



## EIP-AGRI practice abstract

### Short title:

Struvite from waste water by "Canal de Isabel II S.A." process

### Summary:

Struvite is a crystal whose matrix is composed of magnesium, ammonium and phosphate ( $\text{NH}_4\text{MgPO}_4 \cdot 6\text{H}_2\text{O}$ ), which is formed when these three ions are present in the solution above its saturation point.

The main value of this product are:

- It has different marketable sizes.
- Complies with EU Fertilizer Regulations, registered under REACH.
- Presents the lowest salt index of any phosphorus source.
- Hardness similar to MAP or DAP.
- Slow release and therefore prepares the soil to improve uptake.
- Sustainably obtained from waste with the recovery of nutrients, proven to reduce leaching and help protect sensitive waterways.

This is a granular phosphorus fertilizer (99.6%), with the following features:

- Nutrients: Total P: 199; P-PO<sub>4</sub>: 155; N-NH<sub>4</sub>: 880; Mg: 19.3; Ca: 52.2 (mg/l). P<sub>2</sub>O<sub>5</sub> soluble in water: 1.3%, P<sub>2</sub>O<sub>5</sub> soluble in neutral ammonium citrate and water: 22.3%, P<sub>2</sub>O<sub>5</sub> soluble in mineral acids: 28.8%, Total nitrogen: 5.7%, Ammonia nitrogen: 5.5%, Nitric nitrogen: <1.0 (0.1%)
- Granulometries: SGN90, SGN150, SGN300 and SGN450, Dry matter: 58.4%, TSS: 0.63 g/l and pH: 7.82 organic matter (%): 0.30
- Other elements (% w/w.d.m): Soluble: MgO (1.79); K<sub>2</sub>O (0.3); Fe (<0.01); Mn (<0.001); Mo (0.002) B (<0.001); Total: MgO (16.35); K<sub>2</sub>O (0.4); Fe (0.028); Mn (<0.001); Mo (0.002) B (<0.001)
- Metals/metalloids: As <2.0 Cd<0.1, Cr total <5, Cu<8, Hg<0.1, Ni<2.0 Pb<0.2, Zn<2 mg/kg dry matter (except Cd, mg/kg P<sub>2</sub>O<sub>5</sub>)
- Salmonella and E. Coli: Absence

It is accepted as a fertilizer and being used in the USA, Canada, Taiwan, South Korea and in the UK and the Netherlands, in potato, beet, onion, turf and general gardening.

The recommended dose is 100 kg/ha.

For more information: [https://nutrیمان.net/farmer-platform/product/id\\_251](https://nutrیمان.net/farmer-platform/product/id_251)