

Transgenomic ICSep Column for Ion Analysis

Ion Chromatography (IC) is the separation of inorganic and organic ionic species by ion exchange chromatography followed by suppressed conductivity detection. The technique was pioneered by Dow Chemical Company in 1974 and has grown in popularity since.

The species analyzed by IC include both anions and cations. The separation of anions is accomplished via anion exchange chromatography. The separations of cations are accomplished via cation exchange chromatography. Transgenomic provides a broad range of columns for the separation of both anions and cations.

The resins used for anion and cation exchange chromatography in IC employ a functionalized, macroporous polystyrene/divinyl benzene copolymer. Resins functionalized with quaternary alkyl or alkynol ammonium groups are used with hydroxide or carbonate based eluents for anion exchange IC. Resins functionalized with sulfonic acid or carboxylic acid groups are used with acidic eluents for cation exchange IC.

FEATURES

- ➔ *Polymeric substrate*
- ➔ *Solvent compatibility*
- ➔ *High efficiency*
- ➔ *Reproducibility*
- ➔ *pH Stability from 0 to 14*

Transgenomic IC columns have been designed to run on a variety of systems. They are tested to be compatible with Ion Chromatographs from: Metrohm-Peak, Dionex, Hach-Lachat, and Alltech. The selectivities have been optimized to be compatible with many of the common IC columns currently available. This includes columns that meet the requirements of E.P.A. methods 300 parts a and b, and E.P.A. method 300.1.

COLUMN EQUIVALENTS GUIDE		
TRANSGENOMIC COLUMN	COMPETITIVE COLUMNS	APPLICATION
ICSep AN300	Dionex AS4A	F-, Cl-, NO ₂ -, Br-, NO ₃ -, HPO ₄ ²⁻ , SO ₄ ²⁻ , By E.P.A. Method 300.0(a)
ICSep AN1	Dionex AS9-HC	F-, Cl-, NO ₂ -, Br-, NO ₃ -, HPO ₄ ²⁻ , SO ₄ ²⁻ , Low molecular weight, Organic acids in medium to high ionic strength matrices, Cr(III), Cr(VI) as CrO ₃ -, CrO ₄ ²⁻
ICSep AN1SC	Dionex AS9-HC	F-, Cl-, NO ₂ -, Br-, NO ₃ -, HPO ₄ ²⁻ , SO ₄ ²⁻ , Low molecular weight, Organic acids in medium to high ionic strength matrices
ICSep AN2	Dionex AS14	Arsenate, Sulfite, Selenate, Arsenite, Selenite, F-, Cl-, NO ₂ -, Br-, NO ₃ -, HPO ₄ ²⁻ , SO ₄ ²⁻ , Low molecular weight Organic acids
ICSep AN300B	Dionex AS9	F-, Cl-, NO ₂ -, Br-, NO ₃ -, HPO ₄ ²⁻ , SO ₄ ²⁻ , ClO ₂ -, ClO ₃ -, BrO ₃ -