



Energy –
Biogas
Production



Lohtragon®

Crystallizing Solutions

Info Sheet Lohtragon®

Energy – Biogas Production

Energy – essential for our daily life – is required for all natural processes as well as a source for heat, light and running equipment. The Lohtragon® metal salts contribute to a sustainable energy generation and storage across various types of energy. In many systems these high performance metal salts act as active component like in thermal energy storage and batteries. In other energy sectors metal salts are used as auxiliary materials and to optimize production processes. The Lohtragon® metal salt range focuses on the following applications:

- ◆ Thermal Energy Storage (TES)
- ◆ Battery Energy Storages (BES)
- ◆ Biogas Production
- ◆ Oil & Gas Production

Lohtragon® Info Sheets are available for each topic. Please **get in touch** with us for further details or discussing your individual challenge.

Biogas Production

The production of biogas – an organic renewable energy source – always generates toxic **hydrogen sulfide** as side product during the digestion process. A full range of iron based Lohtragon® metal salts is available to remove hydrogen sulfide for further use of the biogas. A selection can be made according to solubility and pH-value/level, depending on requirements.

Hydrogen sulfide is toxic, corrosive and flammable with a strong odor of rotten eggs. This short list of properties already implicates the main issues of this gas and the reasons why it has to be converted into an unproblematic substance as it is

- ◆ harmful to health
- ◆ destroying industrial steel tools
- ◆ forming sulfur dioxide when burnt, which is equally aggressive and harmful to health
- ◆ annoyingly smelling



Therefore, **hydrogen sulfide must be rapidly eliminated** in order to ensure

- ◆ safety at work
- ◆ respect health, safety and environmental standards
- ◆ efficient processes
- ◆ protection of the process tools
- ◆ level of hydrogen sulfide in biogas determines further use as there are limits for human exposure, for the use in gas engines (over acidification of oil, corrosion), and others

Lohtragon® Product Selector

Lohtragon® contributes to the requirements of eliminating hydrogen sulfide during the production of biogas primarily with:

- ◆ Lohtragon® C08 | Type 3 (aqueous solution)
- ◆ Lohtragon® C73 | Type 171 (granules)

In case of need for different type of products please **contact us**.

Energy – Biogas Production

Features & Benefits

- ◆ complete and fast H₂S removal
- ◆ flexible and easy adjustable dosing depending on H₂S content
- ◆ easy and highly efficient processing by using aqueous solutions like the Lohtragon® C08 or highly soluble granules like the Lohtragon® C73
- ◆ stable to precipitation from slightly neutral to alkaline pH-level
- ◆ keeps reactivity on a constant and controlled safe level
- ◆ pH-value of the aqueous solutions is compatible with the microbiology present in the digester
- ◆ the formed iron sulfides remain in the digestate and are highly bioavailable fertilizers
- ◆ the organic component of Lohtragon® C08 and Lohtragon® C73 are biodegraded during the fermentation process
- ◆ The Lohtragon® C08 solution has a very high iron content for direct dosage which considerably simplifies the treatment

Product Description

	Lohtragon® C08	Lohtragon® C73
Product name	Lohtragon® C08 Type 3	Lohtragon® C73 Type 171
Product number	503008001	503073005
Used substance	Ferric Sodium Citrate Solution	Ferrous Gluconate 2-hydrate
Metal content	approx. 18 % Fe(III)	approx. 11.5 % Fe(II)
Appearance	solution	granules
Color	dark-brown	greenish-gray
pH	7.5 – 9.0 (as is)	approx. 4.5 (1 %)
Density	approx. 1.6 g/ml	
Retest period	24 months	24 months

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Contact

Connect directly with our Lohtragon® experts in our German headquarter.



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Lohtragon® – A Brand of Dr. Paul Lohmann®

For over 135 years, the company Dr. Paul Lohmann has been able to establish and maintain its leading position as an international manufacturer of mineral and metal salts that meet the highest quality standards. The product range includes over 400 different salts, from Aluminum to Zinc, in a total of over 7,000 different specifications. Dr. Paul Lohmann® supplies its specialty salts worldwide to customers in the pharmaceutical industry, food sector, food supplements, cosmetics and – under the Lohtragon® brand – to customers in industrial applications.

Lohtragon® stands for unique competences in manufacturing, optimizing and developing metal salts for a broad variety of industrial market segments. Established in diversity, tailor-made for you, your application and your process - our solution for your challenges!