

# VisionHT™ Media in High-Speed Rocket™ Columns

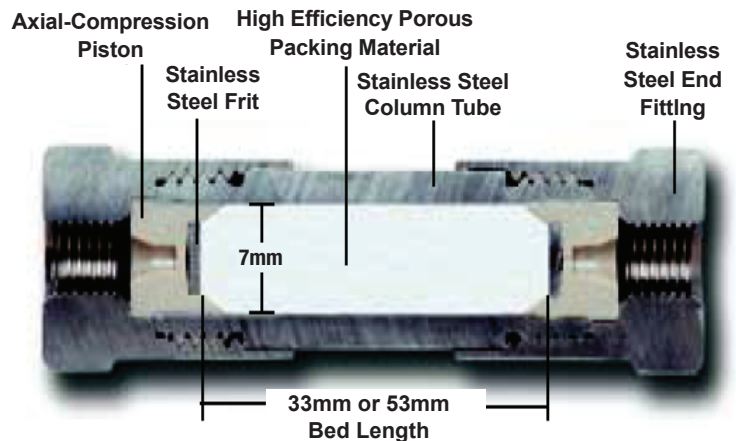
High-Throughput Performance on Traditional HPLC Systems

- Get Sub2µm efficiency benefits on Traditional HPLC Systems
- 70-80% Faster Separations with Equal or Better Resolution
- Solve Challenging Separations with Polar Selective Phases
- Accelerate Existing Applications without the need for Capital Investment
- Ideal for Pharmaceutical, Forensic, Toxicology and Environmental Industries

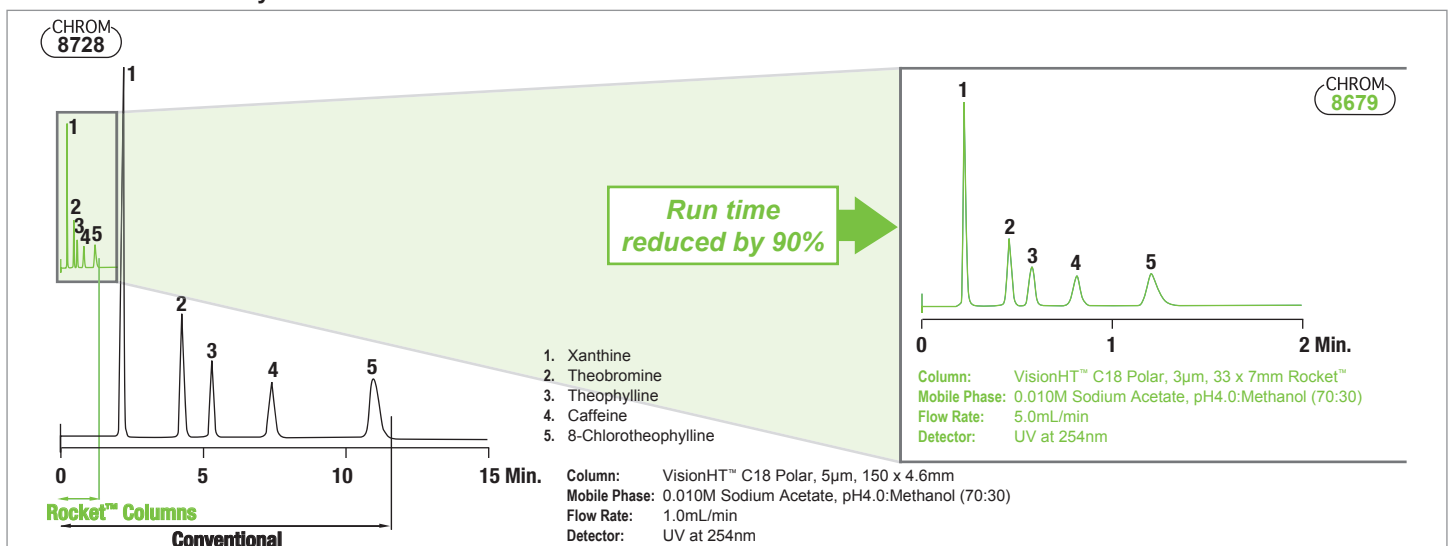


## Rocket™ Hardware Benefits

VisionHT™ media packed in Rocket™ column formats provide low backpressure and fast analysis times while preserving column efficiency. They are available with VisionHT™ 1.5µm and 3µm packing materials for use on standard HPLC systems with backpressure limits less than 5000psig. The 7mm i.d. allows faster flow rates that “sweep” the extra system volume faster and reduce peak broadening. This larger diameter also means a larger column volume to system volume ratio to minimize the efficiency loss from the extra system volume. This benefit is more pronounced over 2.1 and 1mm i.d. columns that have a smaller ratio than 4.6mm i.d. columns and require much lower flow rates for acceptable backpressures. Low flow rates allow more time for sample diffusion within the standard HPLC’s system volume to further degrade the column’s efficiency.



VisionHT™ media in high-speed Rocket™ columns reduces analysis time and solvent consumption significantly on conventional HPLC systems.



## VisionHT™ Phase Specifications

Packing	Particle Size	Carbon Load	Pore Size	Surface Area	Endcapped	pH Range*	Feature	Recommended Usage
C18-High Load	1.5, 3, 5, 10µm	11%	120Å	220m <sup>2</sup> /g	Yes	1–10	Ultra high-purity silica, Fully Bonded.	General Purpose for broad range compounds, Classic selectivity, High-capacity for hydrophobic compounds.
C18-BasicP	1.5, 3, 5, 10µm	5%	120Å	220m <sup>2</sup> /g	Proprietary	1–10	Ultra-High purity silica, Controlled silica surface exposure gives dual mode separation with polar and non-polar analytes.	Alternate RP selectivity. High polar retention especially with compounds having 2 or more polar groups. Excellent sensitivity and peak shape for basic compounds, without the need for acidified mobile phases.
C18-Standard	1.5, 3, 5, 10µm	6%	100Å	200m <sup>2</sup> /g	Yes	1–10	Lower carbon load, Slight silica exposure.	Reversed phase separations with reduced bonding optimized for speed. Some additional polar retention.
C18-Polar	1.5, 3, 5, 10µm	5%	100Å	200m <sup>2</sup> /g	No	1–10	High silica exposure, low carbon load uniform coverage of inert vicinal silanols.	Unique polar selectivity. Low carbon load gives fastest reversed-phase elution times while retaining polar compounds longer.
HILIC	1.5, 3, 5, 10µm	NA	120Å	220m <sup>2</sup> /g	No	2–8	Polar phase with shorter equilibration times. Shipped in ACN/Water.	Peak reversal compared to reversed-phase. Ideal for very polar compounds with high organic mobile phases for improved sensitivity by MS.
Silica	1.5, 3, 5, 10µm	NA	120Å	220m <sup>2</sup> /g	No	2–8	Traditional normal phase for use in 100% organic mobile phases.	For isomeric separation of non-aqueous compatible compounds by absorption chromatography.

\*Choice of buffer is critical at pH >8.

## VisionHT™ Rocket™ Columns

VisionHT™ Particle	Format	Length	i.d.	C18 High Load	C18 Basic	C18	C18 Polar	HILIC
1.5	Rocket	53	7	5151982	5152005	5151949	5152073	5152092
1.5	Rocket	33	7	5151984	5152007	5152041	5152075	5152110
3	Rocket	53	7	5151983	5152006	5152040	5152074	5152093

## Convert Between Standard HPLC Columns & Rocket™ Columns

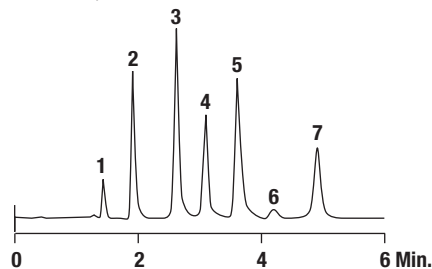
Standard Analytical (4.6mm): **1.0X Flow Rate**      Rocket™ Column (7.0mm): **2.3X Flow Rate**

Use this conversion of flow rate to transfer methods between Rocket™ column or VisionHT™ columns. Backpressure on standard LC systems should be considered.

### Benzodiazepines and Metabolites

1. Chlordiazepoxide degradant
2. Nitrazepam
3. Norchlordiazepoxide
4. Nordiazepam
5. Chlordiazepoxide
6. Chlordiazepoxide degradant
7. Diazepam

CHROM  
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**Column:** VisionHT™ C18 Polar Rocket™, 1.5µm, 33 x 7.0mm (Part No. 5152075)

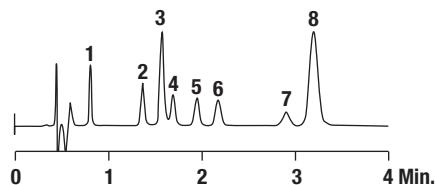
**Mobile Phase:** 0.05M Ammonium Acetate, pH5.5:35Acetonitrile (65:35)

**Detector:** UV at 254nm  
**Flow Rate:** 2.0mL/min

### Barbiturates

1. Barbitol
2. Butalbarbital
3. Aprobarbital
4. Talbutal
5. Butabarbital
6. Phenobarbital
7. Amobarbital
8. Mephobarbital

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**Column:** VisionHT™ C18 Polar Rocket™, 3µm, 53 x 7.0mm (Part No. 5152074)

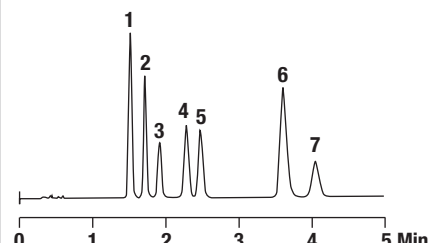
**Mobile Phase:** 0.010M Sodium Acetate, pH4.0:25 Acetonitrile (75:25)

**Detector:** UV at 230nm  
**Flow Rate:** 3.0mL/min

### Triazine Herbicides

1. Simazine
2. Simetryn
3. Prometon
4. Atrazine
5. Ametryn
6. Prometryn
7. Terbutryn

CHROM  
8671



**Column:** VisionHT™ C18 Polar Rocket™, 1.5µm, 33 x 7.0mm (Part No. 5152075)

**Mobile Phase:** 0.025M Potassium Phosphate, Monobasic pH3:Acetonitrile (65:35)

**Detector:** UV at 254nm  
**Flow Rate:** 2.0mL/min

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