University of Ljubljana Biotechnical Faculty Department of Animal Science



CATALOGUE OF SERVICES

Reference materials

2025

RAW MILK

(preserved with Bronopol® 0.02 %, excluding SET 3A)

SET 1: Control or calibration of MID-IR instruments

Parameter: **Fat (g/100 g)**; approximate range 2,5 – 5,5 g/100 g

Proteins (g/100 g); approximate range 2,5 – 4,2 g/100 g

Lactose anhidrid **(g/100 g)**; approximate range 4,0 – 5,5 g/100 g **Total solids (g/100g)**; approximate range 10,0 – 15,0 g/100 g

Standard values determined by method:

Fat: Gravimetric, Röse Gottlieb (ISO 1211/IDF 1)

Proteins: Kjeldahl (ISO 8968-3/IDF 20-3)

Lactose: Liquid chromatography (ISO 22662/IDF 198) **Total solids:** Gravimetric, drying at 102°C (ISO 6731/IDF 21)

Number of samples: 10 Sample volume: 60 ml

| | With registration / month: |
|------------------------|----------------------------|
| Price for SET 1: | 120,00 € |
| Price for extra SET 1: | 70,00 € |

SET 2: Control or calibration of different instruments

Parameter: **Urea (mg/100 ml)**; approximate range 10 - 60 mg/100 ml

Standard values determined by method: Differential pH-metry (ISO 14637/IDF 195)

Number of samples: Sample volume: 60 ml

| | With registration / month: |
|------------------------|----------------------------|
| Price for SET 2: | 100,00 € |
| Price for extra SET 2: | 60,00 € |

Calibration/control of different instruments SET 3A:

Freezing point (°C) - NON-PRESERVED SAMPLES Parameter:

approximate range -0,480 do -0,550 °C

Standard values determined by method: Cryoscopy (ISO 5764/IDF 108)

Number of samples: 10 Sample volume: 60 ml

| | With registration / month: |
|-------------------------|----------------------------|
| Price for SET 3A: | 85,00 € |
| Price for extra SET 3A: | 45,00 € |

Control of different instruments SET 3B:

Freezing point (°C) - PRESERVED SAMPLES

approximate range -0,480 do -0,550 °C

Standard values determined by method: Cryoscopy (ISO 5764/IDF 108)

Number of samples: 10 Sample volume: 60 ml

| | With registration / month: |
|-------------------------|----------------------------|
| Price for SET 3B: | 85,00 € |
| Price for extra SET 3B: | 45,00 € |

RAW MILK

(preserved with Bronopol® 0.02 %)

SET 4: Enumeration of somatic cells by fluoro-opto-electronic counters

Parameter: **Somatic cells/ml**; approximate range 1000.000 – 1.500.000 SC/ml

Standard values determined by method: fluoro-opto-electronic method (ISO 13366-2/IDF 148-2)

Number of samples: 5 Sample volume: 60 ml

| | With registration / month: |
|------------------------|----------------------------|
| Price for SET 4: | 100,00 € |
| Price for extra SET 4: | 50,00 € |

PASTEURISED MILK

(preserved with Bronopol® 0.02 %)

SET 5: Control or calibration of IR instruments

Parameter: Fat (g/100 g); approximate range 0.5 - 3.9 g/100 g

Protein (g/100 g); approximate range 3,4 - 3,7 g/100 g

Lactose anhidrid (g/100 g); approximate range 4,6 - 4,8 g/100 g**Total solids** (g/100 g); approximate range 10,0 - 13,0 g/100 g

Standard values determined by method: IR spectrometry (ISO 9622/IDF 141)

Number of samples: 10 Sample volume: 60 ml

| | With registration / month: |
|------------------------|----------------------------|
| Price for SET 5: | 125,00 € |
| Price for extra SET 5: | 65,00 € |

PASTEURISED CREAM

(preserved with Bronopol® 0.02 %)

SET 6: Control or calibration of IR instruments

Parameter: **Fat (g/100 g)**; approximate range 20,0 – 40,0 g/100 g

Proteins (g/100 g); approximate range 2,0 – 3,0 g/100 g

Total solids (g/100 g); approximate range 30,0 - 45,0 g/100 g

Standard values determined by method:

Fat: Gravimetry, Röse Gottlieb (ISO 1211/IDF 1)

Proteins: Kjeldahl (ISO 8968-3/IDF 20-3)

Total solids: Gravimetry, drying at 102°C (ISO 6731/IDF 21)

Number of samples: 3
Sample volume: 60 ml

| | With registration / month: |
|------------------|----------------------------|
| Price for SET 6: | 65,00 € |

SENSORY ANALYSIS

SET 7: recognition of basic tastes

Parameter: **basic tastes** (salty, bitter, sweet, sour)

Number of samples: 5

Sample volume: samples for preparation testing solutions, prepared solutions are sufficient to

carry out the analysis of 5 assessors

| | With registration: |
|------------------------|--------------------|
| Price for SET 7: | 100,00 € |
| Price for extra SET 7: | 50,00 € |

Dispatch dates of RM 2025

| SET | jan | feb | mar | apr | may | jun | jul | aug | sep | oct | nov | dec |
|------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1 2 3A 3B 4 5 | 7. | 4. | 4. | 1. | 6. | 3. | 1. | 5. | 2. | 7. | 4. | 2. |
| 6 | | | 5. | | | | | | 3. | | | |

Number of extra SETs is not limited.

VAT is not included in the prices.

Samples "Without annual registration" order at least one week before the date of the dispatch.

Reference values of RM samples will be published on the website http://www.bf.uni-lj.si/en/iml-pro/.

Costs of transport and documentation (Veterinary certificate for export, invoices, etc.) are not included in the prices.

Samples can be ordered also **between dispatch dates** (calibration, control, service of instruments, etc.) but at least one week in advance (prices by agreement).

Please send us completed **registration form** (Page 4) to

E-mail: borut.kolenc@bf.uni-lj.si

before 30th December 2024

Preparation of catalogue: Borut Kolenc

Head of laboratory: dr. Petra Mohar Lorbeg

ANNUAL REGISTRATION FORM

REFERENCE METERIALS

2025

| Name and DELIVERY | /INV(| DICI | NG ac | ldres | s: | | | | | | | |
|--|--------|-------|--------|----------|------|--------|----------|---------|-------|--------|-----|-----|
| Contact person: | | | | | | | | | | | | |
| Phone: | E-ma | il: | | | | | | | | | | |
| | | | INDI | CATE | THE | NUM | BER (| OF SE | :Ts/n | nonth | 1 | |
| CET 1 MID ID | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | ОСТ | NOV | DEC |
| SET 1 – MID-IR spectroscopy fat, protein, lactose | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| extra SET 1 SET 2 – urea | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| extra SET 2 | | | | | | | | | | | | |
| SET 3A – freezing point (NON-PRESERVED SAMPLES) | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| extra SET 3A SET 3B – freezing point | | | | | | | | | | | | |
| (PRESERVED SAMPLES) | | | | | | | | | | | | |
| extra SET 3B | | | | | | | | | | | | |
| SET 4 – enumeration of somatic cells | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| extra SET 4 SET 5 – pasteurised milk | | | | | | | | | | | | |
| extra SET 5 | | | | | | | | | | | | |
| SET 6 – pasteurised cream | | | | | | | | | | | | |
| extra SET 6 | | | | | | | | | | | | |
| SET 7 – sensory analysis | | | | | | | | | | | | |
| extra SET 7 | | | | | | | | | | | | |
| Please declare Shipping/delivery method | □ Ву р | ost 🗈 | Person | al take- | over | □ Othe | r (by ag | greemer | t) | | | |
| Date: | | | | | | | | | Sig | ınatur | e: | |