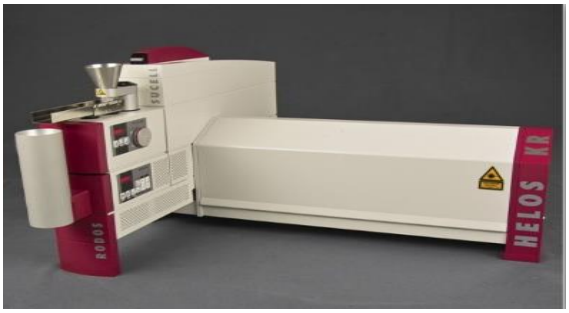
Lehrstuhl für Systemverfahrenstechnik
Wissenschaftszentrum Weihenstephan
Technische Universität München

Master Thesis

# Potential of roasted bean mass density in predicting surface area of grounded coffee

**Motivation:**

Coffee is one of the world's most preferred beverages, and the coffee industry is witnessing a continuous rise in popularity. Since flavour is an important criterion for consumers it becomes important to prepare the best possible coffee, and this is related to the characteristics of the coffee and extraction method. Thus, it becomes important to study the parameters (e.g., roasting degree, grinding degree, and density) that affect the characteristics of grounded coffee (particle size distribution and surface area).




Instrument for characterization of grounded coffee

**Work Objectives:**

The aim is to investigate how the different roasted bean densities and grinds affect the particle size distribution and surface area of the grounded coffee. Using our instrument coffee powder parameters such as particle size distribution, shape, and density are to be determined.

**Work Packages:**

i. Parameter measurements: Pycnometer (density), Helos (particle size distribution with laser diffraction), Quicpic (shape characteristics).
ii. Scientific writing

**Skills required and qualifications obtained:**

You should be interested in laboratory work, with a background in process system engineering/ food process engineering. You should be able to analyse data and interpret the results independently. In this work, you will learn how to use instruments and methods necessary to characterize grounded coffee and data analysis to draw conclusions that can contribute towards preparing the best possible coffee.

**Start**
Immediately

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