

**BIL. SEBUTHARGA/QUOTATION REF: UBD/Q/295/2022 - [G]
(CAMES)**

TITLE : TO SUPPLY, DELIVER, INSTALL AND TEST GAS GENERATOR H2 AND AIR INTO SHIMADZU GC-2014GC GAS CHROMATOGRAPHY WITH THERMAL CONDUCTIVITY DETECTOR AND FLAME IONISATION DETECTOR FOR CENTRE OF ADVANCED MATERIAL AND ENERGY SCIENCES (CAMES), UNIVERSITI BRUNEI DARUSSALAM

No.	Quantity	SPECIFICATIONS
1	1 LOT	To supply, deliver, install and test gas generator H2 and Air into Shimadzu GC-2014GC Gas Chromatography with Thermal Conductivity Detector and Flame Ionisation Detector <i>Specification:</i> Refer the attachment.

**To supply, deliver, install and test gas generator H2 and Air into Shimadzu GC-2014GC Gas Chromatography
with Thermal Conductivity Detector and Flame Ionisation Detector For Centre of Advanced Material and Energy Sciences,
Universiti Brunei Darussalam**

NO.	QTY	ITEM NAME/DESCRIPTION
1	1 LOT	<p>To supply, deliver, install and test gas generator H2 and Air into Shimadzu GC-2014GC Gas Chromatography with Thermal Conductivity Detector and Flame Ionisation Detector For Centre of Advanced Material and Energy Sciences, Universiti Brunei Darussalam</p> <p>Specification: Consist of complete both Item No. 1A and 1B as specify below with no partial offer. Compatible into Shimadzu GC-2014GC Gas chromatography.</p>
1A	1 Unit	<p>Hydrogen (H2) Gas Generator 120 cc/min Specification: Able to generate up to 700 cc/min of Hydrogen with purity better than 99.9999% and pressure up to 10 bar (145 psi). includes a new long life multilayer electrolytic cell with polymeric membrane (PEM) using distilled water. No acid or alkaline solutions are used.</p> <p>Main Applications: GC-FID / GC-NPD / GC-FPD / THA ICP-MS collision gas</p> <p>Other specification - Refilling metal hydride tanks for use with fuel cells New long life multilayer PEM cell High flow rate up to 700 cc/min High pressure up to 10 bar (145 psi) RS 232/485 and USB standard LAN optional Auto refill standard High purity: 99.9999% Static dryer no maintenance Safety routine and self monitoring Smart humidity safe guard High pressure GLS electronically controlled</p> <p>Inclusive: Deionizer water filter Dessicant refill</p> <p>Onsite installation -Total cost should INCLUDE extra works electrical wiring installation, pipe tubing works, structural modifications etc. -Responsible for provision of all labour and both consumable and non-consumable materials for carrying out installation, calibration and testing at their expenses</p>
1B	1 Unit	<p>Air Generator Specifications: Able to remove the total hydrocarbons to less than 0.05 ppm. available with a low noise built-in pistons compressor, 100% oil-free. The filtration of the hydrocarbons is performed using a catalytic oven filled with palladium.</p> <p>Main Applications: GC-FID GC-NPD GC-FPD GC-PFPD THA Gas sensing</p> <p>Other specification Easy use and quick installation Flow rate up to 30 L/min Pressure up to 9 bar (130 psi) RS 485 and RS 232 as standard Purity: < 0.05 ppm THC Long life and 100% oil free built-in compressor Silent technology: < 52 dB(A) No maintenance Reduced foot print</p> <p>Inclusive: Kit filter for ZA FID Air C - 2 KIT</p> <p>Onsite installation -Total cost should INCLUDE extra works electrical wiring installation, pipe tubing works, structural modifications etc. -Responsible for provision of all labour and both consumable and non-consumable materials for carrying out installation, calibration and testing at their expenses</p>