

## PAID DIPLOMA / MASTER'S THESIS

### *Characterization of Multilayer Coating for Controlled Release*

#### *Purposes*

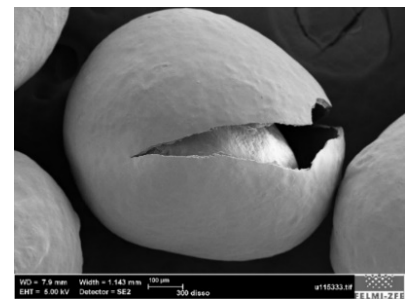
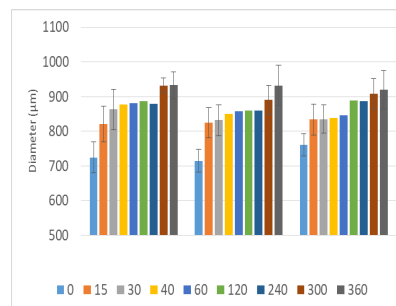
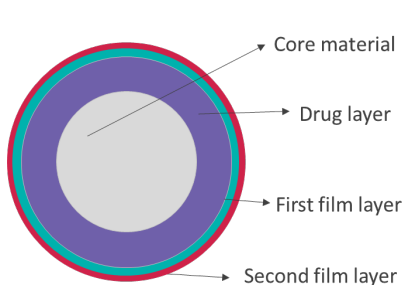
*Ref.Nr. DA121*

To dedicated students of Pharmacy, Chemistry, Physics or related disciplines, we offer an opportunity to write a paid Master's thesis. The project is conducted in close cooperation with Graz University of Technology.

#### **OBJECTIVE:**

Coating layers are typically designed to act as the rate controlling membrane for the drug release. Within this project, coated beads prepared under different process conditions will be analyzed in order to understand the impact of process dynamics on the coated films.

The work will include the following tasks: **i)** Determination of the coating quality by establishing quantitative analysis of amorphous/crystalline part and performing already established methods such as water-uptake, swelling and erosion of coating and their impact on release profile, **ii)** Quantification of the coating amount with different techniques involving for example FTIR, acid-base titration, etc. **iii)** Identification of the most important microscopic/morphological properties of the films relevant for the drug performance (dissolution).



#### **WITHIN THE FRAMEWORK OF THIS DIPLOMA/ MASTER'S THESIS WE OFFER THE FOLLOWING:**

- Extensive participation in a top-level and industrially relevant research project in an international environment
- Supervised training in the task
- Assistance of experienced staff with the implementation of innovative ideas
- Access to highly modern infrastructure on campus of Graz University of Technology
- Assistance with the publication of results
- Adequate compensation and opportunities for personal and professional development

#### **FINANCING:** Compensation on the basis of a service contract

If you are interested in writing your thesis at the interface between university research and industry/business and to contribute to the optimization of product and process development in the pharmaceutical industry, please contact us indicating the reference number.

#### **Research Center Pharmaceutical Engineering GmbH**

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