



Feed Biosecurity

Prevent Bacteria and Virus Contamination

Acidify your feed with

Orgacids[®]

Feed poses a serious biosecurity risk that expose the farm animals to potential disease transmission and affect animal performance.

Organic acids have been used in animal nutrition for several decades and are a key part of ensuring feed preservative and safety. It is the most cost effective and eco-efficient performance enhancing option available to the feed industry to date¹.

Orgacids[®] is an acid compound containing a balanced amount of formic acid, lactic acid, malic acid, tartaric acid, citric acid and orthophosphoric acid with min. 36% total acid content.

The organic acids blend has a wide spectrum of pKa values effective against a wider range of microbial species, prevent feed from pathogenic contamination, maintain feed nutrients value and ensure animal performance.

Antimicrobial activities of Orgacids[®]

	Concentration of Orgacids [®]									Minimum Inhibitory Concentration (MIC)
	0.00%			0.15%			0.20%			
Plate No. (Triplicate)	1	2	3	1	2	3	1	2	3	
Bacteria										
<i>S. enteritidis</i>	+	+	+	-	-	-	-	-	-	0.15%
<i>S. typhimurium</i>	+	+	+	+	+	+	-	-	-	0.20%
<i>E. coli</i>	+	+	+	-	-	-	-	-	-	0.15%
<i>Enterobacter</i>	+	+	+	-	-	-	-	-	-	0.15%
<i>Bacillus subtilis</i>	+	+	+	+	+	+	+	+	+	>0.20%
<i>Klebsiella pneumoniae</i>	+	+	+	-	-	-	-	-	-	0.15%
<i>Campylobacter jejuni</i>	+	+	+	-	-	-	-	-	-	0.15%
VRE	+	+	+	+	+	+	-	-	-	0.20%
<i>L. monocytogenes</i>	+	+	+	-	-	-	-	-	-	0.15%
<i>Staphylococcus aureus</i>	+	+	+	-	-	-	-	-	-	0.15%
<i>Rhodococcus</i>	+	+	+	-	-	-	-	-	-	0.15%
<i>Corynebacterium</i>	+	+	+	+	+	+	+	+	+	>0.20%
<i>Gamma-Streptococcus</i>	+	+	+	-	-	-	-	-	-	0.15%
<i>Alpha-Streptococcus</i>	+	+	+	+	+	+	+	+	+	>0.20%
<i>Beta-Streptococcus</i>	+	+	+	-	-	-	-	-	-	0.15%
<i>Proteus</i>	+	+	+	+	+	+	+	+	+	>0.20%
<i>Pseudomonas aeruginosa</i>	+	+	+	+	+	+	+	+	+	>0.20%
<i>Actinobacillus</i>	+	+	+	-	-	-	-	-	-	0.15%
<i>Acinetobacter</i>	+	+	+	-	-	-	-	-	-	0.15%
<i>Serratia marcescens</i>	+	+	+	-	-	-	-	-	-	0.15%
+: growth										
-: no growth										

Dr. Zunita et al. 2003 UPM²

Dietary acidification with organic acids has been shown to inhibit the growth of pathogenic agents like Salmonella and E. coli, ensuring optimal animal performance. Moreover, constant treatment with organic acids has a residual protective effect in feed, which help to reduce recontamination.

Antimicrobial Activities of Orgacids[®] in Feed



***Veterinary Research Institute, Ipoh, Malaysia (Dr. Maria, 2003).**

In an in vitro experiment where the feed was spiked with Salmonella Enteritidis (SE) at the concentration of 10^4 CFU/mL, supplementation of Orgacids[®] effectively controlled the growth of SE and has a residual effect on the feed (Table).

The Growth of SE in XLT4 Agar:

Hours	4	8	24	48	72	96	120
Treatment	+++	+++	++	–	–	–	–
Control	+++	+++	+++	+++	+++	+++	+++

+++ SE growth on XLT4 agar

– No SE growth on XLT4 agar

In the commercial feed mill, a similar result has been replicated (Table)

Detection of Salmonella spp in the Feed Mill

	Pre-treatment	Post Treatment (Orgacids [®] 0.2%)		
		Day 1	Day 14	Day 28
Mixer	+++	–	–	–
Silo	+++	–	–	–

+++ Positive detection of Salmonella spp

– No Salmonella spp detected

A constant and consistent treatment with Orgacids[®] protects the feed from pathogenic contamination.

Composition

Formic acid, Lactic acid, Malic acid, Tartaric acid, Citric acid and Orthophosphoric acid.
Total Acids > 36%

Indications

- Acidity Regulators – adjust the pH of feeding stuffs and GIT.
- Control of pathogenic organisms in animal feed and GIT.
- Stabilizes gut microflora eubiosis.
- Improvement in weight gain and FCR.

Route of Administration

Mix into feed.

Dosage

Swine	Orgacids®	Poultry	Orgacids®
Sow	1.0 kg/ton feed	Broiler	1.5-2.0 kg/ton feed
Pre-Starter	2.0 kg/ton feed	Layer	1.5-2.0 kg/ton feed
Starter	1.5 kg/ton feed	Native Chicken	2.0 kg/ton feed
Grower-Finisher	1.0 kg/ton feed	Duck	2.0 kg/ton feed

Withdrawal Period

No withdrawal period required

Packaging

25kg

Reference:

1. FEFANA Publication – Organic acids in animal nutrition 2014_08_20-BOOKLET-OA.
2. Zunita et al. In Vitro Study on the Antimicrobial Activities of Orgacids® Against Some Important Bacteria. 2003.

Manufactured and distributed by,
Sunzen Corporation Sdn Bhd
199801014339

Lot 11, Jalan Anggerik Mokara 31/47,
Kota Kemuning, 40460 Shah Alam,
Selangor Darul Ehsan, Malaysia



+6.03.5122.9333
+6.03.5525.1996 (Fax)



www.sunzencorp.com



info@sunzen.com.my