



CrysVital® EO

Essential Oils Cocrysal for precise nutrition
water soluble, stable and efficient



Benefits



Improve intestinal health and efficiency of nutrient absorption



Boost immunity, promote growth and reduce mortality



Enhance antioxidation stress response, improve animal health and production efficiency

Usage guidelines

Product	Active Ingredient	Suggested Dosage*
CrysVital® EO15	Carvacrol \geq 7.5% Thymol \geq 7.5%	Pig feed : 150-300 g/t Poultry feed : 100-150 g/t Aquatic feed : 400-500 g/t
CrysVital® EO25	Carvacrol \geq 12.5% Thymol \geq 12.5%	Pig feed : 100-300 g/t Poultry feed : 60-100 g/t Aquatic feed : 200-300 g/t

*Adjust usage amount as needed based on specific application needs.



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Introduction

CrysVital® EO is a patented product developed using cocrystal technology, containing 50% active ingredients of Thymol/Carvacrol. Essential oil cocrystals are created through the crystalline structure formed by the interaction of active essential oil molecules with cofomer molecules via non-covalent bonds, where each essential oil molecule is securely held in the lattice.

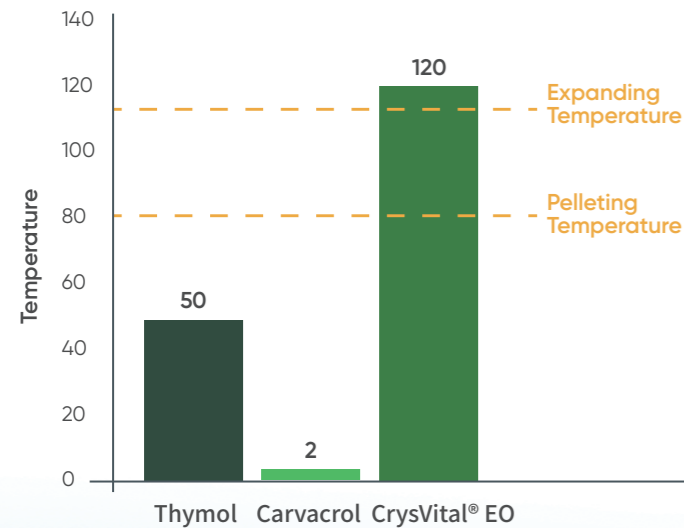
The cocrystal formulation plays a significant role in enhancing the solubility, bioavailability, and stability of the essential oils, leading to effectively improved efficacy and performance.

Product Features

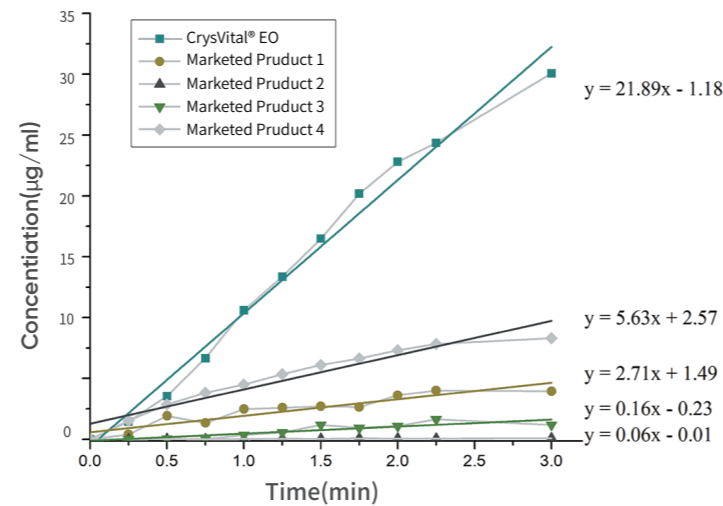
 Melting point increases from 2°C to 120°C; low volatility ensures high residue content during feed processing and storage

 Dissolution rate increases by a hundredfold, fully soluble in water in second

Melting point increases to 120°C



Higher solubility



Animal Tests

I Application of CrysVital® EO on Broiler

Experimental conclusion: Application of CrysVital® EO (effective essential oil content is 15 mg/kg) significantly increases the average daily weight gain of broilers and reduces the FCR.

Effects of CrysVital® EO on Broiler Growth Performance

	Control Group	EO10 10 mg/kg	EO15 15 mg/kg	EO20 20 mg/kg
1 d Weight/g/bird	45	45	45	45
42 d Weight/g/bird	2596.13 ^b	2616.75 ^{ab}	2637.50 ^a	2620.88 ^{ab}
ADG/g/d	60.74 ^c	61.23 ^b	61.73 ^a	61.33 ^{ab}
ADFI/g/d	90.81 ^b	90.92 ^{ab}	90.99 ^{ab}	91.43 ^a
FCR	1.50 ^a	1.48 ^{ab}	1.47 ^b	1.49 ^a

Experimental animals: 24400 1-day-old AA commercial broilers; The amount of essential oil added in the experimental group is the effective essential oil content provided by CrysVital® EO; Experimental period is 42 days, Different subscript letters indicate significant differences (p<0.05). The experimental collaborators: shandong Agricultural University.

II Application of CrysVital® EO on Weaned Piglets

Experimental conclusion: Application of CrysVital® EO (effective essential oil content is 45 and 60 mg/kg) increases the weight of weaned piglets and reduces the diarrhea rate.

Effects of CrysVital® EO on Growth Performance of Weaned Piglets

	Control Group	EO30 30 mg/kg	EO60 60 mg/kg	EO120 120 mg/kg
Weight/kg				
Day 1	7.90	7.88	7.88	7.93
Day 28	13.27 ^b	14.40 ^{ob}	15.63 ^a	13.85 ^{ob}
Diarrhea rate /%				
Day 1-28	20.97	20.36	19.62	17.47

	Control Group	EO30 30 mg/kg	EO45 45 mg/kg	EO60 60 mg/kg
Weight/kg				
Day 1	5.80	5.80	5.81	5.81
Day 28	12.80	12.93	13.53	13.77
Diarrhea rate /%				
Day 1-28	14.44 ^a	12.05 ^{ob}	10.11 ^{bc}	8.01 ^c

* Experimental animals: 80 ternary hybrid weaned piglets with an initial weight of 7.9 kg; Zinc oxide was not added to the basic diet; The amount of essential oil added in the experimental group is the effective essential oil content meter provided by CrysVital® EO; The experimental period is 28 days; Different subscript letters indicate significant differences(p<0.05); The experimental collaborators: Shanxi Agricultural University.

* Experimental animals: 120 21-day-old ternary hybrid weaned piglets; The amount of essential oil added in the experimental group is the effective essential oil content meter provided by CrysVital® EO; The experimental period is 28 days; Different subscript letters indicate significant differences (p<0.05); The experimental collaborators: jiangxi Agricultural University.

III Application of CrysVital® EO on Laying Hens

Experimental conclusion: Application of CrysVital® EO (effective essential oil content is 25 mg/kg) significantly increases the protein height and Hasselblad unit of eggs.

Effects CrysVital® EO on Egg Quality

2-Week	Control Group	EO25 25 mg/kg
Albumen Height(mm)	5.66±0.22 ^b	7.48±0.31 ^a
Egg Yolk Color	8.25±0.22	8.50±0.14
Hauh Unit	72.39±2.14 ^b	84.46±1.49 ^a

Experimental animals: 1200 Hailan brown laying hens The amount of essential oil added in the experimental group is the effective essential oil content meter provided by CrysVital® EO; The experimental period is 4 weeks Different subscript letters indicate significant differences (p<0.05). The experimental collaborators: shandong Agricultural University.