



**LINCOLN UNIVERSITY
PURCHASING DEPARTMENT
INVITATION FOR BID (IFB)
AMENDMENT:001**

IFB NO.: B13-0945
TITLE: Ion Chromatography system
ISSUE DATE: June 24, 2013

REQ NO.: 88564
BUYER: Steven Yaple
PHONE NO.: (573) 681-5417
E-MAIL: yaples@lincolnu.edu

RETURN BID NO LATER THAN: July 18, 2013 AT 2:00 P.M. CENTRAL TIME

MAILING INSTRUCTIONS: Print or type **IFB Number** and **Return Due Date** on the lower left hand corner of the envelope or package. Delivered sealed proposals must be in the Lincoln University Purchasing Department (1002 Chestnut St, Room 101) by the return date and time.

(courier service)
**RETURN BID TO: LINCOLN UNIVERSITY
1002 CHESTNUT ST
SHIPPING & RECEIVING BLDG
JEFFERSON CITY MO 65101**

CONTRACT PERIOD: N/A

The bidder hereby declares understanding, agreement and certification of compliance to provide the items and/or services, at the prices quoted, in accordance with all requirements and specifications contained herein and the Terms and Conditions Invitation for Bids (Dated 04-23-2010). The bidder further agrees that the language of this IFB shall govern in the event of a conflict with his/her bid. The bidder further agrees that upon receipt of an authorized purchase order from Lincoln University or when this IFB is countersigned by an authorized official of Lincoln University, a binding contract shall exist between the bidder and Lincoln University.

SIGNATURE REQUIRED

AUTHORIZED SIGNATURE		DATE	
PRINTED NAME		TITLE	
DOING BUSINESS AS (DBA) NAME		LEGAL NAME OF ENTITY/INDIVIDUAL FILED WITH IRS FOR THIS TAX ID #	
MAILING ADDRESS		IRS FORM 1099 MAILING ADDRESS	
CITY, STATE, ZIP CODE		CITY, STATE, ZIP CODE	
VENDOR NO. (IF KNOWN)	TAXPAYER ID NUMBER (TIN)	TAXPAYER ID (TIN) TYPE (CHECK ONE) <input type="checkbox"/> FEIN or <input type="checkbox"/> SSN	
VENDOR TAX FILING TYPE WITH IRS (CHECK ONE) <input type="checkbox"/> Corporation <input type="checkbox"/> Individual <input type="checkbox"/> State/Local Government <input type="checkbox"/> Partnership <input type="checkbox"/> Sole Proprietor <input type="checkbox"/> Other			
CONTACT PERSON		E-MAIL ADDRESS	
PHONE NUM BER.		FAX NUMBER	

NOTICE OF AWARD (LINCOLN UNIVERSITY ONLY)

ACCEPTED BY LINCOLN UNIVERSITY AS FOLLOWS:		
CONTRACT NO.		CONTRACT PERIOD
BUYER	DATE	PURCHASING DIRECTOR

AMENDMENT #001 TO IFB: B13-0945

TITLE: Ion Chromatography system

IFB NO. B13-0945 is hereby amended with the following revisions and additions:

1. Pg 7, Part 1

CHANGE: Ion Chromatograph system

TO: Dual-pump/dual-channel Ion Chromatograph System or like system.

2. Pg 7, Part 1-a-iii

CHANGE: Eluent generation or like capabilities must be available as an option which can be added to the system at a later time.

TO: System shall have the capability to add an automated eluent generation/production system at a future date. Submissions that have this capability already incorporated into the system shall be considered to meet this specification.

3. Pg 7, Part 1-a-iv

Change: Must have the ability to perform gradients with either low pressure mixing or electrolysis produced with the addition of an eluent generator or like capabilities.

TO: Must have the ability to perform gradients with either low pressure mixing or electrolysis produced with the addition of an eluent generator/producer or like capabilities. Submissions that have this capability already incorporated into the system shall be considered to meet this specification.

4. Pg 7, Part 1-a-vi

Change: Instrument must permit field installation of an optional automation manager consisting of up to two 6-port or 10-port high pressure and/or two low pressure solenoid valves for automating sample preparation operations such as online matrix removal and online filtration, pre-concentration, post-column, as well as large loop/small loop injections controlled by the data system or like systems.

TO: Instrument must permit field installation of an optional automation manager/integrated electrically activated system of up to two 6-port or 10-port high pressure and/or two low pressure solenoid valves for automating sample preparation operations such as online matrix removal and/or online filtration, pre-concentration, post-column, as well as large loop/small loop injections controlled by the data system or like systems.

5. Pg 7, Part 1-a-vii

Change: Minimum capabilities to allow for advanced single-range digital output with operating range to 15000 μ S full-scale and single-range analog signal output to 15000 μ S.

TO: Minimum capabilities to allow for advanced single-range digital output with a range to 15000 μ S full-scale.

6. Pg 7, Part 1-a-viii

Change: Must utilize optical leak detection or like system for laboratory safety and management to allow fast response to system leaks.

TO: Must have leak detection feature or like system for laboratory safety and management to allow fast response to system leaks.

7. Pg 7, Part 1-a-ix

Change: Must have a built in vacuum degas assembly or like system which would be capable to provide in-line degassing of eluents ensuring reproducibility and protection of eluents from contamination and decomposition.

TO: Must have a built in vacuum degas assembly or like system which would be capable to provide in-line degassing of eluents to assist reproducibility and the protection of eluents from contamination and decomposition.

8. Pg 7, Part 1-a-xi-2

Change: Components must be either quaternary low pressure mixing, isocratic, or capillary designs.

TO: Specification removed.

9. Pg 7, Part 1-a-xi-3

Change: Component housing must be able to incorporate up to two independent pumping systems which can be any combination of the available designs. Field upgradability to a second pump must be available for possible future upgrades.

TO: Component housing must be able to incorporate up to two independent pumping systems which can be any combination of the available designs.

10. Pg 7, Part 1-a-xi-5

Change: Must have an automated integrated piston seal wash or like system to prolong seal lifetime by preventing eluent crystallization on the seal surfaces or like situations.

TO: System to be capable of removal of corrosive eluents. Must have an automated integrated piston seal wash or like system to prolong seal lifetime by preventing eluent crystallization on the seal surfaces or like situations. Submissions that do not utilize or have corrosive eluents produced by the system shall be considered to meet this specification.

11. Pg 8, Part 1-a-xi-7

Change: The quaternary pump or like system must support any needed number of linear, convex, concave, or negative eluent gradients.

TO: Specification removed

12. Pg 8, Part 1-a-xiii

Change: Eluent Generation or like system shall be included:

TO: Eluent Generation/Production or like system shall be included:

13. Pg 8, Part 1-a-xiii-1

Change: System must be available as an option and must be available in either a single channel or dual channel configuration. The single channel must be field upgradeable to dual and both channels must be contained in the same enclosure.

TO: Specification removed

14. Pg 8, Part 1-a-xii

Change: Eluent Generation or like system shall be included

TO: Eluent Generation/Producing or like system shall be included

15. Pg 8, Part 1-a-xii-1through 7

Change:

- (1) System must be available as an option and must be available in either a single channel or dual channel configuration. The single channel must be field upgradeable to dual and both channels must be contained in the same enclosure.
- (2) Must be capable to operate with no abrasive salts or corrosive acids or bases present to reduce the longevity of pump seals. Mixing of two or more eluents is not considered eluent generation but mere dilution.
- (3) Minimum Eluent types generated:
 - (a) KOH
 - (b) NaOH
 - (c) LiOH,
 - (d) Bicarb/carbonate
 - (e) MSA.
- (4) System must be able to produce any needed number of linear, convex, concave, or negative eluent gradients.
- (5) Minimum concentration range:
 - (a) 0.1 to 100mM for KOH
 - (b) 0.1 to 15.0 mM for carbonate
 - (c) 0.1-200mM for capillary.
- (6) Concentration increments must be as low as 0.01mM which is required to optimize chromatographic peak resolution and optimize separation time.

- (7) Minimum flow rate capability:
(a) 0.1 mL/min to 3.000 mL/min for analytical
(b) 0.001-0.030 mL/min for capillary

TO: Specifications deleted

16. Pg 9, Part 1-a-xiii-5

Change: The fluid flow path must be PEEK or like materials to prevent corrosion and contamination of samples for extended instrument utilization.

TO: The fluid flow path must be constructed of inert, nonmetallic components or like materials to prevent corrosion and contamination of samples for extended instrument utilization.

17. Pg 9, Part 1-a-xv-2

Change: Electrolytic suppressor capability to reduce the operator's exposure to hazardous chemicals by not requiring Sulfuric Acid as a regenerate.

TO: System shall have the capability to reduce the operator's exposure to hazardous chemicals.

18. Pg 9, Part 1-a-xv-4 an 4-a

Change: System device must be able to suppress carbonate as well as hydroxide eluents as required for EPA methods.

a. Supplied operation literature must site external suppression system wear parts, i.e., peristaltic pumps, rotors, tubing, and in line filters if required. Literature must detail the frequency with which the operating manual and warranty requires their maintenance. Shall include product maintenance manual procedures.

TO: System shall adhere to all current EPA methods and regulations as of a 07/01/2013 date for minimum of EPA method 300.1 Part A and Part B.

a. Supplied operation literature must site potential wear parts, i.e., peristaltic pumps, rotors, tubing, in line filters etc.. if required. Literature must detail the frequency with which the operating manual and warranty requires their maintenance. System maintenance manual procedures shall be submitted or have the ability to be noted via web content.

19. Pg 10, Part 1-a-xix

Change: A 7- seat workstation or like system shall be included

1. Shall include all operating software for running the IC system

TO: A 7- seat workstation or like system shall be included

1. Shall include all operating software for running the IC system
2. No CPU required.

20. Pg 10, Part 2-ii

Change: Must have displacement injection principle to allow loop and concentrator loading, high precision volume delivery, individual sample filtration, and prevent viscosity dependency. Must not require an external sampling pump.

TO: Must have a built-in pump system or like components for sample filtration requirements.

21. Pg 10, Part 2-vi

Change: Must be capable of handling vials sizes of 0.5 ml or 5ml and the vials must be polymeric as a minimum.

To: Minimum capabilities of handling vials sizes of 0.5 ml or 5ml. All components to experiment with stated vials to be included.

22. Pg 10, Part 4 a through c

Change: Temperature stabilizer micro-bore or like component

- b) Must have like capabilities/functions to Dionex part number 062562 or above systems to have function capabilities.
- c) Must be capable as a temperature stabilizer for microbore, 0.125mm
- d) Must maintain price for stated item through 09/30/2014

TO: Temperature stabilizer micro-bore or like component

- a.) Must be capable as a temperature stabilizer for system in regards to EPA method 300.1 Part A and Part B.

b.) Must maintain price for stated item through 09/30/2014

23. Pg 11, Part 5 a through e

Change: hydroxide-selective anion-exchange column or like component

- a. Must have like capabilities/functions to Dionex part number 062886 or above systems to have function capabilities.
- b. Must be capable of analysis of oxyhalides and common inorganic anions including fluoride, chlorite, bromate, chloride, nitrite, bromide, chlorate, nitrate, phosphate, and sulfate in drinking water, groundwater, wastewater, and other diverse sample matrices.
- c. Must be capable to Meet or exceed performance requirements of US EPA Methods 300.0 and 300.1.
- d. Must be compatible with organic solvents.
- e. Must maintain price for stated item through 09/30/2014

TO: hydroxide-selective anion-exchange column or like component

- a. Must be capable of analysis of oxyhalides and common inorganic anions including fluoride, chlorite, bromate, chloride, nitrite, bromide, chlorate, nitrate, phosphate, and sulfate in drinking water, groundwater, wastewater, and other diverse sample matrices.
- b. Must be capable to Meet or exceed performance requirements of US EPA Methods 300.0 and 300.1.
- c. Must be compatible with organic solvents.
- d. Must maintain price for stated item through 09/30/2014

24. Pg 11, Part 6 a through b

Change: Guard Column

- a. Must have like capabilities/functions to Dionex part number 062888 or above systems to have function capabilities.
- b. Must maintain price for stated item through 09/30/2014

TO: Guard Column compatible with IC system

- a. Must maintain price for stated item through 09/30/2014

25. Pg 11, Part 7 a through c

Change: Medium-capacity, carboxylate-functionalized cation-exchange column or like component.

- a. Must have like capabilities/functions to Dionex part number 046075 or above systems to have function capabilities.
- b. Must be capable of separation of group I and II cations plus ammonium separation of lithium, sodium, ammonium, potassium, magnesium and calcium using methane sulfonic or sulfuric acid eluents in diverse sample matrices or like capabilities.
- c. Must maintain price for stated item through 09/30/2014

TO: Medium-capacity, carboxylate-functionalized cation-exchange column or like component.

- a. Must be capable of separation of group I and II cations plus ammonium separation of lithium, sodium, ammonium, potassium, magnesium and calcium using methane sulfonic or sulfuric acid eluents in diverse sample matrices or like capabilities. Additional columns can be supplied to meet specification.
- b. Must maintain price for stated item through 09/30/2014

26. Pg 11, Part 8 a through c

Change: Guard Column

- a. Must have like capabilities/functions to Dionex part number 046076 or above systems to have function capabilities.
- b. Must be capable of isocratic separation of cations using MSA or sulfuric acid or like capabilities.
- c. Must maintain price for stated item through 09/30/2014

TO: Guard Column

- a. Must be capable of isocratic separation of cations using MSA or sulfuric acid or like capabilities.
- b. Must maintain price for stated item through 09/30/2014

27. Pg 11, Part 9 a through b

Change: Anion Self-Regenerating Suppressor (SRS) or like component.

- a. Must have like capabilities/functions to Dionex part number 064555 or above systems to have function capabilities.
- b. Must maintain price for stated item through 09/30/2014

TO: Anion Self-Regenerating Suppressor (SRS) or like component.

- a. Must maintain price for stated item through 09/30/2014

28. Pg 11, Part 10 a through b

Change: Cation Self-Regenerating Suppressor or like component.

- a. Must have like capabilities/functions to Dionex part number 064557 or above systems to have function capabilities.

b. Must maintain price for stated item through 09/30/2014

TO: Cation Self-Regenerating Suppressor or like component.

a. Must maintain price for stated item through 09/30/2014

29. Pg 11, Part 11 a through c

Change: Carbonate Removal Device or like component

- a. Must have like capabilities/functions to Dionex part number 064638 or above systems to have function capabilities.
- b. Must be capable to remove carbon dioxide from the suppressed eluent stream by diffusion through the walls of a gas-permeable membrane or like capabilities.
- c. Must maintain price for stated item through 09/30/2014

TO: Carbonate Removal Device or like component

- a. Must be capable to remove carbon dioxide from the suppressed eluent stream by diffusion through the walls of a gas-permeable membrane or like capabilities.
- b. Must maintain price for stated item through 09/30/2014

30. Pg 11, Part 12 a through c

Change: Potassium Hydroxide Eluent Generator Cartridge or like component

- a. Must have like capabilities/functions to Dionex part number 074532 or above systems to have function capabilities.
- b. Must be capable of production of hydroxide, carbonate and methane sulfonic acid eluents of like capabilities.
- c. Must maintain price for stated item through 09/30/2014

TO: Potassium Hydroxide Eluent Generator Cartridge or like component

- a. Must be capable of generation/production of hydroxide, carbonate and methane sulfonic acid eluents of like capabilities.
- b. Must maintain price for stated item through 09/30/2014

31. Pg 11, Part 13 a through c

Change: Methane sulfonic Acid Eluent Generator Cartridge or like component

- a. Must have like capabilities/functions to Dionex part number 074535 or above systems to have function capabilities.
- b. Must be capable as a disposable means to produce eluent for cation separations or like capabilities.
- c. Must maintain price for stated item through 09/30/2014

TO: Methane sulfonic Acid Eluent Generator/producer Cartridge or like component

- a. Must be capable as a disposable means to produce eluent for cation separations or like capabilities.
- b. Must maintain price for stated item through 09/30/2014

32. Pg 11, Part 14 a through b

Change: Continuously Regenerated Anion Trap Column or like component

- a. Must have like capabilities/functions to Dionex part number 074535 or above systems to have function capabilities.
- b. Must maintain price for stated item through 09/30/2014

TO: Continuously Regenerated Anion Trap Column or like component

- a. Must maintain price for stated item through 09/30/2014

33. Pg 11, Part 15 a through b

Change: Continuously Regenerated Cation Trap Column or like component

- a. Must have like capabilities/functions to Dionex part number 074535 or above systems to have function capabilities.
- b. Must maintain price for stated item through 09/30/2014

TO: Continuously Regenerated Cation Trap Column or like component

- a. Must maintain price for stated item through 09/30/2014

Additional comments added

- Complete system shall be EPA method 300.1 Part A and Part B compliant.
- All specifications listed in the amendment and in the original document must function and be compatible with the system as a whole.
- All specifications not noted shall remain the same per original IFB B13-0945
- Specifications 4-15 shall have the capability of generation/production of stated consumables/eluents or the system as a whole shall have like capabilities of the specifications.
- System must be capable to analyze both anions and cations at the same time for research needs.