



The IonPac[®] CS10 column is designed for the rapid separation of common cations in complex matrices. The hydrophilic surface of the IonPac CS10 makes it ideal for aliphatic amine separations. This moderate capacity, high efficiency MicroBead[™] cation exchange column has unique selectivity for monovalent and divalent cations and is solvent compatible.

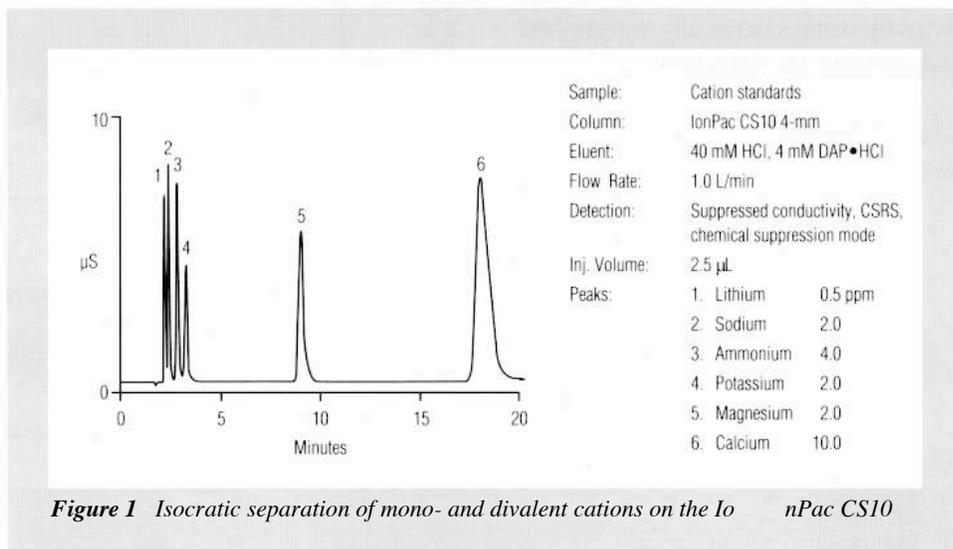


Figure 1 Isocratic separation of mono- and divalent cations on the IonPac CS10

FAST ISOCRATIC ANALYSIS OF MONO- AND DIVALENT CATIONS

Common mono- and divalent cations can be separated isocratically in less than 20 minutes as shown in Figure 1. You no longer need to use two separate runs, gradient step changes or column switching to obtain efficient separations.

HIGH EFFICIENCY

The IonPac CS10 produces very sharp, efficient peaks. Even magnesium and calcium are eluted efficiently and do not exhibit the characteristic "tailing" observed with conventional cation exchange resins.

HIGH LOADING CAPACITY

Unlike other high efficiency columns, the IonPac CS10 does not lose resolving power at moderately high analyte levels. Peaks from a sample containing 50 ppm sodium and 0.5 ppm ammonium are baseline resolved in Figure 2.

PATENTED MICROBEAD TECHNOLOGY

The exceptional efficiency of the IonPac CS10 column results from its unique pellicular structure. This resin consists of a highly crosslinked ethylvinylbenzene/divinylbenzene core to which a layer of submicron cation exchange MicroBeads is permanently attached.

UNIQUE SELECTIVITY

The selectivity of the IonPac CS10 column can easily be tailored for complex matrix separations by simply varying the diaminopropionic acid concentration in the eluent.

SOLVENT COMPATIBLE

Because this column is 0-100% HPLC solvent compatible, organic solvents can be used for efficient column clean-up. This feature allows complex matrices to be analyzed with minimal sample preparation.

ISOCRATIC OR GRADIENT ANALYSIS OF ORGANIC AMINES

Use the IonPac CS10 to separate organic amines and inorganic cations on a single column. Maximize sensitivity by using chemically suppressed conductivity for detection.

SPECIFICATIONS

Resin Composition:

8.5- μ m ethylvinylbenzene/divinylbenzene substrate agglomerated with 200-nm MicroBead cation exchange latex.

Cation exchange capacity:

80 μ eq/column.

Nominal efficiency:

24000 plates/meter for magnesium.

Maximum Operating pressure:

4000 psi (27.5 MPa).

Chemical Compatibility:

pH 0-14; 0-100% of typical HPLC solvents (i.e., methanol, acetonitrile).

Column Construction:

PEEK with 10-32 threaded ferrule style end fittings. All components are nonmetallic and corrosion-free.

ORDERING INFORMATION

In the U.S., call 1-800-346-6390, or contact the Dionex Regional Office nearest you. Outside the U.S., order through your local Dionex Office or distributor. Refer to the part numbers below.

The CSRS Cation Self-Regenerating Suppression should be used in the chemical suppression mode with eluents containing chloride ions. Alternatively, the CMMS-II Cation MicroMembrane™ Suppressor may be used for eluents suppression.

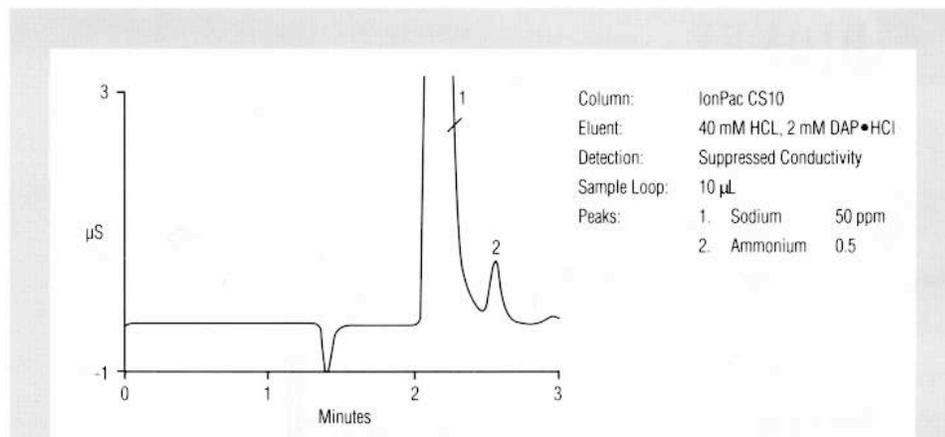


Figure 2 Isocratic separation of 50 ppm sodium and 0.5 ppm ammonium using the IonPac CS10.

Columns:	IonPac CS10 Analytical Column and CG10 Guard Column
Eluent 1:	200 m HCL
Eluent 2:	(95%) Acetonitrile
Eluent 3:	Deionized Water
Eluent 4:	20 mM DAP•HCl
Flow Rate:	1.0 mL/min
Detection:	Suppressed Conductivity
Sample Loop Volume:	10 μ L

Gradient Program:				
Time (min)	% E1	% E2	% E3	% E4
0.0	5	5	85	5
4.0	5	5	85	5
25.0	40	15	0	45

Peaks:	Retention Time
1. Lithium	1 ppm
2. Sodium	5
3. Ammonium	5
4. Methylamine	5
5. Potassium	5
6. Trimethylamine	5
7. Morpholine	20
8. Diethylamine	10
9. Pyrrolidine	10
10. Triethylamine	10
11. Piperidine	10
12. Tetraethylamine	10
13. Magnesium	5
14. Cyclohexylamine	15
15. Calcium	10

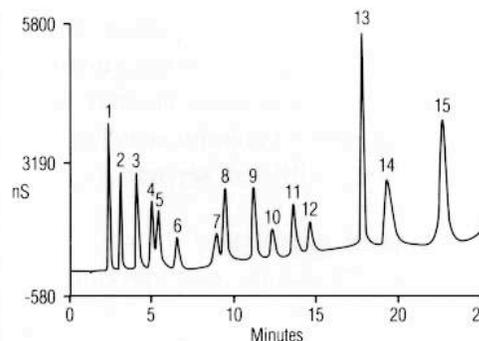


Figure 3 Gradient separation of organic amines and inorganic cations.

IonPac CS10 Analytical Column
(4X250 mm) P/N 43015

IonPac CG10 Guard Column
(4 X 50 mm) P/N 43016

CSRS (4-mm)
(Cation Self-Regenerating
Suppressor)P/N 43190

CMMS-II
(Cation MicroMembrane
Suppressor) P/N 43021

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