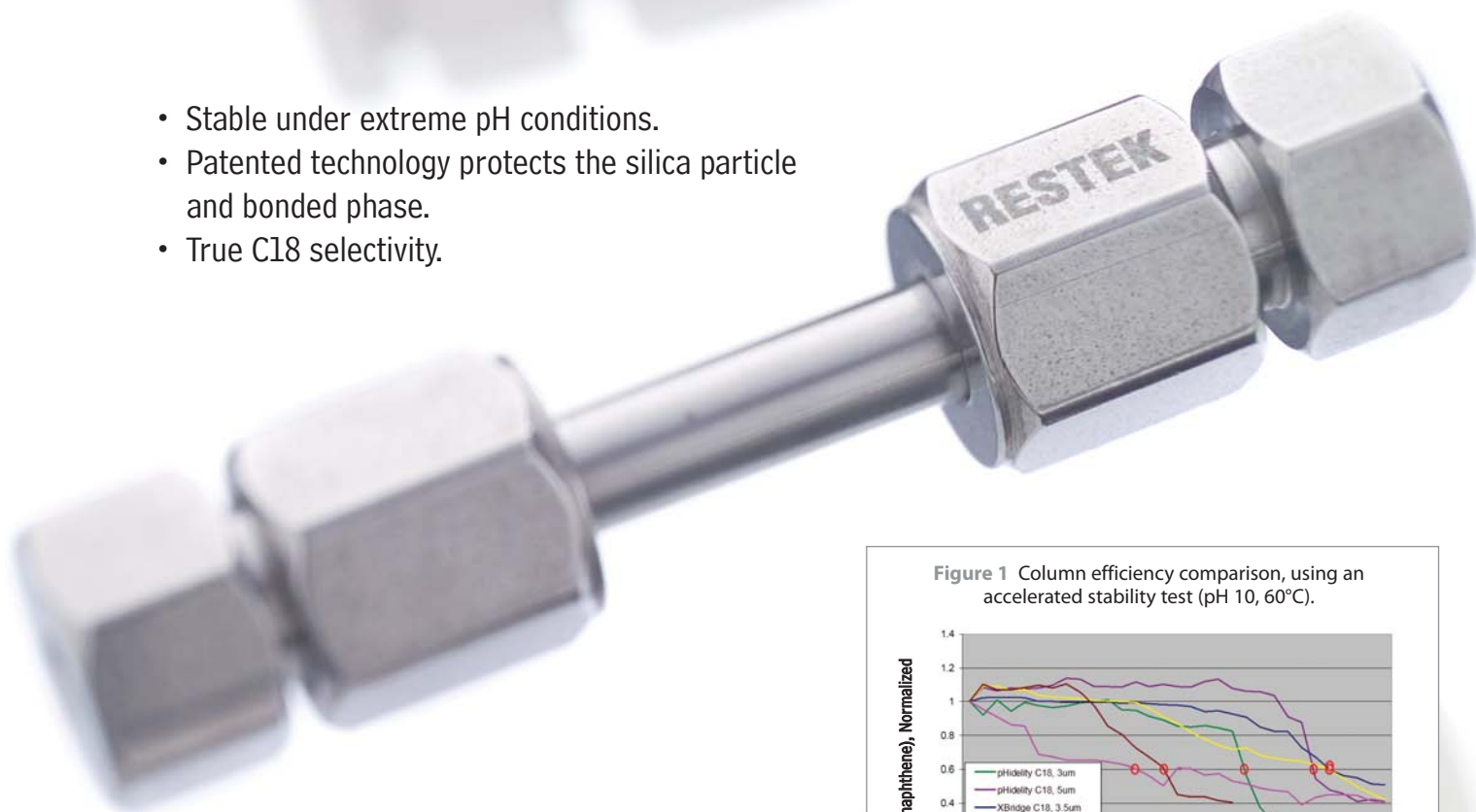


pHidelity™ HPLC Columns

pH Stable Columns from Restek

new!

- Stable under extreme pH conditions.
- Patented technology protects the silica particle and bonded phase.
- True C18 selectivity.



Restek is pleased to introduce pHidelity™ HPLC columns, designed for analyses that require extreme pH conditions. Using a technology patented by Selerity Technologies,¹ a polycarbosilane barrier layer protects the base silica particle, while a secondary layer provides the functional stationary phase group (e.g., C18). The pHidelity™ C18 column is our first introduction in this new column family.

Using an accelerated stability test (pH 10, 60°C), we compared the stability of pHidelity™ C18 columns (5µm particles and 3µm particles), a conventional C18 column, and three commercially available extended pH columns. Results are shown in figures 1 and 2.

¹US Patent 2005/0191503A1.

Figure 1 Column efficiency comparison, using an accelerated stability test (pH 10, 60°C).

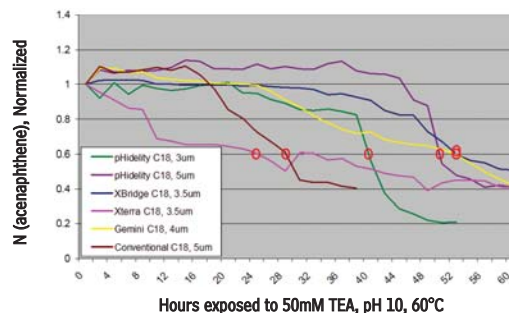
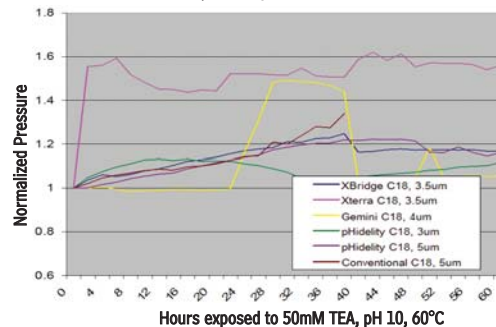


Figure 2 Column pressure during the accelerated stability test (pH 10, 60°C).



pHidelity™ pH stable HPLC columns can be used with mobile phases outside the typical pH range of silica-based stationary phases (pH 2.5-7.5), giving more control over analyte retention and resolution. Mobile phase pH can be decreased to increase retention for acidic analytes, or increased to increase retention of basic analytes (Figure 3).

A comparative analysis of selective serotonin reuptake inhibitors (SSRIs) clearly shows the value of pHidelity™ pH stable columns (Figure 4). SSRIs have high pKa values, and an ion-pairing reagent or a low pH mobile phase (to create the acid forms of the basic compounds) typically is required to analyze them on C4-C18 alkyl stationary phases. The analysis on a pHidelity™ C18 column, at pH 11, shows markedly better retention, and ultimately better resolution, compared to separation on a conventional C18 column at acidic pH. The high mobile phase pH, roughly 2 units above the analytes' pKa, increases retention and significantly improves resolution, creating a more robust and reproducible analysis.

Figure 3 Relationship of retention capacity to mobile phase pH for an acidic (blue), neutral (pink), or basic (green) test probe.

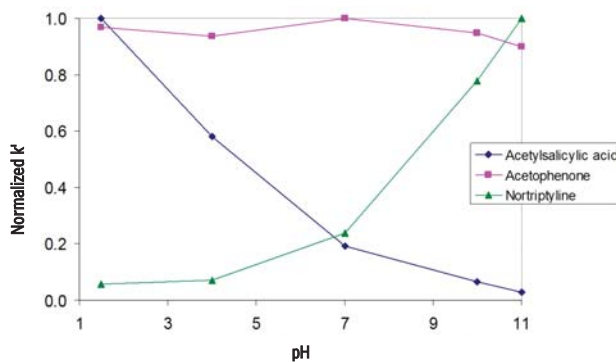
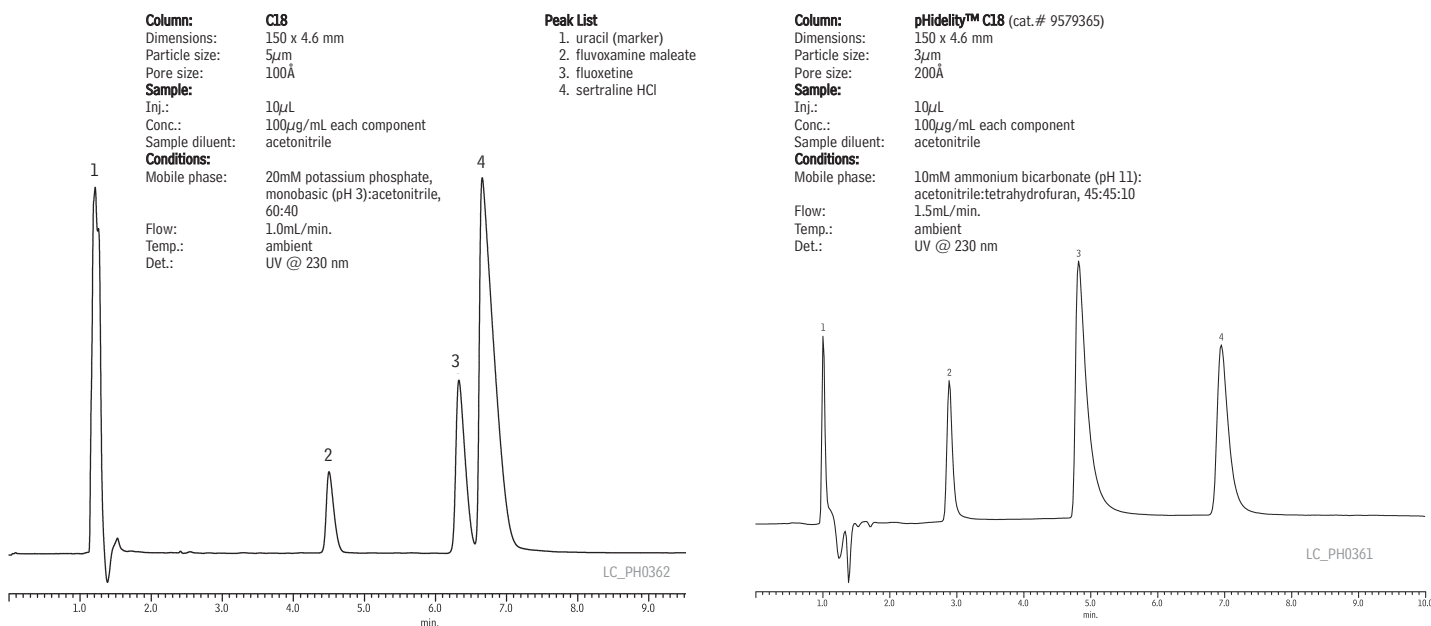


Figure 4 A pHidelity™ column provides superior chromatography for basic analytes, without an ion-pairing reagent.



pHidelity™ C18

Physical Characteristics: particle size: 3µm; pore size: 200Å; pH range: 1 to 12; temperature limit: 80°C

	2.1mm ID cat.#	3.2mm ID cat.#	4.6mm ID cat.#
3µm Columns			
30mm	9579332	9579333	9579335
50mm	9579352	9579353	9579355
100mm	9579312	9579313	9579315
150mm	9579362	9579363	9579365
Guard Cartridges	3-pk. (10 x 2.1mm)	3-pk. (10 x 4.0mm)	2-pk. (20 x 2.1mm)
pHidelity™ C18	957930212	957930210	957930222
			2-pk. (20 x 4.0mm)
			957930220

Restek Trademarks: pHidelity, Turning Visions into Reality, Restek logo.



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