

REQUEST FOR INFORMATION (RFI)

HIGH-PERFORMANCE ION CHROMATOGRAPHY (HPIC) PLATFORM AND ASSOCIATED SERVICES

Date of Request: 20 October 2026

RFI Reference: SAMRC RFI 26/03

The South African Medical Research Council (SAMRC) invites suitably qualified manufacturers, authorised distributors, service providers and other relevant market participants to provide information on commercially available high-performance ion chromatography (HPIC) platforms and associated services capable of supporting analytical development, characterisation, process development, stability studies, quality control testing and regulatory submissions for polysaccharide and polysaccharide-conjugate vaccines.

Service Providers are requested to provide the information specified in this RFI, including completion of the **Functional Requirements Matrix in Appendix A**, and the **Commercial Response Schedule in Appendix B**, together with relevant brochures, technical datasheets, application notes, validation/qualification documentation, reference information and other supporting evidence, where available.

Submission Contact:

Supply Chain Management South African Medical Research Council (SAMRC)

Email: tenders@mrc.ac.za Website: www.samrc.ac.za

Table of Contents

1. INTRODUCTION	3
2. BACKGROUND	3
3. PURPOSE	4
4. DISCLAIMER	4
5. REQUIRED INFORMATION	4
6. PROPOSED HPIC PLATFORM	7
7. ANALYTICAL AND APPLICATION CAPABILITY	8
8. INFRASTRUCTURE, DATA, SECURITY AND INTEGRATION	9
8.1 Infrastructure	9
8.2 Security and Data Integrity	10
8.3 Integration	10
9. IMPLEMENTATION, QUALIFICATION AND TRAINING	11
10. SUPPORT, MAINTENANCE AND LIFECYCLE	11
11. MARKET INTELLIGENCE	12
12. PRICING AND COMMERCIAL INFORMATION	13
13. MARKET ASSESSMENT	14
14. SUBMISSION REQUIREMENTS	15
15. QUERIES AND SUBMISSION	16
16. APPENDIX A – FUNCTIONAL REQUIREMENTS MATRIX	17
17. APPENDIX B – COMMERCIAL RESPONSE SCHEDULE	20

REQUEST FOR INFORMATION (RFI)

HIGH-PERFORMANCE ION CHROMATOGRAPHY (HPIC) PLATFORM AND ASSOCIATED SERVICES

1. INTRODUCTION

The South African Medical Research Council (SAMRC) invites suitably qualified manufacturers, authorised distributors, service providers and other relevant market participants to provide information on commercially available high-performance ion chromatography (HPIC) platforms and associated services. The proposed platforms should be capable of supporting analytical development, characterisation, process development, stability studies and quality-control testing for polysaccharide and polysaccharide-conjugate vaccines, including the generation of analytical data that may support regulatory submissions.

The RFI is intended to obtain current market information on available technologies, configurations, applications, implementation models, support arrangements, commercial models, lifecycle considerations, market alternatives and associated risks.

2. BACKGROUND

The SAMRC conducts and supports health research and related scientific activities, including research and development involving vaccines and associated analytical technologies.

SAMRC is investigating the availability and suitability of HPIC platforms and associated analytical capabilities to support the characterisation and development of polysaccharide and polysaccharide-conjugate vaccines.

For purposes of this RFI, HPIC refers to high-performance ion chromatography systems capable of operating at elevated pressures and supporting the chromatographic, detection, automation and analytical capabilities described in this RFI.

Where pressure capability is specified, Service Providers shall distinguish between the maximum rated operating pressure, typical operating pressure range and the pressure capability of the specific configuration proposed.

3. PURPOSE

The purpose of this RFI is to obtain market information on commercially available HPIC platforms and associated services relevant to SAMRC's requirements.

The information will be used to:

- Assess available technologies and market maturity;
- understand technical, functional, application, integration and data-management capabilities;
- understand implementation, qualification, training, support, maintenance and lifecycle requirements;
- obtain indicative acquisition, implementation, operating and lifecycle cost information;
- identify technically credible alternative platforms, configurations or technology combinations;
- identify market risks, supplier dependencies, interoperability considerations and emerging technologies; and
- inform future requirements and the appropriate procurement strategy.

4. DISCLAIMER

This RFI is for information-gathering purposes (market and price analysis) only and does not constitute a commitment to purchase, contract, or award work. Responses will not be evaluated as bids or proposals and will not form the basis of a contract or confer an advantage in any future procurement process. SAMRC may use the information gathered to refine its requirements, assess market capacity and competition, and determine the most appropriate procurement method. Participation is voluntary, and all response costs shall be borne by the Service Provider.

5. REQUIRED INFORMATION

Service Providers shall provide sufficient information to enable SAMRC to understand the capability, maturity, application suitability, implementation requirements, support model, lifecycle considerations, commercial model and market position of the proposed solution.

Complete **Part A: Service Provider Information** and **Part B: Service Provider confirmation**.

Detailed functional requirements shall be addressed in **Appendix A**, and detailed commercial information shall be provided in **Appendix B**.

5.1. Part A: Service Provider Information

Where applicable, Service Providers should provide evidence of manufacturer authorisation and describe their arrangements for local supply, technical support and maintenance.

Legal name of organisation: _____

Manufacturer/platform proposed: _____

Service Provider capacity: ☐ Manufacturer ☐ Authorised distributor ☐ Service provider ☐ System integrator ☐ Other

Country of registration: _____

Company registration number, if applicable: _____

South African presence: ☐ Yes ☐ No

Primary contact person: _____

Position: _____

Telephone: _____

Email: _____

Website: _____

5.2. Part B: Service Provider confirmation

The Service Provider confirms that:

- 5.2.1 The information submitted in response to this RFI is accurate to the best of the Service Provider's knowledge.
- 5.2.2 The person signing this schedule is authorised to submit the information on behalf of the Service Provider.
- 5.2.3 The Service Provider understands that this RFI is issued for market-information and planning purposes only.
- 5.2.4 The response does not constitute a bid or proposal and will not result in the award of a contract.
- 5.2.5 Participation in this RFI does not confer an advantage in any future procurement process.
- 5.2.6 SAMRC may contact the Service Provider to request clarification or further information.
- 5.2.7 All costs associated with preparing and submitting the response are borne by the Service Provider
- 5.2.8 All costs associated with preparing and submitting the response are borne by the Service Provider.
- 5.2.9 Any information considered confidential has been clearly identified and the reasons for confidentiality have been stated.

Name of authorised representative: _____

Position or designation: _____

Signature: _____

Date: _____

6. PROPOSED HPIC PLATFORM

For each proposed platform or materially different configuration, provide:

- manufacturer and model;
- current commercially available version;
- date of information;
- commercial availability status;
- lifecycle status and upgrade cycle;
- anticipated end-of-life, where applicable;
- system architecture;
- available configurations;
- deployment model;
- maximum rated operating pressure;
- typical operating pressure range;
- capability for continuous operation at approximately 5,000 psi;
- capability for continuous operation at approximately 6,000 psi, where available;
- High-pH compatibility;
- HPAE;
- PAD;
- RFIC;
- conductivity and other relevant detection capabilities;
- analytical, microbore and capillary configurations;
- single- and dual-channel capability;
- detector and column temperature control
- autosampling and automation;
- refrigerated autosampler capability;
- eluent generation and suppression/regeneration;
- IC-MS, HRMS and MS/MS compatibility;
- supported interfaces and MS configurations;
- chromatography/data-acquisition software;
- data-management capabilities;
- data export, portability and archival;
- FAT/SAT and IQ/OQ support;
- GMP and ISO 17025 suitability evidence;
- technical/application/regulatory documentation; and
- relevant polysaccharide, glycoconjugate and vaccine application experience.

Detailed technical capability shall be provided in **Appendix A (Page 17)**.

7. ANALYTICAL AND APPLICATION CAPABILITY

7.1. Service Providers shall complete **Appendix A** and identify the extent to which the proposed solution supports relevant applications, including, where applicable:

- monosaccharide composition analysis;
- oligosaccharide profiling/mapping;
- degree of polymerisation;
- free-saccharide quantitation;
- sialic acid analysis;
- glycoconjugate characterisation;
- impurity analysis;
- analysis of complex vaccine matrices;
- high-resolution carbohydrate separation;
- quantitative carbohydrate analysis;
- method development;
- method validation support;
- method transfer;
- stability studies;
- quality-control testing;
- analytical development;
- process development; and
- regulated laboratory use.

Service Providers should provide evidence for material application claims.

7.2. Capability Classification

For each relevant capability, Service Providers shall distinguish between:

- commercially available;
- standard/included;
- optional;
- third party;
- configuration / customization / professional services;
- planned/under development;
- not commercially available; and
- not supported/not applicable.

7.3. Regulatory Support

For purposes of this RFI, regulatory support refers to capabilities and documentation that may support regulated laboratory use and generation of analytical evidence (GMP and ISO 17025 suitability evidence), including, where applicable:

- data integrity;
- audit trails;
- electronic records;
- electronic signatures;
- qualification documentation; and
- application/validation support.

This does not imply that the supplier is responsible for regulatory approval or submission of a vaccine.

8. INFRASTRUCTURE, DATA, SECURITY AND INTEGRATION

Service Providers shall describe applicable infrastructure, data and integration requirements.

8.1 Infrastructure

Provide information on:

- system architecture;
- operating systems and software dependencies;
- databases/application servers;
- cloud, hosted or hybrid components;
- hosting location and data-residency arrangements;
- storage;
- performance and availability;
- scalability;
- backup and restoration;
- disaster recovery;
- business continuity; and
- dependencies on SAMRC or third-party infrastructure.

8.2 Security and Data Integrity

Describe, where applicable:

- encryption;
- authentication and authorisation;
- role-based access control;
- audit logging;
- electronic records;
- electronic signatures;
- protection against unauthorised alteration / deletion;
- SSO;
- Microsoft Entra ID/Active Directory;
- MFA;
- security patching;
- vulnerability management;
- software and firmware updates;
- incident detection and notification;
- secure remote support;
- data retention and archival;
- secure deletion; and
- relevant cybersecurity, quality, regulatory and data-integrity standards or certifications.

8.3 Integration

Identify standard, configurable, optional, third-party and custom integrations with:

- mass spectrometry, including HRMS and MS/MS;
- chromatography data systems;
- LIMS;
- laboratory workflow/execution systems;
- ELN;
- institutional identity-management systems;
- networked laboratory infrastructure;
- enterprise storage and backup;
- reporting/business-intelligence tools;
- instrument qualification/calibration systems; and
- other laboratory instruments or platforms.

All additional licenses, subscriptions, proprietary interfaces, custom development and recurring integration costs shall be identified.

9. IMPLEMENTATION, QUALIFICATION AND TRAINING

Service Providers shall describe the proposed implementation approach including where applicable:

- project governance;
- roles and responsibilities;
- implementation methodology;
- site readiness requirements;
- infrastructure assessment;
- system design and configuration;
- installation and commissioning;
- interface/integration testing;
- data or metadata migration;
- method transfer;
- application support;
- qualification and validation support;
- IQ / OQ / PQ;
- training;
- knowledge transfer;
- change management;
- go-live and operational handover;
- stabilisation;
- operational handover;
- implementation duration;
- supplier and customer resources;
- dependencies;
- assumptions; and
- implementation risks.

10. SUPPORT, MAINTENANCE AND LIFECYCLE

Service Providers shall describe:

- service desk and support channels;
- support hours;
- service levels;
- response and resolution targets;
- escalation arrangements;
- local/regional support;
- application support;
- preventive and corrective maintenance;
- remote monitoring;

- release management;
- software/firmware upgrades;
- security patching;
- spare parts availability;
- consumables availability;
- warranty;
- training;
- technical documentation;
- service reporting; and
- exit, transition and continuity arrangements.

Service Providers shall identify any material:

- supplier dependencies;
- proprietary consumables;
- mandatory service contracts;
- license/subscription dependencies;
- single-source components; or
- other factors that could affect long-term operation.

11. MARKET INTELLIGENCE

Service Providers are invited to provide evidence-based information on:

- commercially available HPIC technologies and suppliers;
- market maturity and adoption;
- relevant pharmaceutical, biotechnology and vaccine-industry practices;
- analytical approaches for carbohydrate composition;
- oligosaccharide profiling;
- degree-of-polymerisation analysis;
- free-saccharide analysis;
- sialic acid analysis;
- glycoconjugate analysis;
- HPAE-PAD;
- RFIC;
- IC-MS and IC-MS/MS;
- relevant standards and regulatory expectations complying with ISO 17025:2017 (SANAS accredited) and Pharmaceutical Good Manufacturing Practice (GMP);
- documented applications involving polysaccharides, glycoconjugates or vaccines;
- technical advantages and limitations;
- local and regional support availability;

- infrastructure and operational risks;
- cybersecurity and data integrity risks;
- vendor dependency and technology lock-in;
- interoperability;
- single source versus multi-vendor approaches;
- automation and throughput opportunities;
- emerging technologies and alternative analytical approaches; and
- significant acquisition, implementation, operating and lifecycle cost drivers.

Service Providers should distinguish clearly between:

1. information concerning their own solution;
2. independently documented market information; and
3. the Service Provider's assessment or opinion.

Claims concerning competing platforms should, where possible, be supported by verifiable evidence.

12. PRICING AND COMMERCIAL INFORMATION

Service Providers shall complete **Appendix B – Commercial Response Schedule**.

Indicative costs should be provided, where applicable, for:

- base HPIC system;
- modules and accessories;
- HPAE-PAD;
- RFIC;
- conductivity detection;
- dual-channel capability;
- analytical/microbore/capillary configurations;
- autosampler;
- columns;
- suppressors;
- software and licenses/subscriptions;
- installation and commissioning;
- integration;
- qualification;
- training/application support;
- maintenance;
- consumables;
- hosting/cloud services;

- third-party products/services;
- shipping and insurance;
- import duties/customs;
- taxes/levies; and
- other material costs.

Service Providers shall clearly identify **mandatory versus optional** costs.

Pricing shall be identified as indicative and shall include:

- currency;
- price validity;
- VAT treatment;
- shipping;
- insurance;
- duties/customs;
- other taxes / levies;
- annual escalation;
- license escalation;
- maintenance escalation;
- consumable assumptions;
- mandatory service requirements;
- mandatory subscriptions; and
- other relevant assumptions.

Service Providers shall provide indicative **Year 1, 3-year and 5-year TCO**, together with the assumptions used to calculate these amounts.

Pricing is requested solely for market analysis and planning purposes and does not constitute a quotation or offer.

13. MARKET ASSESSMENT

Service Providers are requested to provide a concise market-level assessment addressing:

- 13.1. Relevant commercially available HPIC platforms and configurations.
- 13.2. The extent to which a single platform can meet SAMRC's combined requirements.
- 13.3. Technically credible alternative platforms or combinations of technologies, compatible with strong NaOH eluents, high-pH chromatography, alkaline PAD operation, and corrosion-resistant flow paths.

- 13.4. Requirements that are unsupported or only partially supported by current platforms.
- 13.5. Significant technical, application, operational, lifecycle and commercial differentiators.
- 13.6. Market maturity and supplier concentration.
- 13.7. Vendor-dependency and interoperability considerations.
- 13.8. Major acquisition, implementation, operating and lifecycle cost drivers.
- 13.9. Emerging technologies and alternative analytical approaches.
- 13.10. Risks associated with single-source and multi-vendor strategies.
- 13.11. Potential risk controls and procurement considerations.

The assessment should not assume or predetermine the suitability of any particular manufacturer, platform or supplier.

Conclusions should, where possible, be supported by current commercial information, documented technical evidence, demonstrated application capability, lifecycle information, support arrangements and indicative total cost implications.

14. SUBMISSION REQUIREMENTS

A response should contain, at minimum:

14.1. Main Response

- Service Provider Information;
- proposed solution overview;
- analytical/application capability;
- IT, data, security and integration information;
- implementation and qualification approach;
- support and lifecycle information;
- market assessment;
- relevant references; and
- supporting evidence.

14.2. Appendix A

A completed **Functional Requirements Matrix** for each proposed platform / configuration where capabilities materially differ.

14.3. Appendix B

A completed **Commercial Response Schedule**, including indicative TCO information.

14.4. Supporting Documentation

Where available, Service Providers should provide:

- technical datasheets;
- product brochures;
- application notes;
- published literature;
- validation/qualification documentation;
- certifications;
- regulatory/data-integrity documentation;
- cybersecurity documentation;
- reference information; and
- other evidence supporting material claims.

15. QUERIES AND SUBMISSION

Queries concerning this RFI may be submitted to:

Supply Chain Management South African Medical Research Council (SAMRC)
Email: tenders@mrc.ac.za

The closing date and time for submission is **10 November 2026 at 11:00 AM (SAST)**

16. APPENDIX A – FUNCTIONAL REQUIREMENTS MATRIX

A.1 Instructions

Service Providers shall complete this matrix for each proposed HPIC platform or materially different configuration.

For each requirement indicate:

- **Supported:** Yes, Partial, No or N/A.
- **Availability:** Standard, Optional, Third Party, Customised, Planned or Not Available.
- Service Providers shall identify any additional costs, limitations or dependencies in the comments' column. Where relevant, supporting technical documentation or application evidence should be referenced.

Platform information

- Service Provider: _____
- Manufacturer: _____
- Platform/model: _____
- Version/configuration: _____
- Date of information: _____

Functional requirements

Requirement	Priority	Supported (Yes/Partial/No/N/A)	Availability	Comments
High-performance ion chromatography	Mandatory			
Operating pressure, including rated and typical ranges	Mandatory			
Continuous operation at approximately 5,000 psi	Mandatory			
Continuous operation at approximately 6,000 psi	Preferred			
High-performance anion-exchange chromatography (HPAE)	Mandatory			

Pulsed amperometric detection (PAD)	Mandatory			
High pH eluent suitability	Mandatory			
Reagent-free ion chromatography (RFIC)	Preferred			
Conductivity/electrochemical detection	Mandatory			
Detector and column temperature control.	Mandatory			
Single- or dual-channel operation	Preferred			
Analytical, microbore and capillary configurations	Preferred			
Automated sample introduction and autosampling	Mandatory			
Refrigerated autosampler capability	Mandatory			
Automated eluent generation and suppression/regeneration	Preferred			
Safety monitoring and leak detection	Preferred			
Chromatography and data-acquisition software	Mandatory			
Monosaccharide composition analysis	Mandatory			
Oligosaccharide profiling and degree of polymerisation	Mandatory			
Free-saccharide quantitation	Mandatory			
Sialic acid analysis	Preferred			
Glycoconjugate characterisation	Mandatory			
Trace impurity and complex vaccine-matrix analysis	Mandatory			
High-resolution separation and quantitative carbohydrate analysis	Mandatory			
Method development, validation and transfer support	Preferred			
Stability studies, quality control and analytical development	Mandatory			
Process-development applications	Preferred			

Polysaccharide and polysaccharide-conjugate vaccine application support	Mandatory			
IC-MS compatibility	Preferred			
HRMS and MS/MS compatibility	Preferred			
Electronic records, audit trails and role-based access	Mandatory			
Electronic signatures and review/approval workflows	Mandatory			
Data export, archival, portability and continued accessibility	Mandatory			
Regulatory documentation and regulated laboratory-use support (GMP and ISO 17025 suitability evidence)	Mandatory			
Instrument qualification, including IQ/OQ/PQ where applicable	Mandatory			
LIMS integration and laboratory workflow automation	Preferred			
Upgradeable/modular architecture	Preferred			

Availability definitions: *Standard = included; Optional = additional module, accessory or license; Third Party = supplied by another provider; Customised = requires configuration, development or professional services; Planned = under development; Not Available = not commercially available or supported.*

A.2 Application evidence

Complete this section for relevant applications demonstrated on the proposed platform, where evidence is available.

- **Application:** _____
- **Sample/matrix:** _____
- **Platform/configuration:** _____
- **Evidence type:** ☐ Supplier demonstration ☐ Published application ☐ Customer application ☐ Routine commercial use ☐ Validated/regulatory use ☐ Other
- **Date/year:** _____
- **Reference or supporting document:** _____

- **Limitations or comments:** _____

17. APPENDIX B – COMMERCIAL RESPONSE SCHEDULE

B.1 Instructions

Service Providers shall provide indicative pricing for the proposed HPIC solution, distinguishing between mandatory and optional components.

Prices are requested solely for market research and procurement planning and do not constitute a quotation or commitment to purchase.

Where a cost does not apply, indicate N/A. Where a cost is included in another item, identify the relevant item to avoid double counting.

Commercial response

Cost element	Mandatory/Optional	Once-off cost	Annual recurring cost	3-year TCO	5-year TCO
Base HPIC system					
Required modules, accessories and detection systems					
Autosampler, columns and suppressors					
Software, licences and subscriptions					
Installation and commissioning					
Integration and migration					
Qualification (IQ/OQ/PQ, where applicable)					
Training and application support					
Maintenance and service contracts					
Consumables					
Hosting/cloud services, where applicable					

Third-party products and services					
Shipping, insurance, duties and taxes					
Other costs (specify)					
Total estimated cost					

Year 1 costs should be included in the TCO calculation assumptions. Identify the currency and whether VAT and other charges are included or excluded.

B.2 Commercial assumptions

- **Currency:** _____
- **Price validity period:** _____
- **VAT:** ☐ Included ☐ Excluded
- **Shipping and insurance:** ☐ Included ☐ Excluded ☐ Separate
- **Import duties and customs:** ☐ Included ☐ Excluded ☐ Not applicable
- **Other taxes or charges:** _____
- **Annual price escalation:** _____
- **Mandatory annual maintenance / service:** _____
- **Mandatory licenses / subscriptions:** _____
- **Estimated annual consumables cost and usage assumptions:**

- **Other assumptions, exclusions or dependencies:** _____

Service Providers shall briefly explain the assumptions used to calculate the 3-year and 5-year total cost of ownership (TCO), including recurring licences, maintenance, consumables and price escalation.

Important: All costs should be presented consistently, with one-off and recurring costs clearly distinguished. Any significant optional costs or dependencies required to achieve the stated functional capabilities must be disclosed.