

FeSfix by

BiogasJG

FeSfix is the latest generation product to deal with desulphurisation in anaerobic fermentation industry, developed in cooperation with German scientific institutions. It comes in powder form, working on the basis of FeO and Fe₂O₃, which binds hydrogen sulphide (H₂S) contained in ferments during the process of anaerobic fermentation in biogas plants.



It is well known that H₂S hinders the process of methanogenesis thereby also displacing trace elements necessary for methanogenic bacteria. This results in a significant drop in biogas production. Therefore, the target should be to put a desulphurisation process in place that allows the anaerobic bacteria to focus on methane production. Other desulphurisation methods based on the principle of adsorption by activated carbon or the addition of air into the fermenter, do not provide such an economic solution as **FeSfix**.

The most effective way of desulphurisation and trace elements dosing on the market

Benefits of **FeSfix**

- Formation of sulphides in ferments reduces H₂S in the gas phase and improves the process of methanogenesis since this process is no longer hindered by a high concentration of H₂S.
- Corrosive effects on concrete and metal parts of equipment are limited. Improved availability of trace elements to bacteria and as a consequence obtention of a higher biogas yield.
- There is no ferment salinity as in the case of other chlorides containing iron compounds.
- **FeSfix** does not contain any, highly toxic, Cr^{VI} as in the case of other (powder based) iron compounds.
- The actual sulphur remains in the digestate and is then applied to the soil as a valuable sulphur fertiliser.
- The high content of trace elements (Co, Ni, Cu, Mn, Zn, B, V, Al) in **FeSfix** optimises the process of anaerobic fermentation.
- The presence of Nickel in **FeSfix** enhances the formation of the F420 and F430 coenzymes, which are important carriers of hydrogen in the process of methanogenesis.
- Longer lifetime of oil in the co-generator and a reduction in dosing of trace elements lead to significant financial savings.
- **FeSfix** contains 50% iron allowing for a lower daily dosage, compared to other products containing Fe(OH)₃, Fe(OH)₂, or FeCl₃ where iron concentration ranges between 9 and 30%.
- **FeSfix** comes in big bags of 1,000 kg or biodegradable paper bags of 20 or 25 kg.

BiogasJG is a Dutch private limited company that supplies **FeSfix** to Biogas producers in the Benelux, United Kingdom, Ireland, Germany, France, Spain, Portugal and India.

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