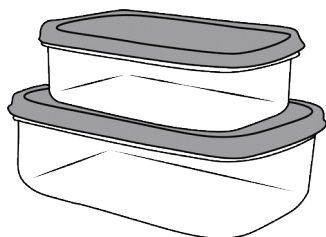




Using Oxygen Absorbers in Other Things



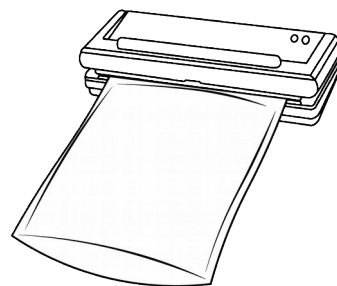
One of the important things to consider when using oxygen absorbers is: How fast is oxygen is going to reenter the container after the Oxygen Absorber removes it? Is the container capable of keeping a tight seal? Does the material it is made of have a high Oxygen Transmission Rate? (OTR), In other words: Does oxygen easily move through the sides of the container itself? Or does it have a low OTR and provide a good oxygen barrier?

The reason mason jars and Mylar bags are the best choices for long-term storage is they both can be hermetically sealed and they transmit little to no oxygen. But Oxygen Absorbers don't have to be for long-term storage only and other options are available to also help you keep your chips, cookies and muffins fresher than any other storage method, or keep bugs out of your flour.

Oxygen is very sneaky and just because a container seems to be sealed does not mean oxygen cannot get in through the seal or through the walls of the container. The only materials that are a permanent barrier to oxygen are glass and metal. (thicker than 15 microns) All plastics will allow oxygen through, but the amount varies greatly: from a sandwich baggie that is useless as an oxygen barrier to HDPE plastic that can keep oxygen at bay for 4 to 5 years.

Here are some other options that are available:

Vacuum Sealer Bags: If you have a vacuum sealer,



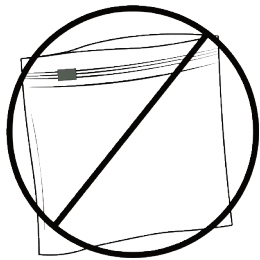
you should always have oxygen absorbers beside it. Just vacuuming air from a product will reduce its oxygen exposure, but including an oxygen absorber effectively eliminates it. You can count on this method to protect food for several months, but if you want years of protection you need Mylar for its extremely low OTR.

HDPE or PETE plastic: This kind of plastic has a very low OTR and will keep oxygen out for 4 to 5 years if it can be hermetically sealed.



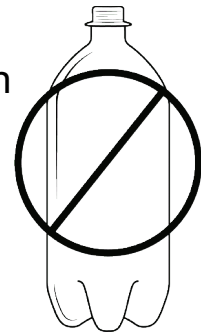
Plastic storage containers: Some Tupperware-type containers can keep a very good seal and can be used, but they are not reliable enough for anything other than short-term use.

Here are some things you should NOT use:



Ziplocs: Oxygen will quickly go through a ziplock enclosure so even the high quality freezer bags will fill up with oxygen quickly.

2 Liter bottles: Anyone knows once you open a soda it will most likely go flat within days as they are not designed to reseal.



For Long-term food storage Mylar or mason jars should be used, but for suitable containers that can keep a seal for shorter periods, there are some general steps that should be followed:

1. Plan

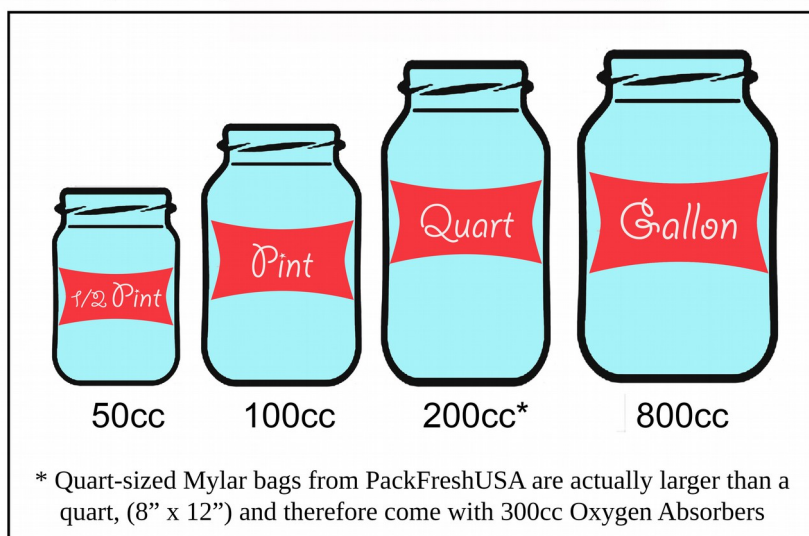
First, read over the directions and make some decisions about the best way for you to complete the sealing process:

Important: Oxygen Absorbers can greatly increase the storage times and fresh quality of shelf-stable food, but they are not a substitute for refrigeration. Food that normally requires refrigeration needs to be frozen for long-term storage. More info: [LTFS Food types](#)

What size oxygen absorbers do I need?

When using storage bags (such as vacuum sealer bags) their flexibility allows them to form around food and minimize air content. Jars and other inflexible containers cannot do this so it is especially important to make sure you include enough absorption to account for all the air when using a rigid container. One way to do this is simply to use enough absorption to deoxygenate the container if it was empty. There is little reason not to do this for those of one quart or smaller because a mere 200cc worth of oxygen absorbers will do the trick for a quart and you won't have to worry about the air content of your product or even filling the container.

Absorption required to deoxygenate an empty mason jar



A 500cc Oxygen Absorber will usually work for a gallon-sized jar as long as it is filled and there are no air pockets. These amounts are good to use for any container, (rigid or flexible) or you can visit [here](#) to learn all about how to precisely determine the appropriate absorber size according to the air volume of your product.

How Do I Save Any Unused Oxygen Absorbers

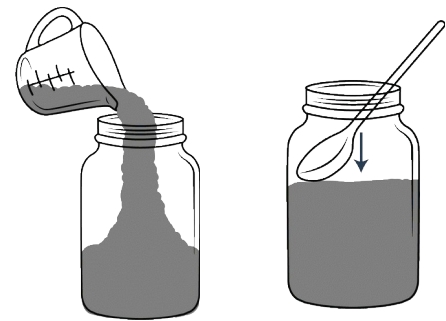
You will need to have a plan for any unused Oxygen Absorbers in the package. A mason jar is often the best choice. Or you can also vacuum seal them or use a jar like a peanut butter jar, but it must be closed very tightly. If your jar is big, it is a good idea to use something like marbles (or anything that fits) to take up the empty space.



3. Create an assembly line

You need to limit the amount of time the Oxygen Absorbers are exposed to the air, so in this step you will get everything filled and lined up.

When filling, pack the food as tightly as possible to reduce the air volume.



4. Add Oxygen Absorbers

Because oxygen removal is an invisible process, many people have unnecessary doubts and are quick to worry about their Oxygen Absorbers, but you can have 100% confidence when you understand them and when you follow the steps below.

You should always confirm the freshness of your Oxygen Absorbers, but the chance of there being an exposed Oxygen Absorber in a vacuum sealed package from a reputable retailer is virtually zero. We have **never** seen one in an undamaged package and there is nothing about them that “fails”. (You can read more about the process [here](#)) Still, the freshness confirmation is very important for peace of mind, which is what Long-term Food Storage is all about.

Before you open the Oxygen Absorber package:

1. Your Oxygen Absorber package should be vacuum sealed. Air could not have entered the package if it is undamaged and under vacuum.
2. The oxygen indicator should be a shade of pink or red, not dark blue. Pink is the typical color, but some are more of a brown or red – and that is fine – the indicator will turn dark blue when oxygen is present. The indicator was dark blue when the package was sealed, so the pink shades are a positive confirmation that the Oxygen Absorbers work and have removed the oxygen from the package.

After you open the package...

3. The Oxygen Absorber should feel soft, like it contains powder. When an Oxygen Absorber becomes fully exposed, it feels solid and crunchy. If you ever get the chance, leave one out in the open overnight to feel the difference.

You can now feel confident that, with a good seal, your food will be protected.



Place the Oxygen Absorbers in with the food.

It takes about 2 hours in the open air for an Oxygen Absorber to become fully exposed, but you should try to get your sealing done in 10 minutes to insure they will absorb the full amount they are rated for. Do not let the Oxygen Absorbers be exposed for over 20 minutes. PackfreshUSA Oxygen Absorbers have a significant safety buffer and will absorb 180 to 300% of their rating, but it's best to keep that in reserve.

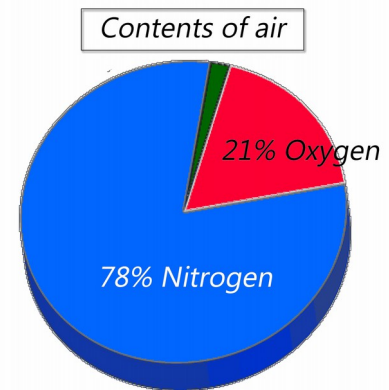
It is normal for the Oxygen Absorbers to feel warm while they work; it is also normal not to notice this.

Place any unused ones in the mason jar or other container you have for unused Oxygen Absorbers.

Seal the bag or other container.

6. Follow-up and storage

Most of the oxygen will be gone from the bag or container in 6 to 12 hours. You may notice a slight vacuum-effect to the container, but if you don't, do not worry. As long as you confirmed the freshness of the Oxygen Absorbers and the container is properly sealed, the process **did** work. There is only a 21% reduction in air volume due to the oxygen being absorbed and that is not always noticeable. Read more about this here



Only oxygen is absorbed so it is normal to still see air in the bag

It is vital that you have complete confidence in your food storage so if you have any questions or concerns please take advantage of our 5 Star Service at:

5StarService@absorboxygen.com