

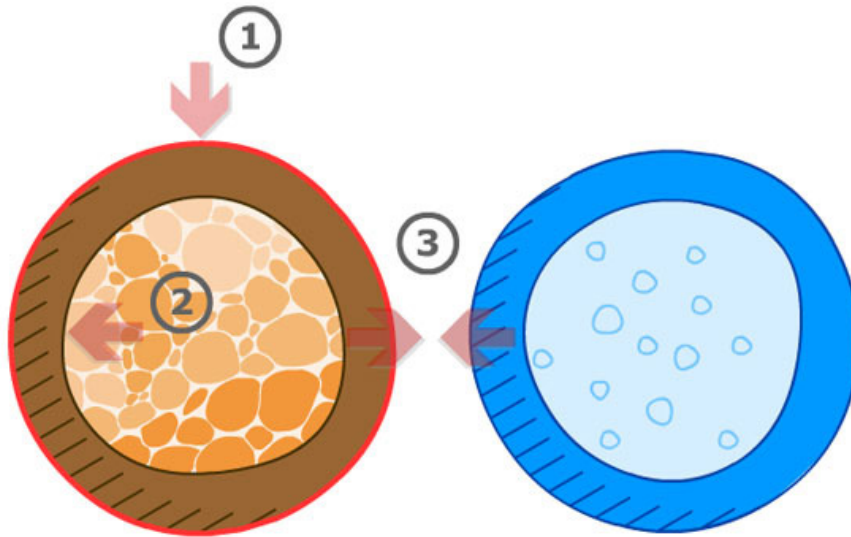
Functional Coating



The apple skin fulfills different functions. It protects the apple from dehydration and prevents the browning of the pulp. Waxlike materials on the surface of the skin inhibit microbial spoilage and last but not least the colour of the skin reveals the apples' degree of maturity.

To simplify handling for the customer, the requirements imposed on new products are becoming ever more complex. Blends of different ingredients need protection from oxidation or reactions with other materials, which can be achieved by encapsulation and film coating. Such combination of different functions, as for instance required in laundry or dishwasher detergents (e.g. tabs) calls for encapsulated products with controlled release of ingredients.

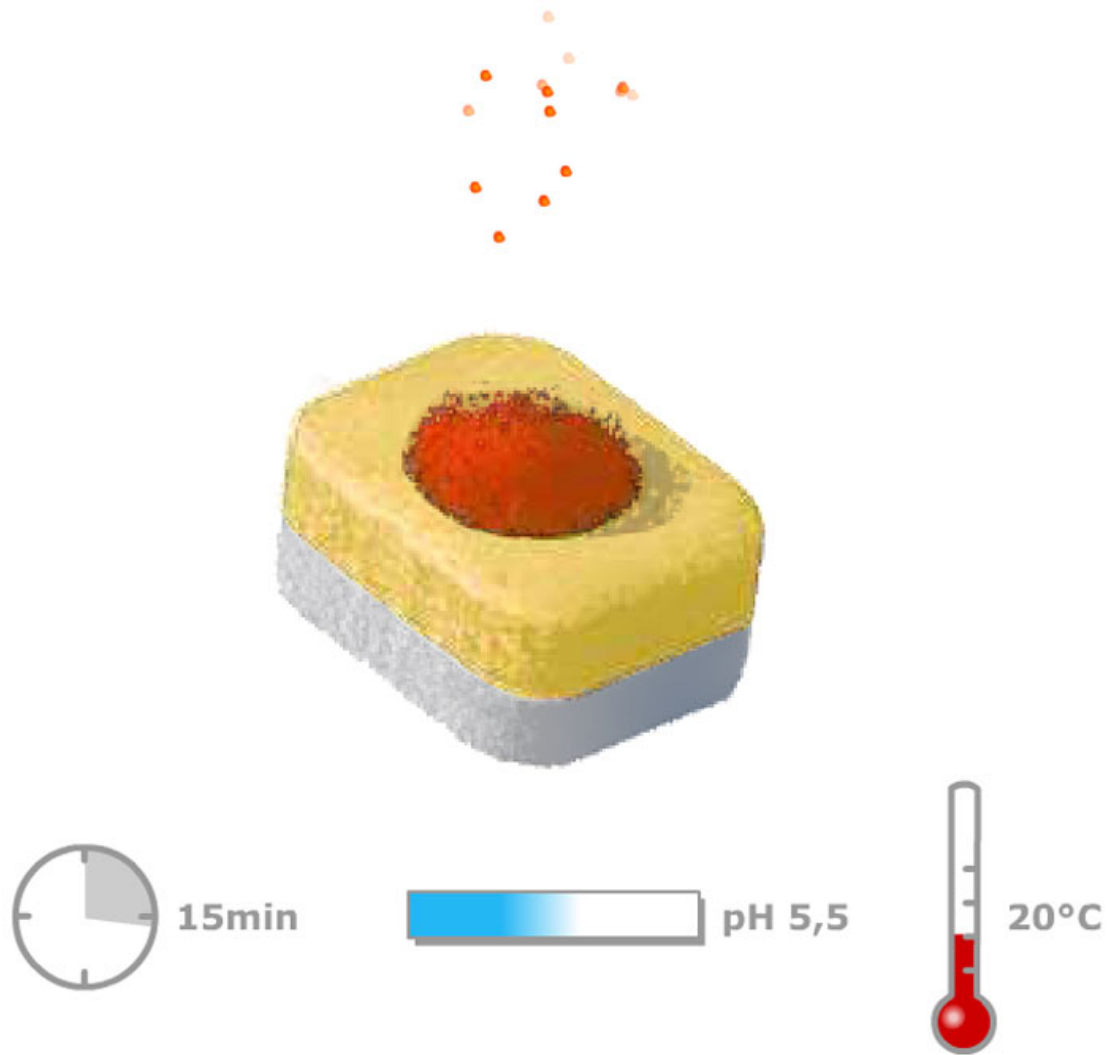
Protection



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- 1** Protection from outside influences
 - 2** Protection of the user
(contact allergy, caustic effect, etc)
 - 3** Separation of components
(prevention of reactions between ingredients)

Protection against oxidation, light and humidity extends the shelf life of products and simplifies handling. In case of highly active enzymes in detergents a protective film coating ensures the improved safety of the user.

Release



The [controlled release](#) of ingredients can be triggered by time, by pH variation or temperature change. The right choice of coating materials defines the functionality of the controlled release system.