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PRUDENT *hplc column*

- ✓ Excellent Mechanical Strength
- ✓ Outstanding Chemical Stability
- ✓ Wide Spectrum Interaction
- ✓ Excellent Homogeneity
- ✓ Finest Resolution
- ✓ Brilliant Reproducibility
- ✓ Economically Feasible
- **√ Swadeshi**

MADE IN INDIA

#VOCALFORLOCAL



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The physical properties of the target molecules (analytes) determine the most suitable HPLC column for a given separation. The molecular characteristics that impact HPLC column selection hydrophobicity/hydrophilicity, include intermolecular forces (particularly dipole-dipole), intramolecular forces size. Amusingly, (ionic), and the hydrophobic mode of interaction is the heart of reverse phase chromatography. 9 out of 10 methods can be safely developed using a C18 HPLC column. Under the USP listing of L1 that is octadecyl silane, we can find over one hundred types of L1 columns which are unique in their own ways.

To support the hydrophic mode of interaction, we hereby present PRUDENT HPLC Columns.

Silica particles for chromatography have a very high surface area, a property that is required for good analyte retention. Most of the surface area is contained in the internal pore structure of the silica particles which have over 99% of the available surface area. Prudent columns are based on a unique ligand-binding technology that makes the maximum area available for retention. Additionally, it also has a distinctive way of gas Endcapping that brings out the real inertness to the column.

Prudent is a high-performance column that doesn't quickly wear out or, more specifically, one that yields utility over time rather than being completely consumed rapidly.

Prudent C18 columns are Perfect "all-purpose" column for analytical use with High resolution of complex mixtures and Ideal retention.

Prudent C18 columns are manufactured with ultra-pure and high surface area silica with three different bonding and Endcapping technologies. These columns have unique functionality and bonding technology to achieve excellent resolution, good peak symmetry and high performance.

Prudent columns are designed to increase productivity, as they offer maximum load ability, excellent stability while maintaining superior resolution, consistent performance, uncompromising chromatography and have an extended lifetime even under the most demanding conditions. Prudent C18 columns are an ideal choice for polar compounds.

TECHNICAL SPECIFICATION

Bonding Phase	Prudent C18	Prudent C18 T	Prudent C18 γ
Average Particle Size (µm)	5 µm	5 µm	5 µm
Average Pore Size (Å)	100	100	100
Specific Surface Area (m.sq/g)	330	320	320
Average Pore Volume (ml/g)	0.8	0.8	0.8
Carbon Load (%)	18	18	18
pH Range	2-8	2-8	2-8
USP Listing (Bonding type)	monofunctional	trifunctional	idiosyncratic

High Quality, but Affordable.

Price has always been, and will always be, a significant factor in picking a column. Prudent is your "to go" product in that case.

What can you expect from the PRUDENT family?

	Hydrophobic	Hydrophobic Retention	Hydrophilic	Extremely Hydrophilic	Acidic	Basic
Prudent C18	$\checkmark\checkmark$	$\sqrt{\sqrt{\sqrt{1}}}$	$\checkmark\checkmark$	\checkmark	$\sqrt{}$	$\sqrt{}$
Prudent C18 T	$\checkmark\checkmark\checkmark$	$\checkmark\checkmark\checkmark$	$\checkmark\checkmark$	$\checkmark\checkmark$	$\sqrt{}$	$\checkmark\checkmark$
Prudent C18 γ	$\checkmark\checkmark$	$\checkmark\checkmark$	$\sqrt{\sqrt{\sqrt{1}}}$	$\sqrt{\sqrt{\sqrt{1}}}$	\checkmark	\checkmark

You guessed it right! You get more at less price with PRUDENT!

CARE AND INSTALLATION

Ad Hoc Scientific columns are individually manufactured and tested to meet strict specification criteria. The following measures will maintain their performance and lifetime:



CARE AND INSTALLATION

EQUILIBRATION

The storage solvent in a new column is the mobile phase used to evaluate the column unless otherwise specified on the chromatogram. Initially, care should be taken not to pass any material through the column that may precipitate in the storage solvent. Ensure that the column is fully equilibrated to the mobile phase prior to starting an analysis. A normal phase silica column usually requires more conditioning than a reverse-phase column.

SOLVENTS

Use only HPLC grade solvents and freshly prepared buffer solutions to minimize bacteria Growth.

Always filter the mobile phase using a 0.2um filter. This will ensure maximum column life.

MOBILE PHASE PH STABILITY

Prudent HPLC columns are stable within a pH range of 2-8. Although, using the column at extreme pH will reduce the column lifetime.

TEMPERATURE

The column temperature should not exceed 60°C.

CARE AND INSTALLATION

BACKPRESSURE LIMIT

Alpha HPLC columns can safely be used up to 4500 psi. However, please avoid pressure shocks on the column. Pressure shocks lead to channelling in the column, which results in peak splitting in the corresponding chromatogram.

MOBILE PHASES (ELUENTS)

Alpha's stationary phases are compatible with all organic solvents in the above-mentioned pH range. Please use the highest quality solvents available (HPLC grade).

STORAGE

For short term storage, i.e., overnight, columns can be stored in the eluent used in last analysis. For middle term storage, i.e., 2 days or over the weekend, columns should be flushed with pure water to prevent microbial growth. For long term storage, silica-based columns should be stored in an aprotic solvent.

Caution! Please make sure that all buffers are washed out of the column.

MECHANICAL DAMAGE

Protect the column from mechanical shock, dropping or banging.

COLUMN LIFETIME & B2B REPRODUCIBILITY

Column Details: Prudent C18 250mm x 4.6mm 5um Column Temperature: Ambient Elution Type: Isocratic Mobile Phase: Acetonitrile: Water (80:20) Detection: UV 254 nm Flow Rate: 1.0 ml/min





BACTH TO BATCH REPRODUCIBILITY



APPLICATIONS



COMPARATIVE STUDIES

PRUDENT C18 5u 250mm * 4.6mm



AMERICAN COMPETITOR - 250mm * 4mm 5u



JAPANESE COMPETITOR - 250mm * 4mm 5u



APPLICATIONS

Mobile Phase: C_100 Flow Rate: 1.0 ml/min Shipping Solvent: Mobile phase Detection: W2996 PDA 210.0 nm at 1.2 Column Temperature: Ambient



APPLICATIONS







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