

**BORANG PERMOHONAN / REQUEST FORM**

1. Sila lengkapkan Borang Permohonan untuk perkhidmatan analisis/ bayaran pukal/ sebut harga.  
*Please fill in the Request Form for analytical services/bulk payment/quotation.*
2. Sila rujuk lampiran untuk senarai harga, terma dan syarat.  
*Please refer to the attachment for price list, terms and conditions.*
3. Borang yang telah lengkap diisi perlu di e-mel ke **pegawai makmal yang bertanggungjawab**.  
*Please send the complete form to lab officer incharge.*
4. Semasa penghantaran sampel, sila bawa Borang Permohonan asal atau Bukti Pembayaran untuk rujukan pegawai.  
*Please bring the original Request Form or Payment Receipt for Officer's reference.*
5. Sampel yang telah siap dianalisis perlu diambil semula atau akan dilupuskan jika tidak dituntut lebih dari 2 minggu. *Samples need to be collected after respective analysis or will be disposed after 2 weeks.*

A. Maklumat Pemohon / Applicant Information			
Nama / Name			
Nombor Matrik / Matric Number			
Alamat Jabatan / Department Address			
Nombor Telefon / Telephone No.	E-mel / Email		
Kategori / Category (Sila Tanda/ Please Tick)	<input type="checkbox"/> IMEN	<input type="checkbox"/>	<input type="checkbox"/> Kakitangan UKM / UKM Staff
	<input type="checkbox"/> Luar UKM / Non-UKM	<input type="checkbox"/>	

B. Maklumat Analisis/ Analysis Information				
<small>Satu jenis Instrumen sahaja / One instrument type only</small>				
No.	Kod Analisis / Analysis Code	Bilangan / No. of Sample	Keterangan Sampel / Sample Details (Method, temperature, etc.)	Kod Promosi / Promotional Code (If applicable)

C. Pengesahan/ Acknowledgement	
Tandatangan pemohon / Applicant Signature:	Tandatangan Ketua Projek & Cop Rasmi / Project Leader Signature & Official Stamp:
Kod Peruntukan (Pengguna UKM) / Project Code (UKM User):	
Kos Analisis / Analysis Cost:	
Tarikh / Date:	

D. Penerimaan / Acceptance
Tandatangan Pegawai Makmal / Signature Lab Officer:
Cop / Stamp:
Tarikh / Date:

## TERMA DAN SYARAT / TERMS AND CONDITIONS

Perkara	Terma & Syarat
<b>Kod Promosi (jika berkaitan) / Promotional Code (if applicable)</b>	<p>Kod Promosi ini hanya tertakluk kepada promosi semasa sahaja dan hanya sah bagi penghantaran sampel dalam tempoh 1 tahun dari tarikh borang diterima. <i>This Promotion Code is only applicable during a promotion period and the samples need to be submitted within 1 year after the date of application.</i></p> <p>Pengguna boleh melayari laman sesawang rasmi IMEN di <a href="https://www.ukm.my/imen">https://www.ukm.my/imen</a> untuk maklumat lanjut berkenaan sebarang promosi. <i>Please refer to our official website <a href="https://www.ukm.my/imen">https://www.ukm.my/imen</a> for further information regarding any promotion.</i></p>

Alat/Instrument	Kod/ Code	Analisis/Analysis	Kos/Cost		
			IMEN	UKM	Non-UKM
<b>Semiconductor Lab (Fauziana)</b>					
Macro-PL Photoluminescence spectrometer	IMN-PL	Measurement at room temperature and low temperature emission	RM50/analysis	RM120/analysis	RM200/analysis
<b>Lab-on-chip (Dr Siti Nurfadhlina)</b>					
Plasma treatment	IMN-PT01	Argon/oxygen	RM50/sample	RM100/sample	RM150/sample
IV/CV 4 point probe system	IMN-4PP01	IV/CV measurement	RM50/sample	RM100/sample	RM150/sample
Impedance analyzer	IMN-IA	Plug-in impedance analyzer	RM50/sample	RM100/sample	RM150/sample
Oven	IMN-OV01	Temperature range: +20 to +300 °C	RM50/sample	RM60/sample	RM70/sample
Sterilizing oven	IMN-OV02	Temperature range: +20 to +250 °C	RM60/sample	RM70/sample	RM80/sample
<b>MEMS/NEMS Lab (Saiful)</b>					
FESEM SIGMA	IMN-FESEM	Field emission electron scanning microscope	RM150/analysis	RM180/analysis	RM400/analysis
EBL SYSTEM	IMN-EBL1	Electron beam lithography (with resist)	RM960/hour	RM1200/hour	RM1500/hour
	IMN-EBL2	Electron beam lithography (own resist)	RM200/hour	RM250/hour	RM300/hour
Shaker LDS V406	IMN-SHK	Shaker	RM120/sample	RM150/sample	RM200/sample
XeF <sub>2</sub> dry etching system	IMN-XEF2	Etches Si, a-Si, Mo, Ta	RM260/sample	RM320/sample	RM350/sample
Laser displacement meter	IMN-DISP	MEMS structure displacement	RM120/sample	RM150/sample	RM200/sample
EBL spin coater CY-SP4	IMN-SC01	Spin coat EBL resist	RM80/sample	RM100/sample	RM150/sample
Plasma sputtering coater	IMN-SPUT01	Aluminium deposition	RM160/sample	RM150/sample	RM200/sample
LCR Meter 6020	IMN-LCR01	Impedance/capacitance / inductance	RM80/sample	RM100/sample	RM150/sample
DI Water Dispenser	IMN-DI01	Limit each DI water dispense to 1 litre	RM2/litre	RM3/litre	RM4/litre
<b>MINES lab (Shafii)</b>					
Altera Terasic DE1	IMN-ALT	SoC Development Board (2015)	RM130/day	RM300/day	RM600/day
LeCroy Wavestation 2012	IMN-FG	Function Generator (2014)	RM60/day	RM120/day	RM240/day
Textronix oscilloscope	IMN-OSC	Oscilloscope	RM70/day	RM120/day	RM200/day
<b>Nanophotonic Lab (Izzah)</b>					
Surface Plasmon Resonance	IMN-SPR1	Measures molecular interactions. SPR with own slide	RM100/sample	RM120/sample	RM150/sample
	IMN-SPR2	Measures molecular interactions. SPR with gold slide	RM800/sample	RM820/sample	RM850/sample
Digital Viscometer	IMN-VISCO	9 ml/sample	RM100/sample	RM120/sample	RM150/sample
CNC Machine	IMN-CNC	Please provide design. Price per sample for the first 1 hour	RM100/sample additional hour – RM50/hour	RM120/sample additional hour – RM60/hour	RM150/sample additional hour – RM70/hour
<b>Thin Film Lab (Shafii)</b>					
E-beam/Thermal Evaporator	IMN-EBEAM	Al, Ag, Cu	RM150/process	RM180/process	RM350/process
Atomic Force Microscopy	IMN-AFM	Surface topography	RM70/analysis	RM120/analysis	RM200/analysis

Hall Effect	IMN-HALL	Conductivity	RM60/sample	RM120/sample	RM200/sample
Picoammeter/tapping solenoid (Isc/Voc)	IMN-TAP	Input force on thin sample and measure current/voltage output	RM50/sample	RM120/sample	RM200/sample
<b>OPEL Lab (Dr Siti Nurfadhlina)</b>					
UV-Vis Spectrophotometer	IMN-UV	Absorbance/ Transmittance/ Reflectance (Solid/Liquid)	RM40/sample	RM50/sample	RM100/sample
Solar simulator Newport Oriol	IMN-SIMSOL	Natural sunlight simulator	RM80/sample	RM100/sample	RM200/sample
Spectrometer Scientific Grade	IMN-Spect	Raman measurement at 785 nm	RM100/analysis	RM125/analysis	RM250/analysis
Potentiostat	IMN-EIS	Electrochemical impedance spectroscopy (EIS)	RM120/sample	RM150/sample	RM300/sample
	IMN-EC	IV/ CV electrochemical	RM60/sample	RM70/sample	RM140/sample
<b>MIPAC Lab (Saiful)</b>					
Nanoindenter	IMN-INDENT	Nanoindentation (subjected to parameter analysis)	RM40/indent	RM50/indent	RM100/indent
Digital Microscope	IMN-OM01	Microscopy observation	RM30/sample	RM50/sample	RM100/sample
<b>C-electronics Lab (Fauziana)</b>					
Four point probe station	IMN-4PP02	Measure IV	RM50/sample	RM100/sample	RM150/sample
Tabletop Centrifuge	IMN-TC01	4000rpm isolation / separation process	RM40/hour	RM50/hour	RM100/hour
Horizontal Tube Furnace	IMN-FURN01	Annealing Process	RM100/process	RM150/process	RM200/process
Chemical Vapor Deposition Tube Furnace	IMN-CVD01	Synthesis Graphene (Gas Ar & H <sub>2</sub> )	RM150/process	RM200/process	RM300/process
Chemical Vapor Deposition Tube Furnace	IMN-CVD02	Synthesis Graphene (Gas CH <sub>4</sub> & Ar H <sub>2</sub> )	RM150/process	RM200/process	RM300/process
Chemical Vapor Deposition Tube Furnace	IMN-CVD03	Synthesis GaO (Gas N <sub>2</sub> & O <sub>2</sub> )	RM150/process	RM200/process	RM300/process
Chemical Vapor Deposition Tube Furnace	IMN-CVD04	Synthesis MOS <sub>2</sub> (Gas Ar 90% H <sub>2</sub> 10%)	RM150/process	RM200/process	RM300/process
Spin Coater	IMN-SC02	Spin coat polymer and photoresist	RM10/sample	RM15/sample	RM30/sample
<b>Artificial Kidney Lab (Fairus)</b>					
FDM 3D Printing	IMN-3DP01	minimum RM10	RM1.0/gram	RM1.0/gram	RM2.0/gram
MSLA 3D Printing	IMN-3DP02	minimum RM10	RM1.0/gram	RM2.0/gram	RM4.0/gram
<b>Microfluidic Lab (Fairus)</b>					
Fluorescence Microscope (Olympus BX53)	IMN-FM1	Molecules analysis	RM80/sample	RM100/sample	RM200/sample
Motic Fluorescence Microscope (BA400 Trinocular)	IMN-FM2	Molecules analysis	RM65/sample	RM80/sample	RM160/sample
High speed camera	IMN-HSC	Observe and record particle motion	RM120/sample	RM150/sample	RM300/sample

RF Plasma Surface Treatment	IMN-PT02	Surface treatment/cleaning/surface modification in oxygen plasma	RM25/hour	RM30/hour	RM60/hour
Spin Coater	IMN-SC03	Spin coat polymer and photoresist	RM10/sample	RM15/sample	RM30/sample
Basic Plasma Cleaner	IMN-PT03	Clean, activate, and modify surfaces (with or without oxygen)	RM25/hour	RM30/hour	RM60/hour
UV-Ozone Cleaner	IMN-OZ	Cleaning and surface activation using UV light	RM65/run	RM80/run	RM160/run
Planetary Mixer	IMN-MIX	Mixing, dispersion, and degassing of materials	RM25/hour	RM30/hour	RM60/hour
<b>Quantum Electronics (Izzah)</b>					
Portable Surface Plasmon Resonance	IMN-SPR3	Measures molecular interactions. SPR with own slide	RM80/sample	RM100/sample	RM130/sample
	IMN-SPR4	Measures molecular interactions. SPR with gold slide	RM325/sample	RM390/sample	RM450/sample
Yixist Visible Spectrometer	IMN-Vis	Absorbance/Transmittance/Reflectance (thin film)	RM20/sample	RM40/sample	RM80/sample
Spin Coater	IMN-SC04	Polymer and carbon-based material	RM30/hour	RM50/hour	RM80/hour
<b>Cleanroom Lab (Anezah)</b>					
SEM (JEOL)	IMN-SEM	Scanning electron microscope	RM50/sample	RM100/sample	RM150/sample
Thin Film Mapping	IMN-MAP	Measure thickness of SiO <sub>2</sub> and Si <sub>3</sub> N <sub>4</sub> thin film	RM30/sample	RM60/sample	RM90/sample
Microscope (Olympus)	IMN-OM02	With depth analyzer	RM50/hour	RM100/hour	RM150/hour
DC/RF magnetron sputter	IMN-SPUT02	Mo, Ta, ZnO, Si, SiO <sub>2</sub> , Al, Cu, Ti	RM100/hour	RM150/hour	RM200/hour
Gold sputter coater	IMN-SPUT03	Au (minimum 50nm)	RM3/nm	RM5/nm	RM8/nm
Oxidation furnace	IMN-FURN02	SiO <sub>2</sub> wet oxidation (all in). Anneal (all in)	RM150/hour	RM250/hour	RM300/hour
Karl-Suss MJB Mask Aligner	IMN-KARL	UV exposure	RM50/hour	RM75/hour	RM100/hour
Midas Single Side Mask Aligner	IMN-MIDAS	UV exposure	RM50/hour	RM75/hour	RM100/hour
Spin Coater	IMN-SC05	SU8, PDMS	RM50/hour	RM80/hour	RM100/hour
Programmable Spin Coater	IMN-SC06	Photoresist	RM50/hour	RM80/hour	RM100/hour
LCR meter	IMN-LCR02	Impedance/capacitance /inductance	RM50/sample	RM250/sample	RM300/sample
Keithley semiconductor analyzer	IMN-4PP03	Semiconductor characterization/IV/CV	RM50/hour	RM200/hour	RM300/hour
Corona discharge	IMN-CORO	Corona treatment	RM50/hour	RM100/hour	RM150/hour
Cleaning (wet bench)	IMN-CLEAN	DI water, IPA, methanol, acetone, ethanol, ultrasonic bath	RM50/hour	RM200/hour	RM300/hour
Wet etching process (wet bench)	IMN-ETCH	Acids and bases	RM50/hour	RM200/hour	RM300/hour