

Announcement of the Faculty of Food Industry King Mongkut's Institute of Technology Ladkrabang Subject: Scientific Instrument Service Charge of the Food Industry Research and Development Center

2021

Food Industry Research and Development Center, Faculty of Food Industry, King Mongkut's Institute of Technology Ladkrabang has provided the analysis, the testing and the scientific equipment services to departments within the Faculty, within the institute and external units. Thus, in order to operate the management effectively, Food Industry Research and Development Center, Faculty of Food Industry would like to announce the rate of service charge for scientific equipment. This is effective from 10th January 2022 onward. The detail is as attached to the announcement.

Announcement date 20th December, 2021

(Asst.Prof.Dr. Naphatrapi Luangsakul)

Naphatrapi

Dean of Food Industry

List of service charge for analytical, processing and general equipment

Analytical Equipment

| | | | | | | Service Ch | arge (Baht) | | |
|-------|--|----------------------------|--------|-----------|-----------|------------|-------------|---------------|-----------|
| Order | Equipment | Model | Photo | Within th | e Faculty | Within the | e Institute | External Unit | |
| no. | Equipment | Wodet | 111010 | Per hour | Per day/ | Per hour | Per day/ | Per hour | Per day/ |
| | | | | | Per time* | | Per time* | | Per time* |
| 1 | Colorimeter 1 | Minolta CR400 | | | - | 300 | 1,800 | 400 | 2,400 |
| 2 | Colorimeter 2 | HunterLab | | | - | 300 | 1,800 | 400 | 2,400 |
| | Differential Scanning Calorimeter (DSC) | Mettler Toledo DSC 2 | | 150 | 900 | 225 | 1,350 | 300 | 1,800 |
| 4 | Fermenter 1-5 lite | New Brunswick Bioflo310 | | | - | - | 1,000* | - | 1,500* |

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| | | | | | | Service Ch | arge (Baht) | | | |
|-------|---|-------------------------------------|-------|-----------|-----------|------------|-------------|----------|-----------|--|
| Order | Equipment | Model | Photo | Within th | e Faculty | Within the | e Institute | Extern | al Unit | |
| no. | Equipment | Modet | THOLO | Per hour | Per day/ | Per hour | Per day/ | Per hour | Per day/ | |
| | | | | | Per time* | | Per time* | | Per time* | |
| 5 | Fourier Transform Infrared Spectrometer (FTIR) | Bruker Invenio-s | | 250 | 1,500 | 375 | 2,250 | 500 | 3,000 | |
| 6 | Gas Chromatography – FID** | Agilent 7890B+5977B | | 160 | 960 | 300 | 1,800 | 400 | 2,400 | |
| 7 | Gas Chromatography – Mass Spectrometry (GC-MS)** | Agilent 7890B+5977B | | 200 | 1,200 | 375 | 2,250 | 500 | 3,000 | |
| 8 | High Performance – Liquid Chromatography (HPLC) 1*** | Agilent Technologies 1260 series | | 200 | 1,200 | 375 | 2,250 | 500 | 3,000 | |

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| | | | | | | Service Ch | arge (Baht) | | |
|-------|----------------------------|----------------------|--------|-----------|-----------|------------|-------------|----------|-----------|
| Order | Equipment | Model | Photo | Within th | e Faculty | Within the | e Institute | Extern | al Unit |
| no. | | Wodet | 111010 | Per hour | Per day/ | Per hour | Per day/ | Per hour | Per day/ |
| | | | | | Per time* | | Per time* | | Per time* |
| | | Agilent Technologies | | 120 | 720 | 225 | 1,350 | 300 | 1,800 |
| | Chromatography (HPLC) 2*** | 1100 series | | | | | | | |
| 10 | Kjeldahl | Gerhardt KB8S+VAP | | <u> </u> | - | 375 | 2,250 | 500 | 3,000 |
| | | 30S | | | | | | | |
| | | | | | | | | | |
| ., 11 | Micro plate reader | Themo Multiskan Go | | | - | 150 | 900 | 200 | 1,200 |
| | | | | | | | | | |
| 12 | Muffle furnace | NaberTherm | | | | 300 | 1,800 | 400 | 2,400 |
| | | LT40/11/B170 | | | | | | | |

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| | | | | | | Service Ch | Service Charge (Baht) | | | |
|-------|--------------------------------|---------------------|-------|-----------|-----------------------|------------|-----------------------|---------------|-----------------------|--|
| Order | Equipment | Model | Photo | Within th | e Faculty | Within the | e Institute | External Unit | | |
| no. | | Model | THOLO | Per hour | Per day/ Per time* | Per hour | Per day/ Per time* | Per hour | Per day/ Per time* | |
| 13 | Multimode Microplate reader | PerkinElmer EnSight | | - | - | 300 | 1,800 | 400 | 2,400 | |
| 14 | Oil Stability index | Rancimat 743 | | - | - | 375 | 2,250 | 500 | 3,000 | |
| 15 | PCR Thermal cycler | Eppendorf NexusGX2 | | | - | 150 | 900 | 200 | 1,200 | |
| 16 | Real-Time PCR | Biorad CTX96 | | - | - | 300 | 1,800 | 400 | 2,400 | |

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| | | | | | | Service Ch | arge (Baht) | rge (Baht) | | | |
|-------|--|--------------------|--|------------|-----------|------------|-------------|---------------|-----------|--|--|
| Order | Equipment | Model | Photo | Within th | e Faculty | Within the | e Institute | External Unit | | | |
| no. | Equipment | Wodet | 711010 | Per hour | Per day/ | Per hour | Per day/ | Per hour | Per day/ | | |
| | | | | | Per time* | | Per time* | | Per time* | | |
| 17 | Rheometer | Anton paar MCR 302 | | 200 | 1,200 | 375 | 2,250 | 500 | 3,000 | | |
| 18 | Soxhlet | Gerhardt S406AK | | : <u>-</u> | - | 375 | 2,250 | 500 | 3,000 | | |
| | Stereoscopic microscope with digital camera | Nikon SMZ745 | | - | | 150 | 900 | 200 | 1,200 | | |
| 20 | Texture analyzer | TA.XT. Plus | Million State Stat | - | - | 375 | 2,250 | 500 | 3,000 | | |

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| | | | | | | Service Ch | arge (Baht) | | |
|-------|-----------------------------|---------------------------|-------|-----------|-----------------------|------------|-----------------------|----------|-----------------------|
| Order | Equipment | Model | Photo | Within th | e Faculty | Within the | e Institute | Extern | al Unit |
| no. | Equipment | Model | rioto | Per hour | Per day/ Per time* | Per hour | Per day/ Per time* | Per hour | Per day/ Per time* |
| 21 | Ultra centrifuge size 11 ml | Himac CP100NX | | - | - | 225 | 1,350 | 300 | 1,800 |
| 22 | UV-Vis Spectrophotometer | Shimadzu UV1800 | | - | - | 300 | 1,800 | 400 | 2,400 |
| . 23 | Viscoamylograph | Brabender viscograph G | | <u>-</u> | - | 225 | 1,350 | 300 | 1,800 |
| 24 | Water activity (aw) | Aqualab 4TEV | | - | - | 300 | 1,800 | 400 | 2,400 |

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| | | | | | | Service Ch | arge (Baht) | | |
|-------|-----------------------------|---------------------------------------|-------|-----------|-----------|------------|-------------|----------|-----------|
| Order | Equipment | Model | Photo | Within th | e Faculty | Within the | e Institute | Extern | al Unit |
| no. | _qaipment | Wodet | THOSE | Per hour | Per day/ | Per hour | Per day/ | Per hour | Per day/ |
| | | | | | Per time* | | Per time* | | Per time* |
| 1 | Air Blast chiller & Freezer | Kolkteck/SFC-50-5E | | 250 | 1,500 | 375 | 2,250 | 500 | 3,000 |
| 2 | Extruder | Twin-Screw Extruder/CTE- D22L32 | | | - | 375 | 2,250 | 500 | 3,000 |
| 3 | Freeze dryer 1 | KINECT/LD0.5 | | 250 | 2,000 | 375 | 3,000 | 500 | 4,000 |
| 4 | Freeze dryer 2 | Scanvac Coolsafe | | 100 | 800 | 150 | 1,200 | 200 | 1,600 |

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| | | | | | | Service Ch | | | |
|-------|---------------------------|--------------------|-------|-----------|-----------------------|------------|-----------------------|----------|-----------------------|
| Order | Equipment | Model | Photo | Within th | e Faculty | Within the | e Institute | Extern | al Unit |
| no. | Egaipment | Modet | THOLO | Per hour | Per day/ Per time* | Per hour | Per day/ Per time* | Per hour | Per day/ Per time* |
| 5 | Homogenizer | IKA/T25 | | - | - | 225 | 1,350 | 300 | 1,800 |
| 6 | Sieve shaker | Retsch AS200 Digit | | - | - | 225 | 1,350 | 300 | 1,800 |
| 7 | Spray dryer | Eurobest/5k | | - | - | 375 | 2,250 | 500 | 3,000 |
| 8 | Rotary Water Spray Retort | OMF/PP500R | | - | 2,500* | - | 3,750* | | 5,000* |

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| | | | | | | Service Ch | arge (Baht) | | |
|-------|--|------------|---|-----------|-----------|------------|-------------|----------|-----------|
| Order | Equipment | Model | Photo | Within th | e Faculty | Within the | e Institute | Extern | al Unit |
| no. | Equipment | Wodet | 111010 | Per hour | Per day/ | Per hour | Per day/ | Per hour | Per day/ |
| | | | | | Per time* | | Per time* | | Per time* |
| 9 | Steam Retort | OMF/90ROFM | Ri de la companya de | | 2,500* | - | 3,750* | - | 5,000* |
| 10 | Food Canning set - Exhausted - Lid closing - Retort | | | | 4,000 | - | 6,000 | - | 8,000 |
| 11 | Super Critical fluid Extraction | SFX2130 | | 250 | 1,500 | 375 | 2,250 | 500 | 3,000 |
| 12 | Tray dryer | Progress | | - | - | 225 | 1,350 | 300 | 1,800 |

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| | | | | | | Service Ch | arge (Baht) | | |
|-------|--|--------------|-------|--------------|-----------|------------|-------------|----------|-----------|
| Order | Equipment | Model | Photo | Within th | e Faculty | Within the | e Institute | Extern | al Unit |
| no. | Equipment | Wodet | THOLO | Per hour | Per day/ | Per hour | Per day/ | Per hour | Per day/ |
| | | | | | Per time* | | Per time* | | Per time* |
| 13 | Grinder (Hammer mill) | WACO | | | - | 225 | 1,350 | 300 | 1,800 |
| 14 | Grinder (Pin mill 1) | Bonny 20B | | - | - | 265 | 1,500 | 350 | 2,000 |
| . 15 | Grinder (Pin mill 2) | Retsch ZM200 | | - | - | 265 | 1,500 | 350 | 2,000 |
| | Pasteurization machine for fruit juice | OFM | | 250 | 1,500 | 375 | 2,250 | 500 | 3,000 |

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General Equipment

| | | | | | | Service | Charge | | |
|-------|-------------------------|-----------------------------|--------|-----------|-----------|------------|-------------|----------|-----------|
| Order | Equipment | Model | Photo | Within th | e Faculty | Within the | e Institute | Extern | al Unit |
| no. | Equipment | Wiodet | 111000 | Per hour | Per day/ | Per hour | Per day/ | Per hour | Per day/ |
| | | | | | Per time* | | Per time* | | Per time* |
| 1 | Autoclave | Tomy SX-500 | | - | | - | 115* | | 150* |
| 2 | Hot air oven | Binder | | | - | 225 | 1,350 | 300 | 1,800 |
| 3 | | New Brunswick Innova 43R | | | | 75 | 450 | 100 | 600 |
| 4 | Refrigerated centrifuge | Eppendorf 5804 | | - | - | 150 | 900 | 200 | 1,200 |

General Equipment

| | | | | | | Service Ch | arge (Baht) | | |
|------------------|--------------------------------------|-----------------|-------|--------------|-----------|------------|-------------|----------|-----------|
| Order | Equipment | Model | Photo | Within th | e Faculty | Within the | e Institute | Extern | al Unit |
| no. | Equipment | Modet | THOLO | Per hour | Per day/ | Per hour | Per day/ | Per hour | Per day/ |
| | | | | | Per time* | | Per time* | | Per time* |
| Anthropolis Inc. | Refrigerated centrifuge (max volume) | Eppendorf 5910R | | - | - | 225 | 1,350 | 300 | 1,800 |
| 6 | Rotary evaporator | Buchi R-300 | | _ | | 225 | 1,350 | 300 | 1,800 |

Remark

- 1. The service charge for the use of the equipment is calculated at a minimum of 1 hour, the fraction of the next hour is charged half an hour
- 2. The service is held on business days, Monday to Friday, 9:00 a.m. 4:00 p.m.
- 3. The cost of disposable material will be calculated according to the actual amount used without discount. This can be adjustable according to the market price as listed below

| Equipment | Disposable material | Price per piece (Baht) |
|--|---|------------------------------|
| Differential Scanning Calorimeter (DSC) | Standard aluminum crucible 40 ul | 150 |
| Fourier Transform Infrared Spectrometer (FTIR) | KBr | 50 |
| Gas Chromatography | Sample vial, screw top, headspace, clear, 10 ml | 30 |
| | Sample vial, screw top, headspace, clear, 20 ml | 26 |
| | Septum PTFE/Silicone for vial headspace 18 mm | 12 |
| | Head space cap 18 mm magnetic | 50 |
| | Sample vial 2 ml | 9 |
| | Cap screw PTFE for sample vial 2 ml | 8 |
| High Performance – Liquid Chromatography (HPLC) | Sample vial, amber glass 2 ml | 9 |
| | Preassembled cap and septa PTFE for sample vial 2 ml | 8 |
| | Syringe disposable 3 ml | 5 |
| | Syringe filter, 13mm 0.22 um single-use (Nylon, PTFE, MixCellulose) | 5 |
| | Syringe filter, 13mm 0.45 um single-use (Nylon, PTFE, MixCellulose) | 5 |
| | Membrane filter, 47mm 0.22 um (Nylon, PTFE, MixCellulose) | 15 |
| | Membrane filter, 47mm 0.45 um (Nylon, PTFE, MixCellulose) | 15 |
| Multimode Microplate reader | 96 well plate | 20 |

- ** 4. In the case of Gas Chromatography, if the column is changed, the cost of consumables of the columns is 400 baht per time. In case of the user brings his/ her own column, the 10% discount will be applied from the service charge.
- ** 5. In the case of Gas Chromatography, if the user does not continuously inject the sample continuously during the request for the service, the user is required to pay the carrier gas 350 baht per day.
- *** 6. In case of HPLC, the user has to prepare the column and mobile phase for the analysis by himself/ herself. If the user uses the laboratory column, the additional charge will be applied with 200 baht per day.
- 7. Experts are required to give advices on how to use the equipment with the rate of 500 baht per time (for the agencies outside the faculty). The charge will be exempted in the consecutively used if he/ she can effectively use the equipment.
- 8. In the case of using Spray dryer, Extruder and juice pasteurizer, the experts need to be hired to give advices with the rate of 400 baht per time (for agencies outside the faculty) and the charge on the equipment cleaning will be 400 baht per time (for agencies outside the faculty).



The protocol for the use of scientific equipment with the service charge from the Faculty of Food Industry

According to the announcement of the Faculty of Food Industry Re: Scientific Instrument Service Charge of the Food Industry Research and Development Center B.E. 2021, announced on December 20, 2021. The central Laboratory needs to set the protocol for the use of scientific equipment with the service charge from the Faculty of Food Industry which is applicable for all buildings for students and staff from food industry will service charge and disposable material as the step below.

Student/Staff check the announcement about the rates for scientific equipment service charge of the Food Industry Research and Development Center, B.E. 2021

Student/ Staff download the requisition form from Food Industry Research and Development

Center on the website http://foodindustry.kmitl.ac.th/th

or from Al601 floor 6 Food Industry building and complete the requisition form

Submit the requisition form to Khun Ratanasuda Chuampai through the E-mail: foodinnopolis@kmitl.ac.th or else submit in person while receive the copy of the completed form

Student/ Staff is required to make a reservation on the equipment through the faculty website with the requirement on attaching the copy of requisition form

The expert in charge on the user training till the user complete the implementation

The expert reports the charge to Khun Ratanasuda Chuampai to process the student and staff payment upon the service

Student/ Staff process the payment End of the Process