

**INBIOSIS EQUIPMENT RENTAL RATE AND SERVICE CHARGES (updated 9 October 2020)**

No.	Name of equipment/ Facility	Brand / Model	Analysis / Usage / Notes	Responsible Research Fellow and Officer	Location	Unit of measurement	Charges for INBIOSIS user (RM)	Charges for UKM user (RM)	Charges for non-UKM user (RM)
1	Nano Liquid Chromatography-Time of Flight-Mass Spectrometry (NanoLC-TOF-MS)	Bruker / MicroTOF QIII	Large Molecules (Proteins) identification based on accurate mass and true isotopic pattern in MS and MS/MS	Dr. Wan Mohd Aizat Wan Kamaruddin, Mrs. Sarah Ibrahim, Mrs Rafidah Ahmad	Chemical Analysis Laboratory	Per injection	200	230	250
2	Liquid Chromatography-Time of Flight-Mass Spectrometry (LC-TOF-MS)	Bruker / MicroTOF QIII	Small Molecules (Metabolites) identification based on accurate mass and true isotopic pattern in MS and MS/MS	Dr. Syarul Nataqain Baharum, Mrs. Sarah Ibrahim, Mrs Rafidah Ahmad		Per injection	MS:200 MS/MS: 230	MS: 230 MS/MS:250	MS: 250 MS/MS:300
3	High Performance Liquid Chromatography (HPLC)	Perkin-Elmer / Flexar	To separate, detect and identify potential chemicals of particular masses	Dr. Syarul Nataqain Baharum, Dr Kamalrul Azlan Azizan, Mr.Hazim Syahmi, Mr. Syahmi Afiq Mustaza		Per sample	150	200	250
4	Gas Chromatography-Mass Spectrometry (GC-MS)	Perkin-Elmer / Clarus 600T	To analyze and quantify organic volatile and semi-volatile compounds	Dr. Syarul Nataqain Baharum, Dr Kamalrul Azlan Azizan, Mr. Syahmi Afiq Mustaza, Mrs. Nur Hazirah Mohd Johari		Per sample	?	250	300
5	Gas Chromatography-Flame Ionization Detector (GC-FID)	Perkin-Elmer / Clarus 580	To provide quantitative analysis of volatile and semi-volatile organic compounds found in a variety of matrices (gases, liquids and solids).			Per injection	?	200	250
6	Fourier Transform Infrared Spectroscopy (FTIR)	Perkin-Elmer / Frontier	To identify compound of sample mixtures of organic and inorganic compounds both in solid and liquid form	Dr. Syarul Nataqain Baharum, Mrs Rafidah Ahmad, Mr. Hazim Syahmi	DNA Analysis Laboratory	Per sample	ATR & KBr: 50 2D-FTIR: 100	ATR & KBr: 75 2D-FTIR: 150	ATR & KBr: 100 2D-FTIR: 175
7	Rotary evaporator	Eyela / N-1100S-WD	To remove solvent from sample by evaporation	Dr. Syarul Nataqain Baharum, Mrs Rafidah Ahmad, Mr. Hazim Syahmi	Metabolomics Laboratory	Per run	0	20	40
8	Freeze dryer	Christ / RVC2-18/MZ2C	To dry sample using freeze dry technique			Per sample	15/sample (max.: 30ml)	15/sample (max.: 30ml)	30/sample (max.: 30ml)
9	Nitrogen evaporator	Sastec / ST-NES12	To dry and evaporate using nitrogen with heat (wet bath)			Per run	0	20	40
10	Flash chromatography self-packed column	Customized	Enable sample separation in a series of fractions based on solvent eluent			Per day	0	25	50
11	Radial chromatography	Chromatotron / 7924T/00081	To separate and isolate chemical mixtures			Per day	0	25	50
12	Hydro-distillation	Favorit	To obtain essential oil from plant/sample			Per day	0	25	50
13	Soxhlet extractor	Favorit	To extract lipids from solid material			Per day	0	25	50
14	Microplate reader	BioRad / iMark13390	To detect biological, chemical or physical events of samples in microtiter plates			Per plate	0	10	20
15	UV-Vis spectrophotometer	Beckman Coulter / DU730	To quantitatively determine different analytes			Per hour	0	7.50	15
16	Vacuum concentrator	Christ / RVC2-18/MZ2C	To evaporate, dry, purify or concentrate sample by rotational vacuum concentrator			Dr. Syarul Nataqain Baharum, Dr Kamalrul Azlan Azizan, Mr. Hazim Syahmi, Mrs Rafidah Ahmad	Per hour	0	10
17	Incubator shaker	Sastec / ST-H2Q-X500C	Provide agitation for optimal cell growth	Dr. Syarul Nataqain Baharum, Mr. Hazim Syahmi, Mrs Rafidah Ahmad	Per day	0	50	100	
18	High capacity incubator shaker	Infors / Multitron	Provide agitation for large volume cell culture	Dr. Syarul Nataqain Baharum, Mr. Hazim Syahmi, Mrs Rafidah Ahmad	Per day	0	50	100	

19	SIMCA-P+ software	Umetrics	To interpret complex chemical analysis dataset	Dr. Syarul Nataqain Baharum, Dr Kamalrul Azlan Azizan, Mrs Rafidah Ahmad	Proteomics Laboratory	Per day	0	25	50
20	Metabolomics Laboratory (including all equipment in the laboratory)			Dr. Syarul Nataqain Baharum, Mrs Rafidah Ahmad, Mr Hazim Syahmi Elias		Per day	0	250	500
21	Isoelectric Focusing (IEF) Unit - 2 units	GE Healthcare / Ettan IPGphor3	To separate proteins based on isoelectric points	Dr. Maizom Hassan, Dr. Wan Mohd Aizat Wan Kamaruddin, Ms Nur Syatila Ab Ghani, Ms Rohana Mahayadin	Proteomics Laboratory	Per day	0	25	50
22	Densitometer	BioRad / GS800	To scan and analyze 1D/2D			Per hour	0	12.50	25
23	Electrophoresis unit (1D)	BioRad / Mini Protean 3 cell	To separate protein with moderate resolution			Per run	0	25	50
24	Electrophoresis unit (1D)	BioRad / Mini Protean Tetracell				Per run	0	25	50
25	Electrophoresis unit (1D)	Atto / AE-6500 Dual Mini Slab				Per run	0	25	50
26	Electrophoresis unit (2D)	Amersham Bioscience / SE600 Ruby (11 cm)				to separate protein based on isoelectric point and molecular weight	Per run	0	25
27	Electrophoresis unit (2D)	GE Healthcare / Ettan Dalt 6 (18cm)	Per run				0	25	50
28	Electrophoresis unit (2D)	BioRad / Protean II XL multicell	Per run				0	25	50
29	Vacuum heated gel dryer	Cleaver Scientific / OMNI	To heat and dry gel at controlled temperature and time	Dr. Maizom Hassan, Dr. Wan Mohd Aizat Wan Kamaruddin, Ms Nur Syatila Ab Ghani, Ms Rohana Mahayadin	Proteomics Laboratory	Per day	0	15	30
30	Fast Performance Liquid Chromatography (FPLC) (2 units) a) Own colum b) Prepacked column. HiLoad 16/600 Superdex 75pg / 200pg or TSKgel c) Empty column. XK16/26 × 20cm d) Empty column. XK16/26 × 40cm e) Empty column. XK16 × 100cm f) Empty column. XK26 × 70cm g) Column with resin. XK16/26 × 20cm h) Column with resin. XK16/26 × 40cm i) Column with resin. XK16 × 100cm j) Column with resin. XK26 × 70cm	GE Healthcare / Akta Pure and Akta Purifier	To purify and isolate desired protein	Dr. Maizom Hassan, Dr. Ng Chyan Leong, Ms Nur Syatila Ab Ghani, Ms Rohana Mahayadin	Proteomics Laboratory	Per hour	0	10	20
						Per run	0	50	100
						Per run	0	25	50
						Per run	0	50	100
						Per run	0	75	150
						Per run	0	75	150
						Per run	0	50	100
						Per run	0	100	200
						Per run	0	150	300
						Per run	0	150	300
31	Sonicator	Q-Sonica / Q500-220	To agitate particles in a sample by applying sound energy			Per hour	0	7.50	15
32	Ultrasonic bath	Elma / ElmaSonic S30H	To clean glassware			Per hour	0	5	10
33	Crystallization incubator (18-20 °C chiller)	HI-TEN / DEI/DEI625E	To incubate crystals obtained			Per plate	0	5	10

34	Stereo microscope (trinocular)	Olympus / SZ61	To analyze sample at low magnification with light reflection on the surface of sample with a built in c-mount optically matched to the zoom body	Dr. Ng Chyan Leong, Ms Nur Syatila Ab Ghani, Ms Rohana Mahayadin		Per day	0	10	20
35	Handheld Homogenizer	Ika / Ultra-Turrax T25 digital	To homogenize sample			Per hour	0	5	10
36	Proteomics Laboratory (including all equipment in the laboratory except FPLC)			Dr. Maizom Hassan, Dr. Ng Chyan Leong, Dr Wan Mohd Aizat Wan Kamaruddin, Ms Nur Syatila Ab Ghani, Ms Rohana Mahayadin		Per day	0	250	500
37	Quantitative Real Time-PCR (RT-qPCR)	BioRad / 170-9780	To detect and quantify RNA expression	Dr Goh Hoe Han, Mrs Faridda Hannim	Genomics Laboratory	Per hour	0	37.50	75
38	PCR thermal cycler gradient (2 units)	Applied Biosystems / Veriti	To amplify a particular DNA sequence with option for thermal gradient technology			Per hour	0	10	20
39	PCR thermal cycler	BioRad / T100	To amplify a particular DNA sequence			Per hour	0	7.50	15
40	Spectrophotometer	NanoDrop / ND-1000	To quantify micro-volumes of sample			Per hour	0	10	20
41	Gel imaging system	UVP / BioDoc-It	To generate gel image for documentation			Per hour	0	10	20
42	Fume Cupboard	Laboff / GPF-1200	To limit exposure to hazardous or toxic fumes, vapors or dusts			Per day	0	50	100
43	Hybridization oven (2 units)	FinePCR / Combi-H12	To distribute evenly probes to identified gene / protein			Per day	0	25	50
44	Water bath 20L (4 units)	Thermo / Precision	To incubate samples in water at a constant temperature over long period of time			Per day	0	10	20
45	Dry block heater	Labtech / Daihan	To heat samples in microcentrifuge tube with dry temperature control	Dr Goh Hoe Han, Mr Mohd Faiz Mat Saad, Mrs Faridda Hannim		Per day	0	10	20
46	Refrigerated benchtop centrifuge	Sartorius / Sigma 3-18K	To separate substance of different densities with temperature control (-20 - 40 °C)			Per day	0	75	150
47	Gel electrophoresis	Clever Scientific / Multisub Midi & Choice	For running gel electrophoresis at high numbers of samples			Per day	0	20	40
48	Electroporator	Eppendorf / Eporator	For fast and controlled electroporation of bacteria, yeasts and other microbes			Per day	0	20	40
49	UV Transilluminator	Vilber Lourmat / ETX-35M	To visualize ethidium bromide-stained nucleic acids / gene fragments			Per day	0	10	20
50	Ultraviolet crosslinkers	UVP / CLP-1000 Crosslinkers	To fix nucleic acid to membrane			Per day	0	10	20
51	Stereo microscope	Olympus / SZ51	To analyze sample at low magnification with light reflection on the surface of sample	Dr. Goh Hoe Han, Dr. Emelda Rosseleena Rohani	Per day	0	10	20	
52	Genomics Laboratory (including all equipment in the laboratory)			Dr. Goh Hoe Han, Mr Mohd Faiz Mat Saad, Mrs Faridda Hannim	Per day	0	200	400	
53	Workstation server (coming soon)	Skylake & Ivy Bridge	To do variety of Bioinformatics analysis including Next Generation Sequencing analysis, Structural Bioinformatics analysis, Molecular modelling analysis	Dr. Nor Azlan Nor Muhammad, Mrs Intan Azlinda Ramlee	Bioinformatics Laboratory	Per day			
54	Biosafety cabinet class I & II	Bioair / Top Safe 1.3	To provide safe workspace for researchers working with pathogens requiring a defined biosafety level			Per day	0	60	120

55	Laminar flow cabinet	Esco / AVC-4A1	Enclosed bench designed to prevent contamination of biological samples	Dr. Kamalrul Azlan Azizan	Microbiology Lab	Per day	0	50	100
56	Microbiology Laboratory (Biosafety cabinet, laminar flow cabinet, carbon dioxide incubator, micropipette set, access to water purification system, benchtop microcentrifuge)					Per day	0	175	350
57	Stereo-imaging microscope	Carl Zeiss / Stemi DV4	To generate image at low magnification with light reflection on the surface of sample	Dr. Emelda Rosseleena Rohani, Mrs Munirah Mahizan	Microscopy Laboratory	Per day	0	15	25
58	Stereo-imaging microscope	Carl Zeiss / Stemi 2000C				Per day	0	15	25
59	Fluorescence microscope <small>*RM35 surcharge per hour for fluorescence</small>	Carl Zeiss / Carl ZE				To generate image using fluorescence source	Per day	0	15*
60	Growth chamber	Conviron/ A1000	Plant growth chamber with control of temperature, light & humidity	Dr. Goh Hoe Han, Ms Siti Fatimah	Ground level, INBIOSIS	Per day	0	6	10
61	Growth chamber	Conviron/ PG15	Plant growth chamber with control of temperature, light & humidity	Dr Wan Mohd Aizat, Mr Mohd Fauzi Abd Razak	PBT	Per day	0	6	10
62	Laminar flow cabinet	Sastec	Enclosed bench designed to prevent contamination of biological samples			Per day	0	50	100
63	Incubator Shaker	INFORS	Provide agitation for optimal cell growth			Per day	0	25	50
64	Refrigerated Microcentrifuge	Sartorius-Sigma/1-15PK	To separate substance of different densities up to 14,000 rpm			Per day	0	35	75
65	Thermal Cycler	Eppendorf/ 5331000010	To amplify a particular DNA sequence			Per hour	0	7.50	15
66	Portable Electrical Conductivity meter	Eutech ECTestr 11	To measure the capacity of ions in an aqueous solution to carry electrical current			Per day	0	25	50
67	PCR thermal cycler	BioRad / T100	To amplify a particular DNA sequence			Per hour	0	7.50	15
68	Molecular Imaging System	Fujifilm/LAS-3000	To generate gel image for documentation			Per hour	0	10	20
69	Spectrophotometer	NanoDrop / ND-1000	To quantify micro-volumes of sample			Per hour	0	10	20
70	Orbital shaker	Protech/722	For aeration of in vitro culture			Per day	0	25	50
71	Orbital shaker	Stuart/SSL1							
72	PC2-Certified Greenhouse	-	Growth space for genetically modified plants to be carried out within a secure and controlled environment	Dr Wan Mohd Aizat, Ms Siti Fatimah	RTPC2	Per month		Bench: 200 GH1: 800 GH2: 500	Bench: 250 GH1: 900 GH2: 600

\* Per day: 9am - 5pm