

# Oxygen absorbers

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**SORBIS GROUP**

ONLY HIGH QUALITY SORBENTS



**Prolong the shelf life of  
your products**

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# Why do foodstuffs need oxygen absorbers?

One of the main aims that foodstuff manufacturers face is increase of products' shelf life.

As it is known, the interreaction with oxygen is the main reason for impairment of foodstuffs' quality. All oxidizing processes in the package take place influenced by oxygen which facilitates generation of microorganisms (bacteria and fungi).



The result is origination of a specific odor and flavor, deterioration of foodstuffs' color and structure. In order to preserve taste and aroma, the majority of manufacturers put foodstuffs into vacuum packages or add the preserving agents.

However, there is a more effective way to increase the shelf life, namely, use of oxygen absorbers!



**The main destination: using oxygen absorbers one can cut the O<sub>2</sub> content in the package down to the minimal level. This way you prolong foodstuffs' shelf life.**

# Problem solution

Oxygen absorber is a mixture of iron powder with coal and salts packed into sachets made of water- and oil-resistant material. Oxygen absorber is put into the package containing foodstuffs. After this the package is hermetically sealed.

The absorber begins its action just after it is placed into the package.

1. When using oxygen absorbers:

- the package does not require additional treatment, namely, use of gas or vacuum;
- vitamins, minerals and nutrient substances are preserved in the foodstuffs;
- shelf life of foodstuffs is increased;
- oxygen initially contained in the package is absorbed, as well as oxygen coming into the package from the outside.

2. Oxygen absorber does not contact with foodstuffs and thus is not considered as an additive.

3. Oxygen absorber is completely compatible with organic products.

**All oxygen absorbers have a laboratory certificate from Federal State Unitary Enterprise Sanitary and Epidemiological Center, Moscow.**

**The exterior appearance of OXYGEN ABSORBERS:**



# Scope of application:

## Scope of application:

- snacks (meat, fish, vegetable);
- sausage products, raw smoked and raw cured meat;
- half-finished meat products;
- cheese and cheese products;
- nuts, dried fruits;
- bread and bakery products;
- confectionery: wafers, pastries, pies;
- other foodstuffs: tea, dried herbs, dried mushrooms;
- animal and fish feedstuff.



# Operating principle

To prolong the shelf life of foodstuff, one should create an oxygen-free environment. The main component of oxygen absorber is a mixture of iron powder with activated carbon and salt. When oxidizing the iron powder absorbs molecules of oxygen. Due to this one can decrease the O<sub>2</sub> content in the package down to the minimal level.

Ambient air is a mixture of gases consisting of: nitrogen (N<sub>2</sub>) - 78%, oxygen (O<sub>2</sub>) - 20.9%, carbon dioxide (CO<sub>2</sub>) - 0.02% and other gases, 1.07%. Therefore, about 20% of air in the package should be absorbed.

How to select a correct type of oxygen absorber?

1) Calculate the volume of package.

2) Calculate the volume of oxygen inside the package that should be absorbed (about 20% of the package's volume)

3) Select an appropriate model of absorber depending on the obtained figure. As any package has permeability, we recommend adding 20% to the obtained figure.

Example:

The volume of package is 250ml. Volume of oxygen that should be absorbed from the package is 50ml. Let's add 20% to this figure and we have 60 ml.

Conclusion: two oxygen absorbers should be used for this package, namely, Model 30, or you can take Model 100 for a margin.

Oxygen absorber should be put into the package directly before hermetic sealing of package. We do not recommend putting oxygen absorber in the open air, as it begins to absorb oxygen immediately.

Complete absorption of oxygen takes place in 24-48 hours.

Oxygen absorber is environmentally friendly product and thus is widely used in food industry.

# Types of absorbers

## SORBIS -U



## 2. SORBIS-U oxygen absorber

- Increased speed of oxygen absorption

This type of absorber can quickly absorb oxygen.

- Special package:

Water- and oil-resistant package, lack of any holes preventing leakage of oxygen absorption powder.

- 4 types of models: Premium 30ml; Premium 50ml; Premium 100ml; Premium 200ml depending on the amount of oxygen needed to be absorbed.

## Prices for oxygen absorbers:

Prices include VAT

Model	Volume of absorbed oxygen	Volume of your package	Bag size	Pieces per pack	Cost of pack, €
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### Oxygen absorber SORBIS-U

<b>Model 30</b>	<b>30 ml</b>	<b>150 ml</b>	<b>30x40 mm</b>	<b>12000 pcs/box</b>	<b>256,31</b>
<b>Model 50</b>	<b>50 ml</b>	<b>250 ml</b>	<b>30x45 mm</b>	<b>9000 pcs/box</b>	<b>215,21</b>
<b>Model 100</b>	<b>100 ml</b>	<b>500 ml</b>	<b>40x50 mm</b>	<b>5000 pcs/box</b>	<b>208,22</b>
<b>Model 200</b>	<b>200 ml</b>	<b>1000 ml</b>	<b>40x60 mm</b>	<b>3000 pcs/box</b>	<b>165,23</b>

# CONCLUSION

Oxygen absorbers are used by various manufacturers within the food industry in order:

- to stop the growth of microorganisms
- to prevent oxidation that leads to discoloration of foodstuffs and origination of bad flavor.

Oxygen absorber put into the package will preserve the original taste and nutritive properties of foodstuffs.

The given products are of demand due to simplicity of use. Wide assortment allows selection of the necessary absorber according to the need. Foodstuffs' shelf life is prolonged, while vitamins, minerals and nutritive substances of foodstuffs are preserved. No additional treatment is necessary, namely, use of gas or vacuum, as even after vacuum sealing or use of nitrogen some oxygen remains in the package. Use of oxygen absorber decreases oxygen content down to 0.1% and below, and this prolongs foodstuffs' shelf life.

[A complete list of products is given below.](#)

Make an order sending an [nikolay@sorbis-group.com](mailto:nikolay@sorbis-group.com) or call us at:

8-495-223-00-32, Nikolay

SORBIS GROUP specialists are always ready to answer all your questions.

We also provide free samples for testing.

[A complete list of products can be found at WWW.SORBIS-GROUP.COM](http://WWW.SORBIS-GROUP.COM)

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**SORBIS GROUP** specializes in production of various protective means for products during storing and transportation, namely: sorbents, desiccants and moisture indicators for products of any industry, as well as supplies oxygen absorbers for the food industry.

The companies cooperating with **SORBIS GROUP** always receive products of the highest quality and within the shortest terms - this is mainly due to the huge experience gained during 11 years of work at this market and an individual approach to each client.

## SORBIS GROUP products

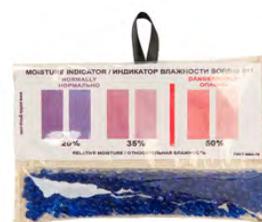
**SORBIS 219 B+**  
DESICCANT-MOISTURE ABSORBER



**SORBIS 219-T**  
DESICCANT-MOISTURE ABSORBER



**SORBIS 511**  
MOISTURE INDICATOR



**INDICATING MOISTURE STRIP**



**SORBIS 317 VK**  
DESICCANT-MOISTURE ABSORBER



**SORBIS 317-TP**  
DESICCANT-MOISTURE ABSORBER



**SORBIS DRY**  
FOR PROTECTION OF CONTAINERS



**OXYGEN ABSORBERS**



**SORBIS 235**  
DESICCANT-MOISTURE ABSORBER



**SORBIS 435**  
DESICCANT-MOISTURE ABSORBER



**DAMAGE AND TILT INDICATORS**



**SORBENTS**



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