



UNIVERSITI SAINS MALAYSIA

USM/JBEND/1/SP/BR/PLW6

TO SUPPLY AND DELIVER LIQUID NITROGEN, GASES AND RENTED GAS TANKS (PHASE 2) TO INSTITUT PERUBATAN DAN PERGIGIAN TERMAJU

UNIVERSITI SAINS MALAYSIA, BERTAM, 13200 KEPALA BATAS, PULAU PINANG

TECHNICAL SPECIFICATION SCHEDULE

QUOTATION NO. : S/B/IPPT/17/03

ITEM NO.	UNIVERSITY’S DESCRIPTION	QUANTITY	BIDDER’S SPECIFICATION (Please Write Your Specification In This Column)	TECHNICAL EVALUATION (FOR OFFICIAL USE ONLY)																								
A.	<b>ITEM NAME</b>  Liquid Nitrogen, Gases and Rented Gas Tanks.																											
B.	<b>DESCRIPTIONS</b>  The supplied liquid nitrogen, gases and rented gas tanks are for research and clinical usage.  These items shall be delivered and supplied to:- <table><tr><th>Name</th><th>Location</th></tr><tr><td>Biobank Laboratory</td><td>Animal Research Center (ARC)</td></tr><tr><td>Oncology Laboratory</td><td>ARC</td></tr><tr><td>Regenerative Laboratory</td><td>ARC</td></tr><tr><td>Integrative Laboratory</td><td>ARC</td></tr><tr><td>Craniofacial and Biomaterial Science Laboratory</td><td>Lot 45, Level 1</td></tr><tr><td>Lifesciences Laboratory</td><td>Lot 45, Level 2</td></tr><tr><td>Infectomic Laboratory</td><td>Lot 45, Level 2</td></tr><tr><td>Animal Research Facility</td><td>ARC</td></tr><tr><td>Advanced Diagnostic Laboratory</td><td>Clinical Trial Centre (CTC)</td></tr><tr><td>Oncological and Radiological Sciences Laboratory</td><td>CTC</td></tr><tr><td>Plant Room Medical Gas</td><td>CTC</td></tr></table>	Name	Location	Biobank Laboratory	Animal Research Center (ARC)	Oncology Laboratory	ARC	Regenerative Laboratory	ARC	Integrative Laboratory	ARC	Craniofacial and Biomaterial Science Laboratory	Lot 45, Level 1	Lifesciences Laboratory	Lot 45, Level 2	Infectomic Laboratory	Lot 45, Level 2	Animal Research Facility	ARC	Advanced Diagnostic Laboratory	Clinical Trial Centre (CTC)	Oncological and Radiological Sciences Laboratory	CTC	Plant Room Medical Gas	CTC			
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C.	<b>ESSENTIAL COMPONENTS</b>  1. Liquid Nitrogen  1.1 Liquid Nitrogen 50 Liter/refill 1.2 Liquid Nitrogen 30 Liter/refill 1.3 Liquid Nitrogen 10 Liter/refill																																											
D.	<b>TECHNICAL SPECIFICATION</b>  <b>1.1 Liquid Nitrogen 50 liter / refill</b>  1.1.1 The vendor shall collect the empty tank, refill and return it within 24 hours. 1.1.2 The quantity of delivery shall be upon request as shown in table below. <table border="1"><thead><tr><th>Months</th><th>Year</th><th>Quantity</th></tr></thead><tbody><tr><td>April</td><td>2017</td><td>7 refills</td></tr><tr><td>May</td><td>2017</td><td>6 refills</td></tr><tr><td>June</td><td>2017</td><td>7 refills</td></tr><tr><td>July</td><td>2017</td><td>6 refills</td></tr><tr><td>August</td><td>2017</td><td>6 refills</td></tr><tr><td>September</td><td>2017</td><td>7 refills</td></tr><tr><td colspan="2"><b>Total</b></td><td><b>39 refills</b></td></tr></tbody></table> <b>1.2 Liquid Nitrogen 30 liter / refill</b>  1.2.1 The vendor shall collect the empty tank, refill and return it within 24 hours. 1.2.2 The quantity of delivery shall be upon request as shown in table below. <table border="1"><thead><tr><th>Months</th><th>Year</th><th>Quantity</th></tr></thead><tbody><tr><td>April</td><td>2017</td><td>6 refills</td></tr><tr><td>June</td><td>2017</td><td>6 refills</td></tr><tr><td>July</td><td>2017</td><td>6 refills</td></tr><tr><td>September</td><td>2017</td><td>6 refills</td></tr><tr><td colspan="2"><b>Total</b></td><td><b>24 refills</b></td></tr></tbody></table>	Months	Year	Quantity	April	2017	7 refills	May	2017	6 refills	June	2017	7 refills	July	2017	6 refills	August	2017	6 refills	September	2017	7 refills	<b>Total</b>		<b>39 refills</b>	Months	Year	Quantity	April	2017	6 refills	June	2017	6 refills	July	2017	6 refills	September	2017	6 refills	<b>Total</b>		<b>24 refills</b>	39 refills   
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E	<b>1.3 Liquid Nitrogen 10 liter / refill</b>	12 refills																										
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September	2017	2 refills																										
Total		12 refills																										
<b>STANDARD REQUIREMENT AND INSTRUCTIONS</b>																												
1. The tanks shall be delivered to the specific location where the tanks are located.																												
2. All Liquid Nitrogen tank are owned by USM.																												
3. The unit price shall include delivery charge.																												
4. The vendor shall collect the empty tank, refill and return it within 24 hours.																												
5. The university has the right to accept all or part of the quotation quoted and does not bind to accept the cheapest quotation or any quotation quoted.																												
6. The location for delivery of the item is shown in Appendix I.																												
7. The summary for quantity of liquid nitrogen / gas needed is shown in Appendix II.																												

**Appendix I: Location for Delivery of the Liquid Nitrogen**

No.	Item	Location	Room No
1.1	Liquid Nitrogen 50 liter / refill	Oncology ARC	LI-MEP-04-95 Washing room
		Regenerative ARC	Staff room
			Cell culture Room 11
1.2	Liquid Nitrogen 30 liter / refill	Integrative ARC	Cell culture Lab 1 (L1-GDR-21)
		Craniofacial and Biomaterial, Lot 45	Level 1, Room B134
1.3	Liquid Nitrogen 10 liter / refill	Infectomic, Lot 45	Lot 45, Level 2, Cell culture Lab 1

**Appendix II : The summary for quantity of liquid nitrogen / gas needed**

No	Gas or Liquid	Size	Quantity required per year (Delivery depend on user requested / refer to Specification Table within Section D)	Tanks need to be rent (Y/N)
1.1	Liquid Nitrogen	50L/refill	39	No
1.2	Liquid Nitrogen	30L/refill	24	No
1.3	Liquid Nitrogen	10L/refill	12	No