

The **Research Center for Pharmaceutical Engineering (RCPE)** is a global leader in pharmaceutical engineering sciences. We help our partners to create and manufacture advanced medicines for patients around the world, through optimizing products and processes.



WE ARE OFFERING A

PAID DIPLOMA/ MASTER'S THESIS

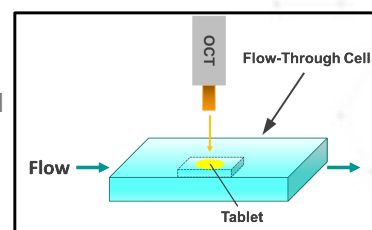
INSIGHTS INTO FILM COATINGS:
FLOW-THROUGH CELL COUPLED WITH OCT AND UV-VIS
REF. NO. DA149

To dedicated students of chemical engineering, chemistry, pharmacy or related disciplines, we offer an opportunity to write a paid Diploma/Master's thesis. The project is conducted in close cooperation with Graz University of Technology.

OBJECTIVE:

Coatings are applied to pharmaceutical solid dosage forms for multiple purposes, e.g., for cosmetic purposes, functional coatings, to add an API (active coating), or to modify drug release. The release profile and on-set release point are critical aspects of the drug performance, where quality of the coating has a **direct impact on important features of a drug, i.e., efficacy and safety.**

The general objective of this thesis is the development of a **flow-through cell setup coupled with an OCT sensor and ideally with a UV/Vis spectrometer for in-situ monitoring of swelling/erosion behavior of coated tablets.** Based on preliminary experiments it can be expected that OCT images can provide qualitative/semi-quantitative information about swelling/erosion behavior (e.g. evolution of swelling front, diffusion front and erosion front, extent of swelling). The ultimate goal is to establish a link between the applied coating and the dissolution performance of coated tablets.



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.

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