

## Beeswax cloths: what should you look out for?

Updated BfR FAQ of 10 November 2022

Beeswax cloths have been available on the market for a while as an alternative to aluminium foil or cling film. For example, packed lunches or food that is stored in the refrigerator can be wrapped in it or covered with it. When the food is covered with the beeswax cloth, warm pressure from the hands on the wax creates a type of solid packaging. Substances may then pass unintentionally from this packaging to the packaged food.

### What are beeswax cloths made of?

The usual constituents of beeswax cloths are cloth, beeswax, oil and possibly resin. Substances from these constituents can inadvertently transfer to the food packaged with the cloths.

### What should be considered when making beeswax cloths?

The cloths used should be textiles that are suitable for food contact. Otherwise, in the case of dyed textiles, such as curtains or other fabric remnants, constituents from the dyes could transfer to the food, for example. The transfer of primary aromatic amines, for example, some of which are classified as carcinogenic, would be critical here. Attention should also be paid to ensuring that the beeswax used meets the requirements as a food additive, since beeswax can otherwise be contaminated with mineral oil constituents or pesticides. The latter can be ingested by the bees when collecting nectar if the plants are treated with plant protection products.

### Are beeswax cloths suitable for packaging all foods?

If beeswax-coated cloths come into contact with fatty foods such as pastries, cakes or sausage and cheese, this can cause wax elements to transfer to the food. These transfers are safe from a toxicological perspective provided that only beeswax in accordance with the purity criteria of Regulation (EU) No. 231/2012 is used to coat the cloths.

According to the BfR Recommendation XXV “Hard Paraffins, Microcrystalline Waxes and Mixtures of these with Waxes, Resins and Plastics”, the BfR recommends that beeswax cloths containing additional substances should not be used for fatty foods.

Conversely, beeswax cloths with waxes containing additional substances are suitable for fruit and vegetables.

### Why should beeswax cloths not contain jojoba oil?

Jojoba oil is often used as an oil constituent in beeswax cloths. This is used to increase the cloths' softness and it is supposed to ensure that the beeswax does not become brittle and peel off the fabric. The BfR advises against its use because the transfer of jojoba oil from the beeswax cloths is very likely when they come into contact with fatty foods. In animal experiments, jojoba oil has demonstrated toxic effects in intestinal cells.

### Do germs accumulate on beeswax cloths?

Beeswax cloths cannot be cleaned at high temperatures since the coating material would melt. For this reason, cloths intended for reuse should especially not come into contact with raw food produced from animals since pathogens that may be present on these foods can be transferred to other foods if the cloths have not been cleaned properly. Plant-based foods can also be contaminated with pathogens, albeit less frequently. Therefore, although it cannot be completely ruled out, the risk of transmission is lower with plant-based foods.

**Further information on the subject from the BfR website:**

Health risk assessment of food contact materials

[https://www.bfr.bund.de/en/health\\_assessment\\_of\\_food\\_contact\\_materials-528.html](https://www.bfr.bund.de/en/health_assessment_of_food_contact_materials-528.html)

Information on jojoba oil can be found in the BfR Opinion “Jojoba seeds are not suitable for consumption” (in German)

[https://www.bfr.bund.de/cm/343/jojobasamen\\_sind\\_nicht\\_fuer\\_den\\_verzehr\\_geeignet.pdf](https://www.bfr.bund.de/cm/343/jojobasamen_sind_nicht_fuer_den_verzehr_geeignet.pdf)



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