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Czech J. Food Sci.

**Bernardos A.,
Kouřimská L.:**

Applications of mesoporous silica materials in food – a review

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Mesoporous silica materials have been developed for some applications in the health field. These solids are used for the controlled release of bioactive molecules, as catalysts in the synthesis of essential nutrients, as sensors to detect unhealthy products etc., with many applications in food technologies. By combining mesoporous silica materials with food, we can create healthier products, the products that improve our quality of life. The development of mesoporous materials applied to food could result in protecting bioactive molecules during their passage through the digestive system. For this reason, the controlled release of bioactive molecules is a very interesting topic for the discipline of food technology. The use of mesoporous silica supports as catalysts in the synthesis of nutrients and as sensors for the detection

of unhealthy products, essential in food, is in great demand industrially for the manufacture of functional foods and films for food and industrial packaging. This review shows some examples of silica materials and their applications in food.

Keywords:

bioactive molecules; healthier products; ordered solids

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