREDIENTS:
 Water, PEG 400 MO, propylene glycol, polysorbate 80, ethyl lactate, potassium sorbate, BHT.

DIRECTIONS FOR USE IN BABY PIGS:
 Administer 1/2–1 mL dose orally at processing. Each 1 mL dose delivers a minimum of 40,000 IU of Vitamin D3 and 500 IU of Vitamin E activity, suitable as a one-time supplement in baby pigs.

DIRECTIONS FOR USE IN NURSERY AND FINISHING PIGS:
 Mix 2–4 oz. of ORAL-PRO™ Vitamin D3 plus E500 liquid per gallon of stock solution, delivered at 1 oz. per gallon of drinking water in nursery and finishing pigs as a supplement. Use for 5–7 days.

WARNINGS:
 For oral animal use only. Keep out of reach of children. Store at 20°–25° C (68°–77° F). Excursions permitted between 15°–30° C (59°–86° F). Do not freeze. Shake well before using. Keep out of direct sunlight. Duration of use not to exceed 7 consecutive days.

TAKE TIME OBSERVE LABEL DIRECTIONS

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Vitamin D3 plus E500

Dispersible Liquid Concentrate

Highly Concentrated Vitamin D3 plus E500
 Supplement for Oral Use in Baby Pigs
 and in Drinking Water of
 Nursery and Finishing Pigs

For Oral Animal Use Only

32 fl. oz. (946 mL)



USOS:
 Para su uso en cerdos como un suplemento durante períodos de ingesta de alimento reducida o estrés.

INGREDIENTES:
 Vitamin D3, min mayor o igual a 40,000 IU/mL
 Vitamin E, min mayor o igual a 500 IU/mL

OTROS INGREDIENTES:
 Agua, PEG 400 MO, propylene glycol, polysorbate 80, ethyl lactate, potassium sorbate, BHT.

INSTRUCCIONES PARA EL USO EN LOS CERDOS DEL BEBÉ:
 Administrar 1/2–1 mL por vía oral en dosis de procesamiento. Cada dosis de 1 mL proporciona un mínimo de 40,000 UI de vitamina D3 y 500 UI de actividad de la vitamina E, adecuado como complemento de una sola vez en los lechones.

INSTRUCCIONES PARA EL USO EN LOS VIVEROS Y LOS CERDOS DE ACABADO:
 Mezclar 2–4 oz. de ORAL-PRO™ Vitamin D3 plus E500 líquido por galón de solución stock, entrega en 1 oz por galón de agua potable en vivero y cerdos de cebo como complemento. Uso durante 5–7 días.

ADVERTENCIAS:
 De animales por vía oral únicamente. Mantener fuera del alcance de los niños. Almacenar a 20°–25° C (68°–77° F). Permiten variaciones entre 15°–30° C (59°–86° F). No congelar. Agite bien antes de usar. Manténgase fuera de la luz solar directa. La duración del uso de no más de 7 días consecutivos.



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