

Requirement Specifications

**SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF TWO UNITS (2) OF
ULTRA HIGH PERFORMANCE LIQUID CHROMATOGRAPH TRIPE QUADRUPOLE
MASS SPRECTROMETER SYSTEM (UHPLC/MS/MS) WITH NINE (9) YEARS
COMPREHENSIVE MAINTENANCE SERVICES (BEING OPTIONAL AFTER ONE (1)
YEAR WARRANTY PERIOD)**

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Section I

A SPECIFICATIONS AND REQUIREMENTS INCLUDING WARRANTY AND MAINTENANCE CONTRACT

Supply, Delivery, Installation and Commissioning of Two (2) units of Ultra High Performance Liquid Chromatograph Triple Quadrupole Mass Spectrometer Systems (UHPLC-MS/MS) with nine (9) years comprehensive maintenance services (being optional after one (1) year warranty period)		
Item	Quantity	Product Description
1	2 units	Ultra High Performance Liquid Chromatograph Triple Quadrupole Mass Spectrometer System (UHPLC/MS/MS) The unit should comprise of the following components: 1. Sample introduction system 2. Column oven 3. Solvent delivery system 4. Solvent degasser 5. Triple quadrupole mass spectrometer system 6. Computer system for hardware controlling and data handling 7. Printer Critical Specification - The system must be able to operate at 220/240 volt, 50/60 Hz - The system must be able to analyse for veterinary drug residues in food and controlled compounds in sewage water. Tenderer may quote a different or similar model of equipment for the two applications. 1. SAMPLE INTRODUCTION SYSTEM Critical Specifications 1.1 Must have a thermostating module to control the temperature of the sample vials (should be settable within 4 °C to 35 °C) 1.2 Programmable needle height control 1.3 Must be compatible with high system pressure at least a maximum of 1300 bar Other specifications

		1.4 Should be well-plate type to enable short injection cycle time for running UHPLC 1.5 Handles at least 100 samples in standard 1.5 or 2 ml vials 1.6 Expandable and programmable to accommodate to ≥ 2 standard size of 96-well plates 1.7 Priority sample capability 1.8 Random access to individual samples 1.9 Programmable needle wash with multi-choice of solvents 1.10 Carryover should be $< 0.005\%$ 1.11 Programmable injection volume from 0-100 μl in 0.1 μl steps 1.12 Injection Precision: at least 0.5% RSD from 5-100 μl and at least 1% RSD from 1-5 μl 1.13 Injection accuracy: at least 1% from 5-100 μL
		2. COLUMN OVEN Critical Specifications 2.1 Can house at least 2 columns Other specifications 2.2 Temperature range: 10 °C above ambient to 80 °C in 0.1°C steps 2.3 Temperature stability: ± 0.05 °C 2.4 Should be able to handle column length from 10-150 mm
		3. SOLVENT DELIVERY SYSTEM Critical Specifications 3.1 Ultra high pressure up to at least a maximum of 1300 bar for flow rates up to 2 ml/min 3.2 Lowest delay volume down to < 130 μl Other specifications 3.3 High performance binary gradient pump system with switching valves to at least accommodate 4 solvent channels 3.4 Able to run in two modes: in standard delay volume mode for normal HPLC and low delay volume mode for fast HPLC, without upgrading any hardware 3.5 Operating settable flow rate 0.001 – 5 ml/min 3.6 Flow accuracy: $\pm 1.0\%$ RSD or 1 ml/min, whichever is greater 3.7 Flow precision: $\leq 0.075\%$ RSD or ≤ 0.02 min SD, whichever is greater (from 0.2-2 ml/min) 3.8 Compositional accuracy: $+ 0.5\%$ RSD 3.9 Equipped with a leak sensor which will send feedback to software when leaks are detected and pump will stop 3.10 Supplied with at least four 1-L amber bottles and four 1-L clear bottles, complete with 4 inlet filters and 4 caps with inlet holes and plugs (1 set/unit) 3.11 Flow path should be able to handle solvent pH range from 2-12

		4. SOLVENT DEGASSER 4.1 On-line vacuum type 4.2 Maximum flow rate: 10 ml/min per channel 4.3 Internal volume per channel should not be more than 0.5 ml 4.4 Should have at least 2 independent channels 4.5 Error status should be fed back to system software
		5. TRIPLE QUADRUPOLE MASS SPECTROMETER SYSTEM 5.1 General Critical Specifications 5.1.1 Scan speed at least 12,000 amu/sec 5.1.2 Mass stability ± 0.1 amu over 24 hrs 5.1.3 Uses only high purity nitrogen for collision purpose 5.1.4 Positive/Negative polarity switching ≤ 25 ms, in continuous mode during LC/MS and LC/MS/MS runs Other Specifications 5.1.5 Minimum mass range: 10-2000 amu 5.1.6 Has an integrated divert valve to switch the LC flow to waste during void volume elution, gradient end-point and any other portion of analytical run 5.1.7 Source elements can be removed for cleaning without breaking vacuum 5.1.8 Fully automated optimization of ion optics and mass axis calibration 5.1.9 Built-in or delivered with external mechanical infusion system (syringe pump) to support real-time data acquisition for MS method optimisation using known standard and with flow rate from 2-100 μl/min. 5.1.10 Delivered with 2 syringes for direct infusion and split infusion 5.1.11 Delivered with necessary tubing, adaptors, connectors and tools for enabling the above functions 5.2 Electrospray Ionisation (ESI) Source Critical Specifications 5.2.1 Sensitivity: 1 pg reserpine injected on column with S/N>500,000:1 for positive mode 5.2.2 Sensitivity: 1 pg of chloramphenicol injected on column with S/N>500,000:1 for negative mode Other Specifications 5.2.3 Compatible with liquid flow rates of 5 μl/min to 3 ml/min without splitting 5.2.4 Source temperature: 400°C or higher 5.2.5 Full gradient capability from 100% aqueous to 100% organic 5.3 Mass Analyzers Critical Specifications

		5.3.1 Minimum dwell time of 1 ms Other specifications 5.3.2 Allows the following data acquisition modes: Full scan MS, selected ion for both Q1 and Q3 product ion scan, precursor scan, neutral loss/gain scan, multiple reaction monitoring (MRM), scheduled MRM, MS2 scan. 5.3.3 Quadrupole mass analyser that is able to concentrate ions effectively and to acquire the mass spectrum for confirmation of unknown compounds at a higher confidence level 5.4 Mass Detector 5.4.1 Detector operates in both positive and negative ion modes 5.4.2 At least six orders of magnitude for linearity 5.5 Vacuum System Critical Specifications 5.5.1 The high vacuum must be maintained by turbo molecular pump. This pump should be backed by mechanical (rough) pump 5.5.2 Must be delivered with enclosure to reduce the noise level of the mechanical pump. 5.5.3 Enclosure should also be large enough to serve as benchtop for the Mass Spectrometer
		6. COMPUTER SYSTEM FOR HARD WARE CONTROL AND DATA HANDLING 6.1 Hardware 6.1.1 Minimally equivalent to performance of Pentium Intel Core i7- 8700 processor (3.2GHz) 6.1.2 At least 16 GB DDR3 SDRAM 6.1.3 At least 2 GB graphics card 6.1.4 At least 1 TB hard disk 6.1.5 At least 23" wide full HD LED monitor 6.1.6 Resolution: at least 1920 x 1080 6.1.7 Optical mouse with scroll wheel 6.1.8 Min 6 USB ports, at least 3 in front 6.1.9 Pre-installed MS Windows 10 or newer version 6.1.10 Pre-installed Microsoft Office 2016 comprising Word, Excel and PowerPoint or newer version 6.1.11 Latest antivirus software 6.2 System control and data handling software Critical specifications: 6.2.1 Must be able to provide fully integrated control for both the ultra-high performance liquid chromatograph (UHPLC) and the triple quadrupole mass spectrometer (MS/MS) systems 6.2.2 Automatic determination of MRM transitions for easy method development 6.2.3 Dynamic/Scheduled or equivalent MRM function with automatic maximization of dwell time for multi-component analysis

		6.2.4 The setting parameters of data acquisition and processing for existing/remaining compounds should not be affected by the addition or deletion of compounds Other specifications: 6.2.5 Has on-line help for instrument control programs as well as user manual in PDF file format 6.2.6 Capable of tuning for electrospray (ESI) in positive and negative ion modes 6.2.7 Automatic mass calibration routine 6.2.8 Zoom scan capability for achieving higher mass resolution
		7. PRINTER Critical specifications: 7.1 Must be supplied with 8 sets of black toner cartridges (4 sets/unit) Other specifications 7.2 Monochrome laser printer 7.3 Printing resolution: at least 1200x1200dpi 7.4 Printing speed: At least 50 ppm in black 7.5 Allow automatic duplex printing, with at least 36spm 7.6 Capacity of input tray: at least 500 A4-size sheet 7.7 Capacity of output tray: at least 250 sheets
		8. OTHER REQUIREMENTS 8.1 User Training Critical specification: 8.1.1 Comprehensive training must be provided by the competent application chemist for all users (2 rounds of at least 3 users per session per unit) on the principle, operation and maintenance of the proposed systems 8.2 Application databases/libraries Critical specification: 8.2.1 Tenderers to provide and install pre-established application databases/libraries coming with both retention time and MRM information for every entry of veterinary & human drugs 8.2.2 If no pre-established library, technical support must be provided to create the library in the customer's system. The rights of this library will belong to SFA use only 8.3 Application and technical Support Critical specification: 8.3.1 Tenderers must provide 4 start-up columns per LCMSMS system, which are compatible with the installed libraries/databases 8.3.2 Set up the running conditions for existing and new test methods as requested by SFA and ensure the methods are running properly 8.3.3 Tenderers must have a local technical support team consisting of service engineers and application chemists to provide equipment maintenance and trouble-shooting services 8.3.4 Tenderers must provide application support to set up new application for veterinary & human drugs including sample preparation for food samples within six (6) months of commissioning.

		Other Specifications: 8.3.5 Set up the full methods based on the libraries/databases loaded onto the new systems 8.4 Warranty and Services Critical specification: 8.4.1 Provide minimum 1-year warranty including all parts and labour 8.4.2 Must provide one (1) preventive maintenance (PM) service with PM kit during warranty year 8.4.3 Must provide quarterly thorough clean-up of Mass Spectrometer (MS), inclusive of tuning and calibration of MS during warranty year
2	9 years	Nine (9) Years Comprehensive Maintenance Services for two (2) units of Ultra High Performance Liquid Chromatograph Triple Quadrupole Mass Spectrometer Systems (UHPLC-MS/MS) (being optional after one (1) year warranty period) Critical Specifications: 1. Must provide one (1) preventive maintenance (PM) service per year with PM kit 2. Must provide quarterly thorough clean-up of Mass Spectrometer (MS), inclusive of tuning and calibration of MS per year 3. Must furnish the rate for the service/maintenance contract as specified 4. Inclusive of all necessary components (e.g. transport, labour, etc) <u>including</u> system replacement parts and consumables (Please provide the list of replacement parts and consumables separately). 5. Unlimited breakdown calls 6. Respond to any calls within 1 working day from time of request 7. Replacement of parts within 5 working days from time of request 8. Including parts and repair services for the associated computer and printer 9. Inclusive of computer operation system upgrade and yearly upgrading of the acquisition and quantitation software (where available) during the 9 years of maintenance contract 10. For instances that the associated computer and printer is faulty and parts are obsolete/no longer available, the tenderer is responsible to provide the replacement at no additional cost to SFA during the 9 years' coverage.
Important: Prior to submission of Tender Offer: (i) Tenderers shall at their own expense make arrangements to collect <u>both</u> test samples provided by the National Centre for Food Science for evaluating performance of the instrument. (ii) Tenderers are to collect <u>both</u> test samples within the <u>first 5 working days</u> of tender publication, between 9 am to 5 pm on weekdays.		

- (iii) Instruction on the required test as well as information on sample matrices, indicative list of compounds in the spiked samples and standard mixtures will be provided on the day of sample collection
- (iv) Please contact the following officers for collection of samples
 - Patricia Chua; Tel: 6795 2831 (Patricia_Chua@sfa.gov.sg), collection at No.10 Perahu Road S(718837)
 - Favian Chua; Tel: 6213 0864 (Favian_CHUA_from.TP@sfa.gov.sg), collection at 11 Outram Road S(169078)
- (v) All tenderers must provide both summary report and a detailed report for both samples, covering the test methods, the extracted ion chromatograms, calibration curves, and the application libraries used (if any) together with their tender proposal in GeBIZ.

Note: SFA reserves the right to reject tenderers who do not participate in the evaluation sample test or fail to submit the test reports for all the evaluation samples.

B OTHER REQUIREMENTS / TENDER INFORMATION

- 1) Tenderer is to submit the published brochures or product information (e.g. reports, certificates, technical specifications, etc.) for all items for evaluation.
- 2) Tenderer is to complete the Compliance Table as set out in Part E and submit as an attachment in GeBIZ.
- 3) Tenderers are to submit their quotes in accordance to the Schedule of Prices in Part C of Section I in GeBIZ.
- 4) Tenderers to state in their submission the length of the warranty of the whole system, which shall commence from the date of system commissioning.
- 5) Delivery and installation of the instrument shall be made within **four (4) weeks** upon receipt of Purchase Order issued via GeBIZ.
- 6) Goods to be delivered to No. 10 Perahu Road and No. 11 Outram Road.

Persons to contact for queries:

Please contact the respective officer from where the samples are collected:

1. Patricia Chua; Tel: 6795 2831 or email: Patricia_Chua@sfa.gov.sg for sample collected at No.10 Perahu Road S(718837)
2. Favian Chua; Tel: 6213 0864 or email: Favian_CHUA_from.TP@sfa.gov.sg for sample collected at 11 Outram Road S(169078)

C SCHEDULE OF PRICES

Note:

1. Interested Tenderers are to fill this section and submit through GeBIZ. Prices quoted for each line item in GeBIZ shall be deemed **final, all-inclusive (including shipping, freight, handling and any other cost) and firm** to fulfil the requirements stated in this Requirement Specifications. Any additional claims on grounds of omission shall not be entertained.
2. Tenderers are to quote for ALL items (including optional items) in the pricing schedule. The Contractor grants the Agency the option to extend the Contract for a further period of 9 years (2nd to 10th year) and the Agency reserves the rights to extend the optional 2nd to 10th year in parts, or any combination of which SFA reserves the rights to award in parts or in whole to different tenderers.
3. Prices quoted shall be exclusive of GST and shall remain firm throughout the contract period.

Note: Tenderers are to quote for ALL the items. Items 1 to 3 are complementary and will be awarded to the same Tenderer.

Table C-1: Price Schedule

Item	Product Description	Quantity	Total Price (S\$) (Exclude GST)
1	Ultra High Performance Liquid Chromatograph Triple Quadrupole Mass Spectrometer (UHPLC/MS/MS) for testing of veterinary and human drugs	1 unit	\$_____/unit [To enter in GeBIZ as line item 1]
2	Ultra High Performance Liquid Chromatograph Triple Quadrupole Mass Spectrometer (UHPLC/MS/MS) for testing of controlled compounds	1 unit	\$_____/unit [To enter in GeBIZ as line item 2]
3	9 years comprehensive Maintenance services for two units of UHPLC/MS/MS (to commence upon expiry of warranty)	Year 1	Under warranty
		Year 2 (optional)	S\$_____/year (To enter in GeBIZ as line item 3)
		Year 3 (optional)	S\$_____/year (To enter in GeBIZ as line item 4)
		Year 4 (optional)	\$_____/unit [To enter in GeBIZ as line item 5]

		Year 5 (optional)	\$_____/unit [To enter in GeBIZ as line item 6]
		Year 6 (optional)	\$_____/unit [To enter in GeBIZ as line item 7]
		Year 7 (optional)	\$_____/unit [To enter in GeBIZ as line item 8]
		Year 8 (optional)	\$_____/unit [To enter in GeBIZ as line item 9]
		Year 9 (optional)	\$_____/unit [To enter in GeBIZ as line item 10]
		Year 10 (optional)	\$_____/unit [To enter in GeBIZ as line item 11]

D SCHEDULE OF SYSTEMS ALREADY INSTALLED BY TENDERER

The tenderer shall furnish in the table below the particulars of the Ultra High Performance Liquid Chromatograph triple quadrupole Mass Spectrometer systems already installed by them in Singapore in the recent 5 years.

Details of systems installed		Clients' Details		
Model	Date of Installation	Company Name	Contact Person	Contact Details (Telephone / E-mail)

E COMPLIANCE TABLE

Tenderer is to complete the compliance table to the specifications as indicated below. If there is any variation to specifications embodied in Section I of this tender document, the tenderer must state the variations clearly. **Published brochures or product information and/ or certified technical specifications from manufacturer shall be provided in tender submission to substantiate claims to compliance with tender specifications.** If relevant data is not available, please state non-compliance.

COMPLIANCE TABLE

(To be completed and submitted by Tenderer)

S/N	Requirement Specifications	Compliance to Specifications (Yes/No)	Remarks
I	The system must be able to operate at 220/240 volt, 50/60 Hz.		
II	The system must be able to analyse for veterinary drug residues in food and controlled compounds in sewage water. Tenderer may quote a different or similar model of equipment for the two applications.		
1. SAMPLE INTRODUCTION SYSTEM			
1.1	Must have a thermostating module to control the temperature of the sample vials (should be settable within 4°C to 35°C)		
1.2	Programmable needle height control		
1.3	Must be compatible with high system pressure at least a maximum of 1300 bar		
1.4	Should be well-plate type to enable short injection cycle time for running UHPLC		
1.5	Handles at least 100 samples in standard 1.5 or 2ml vials		
1.6	Expandable and programmable to accommodate to ≥ 2 standard size of 96-well plates		
1.7	Priority sample capability		

1.8	Random access to individual samples		
1.9	Programmable needle wash with multi-choice of solvents		
1.10	Carryover should be <0.005%		
1.11	Programmable injection volume from 0-100 µl in 0.1 µl steps		
1.12	Injection Precision: at least 0.5% RSD from 5-100 µl and at least 1% RSD from 1-5 ul		
1.13	Injection accuracy: at least 1% from 5-100 µL		
2. COLUMN OVEN			
2.1	Can house at least 2 columns		
2.2	Temperature range: 10°C above ambient to 80 °C in 0.1 °C steps		
2.3	Temperature stability: ±0.05°C		
2.4	Should be able to handle column length from 10-150 mm		
3. SOLVENT DELIVERY SYSTEM			
3.1	Ultra high pressure up to at least a maximum of 1300 bar for flow rates up to 2 ml/min		
3.2	Lowest delay volume down to <130 µL		
3.3	High performance binary gradient pump system with switching valves to at least accommodate 4 solvent channels		
3.4	Able to run in two modes: in standard delay volume mode for normal HPLC and low delay volume mode for fast HPLC, without upgrading any hardware		
3.5	Operating settable flow rate 0.001 – 5 ml/min		
3.6	Flow accuracy: ± 1.0% RSD or 1 ml/min, whichever is greater		
3.7	Flow precision: ≤ 0.075% RSD or ≤ 0.02 min SD, whichever is greater (from 0.2-2 ml/min)		

3.8	Compositional accuracy: + 0.5% RSD		
3.9	Equipped with a leak sensor which will send feedback to software when leaks are detected and pump will stop		
3.10	Supplied with at least four 1-L amber bottles and four 1-L clear bottles, complete with 4 inlet filters and 4 caps with inlet holes and plugs (1 set/unit)		
3.11	Flow path should be able to handle solvent pH range from 2-12		
4. SOLVENT DEGASSER			
4.1	On-line vacuum type		
4.2	Maximum flow rate: 10 ml/min per channel		
4.3	Internal volume per channel should not be more than 0.5ml		
4.4	Should have at least 2 independent channels		
4.5	Error status should be fed back to system software		
5. TRIPLE QUADRUPOLE MASS SPECTROMETER SYSTEM			
5.1 General			
5.1.1	Scan speed at least 12,000 amu/sec		
5.1.2	Mass stability ± 0.1 amu over 24 hrs		
5.1.3	Uses high purity nitrogen for collision purpose		
5.1.4	Positive/Negative polarity switching ≤ 25 ms, in continuous mode during LC/MS and LC/MS/MS runs		
5.1.5	Minimum mass range: 10-2000 amu		
5.1.6	Has an integrated divert valve to switch the LC flow to waste during void volume elution, gradient end-point and any other portion of analytical run		

5.1.7	Source elements can be removed for cleaning without breaking vacuum		
5.1.8	Fully automated optimization of ion optics and mass axis calibration		
5.1.9	Built-in or delivered with external mechanical infusion system (syringe pump) to support real-time data acquisition for MS method optimisation using known standard and with flow rate from 2-100 µl/min.		
5.1.10	Delivered with 2 syringes for direct infusion and split infusion		
5.1.11	Delivered with necessary tubing, adaptors, connectors and tools for enabling the above functions		
5.2 Electrospray Ionisation (ESI) Source			
5.2.1	Sensitivity: 1 pg reserpine injected on column with S/N >500000:1 for positive mode		
5.2.2	Sensitivity: 1 pg of chloramphenicol injected on column with S/N>500,000:1 for negative mode		
5.2.3	Compatible with liquid flow rates of 5 µl/min to 3 ml/min without splitting		
5.2.4	Source temperature: 400°C or higher		
5.2.5	Full gradient capability from 100% aqueous to 100% organic		
5.3 Mass Analyzer			
5.3.1	Minimum dwell time of 1 ms		
5.3.2	Allows the following data acquisition modes: Full scan MS, selected ion for both Q1 and Q3 product ion scan, precursor scan, neutral loss/gain scan, multiple reaction monitoring (MRM), scheduled MRM, MS2 scan.		

5.3.3	Quadrupole mass analyser that is able to concentrate ions effectively and to acquire the mass spectrum for confirmation of unknown compounds at a higher confidence level		
5.4 Mass Detector			
5.4.1	Detector operates in both positive and negative ion modes		
5.4.2	At least six orders of magnitude for linearity		
5.5 Vacuum System			
5.5.1	The high vacuum must be maintained by turbo molecular pump. This pump should be backed by mechanical (rough) pump		
5.5.2	Must be delivered with enclosure to reduce the noise level of the mechanical pump		
5.5.3	Enclosure should also be large enough to serve as benchtop for the Mass Spectrometer		
6. COMPUTER SYSTEM FOR HARD WARE CONTROL AND DATA HANDLING			
6.1 Hardware			
6.1.1	Minimally equivalent to performance of Pentium Intel Core i7- 8700 processor (3.2GHz)		
6.1.2	At least 16 GB DDR3 SDRAM		
6.1.3	At least 2 GB graphics card		
6.1.4	At least 1 TB hard disk		
6.1.5	At least 23" wide full HD LED monitor		
6.1.6	Resolution: at least 1920 x 1080		
6.1.7	Optical mouse with scroll wheel		
6.1.8	Min 6 USB ports, at least 3 in front		
6.1.9	Pre-installed MS Windows 10 or newer version		
6.1.10	Pre-installed Microsoft Office 2016 comprising Word, Excel and PowerPoint or newer version		

6.1.11	Latest antivirus software		
a) 6.2 System control and data handling software			
6.2.1	Must be able to provide fully integrated control for both ultra-high performance liquid chromatograph (UHPLC) and triple quadrupole mass spectrometer (MS/MS) systems		
6.2.2	Automatic determination of MRM transitions for easy method		
6.2.3	Dynamic/Scheduled or equivalent MRM function with automatic maximization of dwell time for multi-component analysis		
6.2.4	The setting parameters of data acquisition and processing for existing/remaining compounds should not be affected by the addition or deletion of compounds		
6.2.5	Has on-line help for instrument control programs as well as user manual in PDF file format		
6.2.6	Capable of tuning for electrospray (ESI) in positive and negative ion modes		
6.2.7	Automatic mass calibration routines		
6.2.8	Zoom scan capability for achieving higher mass resolution		
7. PRINTER			
7.1	Must be supplied with 8 sets of black toner cartridges (4 sets/unit)		
7.2	Monochrome laser printer		
7.3	Printing resolution: at least 1200x1200dpi		
7.4	Printing speed: At least 50 ppm in black		
7.5	Allow automatic duplex printing, with at least 36spm		
7.6	Capacity of input tray: at least 500 A4-size sheets		

7.7	Capacity of output tray: at least 250 sheets		
8. OTHER REQUIREMENTS			
8.1 User Training			
8.1.1	Comprehensive training must be provided by the competent application chemist for all users (2 rounds of at least 3 users per session per unit) on the principle, operation and maintenance of the proposed systems		
8.2 Application Databases/Libraries			
8.2.1	Provide and install pre-established application databases/libraries coming with both retention time and MRM information for every entry of veterinary & human drugs		
8.2.2	If no pre-established library, technical support must be provided to create the library in the customer's system. The rights of this library will belong to SFA use only		
8.3 Application and Technical Support			
8.3.1	Must provide 4 start-up columns per LCMSMS system, which are compatible with the installed libraries/databases		
8.3.2	Set up the running conditions for existing and new test methods as requested by SFA and ensure the methods are running properly		
8.3.3	Must have a local technical support team consisting of service engineers and application chemists to provide equipment maintenance and trouble-shooting services		
8.3.4	Must provide application support to set up new for veterinary & human drugs including sample preparation for food samples within 6 months of commission		
8.3.5	Set up the full methods based on the libraries/databases loaded onto the new systems		
8.4 WARRANTY AND SERVICES			

8.4.1	Provide minimum 1 year warranty including all parts and labour		
8.4.2	Must provide one (1) preventive maintenance (PM) service per year with PM kit		
8.4.3	Must provide quarterly thorough clean-up of Mass Spectrometer (MS), inclusive of tuning and calibration of MS		
Nine (9) Years Comprehensive Maintenance Services for two (2) units of Ultra High Performance Liquid Chromatograph Triple Quadrupole Mass Spectrometer Systems (UHPLC-MS/MS) (being optional after warranty period)			
1	Must provide one (1) preventive maintenance (PM) service per year with PM kit		
2	Must provide quarterly thorough clean-up of Mass Spectrometer (MS), inclusive of tuning and calibration of MS per year		
3	Must furnish the rate for the service/maintenance contract as specified		
4	Inclusive of all necessary components (e.g. transport, labour, etc) <u>including</u> system replacement parts and consumables. (Please provide the list separately)		
5	Unlimited breakdown calls		
6	Respond to any calls within 1 working day from time of request		
7	Replacement of parts within 5 working days from time of request		
8	Including parts and repair services for the associated computer and printer		
9	Inclusive of computer operation system upgrading and yearly upgrading of the acquisition and quantitation software during the 9 years of maintenance contract		
10	For instances that the associated computer and printer is faulty and parts are obsolete/no longer available, the tenderer is responsible to		

	provide the replacement at no additional cost to SFA during the 9 years' coverage.		
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Section II

EVALUATION CRITERIA

Critical Criteria:

1. The Tenderer must be registered under Supply Head:
EPU/LTE/10 (Laboratory Testing and Survey Equipment and Laboratory Testing Services) with a financial grade of S4 and above;
OR
EPU/LAB/30 (Laboratory Equipment and Accessories) with a financial grade of S4 and above.
2. Submission of Evaluation Samples Test Reports
3. Full compliance to Critical Specification. Tenderer is to complete the Compliance Table as set out in Part E

Other Criteria:

Tenderers who meet the above critical criteria shall be further evaluated against the following criteria:

S/N	CRITERIA	WEIGHTAGE
i	Performance in the testing of evaluation samples	40%
ii	Ability to meet other specifications. Otherwise SFA will consider the proposal which best meets the requirements while remaining technically acceptable. Tenderer is to complete the Compliance Table as set out in Part E.	30%
iii	Price competitiveness	30%
TOTAL		100%