

Advanced Hydrophilic Emulsifier

SOLMAX[®] 50



High HLB
Value

Best Solution
to replace energy

Well Soluble
in GIT

Enhanced
Fat Digestion

Introduction

SOLMAX[®] 50 is the advanced hydrophilic emulsifier to improve the digestibility of fats, proteins, carbohydrates, etc. in feed[especially fatty acid]. SOLMAX[®] 50 contains sodium stearyl - 2 - lactylate and has highest HLB value, so it is well soluble in water and well dispersible in GIT than lipophilic emulsifier.

Benefits

01 High HLB Value

- Well soluble in GIT
- Similar with natural emulsifier
- Helps emulsification process

02 Feed Cost Saving

- Reduces the metabolizable energy in feed formulation
- Replace some of oil quantity

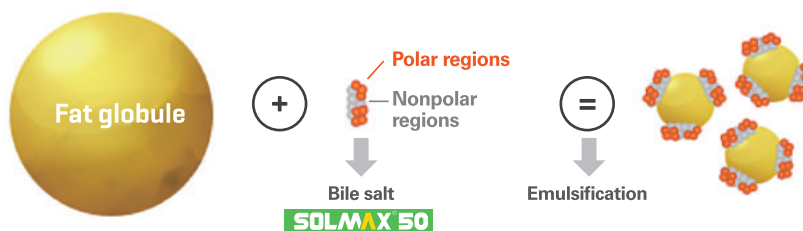
03 Performance Improvement

- Increases body weight gain
- Improves FCR
- Improves fat digestibility
- Improves Production index

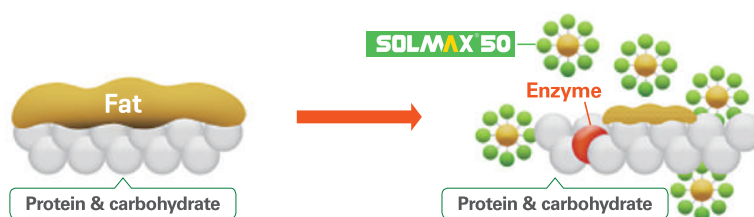
Mode of action

- SOLMAX[®] 50 can make fat droplet size down and extend surface with bile salt to improve efficiency of lipase.
- SOLMAX[®] 50 can help to form micelle more easily, so it can improve the efficiency of fat absorption.
- SOLMAX[®] 50 can improve the digestibility for protein and starch by removing lipid membrane.

Fat Emulsification and Fatty Acid Absorption

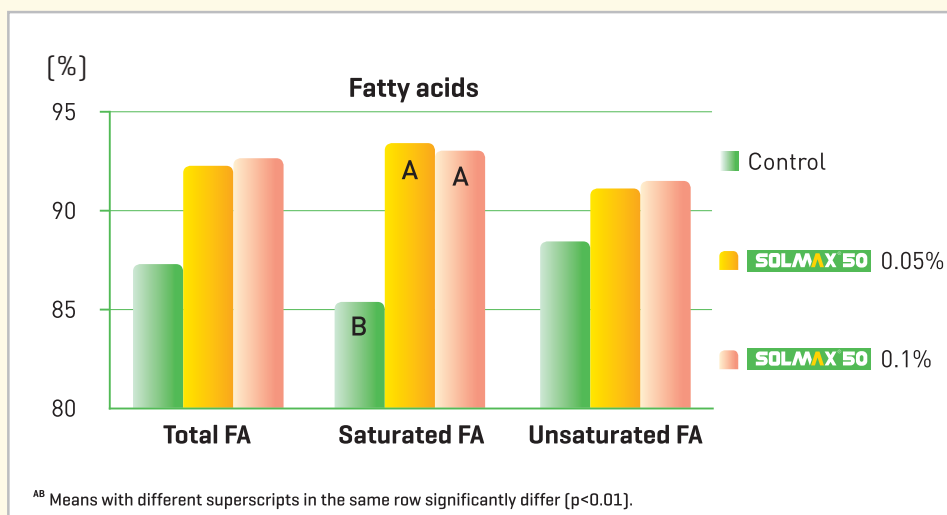
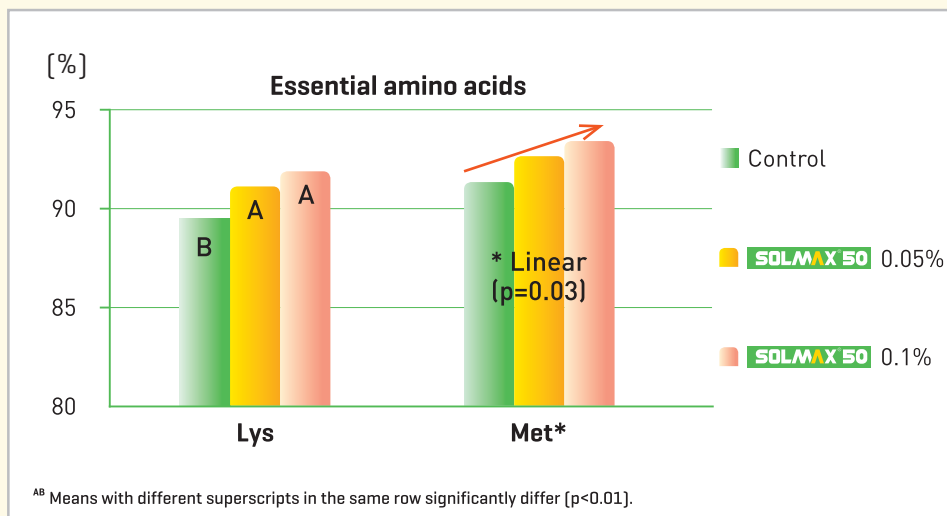


Increase digestibility of Nutrients



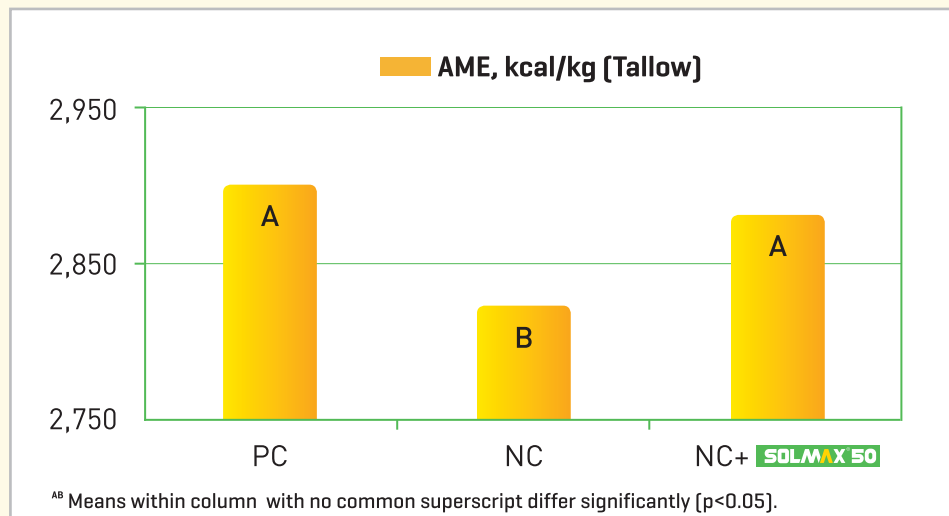
Apparent Ileal Digestibility Test

- A total of 12 growing pigs [BW 22.95 ± 1.45kg]
- Experimental design : 3 dietary treatments with 3 replicates with 4 pigs/replicates
 - Control : Basal diet (Tallow, 3265kcal ME/kg)
 - Treatment 1 : Control + SOLMAX[®] 50 0.05%
 - Treatment 2 : Control + SOLMAX[®] 50 0.1%

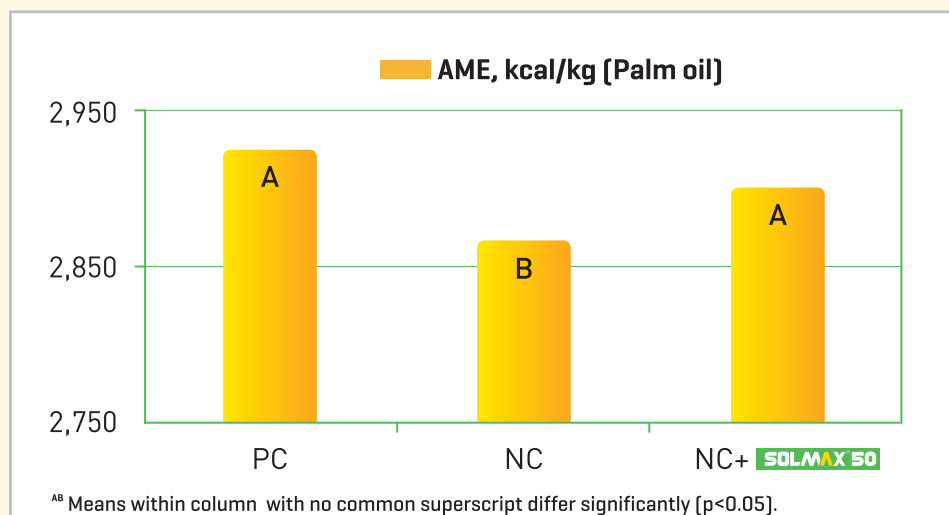


Apparent Metabolizable Energy Test

- A total of 90 one-day-old chicks [BW 44.0g]
- Experimental design : 3 dietary treatments with 6 replicates with 5 heads/replicates
 - PC : Control diet [Tallow : 4.22%]
 - NC : PC-1% oil
 - Treatment : NC + SOLMAX[®] 50 0.05%

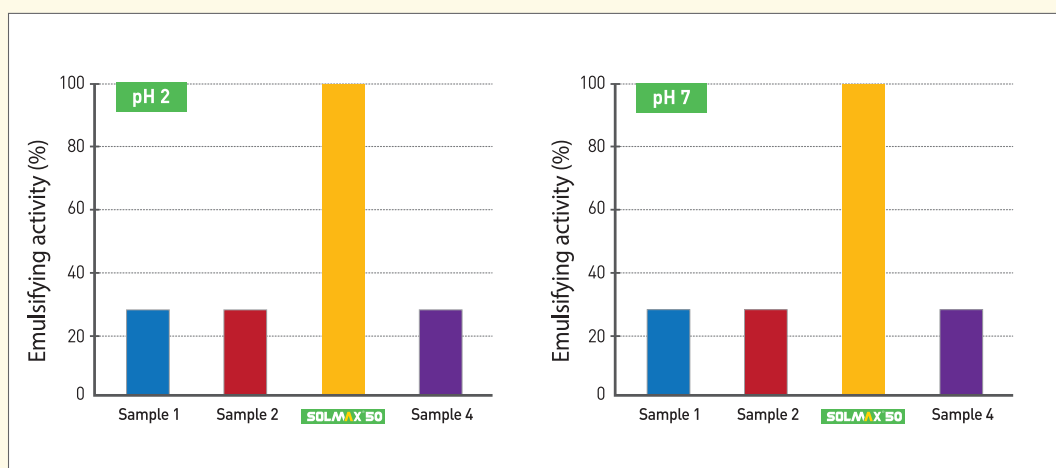
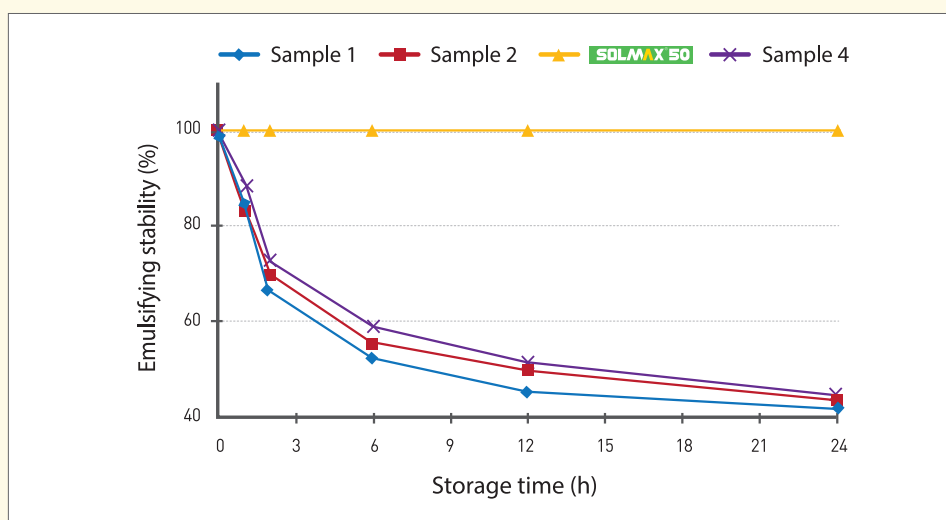


- A total of 90 one-day-old chicks [BW 44.0g]
- Experimental design : 3 dietary treatments with 6 replicates with 5 heads/replicates
 - PC : Control diet [Palm oil : 4.22%]
 - NC : PC-1% oil
 - Treatment : NC + SOLMAX[®] 50 0.05%



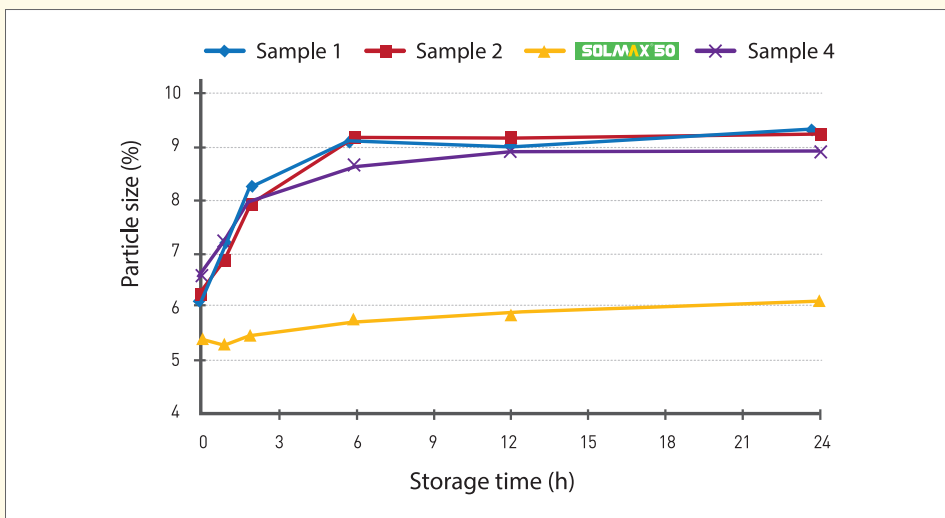
SOLMAX[®] 50**Emulsification test**

1. Emulsifiers were mixed with soybean oil and deionized water [pH 7.0].
The ratio of emulsifier, soybean oil, and deionized water was 5:30:65 [% , w/w].
2. The temperature of mixtures was adjusted to 40°C using water bath controlled thermostatically.
3. Homogenized at 8,000 rpm in a probe type homogenizer. The resulting emulsions were stored at 20°C for 24 h.

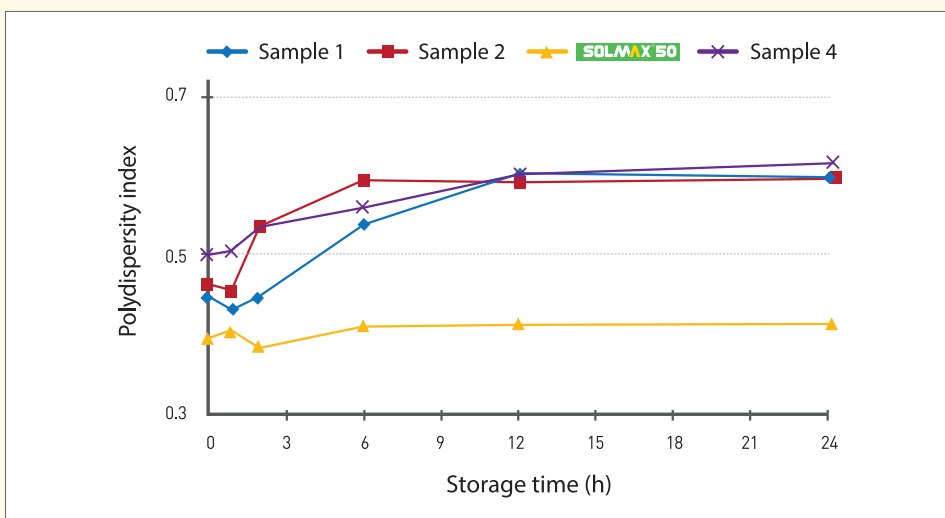
Emulsifying Activity by pH**Emulsifying Stability**



Droplet (particle) Size



Polydispersity Index



SOLMAX[®] 50

Indication	<ul style="list-style-type: none"> ▶ The fat amount in feed can be reduced. [cost saving effect] <ul style="list-style-type: none"> • Improvement of growth performance • Improvement of fat digestibility ▶ Improvement of meat quality and performance for animal products <ul style="list-style-type: none"> • Increase of edible meat
Recommendation	Swine, Poultry, Cattle 0.5~1kg/tone of complete feed Aqua feed 0.5~2kg/tone of complete feed
Package	20kg paper bag



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