

Petronet DeSulf[®]

Desulfuration of biogas



It is a compound based on iron oxides-hydroxides, as well as other functional oxides that Amapex has developed to be used directly in anaerobic digesters.

This product has been successfully applied in biogas plants, in Spain and Portugal. The reaction of this compound with H₂S generates Iron Sulfide, a component of common fertilizers used in agriculture.

CHEMICAL COMPOSITION:

- FeOOH 65,0 (±2).
- Fe₂O₃ 9,0 (±2).
- (Ion Fe 45%)
- SiO₂ 9,0 (±1).
- Al₂O₃ 4,0 (±1).
- MnO₂ 5,0 (±1).
- MgO 3,0 (±0,5).
- Otros óxidos < 2
- H₂O (humedad) < 2
- MgCO₃+CaMg (CO₃)₂ < 2

METALS TRACES (ppm):

- Co 35 (±15).
- Cu 25 (±15).
- Ni 70 (±20).

- V 60 (±20).
- Zn 50 (±20).

PHYSICAL CHEMICAL PROPERTIES

- **Apariencia:** Polvo rojizo micronizado. Alte superficie específica.
- **Tamaño de partícula:** 2,0µm (±0,20) (predominante).
- **Densidad aparente:** 1g/cm³ (±0,2).
- **pH:** 7(±2).

PRODUCT PRESENTATION:

- 25kg PP bags.
- Pallets of 40 bags (1000kg.)

➤ 1000Kg Bigbags.

Petronet DeSulf[®] does not contain any biological agent that can cause diseases to people, animals or plants.

Petronet DeSulf[®] PROMOTER OF H₂S REDUCTION IN THE ANAEROBIA DIGESTION

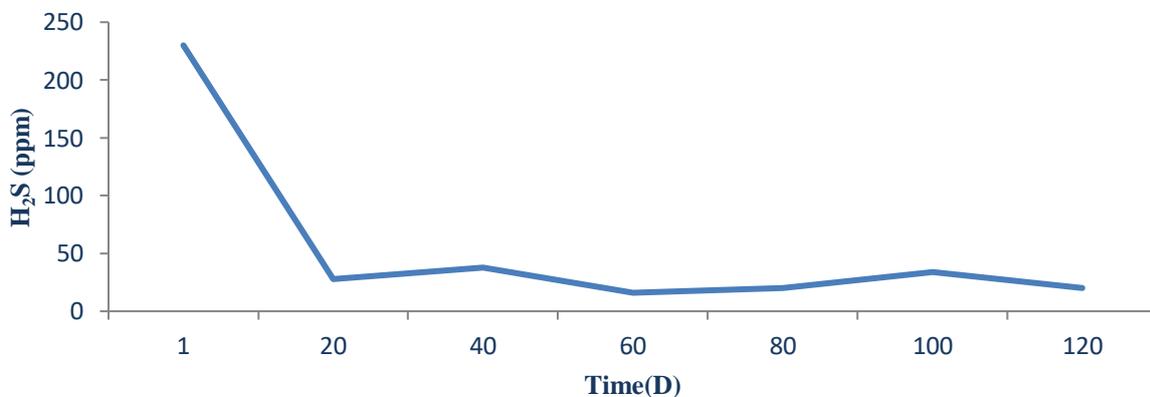
The biogas generation plants use essentially urban, agricultural or forest waste in definite organic matter in different phases of decomposition. These materials are placed in anaerobic conditions (absence of oxygen). The decomposition and fermentation of these materials produce a gas, which consists mainly of methane, which also contains various levels of hydrogen sulfide (H₂S), depending on the organic materials used.

The presence of hydrogen sulphide (H₂S) is harmful due to various aspects, due to its toxicity, its high corrosive power and, additionally, its influence on the life of the catalysts. The elimination or reduction to the minimum levels of the acid requires a specific intervention through which its toxicity and corrosivity are minimized.

ADVANTAGE:

- Clean and safe to use.
- It is added directly to the digester without the need for dosing systems.
- Economic and efficient method for desulfurization.
- Reduces corrosion damage to a minimum.
- Reduces equipment maintenance costs.
- Improves the characteristics of compost.
- No toxic products are generated, and additionally produces basic by-products to be used as fertilizers.
- No special storage required. Its use does not require specific training, since it does not involve the handling of dangerous substances. Stored in 25 kg paper bags, that can be added directly to the process without opening them.

H₂S reduction with Petronet DeSulf[®]



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