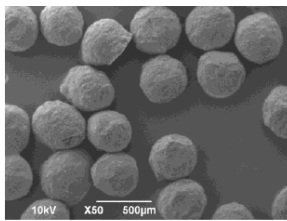


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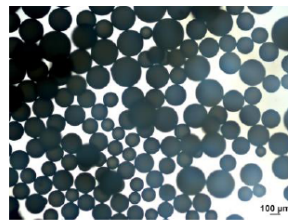
ADVANCING RESEARCH IN AGRICULTURAL AND
FOOD SCIENCES AT FACULTY OF AGRICULTURE,
UNIVERSITY OF BELGRADE



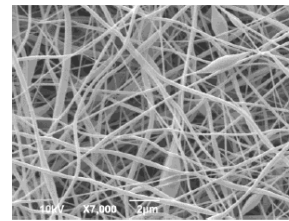
Immobilization (encapsulation) biotechnology group (IMMOBIOG)



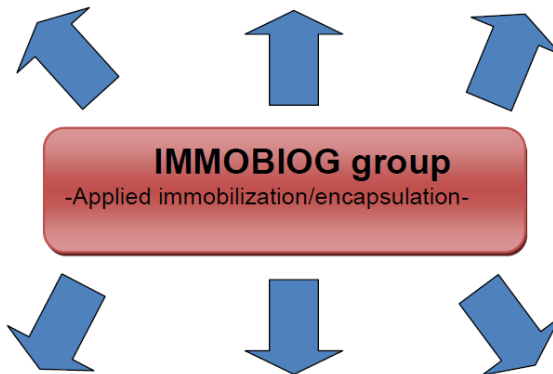
Flavor encapsulation



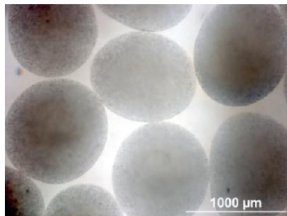
Solid lipid particles



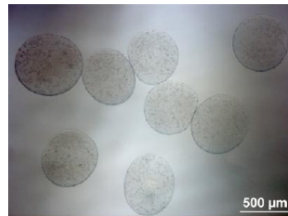
Nanofibers



IMMOBIOG group
-Applied immobilization/encapsulation-



Yeast encapsulation

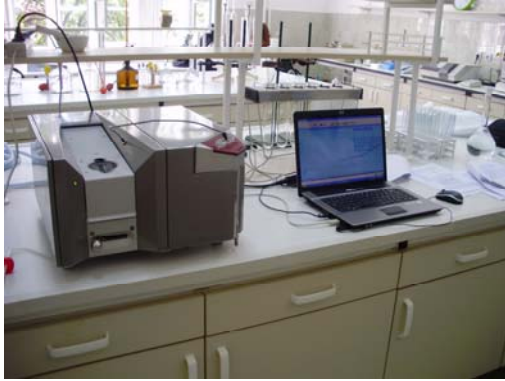


Probiotic bacteria
encapsulation



Sorbent encapsulation

Encapsulation has been widely used to stabilize an active food ingredient, control its release rate and/or convert a liquid formulation into a solid which is easier to handle. From the other side immobilization of cells permits higher cell densities to be attained in bioreactors, and thus results in higher fermentation rate. In our laboratory, we investigate encapsulation of yeast cells for beer and fruit wine fermentations as well as encapsulation of probiotics to be incorporated in different food staff. Natural polymers and lipid compounds have been used for flavor and antioxidants encapsulation. Encapsulated sorbents have been applied for heavy metal removal from water.



Central laboratory



Central laboratory



Laboratory for brewing products analysis



VAR V1 encapsulation unit

Our laboratory is equipped for encapsulation of cells and bioactive molecules and application of encapsulated actives in various biotechnological processes. In our studies electrostatic extrusion unit VAR V1 has been intensively used for generation of small polymer particles with encapsulated active compounds. The laboratory is set to run different fermentation processes by distinct bioreactor systems (gas lift, packed bed). The laboratory is also equipped with up to date analytical instruments for different measurements, such as alcohol and extract contents, CO₂ concentration, viscosity, and so on.

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