

# Organic substances in optimal balance







# Bioma®

## A Swiss company with more than 30 years of international presence.

BIOMA is a company active in the production and marketing of "Chemical free" and "GMO free" solutions for the food industry, oenology, agriculture, environmental bioremediation, zootechnics and animal and human well-being.

Our products optimize all biological processes through indigenous microbiology and make it possible to reach an optimal balance in the involved biomass. We seek to reduce the environmental impact within each of the previously mentioned areas.

The purpose of BIOMA solutions is to optimize the processes while guaranteeing economic sustainability.







## Geolife<sup>®</sup> technology An innovative manufacturing and patented process.

Geolife<sup>®</sup> is a technology for the extraction and stabilization of organic compounds allowing the activation of our products. This technology makes our products unique, easy to use and safe for the user, animals and the environment.

## Kopros<sup>®</sup> C

## Better bio-balance of organic materials and their valorization

## What is Kopros® C?

Kopros<sup>®</sup> C is a complex biological catalyst for the activation of the composting process of poultry manure. Kopros<sup>®</sup> C enables the transformation mechanisms of manure and slurry to be activated and accelerated.

## How does Kopros® C work?

Microorganisms are applied to all areas where animal droppings are present (e.g. litter or manure pits, etc.). These stimulate the indigenous microbiological activity, accelerating the humification, mineralization and nitrification processes (composting process), in order to drastically reduce ammonia and other harmful gas emissions.

## What are the benefits?



## How to prepare it?



**Dosage:** Adapted to the number of livestock.

- Step 1: Rehydration phase (micro-organisms awakening).
- Step 2: Filtration and incorporation phase.
- **Step 3:** Activation phase.

### How to apply?



Volume of water: adapted to the surface (sq) Working pressure: max 2000 in  $H_2O$ Frequency of application: every 28 to 30 days Treated surface: any type of coating / litter

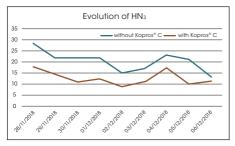
Possible use in the presence of animals

## A Kopros<sup>®</sup> for every farm



## Our results: Farm of 33'000 chickens

#### Ammonia measurement report

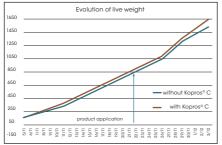


Measurement of ammonia (NH3) values	E without Kopros® C	F with Kopros® C
Average	20,4	12,5
Maximum value	29	18
Minimum value	13	9

### Evolution of ammonia emission measurements

Comparison between **room E** with 16,720 chickens without Kopros® C treatment and **room F** with 16,600 chickens treated with Kopros® C.

#### Weight increase



	Test	
	with Kopros®C	without Kopros®C
Date of slaughter	23/11/2018	24/11/2018
Number of chickens slaughtered	16 380	16 345
Average weight (kg)	1,84	1,67
CI (kg/kg)	1,70	1,69
GMQ (g/d)	45,99	42,6
Dermatitis (0-1)	75	41
Dermatitis (2-3)	25	59
Dermatitis (4-5)	0	0
% seized	0,88%	0,73%



### Manure analysis Henhouse in Switzerland (Canton of Fribourg)

Results			
Parameters	09.01.2020 Without Kopros® C	25.02.2020 Treated with Kopros® C	Unit
MS	31,2	70,7	%
MO	85,8	88,6	%
рН	7,4		

Manure analysis

Results			
Parameters	09.01.2020 Without Kopros® C	25.02.2020 Treated with Kopros® C	Unit
N tot.	42,2	41,5	kg/t MS
P <sub>2</sub> O <sub>5</sub>	22,1	19,4	kg/t MS
K <sub>2</sub> O	29,9	24,8	kg/t MS
Ca	19,2	18,3	kg/t MS
Mg	6,8	5,4	kg/tMS

Total fertilizer components

Results			
Parameters	09.01.2020 Without Kopros® C	25.02.2020 Treated with Kopros® C	Unit
N tot.	13,2	29,3	kg/t MF
P <sub>2</sub> O <sub>5</sub>	6,9	13,7	kg/t MF
K <sub>2</sub> O	9,3	17,5	kg/t MF
Ca	6,0	12,9	kg/t MF
Mg	2,1	3,8	kg/t MF

Total nutrients (volume)

## Product composition:

Dried and selected cultures of microorganisms on cereal and talc substrate.

## **Classification and** Labeling:

Chemicals are classified according to their level of physical, health and environmental hazard. These hazards are indicated by specific labels and safety data sheets (SDS). With the GHS (Globally Harmonized System), hazard statements have been worldwide standardized so that the recipients of the information (production workers, first aiders and consumers) can better understand the hazards of the chemicals used. In the EU, the principles of the GHS are ratified in the EU-1272/2008 (CLP) regulation. In accordance with this regulation, the Kopros<sup>®</sup> range must not be classified or labeled according to its physicochemical properties, its effects on the health and safety of the environment and is not required to submit a safety data sheet. The Kopros<sup>®</sup> range includes only organisms that are naturally present in nature and non-hazardous (WHO Class 1).

## **Compliance:**

The Kopros<sup>®</sup> range is compliant with the NFU 44-051 standard and compliant with the European regulation EC 834/2007 and the American Regulation NOP (National Organic Program). It can be used in organic agriculture according to FiBL Suisse and Ecocert.

#### Solar Impulse Efficient Solution

Kopros® has been selected by the Solar Impulse Foundation as one of the 1000 solutions to protect the environment in a cost-effective way.



ZERO EMISSIONS INFSTOCK FADMING

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#### Notes:

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