



TECHNICAL SPECIFICATION

ZOOTECHNICAL FLOUR

1. PRODUCT DESCRIPTION			
Technical name:	Zootechnical corn flour		
Trade name:	-		
Composition:	By-product obtained during the separation of the corn pericarp and germ.		
Classification:	Raw material for animal consumption		
Recommended use for the product	For use in animal feed		
2. PHYSICAL AND CHEMICAL CHARACTERISTICS			
PARAMETER	UNIT OF MEASURE	MINIMUM	MAXIMUM
Humidity	%	-	13
Density	g/L	350	550
Protein	%	8	-
Acid Detergent Fiber (ADF)	%	5	-
Neutral Detergent Fiber (NDF)	%	24	-
Fat	%	-	6,5
Minerals or ashes	%	-	3
Foreign material	%	-	1
Pest	-	Free of live pests	
3. GRANULOMETRY SPECIFICATION			
PARAMETER	UNIT OF MEASURE	MINIMUM	MAXIMUM
Retained on tyler 10 screen	%	-	15
4. SENSORY CHARACTERISTICS			
PARAMETER	SPECIFICATION		
Color	Cream to light yellow powder, depending on the corn source		
Odor	Free of strange and/or chemical odors		
Appearance	Free of whole grain or husk		
5. MICROBIOLOGICAL SPECIFICATIONS			
PARAMETER	UNIT OF MEASURE	MINIMUM	MAXIMUM
Coliforms	CFU/g	-	100
Escherichia coli	CFU/g	-	10
Salmonella	CFU/g	Negative	

6. NUTRITIONAL INFORMATION FOR ANIMALS

PARAMETER	UNIT OF MEASURE	MINIMUM	MAXIMUM
NUTRIENT			
Total Digestible Nutrients	%	75	81
Protein	%	8	-
Broiler Metabolizable Energy	kcal/kg	3120	3320
Metabolizable energy pigs	kcal/kg	3660	3860
Net Energy Gain (bovine)	kcal/kg	2060	2260
Net Energy Gain (lactating cattle)	kcal/kg	1760	1980
FIBER			
Detergent Neutral (FND)	%	24	-
Detergent Acid (FAD)	%	5	-
AMINO ACIDS			
Lysine	%	0,35	0,45
Methionine	%	0,17	0,25
Tryptophan	%	0,08	0,12
MINERALS			
Calcium	%	0,03	0,07
Phosphorus	%	0,45	0,65
Iron	mg/kg	57	77
Zinc	mg/kg	20	40

7. FOOD SAFETY STANDARDS*

PARAMETER	UNIT OF MEASURE	MINIMUM	MAXIMUM
MYCOTOXINS			
Aflatoxins	µg/kg	-	20
Vomitoxin	µg/kg	-	4000
Fumonisin	µg/kg	-	4000
Ochratoxin	µg/kg	-	100
Zeralenone	µg/kg	-	350
T-2 Toxin	µg/kg	-	100
PESTICIDES			
Pesticide residues	mg/kg	Must comply with the maximum tolerable residue (MRL, mg/kg) of the Codex Alimentarius for corn.	

7. EXPECTED SHELF LIFE AND STORAGE CONDITIONS

Being a dry product, it maintains its characteristics as long as it is stored in its original closed packaging, in a cool and dry place, free from moisture, dust, insects, rodents, and strange odors. The shelf life of this product is yet to be determined.



**8. PRODUCT LABELING
FOR TRACEABILITY**

The information on the product label must ensure its traceability.
The labeling of this product is yet to be determined, but will include information such as: batch, production and expiration dates, net content, and composition.

**9. PACKAGING, PACKING,
AND DISTRIBUTION
METHOD**

Presentations: Bulk or in 25 or 50 kg bags.
The packaging and packing of the product, whether in bags or in bulk presentation, must align with industrial safety considerations and good manufacturing practices. The transportation and distribution method must ensure the integrity and safety of the product.
The packaging, packing, and distribution method of this product are yet to be determined.

10. HISTORY OF CHANGES			
VERSION NUMBER	CHANGE DETAILS	AUTHOR	DATE
1	Initial Creation	Betzabeth Ramírez	07/03/2024

Prepared by: Betzabeth Ramírez	Reviewed by: Julio Araque	Approval date: 07/03/2024	Last review date: 07/03/2024
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