



# OF THE RAW MATERIAL

### BRF



- Animal genetics world reference
- Work as a partner of its farmers in the field
- Provides animals for the integrated farmers produces and delivers the complete feed
- Implements the process standards provides technical assistance and information management
- Sustainable production practices that ensure animal welfare

30K suppliers

BRF's integrated production system guarantees 100% traceable products, monitoring from the genetics of production of its animals, husbandry, to processing and industrialization.

### **Integrated Farmers**



- BRF process is standardized, audited and validated by its specialists
- Appropriated structure for animal husbandry
- Equipments BRF standard
- Works with exclusivity (full-time)

BRF's Integrated Production System

## **BRF** Ingredients



- Fresh raw material of BRF origin
- Extraction, processing and storage controlled and free of contamination
- Trained and specialized team
- Investment in research and development

Consistency of quality and delivery

# **CRUDE HEPARIN**

Crude heparin sodium is an active pharmaceutical ingredient (API), produced integrally from the mucosa swine and belongs to the family of glycosaminoglycans - linear long polymers, non-flexible and with non-branched chains, with negative charges, formed by the alternating repetition of an amino sugar unit and uronic acid. Some units in this chain are linked to sulfate molecules in a specific way.











#### TYPICAL APPLICATIONS

- Treatment and prevention of thromboembolism
- Cardiovascular surgeries
- Prevent stroke
- Attend pregnant women who need to be anticoagulated

- Avoid the formation of venous spots
- Cover surfaces of instrument in contact with fresh blood
- Renal clearance of blood for diabetic diseases

### **HOW IS IT DONE?**

The mucosa is extracted from pigs 100% approved by the Federal Inspection System (SIF in Portuguese) and with control of the entire production chain (BRF S/A), goes through a careful selection of quality analysis, it is processed through a aqueous enzymatic and chemical digestion, followed by isolation and purification stages.

### **TECHNICAL DATA**

Meets Pharmacopoeias: USP and EP.
Certified by GMP and FDA.
Characteristics: White powder; soluble in water.
Storage: Store in a closed package and below 40°C.

### **HEPARIN TRACEABILITY**

Pigs controlled and individually identified, enable the traceability of all raw material, from the reception of the animals to the extraction of the mucosa.

The swine mucosa is stored in specific and appropriate tanks according to this product needs. It is maintained in conditions that guarantee the quality of the raw material.

The mucosa is transported in dedicated fleet and exclusive to the BRF product, eliminating the risk of cross-contamination.

All information is available in the SAP system and ensure the record and reliability of the data.

# **CHONDROITIN SULFATE**

Chondroitin Sulfate is a natural supplement for health, produced from swine cartilage and/or from poultry, belongs to the family of glycosaminoglycans, responsible for the maintenance of cartilaginous cells of the body.

Produced naturally by the body, but necessary when the cartilaginous tissue is fragile.



### TYPICAL APPLICATIONS

- Regenerates cartilage and prevents degradation
- Reduces the pain and increases mobility
- Protects the joints
- Slows down the degenerative process
- Treatment of inflammatory joint processes

### **HOW IS IT DONE?**

The cartilage is extracted, packed and stored in conditions that guarantee the maintenance of quality.

Chondroitin sulfate is processed according to its origin, through enzymatic chemical hydrolysis, purified and packaged.

### **TECHNICAL DATA**

Certified by GMP.
Purity: Minimum 95%.
Characteristics: White powder.

Packaging: 25kg, aluminum bag, packaged in barrels. Storage: Store in a closed package and below 40°C.

### **ABOUT BRF**

BRF is one of the largest food companies in the world, created in 2009 by the association of Sadia and Perdigão, two of the largest consumer brands globally.

We are global leaders in the exportation of animal protein and we produce foods that reach more than 150 countries in five continents.

## WE PROCESS ANNUALLY 1.7 BILLION POULTRY AND 9.5 MILLION PIGS











6th Global animal feed producer

# **ABOUT BRF INGREDIENTS**

As a new business unit of BRF, we have tasked ourselves with the mission of improving quality of life globally, creating innovative and natural ingredients solutions. We aim to be a sustainable source for the creation of new solutions and technologies for health and nutrition applications.

We are committed to the highest international quality standards, ensured through a 100% integrated value chain, that is transparent and sustainable throughout.

As a new venture, we can rapidly prototype personalised and innovative solutions, with dedicated service and care for each client.

### **OUR BUSINESS DIVISIONS**



ANIMAL NUTRITION



FOOD INGREDIENTS



PLANT NUTRITION



HEALTH & WELL-BEING



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