

With global population on the rise, an increasing focus rests on agriculture, livestock, water and sustainable energy generation.

Biogas from anaerobic digestion (AD) will lead a key role in the responsible management of the world's limited resources.

SwissBiogas.com assists AD-plants in the implementation of a sustainable desulphurisation process, minimising their environmental footprint.



### **SBGx by SwissBiogas.com**

High purity tailor-made additives, which optimise bioreactor environments.

- Remove Hydrogen Sulphides
- Increase Biogas and Methane Yields
- Reduce Odor Formation
- Address Struvite Formation
- Adhere to National Fertiliser Regulations

SBGx by SwissBiogas.com incorporates the latest research in the field, with the focus to substrate-independently raise the biogas volume and its methane concentration.

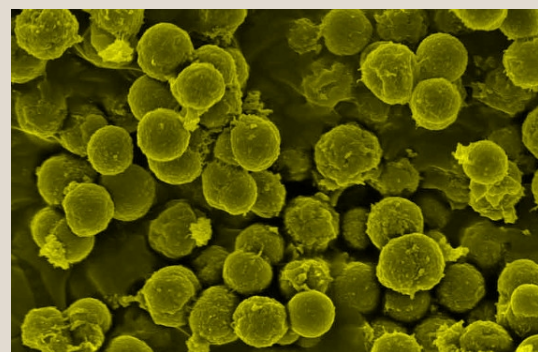


### **Biogas production**

In biogas plants, methanogens decompose organic substances in the absence of oxygen. The resultant biogas contains levels of hydrogen sulphides, requiring removal prior downstream processing.

### **H<sub>2</sub>S removal**

Plant operators apply one of three methods, each with their associated costs and benefits. For more details see the comparison table.



*Beneficial bacteria*



# Advantages of SBGx by SwissBiogas.com

## Comparison of Desulphurisation Methods in Anaerobic Digestion Plants

	<b>SBGx</b>	<b>Iron Oxide</b>	<b>Iron Oxide-Hydroxide</b>	<b>Iron Chloride</b>	<b>Air Injection</b>
<b>Investment into</b>					
Storage and Handling	low	low	low	high	none
Dosing Equipment	none / low	none / low	medium	medium	medium
<b>Risk of / to</b>					
Exposure / Personnel	low	low	low	high	none
Explosion	low	low	low	low	high
Corrosion	low	low	low	high, HCl	high, H <sub>2</sub> SO <sub>4</sub>
Incompatibility	low	low	low	high	high
Gas Impurities	low	low	low	low	high
Reaction Products	none	none		HCl	H <sub>2</sub> SO <sub>4</sub>
<b>Characteristics</b>					
Reactive Content	> 60%	30% - 60%	10% - 15%	10% - 14%	none
Digestion Speed / Volume	high	low	low	high	low
Deposit Effect	high	high	medium	none	none
Methanogen Growth	increased	normal	normal	negative	negative
Gas Yield over Normal	higher	normal	normal	negative	negative
Trace Element Addition	not necessary	required	required	required	required
Shelf Life	> 12 months	> 12 months	< 12 months	< 12 months	none
Price per chem. Reaction	medium	high	medium	high	none

## Logistics and Financing

Delivered in powder form, in 25, 500 or 1000 kg bags, or as per individual requirements.

Depending on order volume, consignment stocks at customers' premises allow easy draw-down, reduce delivery frequencies, eliminate financing and address just-in-time requirements.

