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Improving food products' quality and storability by using Layer by Layer edible coatings

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1 **Improving Food Products' Quality and Storability by Using Layer by Layer Edible**
2 **Coatings**

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16 **Abstract**

17 *Background*

18 Natural materials-based edible coatings provide a promising approach for enhancing
19 quality and prolonging storability of food products. Since one single material often
20 cannot answer numerous applicative requirements, there has been recent development in
21 composite edible coatings. The Layer by Layer (LbL) approach is based on the alternate
22 deposition of different biopolymers and allows for a more effective control over the
23 physicochemical properties and activity of edible coatings.

24 *Scope and Approach*

25 In this review, the progress in the development of active edible coatings, by utilizing
26 the LbL approach, has been summarized. The discussion includes raw materials that are
27 used to form LbL matrices, physical and mechanical properties of the prepared edible
28 coatings, their bioactivity and applications on various food products.

29 *Key Findings and Conclusions*

30 The LbL method enables to regulate material properties and allows the formation of
31 advanced edible coatings. Currently, LbL edible coatings are mostly applied on fresh fruit
32 and vegetables, although their application on processed food products is also possible.
33 LbL edible coatings may provide food products with prolonged storability, enhanced

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