

ALTERNATIVE TO POTASSIUM SORBATE AS A FOOD PRESERVATIVE IN SAUCES

Refrigerated sauces are a delicious addition to a wide variety of dishes, from salads to fast foods and snacks. These foods offer great convenience and taste, but also pose challenges in terms of shelf life and food safety due to the *pathogenic microorganisms* that thrive in them.

In this blog, we will explore the types of refrigerated sauces along with the microbiological problems they face and the most common pathogenic microorganisms, **potassium sorbate** as a food preservative (it is one of the most commonly used chemical food preservatives) and finally, a *clean label* alternative to these chemical food preservatives currently on the market.

What types of refrigerated sauces are there?

There are many types of refrigerated sauces that can be found in a wide variety of flavours and textures. Some common examples include **mayonnaise sauce**, **mustard sauce**, **guacamole** and many others. These sauces are popular because of their freshness and taste, but that same freshness also makes them susceptible to the growth of microorganisms.

We could classify the types of sauces according to the processes they have undergone:

- Fresh
- HPP
- Pasteurised
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Each of them suffers from a specific [shelf-life problem](#), the freshest sauces spoil in a short time and are more vulnerable to pathogenic microorganisms, while the most treated products (HPP or pasteurised) lose their organoleptic freshness over time, which is why different food preservatives are used.

What are the microbiological problems with refrigerated sauces?

Refrigerated sauces, which include classics such as mayonnaise and guacamole sauce, face similar microbiological problems. These sauces often contain fresh ingredients such as avocado, tomato or onion that may be contaminated with **pathogenic microorganisms** such as *Salmonella* or *E. coli*. Cross-contamination is a real risk during the handling and preparation of these ingredients, increasing the risk of foodborne illness. In addition, the high moisture and water content in these sauces provides a favourable environment for the growth of moulds and yeasts.

This can lead to problems such as the proliferation of harmful microorganisms, affecting both food safety and product quality, necessitating the use of food

preservatives such as potassium sorbate by manufacturers to ensure product safety.

What are the microbiological problems with guacamole sauce?

In particular, guacamole sauce presents a specific set of challenges.

- **Discolouration and browning:** Guacamole is prone to discolouration and browning due to oxidation of the avocado components. While this is not a microbiological problem in the food safety sense, it can negatively affect the quality and appearance of the product.
- **Mould and bacterial growth:** The high humidity and water content in guacamole sauce provides an environment conducive to bacterial and mould growth. Microorganisms such as *Listeria*, *Salmonella* and *E. coli* can proliferate if the sauce is not kept at the proper temperature and stored for long periods.
- **Texture and Consistency:** Unwanted microorganisms can affect the texture and consistency of guacamole sauce, causing it to become runny or take on an unpleasant texture. This can lead to consumer dissatisfaction.

What chemical preservatives are used in refrigerated sauces?

To combat these microbiological problems, the industry has traditionally relied on chemical food preservatives. These chemical preservatives can include *potassium sorbate*, *sodium benzoate* and other ingredients that extend the shelf life of refrigerated sauces. While these food preservatives have been effective, some consumers are concerned about their impact on health and prefer to avoid chemical additives.

These food preservatives can be identified on food labels by the following [numbers](#):

- E202 Potassium sorbate - is a derivative of sorbic acid (E200).
- E211 Sodium benzoate - is obtained industrially by reaction of sodium hydroxide (E254) and benzoic acid (E210).

What Clean Label alternatives to potassium sorbate are available for refrigerated sauces?

There are *clean label* alternatives to potassium sorbate to combat these microbiological problems in sauces.

Amerex offers a natural alternative to potassium sorbate called [Biamex YM or Biamex Aroma Global](#), a biotechnology-based natural preservative. This product is particularly effective in the fight against moulds and yeasts, two of the main microbiological challenges in refrigerated sauces and in guacamole sauce in particular. Biamex is not only a safe and effective option, but also meets the demands of consumers concerned about the absence of chemical preservatives

in food. This makes it a truly clean label alternative also for manufacturers looking to remove E numbers such as potassium sorbate from their food labels, while maintaining food safety.

In summary, both refrigerated sauces and guacamole sauce are delicious and very common in gastronomy, but their microbiological problems can affect both food safety and quality. Instead of resorting to chemical food preservatives, Amerex's alternative to potassium sorbate, Biamex YM or Biamex Aroma Global, offers a natural and effective *clean label* option to combat these problems, while ensuring the satisfaction of both consumers and food producers. If you want to know more, contact us!

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See you neXt time!