



## SUBJECT DATASHEET

<b>Semester:</b>	2010/11/2
<b>Subject:</b>	Down-stream processing lab training
<b>Code:</b>	VEMKBMB332F
<b>Responsible department:</b>	Research Institute on Bioengineering, Membrane Technology and Energetics
<b>Responsible department code:</b>	MKBM
<b>Responsible lecturer:</b>	dr. Béla Nándor Nemestóthy

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### Educational objectives:

Study downstream processes like centrifugation, membrane separation. Students are work individually or groups of 3-4.

### Detailed content of the subject:

1. To carry out a whole fermentation process (steps, sampling, decontamination)
2. Centrifugation, liofilzation Ultrafiltration (3DTA)
3. Adsorptive product recovery
4. Extractive Product recovery

### Requirements:

The accomplishment of the all measurements. Preparing a related report and a preceding test.

### Required and suggested references:

- Ladisch, Michael R Bioseparations Engineering: Principles, Practice, and Economics. Wiley. 2001
- Pécs Miklós: A biológiai iparok elválasztási műveletei BME 2010