Composition

	Grams/ Kilo-gram	Percentage by weight
DINASAL DRY		
Propionic acid, Ammonium Di-propionate & Formaldehyde	500	50
Total Active	500	50
Carrier	500	50
Total	1000	100
DINASAL LIQUID		
Propionic acid, Ammonium Di-propionate & Formaldehyde	1000	1000

As additional security, in addition to treatment of feeds and raw materials, mix DINASAL with 3-4 tons of corn or rice hulls at the rate of 40 kg per ton and run through entire mill system to disinfect circuits

DISCARD MATERIAL AFTER USE

Depicted above is *S. typhimurium* which is able to invade the epithelial cells of the intestinal tract, survives the intracellular defense mechanisms of the host cell, and multiply thereafter.

Product Specifications

SPECIES	Poultry, pigs, cattle.
EFFICACY	Effective as a bactericide.
PRECAUTION	Avoid skin contact, inhaling dust or liquid vapors or consumption.
PACKING	**DRY**-25 kg. multi layer paper bags with inner polyethylene/ aluminum lining or 20 kg pails. **LIQUID** 208.1 gallon plastic drum or 7 gallon plastic pail
STORAGE	Should be stored in a dry, dark, cool place. Avoid temperatures above 39C.
STABILITY	One year in original factory package. *Normally stable*
USE AND DOSE	Add to animal feed in feed mixer; to meat meal and/or fish meal as soon as possible after processing. Add DINASAL Dry at 2-5 kg/ mt, DINASAL Liquid at 1-2.5 kg/mt. in mixed feeds, meat meals, and/or fish meals.

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"A Dynamic Approach to Nutri-Agri Product Research and Technology Development"

DINATEC

Quality You Can Trust

DINASAL

Advanced highly efficacious Salmonella inhibition technology

Salmonella

How DINASAL works

Through its unique blend of highly effective active ingredients and surfactants, **DINASAL** easily penetrates the bacteria cell wall membrane and passes into the cytoplasm. The ensuing bacterial breakdown into anions and cations results in rapid acidification of the cytoplasm which interferes with DNA, RNA, protein synthesis and various other intercellular functions, killing the Salmonella organism.

DINASAL...

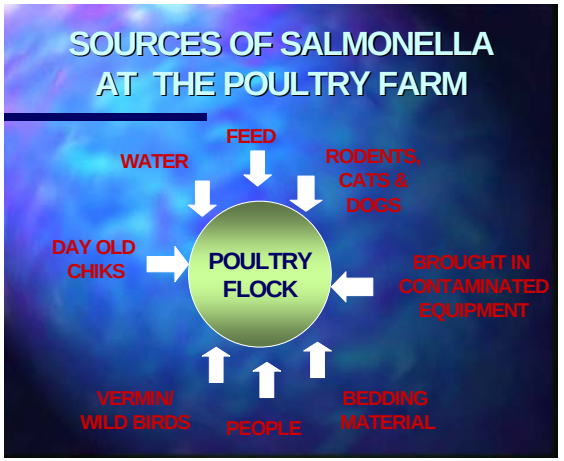
- Will not interfere with the animals physiology or immune system.
- Will not interfere with vaccination
- programs,
- At 2-5 kg/ton, all naturally occurring *salmonella* organisms die within 48 hours,
- Kills over 99% of *salmonella* species in 24 hours,
- Continues to work effectively after 24 hours to help prevent recontamination
- Eliminates *salmonella* from the finished feed and raw materials.

Salmonella enteritidis

Common Symptoms in Humans

- In most cases poultry eggs are the culprit. Illness lasts 4 to 7 days, most persons recover without antibiotic treatment.
- Symptoms start 12 to 72 hours after consuming contaminated food or beverage. They are fever, abdominal cramps & diarrhea which can be severe enough to require hospitalization.
- The elderly, infants and those with impaired immune systems may be affected severely. In these patients, the infection may spread from the intestines to the blood stream and then to other body sites and can cause death unless treated promptly with antibiotics.

Sources of Contamination	**DINASAL** Action
Fish meal, offal, meal and bone, Soya, etc.	Immediate kill of contaminating microorganisms and prevention of recontamination
Lorries, storage bins, hoppers, augers, etc.	Long-term protection due to the non-volatile nature of the product
Contaminated feed, litter, housing, etc.	In-bird effect helps prevent *salmonella* from infecting bird
Food processing areas, cleaning and packaging	*Salmonella, Listeria and Campylobacter*– free feces will minimize the risk of food contamination



Salmonella require moisture

Guidelines for moisture control:

- Keep feed materials dry at all times.
- Keep roofs and ceilings leak-proof.
- Construct storage area walls and floors in such a manner as to keep out moisture.
- Avoid or correct conditions conducive to the formation of condensation in buildings and equipment. Poorly insulated pipes in the receiving area of the feed mill can result in condensation which will contribute to the spread of bacteria.
- Keep ingredients, finished products, containers, storage areas, and transporting vehicles as dry as possible to prevent growth of Salmonella.