FE 483 FOOD OPERATIONS LABORATORY

2025-2026 FALL SEMESTER

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| DATE | Startting at | Rising Film Evaporator (Res. Asst. Andaç KOÇ) | Supercritical CO2 Extraction  (Dr. Ahmet Kaya) | Spray Drying  (Dr. Medeni Maskan) | Cream Separation  (Dr. Sevim Kaya) | Tray Drying  (Dr. Fatih Balcı) | Mixing, Sieving and Solid Bench  (Dr. Mustafa Bayram) | Leaching  (Dr. A.Coşkun Dalgıç) | Milling  (Dr. Hatice Neval ÖZBEK) | Fluidized Beds  (Dr. Burcu GÖKKAYA ERDEM) | Filtration by Frame and Filter Press  (Res. Asst. Dr. Songül ŞAHİN ERCAN) |
| 02.10.2025 | 13:30 | A | B |  |  |  |  |  |  |  |  |
|
| 09.10.2025 | 13:30 |  | A | B |  |  |  |  |  |  |  |
|
| 16.10.2025 | 13:30 |  |  |  | A | B |  |  |  |  |  |
|
| 23.10.2025 | 13:30 | B |  | A |  |  |  |  |  |  |  |
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| 30.10.2025 | 13:30 |  |  |  | B | A |  |  |  |  |  |
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| **06.11.2025** | **Midterm I** | | | | | | | | | | | |
| 13.11.2025 | 13:30 |  |  |  |  |  | A | B |  |  |  |
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| 20.11.2025 | 13:30 |  |  |  |  |  |  | A | B |  |  |
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| 27.11.2025 | 13:30 |  |  |  |  |  |  |  |  | A | B |
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| 04.12.2025 | 13:30 |  |  |  |  |  | B |  | A |  |  |
|
| 11.12.2025 | 13:30 |  |  |  |  |  |  |  |  | B | A |
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| **25.12.2025** | **Midterm II** | | | | | | | | | | | |
| **02.01.2026** | **Final Exam** | | | | | | | | | | | |

**Notes:**

* About the exams; you will have questions from 5 experiments for each midterm. For the final exam, you will be responsible for all experiments.
* The lectures start at 13:30
* Experiment sheets can be downloaded from the website of **Dr. Fatih BALCI (Link FE483)**
* You are supposed to take a quiz before each experiment at 13:30 in the places shown in the Table 1.
* Groups should prepare one report and discussion.
* After discussion of each experiment, you will get the data and you need to write a report according to your lecturer’s specific comment if there is.

**The laboratory report should include:**

1. Title page (Date of Experiment, title, group number, to whom it is submitted, members names)
2. Purpose (1-2 sentences)
3. Introduction (max. 2 pages)
4. Experimental (description of the procedures used)
5. Calculations
6. Results and Discussion (discussion of system and results, comparisons)
7. References

**Due time**: 1 week later

**MATERIALS THAT MUST BE SUPPLIED BY STUDENTS BEFORE THE EXPERIMENT**

1. Cream Separation: **3 kg raw milk**
2. Rising Film Evaporator: **8-10 L apple juice *or* sour cherry juice *or* grape juice**
3. Spray drying: **50 g instant coffee (Nescafe classic)**
4. Milling: **1 kg hard wheat, 1 kg soft (aşurelik) wheat**
5. Supercritical CO2 extraction: **None**
6. Mixing, Sieving and Solid Bench: **200 gr rice,2 kg black/brown fine bulgur and 2 kg semolina**
7. Tray Dryer: **100 g Fresh Mint**
8. Leaching: **250 g seedless dried grape (çekirdeksiz üzüm)**
9. Fluidized Beds: **None**
10. Filtration: **100 grams of dry mint powder**

**Table 1**

Experiments and the places to be conducted

|  |  |
| --- | --- |
| **Experiments** | **Places (Quiz and experiment)** |
| Cream Separation (Dr. Sevim Kaya) | Operation Lab-1 |
| Rising Film Evaporator (Res. Asst. Andaç KOÇ) | Operation Lab-1 |
| Spray Drying (Dr. Medeni Maskan) | Biotechnology Laboratory |
| Supercritical CO2 Extraction (Dr. Ahmet Kaya) | Research Laboratory (A. Kaya) |
| Milling (Dr. Hatice Neval ÖZBEK) | Operation Lab-2 |
| Mixing, Sieving and Solid Bench (Dr. Mustafa Bayram) | Pilot Scale Lab. |
| Tray Drying (Dr. Fatih Balcı) | Operation Lab-2 |
| Leaching (Dr. A. Coşkun Dalgıç) | Operation Lab-1 |
| Fluidized Beds (Dr. Burcu GÖKKAYA ERDEM) | Fermentation Tech. Lab. |
| Filtration by Frame and Filter Press (Res.Asst. Dr. Songül ŞAHİN ERCAN) | Biotechnology Lab. |

Coordinator: Dr. Burcu GÖKKAYA ERDEM

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| --- | --- | --- | --- |
| **Name** | **Surname** | **ED.** | **Groups** |
| Sude | IRGAL |  | A |
| Meryem | YILKINÇ |  | A |
| Sadan Husein Saqalla | SADAN HUSEİN SAQALLA |  | A |
| Roaa Shamil Anwer | AL-ALLAF |  | B |
| Nazar | AYGÜN |  | B |
| Nadia | FAYAD |  | B |