

TECHNICAL DATA SHEET – Bacvir

Digest Swine

Natural feed additive – Detoxification and digestive improvement in pigs

1. Product Description

Bacvir Digest Swine is a natural additive based on activated and micronized clinoptilolite , developed to improve digestive health, nutrient absorption and the sustainability of pig production.

Its main action is based on:

- Adsorption of mycotoxins and heavy metals
- Regulation of intestinal pH
- Reduction of ammonia excretion
- Improving production performance and biosecurity

Certified product for organic livestock farming (ECOCERT).

2. Chemical and Mineralogical Composition

Mineralogical Composition (XRD – Aristotle University of Thessaloniki)

Component	% by weight
Clinoptilolite (HEU type zeolite)	90%
Varieties of SiO ₂ (quartz , cristobalite, tridymite)	5%
Mica (muscovite)	3%
Feldspar (plagioclase)	2%

Chemical Composition (XRF – National Technical University of Athens)

Component	% by weight
SiO ₂	64.55%
Al ₂ O ₃	12.87%
TiO ₂	1.15%
Fe ₂ O ₃	1.65%
CaO	3.72%
MgO	0.91%
No ₂ O	2.01%
K ₂ O	2.57%
LOI (Loss on Ignition)	10.57%

3. Physical Properties

Property	Value
Apparent density	0.85 – 1.1 g/cm ³
Particle size	50 – 300 μm
Surface area	25 – 45 m ² /day
Cation exchange capacity (CEC)	120 – 160 meq /100g
pH in aqueous solution	7.5 – 9.5

4. Benefits and Mechanism of Action (*without table*)

In the digestive tract:

- Adsorbs mycotoxins and metals heavy metals (aflatoxins , ochratoxins , zearalenone, lead , cadmium).
- It regulates intestinal pH, promoting a balanced microbiome.
- Reduces the incidence of diarrhea post-weaning up to 30%.

- Improves digestive efficiency and feed conversion (10–15% more meat with less feed).

In the production environment:

- NH_3 excretion by 25–30%.
- Reduces environmental pollution from slurry.
- Natural substitute for growth-promoting antibiotics.

In the final product:

- Increase in weight and quality of meat (+5–10%).
- Reduction of metabolic problems and improvement of animal welfare.

5. Applications and Dosages (*on the table*)

Oral administration – Incorporated into the daily ration.

Category	Recommended Dose
Piglets	0.5 – 1% of the daily ration
Breeding sows and boars	2% of the daily ration
Fattening pigs	1% of the daily ration
Digestive disorders (diarrhea, metabolic stress)	Double dose

Notes:

- Compatible with automated feeding systems.
- Mix well to ensure even distribution.

6. Safety and Toxicity

- No signs of acute toxicity (OECD 420).
- No macroscopic lesions were observed in organs or mucous membranes.
- GHS Classification : *Unclassified* .
- Cell viability greater than 90% (ISO 10993-5).
- It does not affect cell proliferation or monolayer integrity.
- Absorbs more than 99% of Pb, Cd, Cr and Cu in 2 hours.
- Minimal retention of heavy metals; does not release them into the body.

7. Presentation and Storage

- Format: High purity micronized powder.
- Packaging: 25 kg sacks and 1,100 kg Big Bags.
- Store in a dry and cool place.
- Avoid humidity and direct light.

8. Manufacturer Contact

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Manufactured by **Bacvir Animal Safety SLU**

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