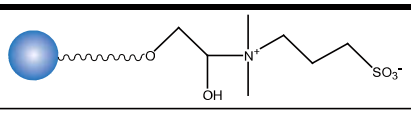
Ultisil™ HILIC Amphion II

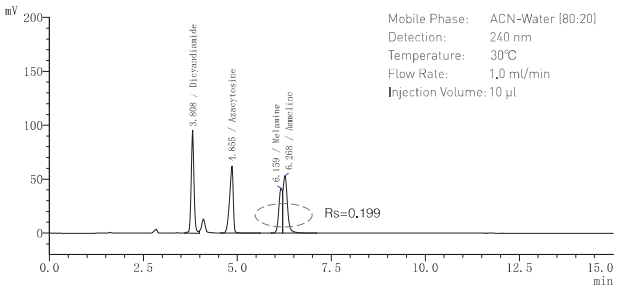
Ultisil™ HILIC Amphion II is a newly developed HILIC column, using amphion-bonded silica as packing material. It applies to the separation of most polar compounds, using acetonitrile or Water other than ion-pairing reagents as mobile phase. The Amphion, containing both Positive Charge Centre and Negative Charge Centre, brings high retention for acid and alkaline compounds through ion-exchange mechanism. Compared with common HILIC packing materials like silica and amino groups, the Amphion-bonded packing material provides better reproducibility and stability.

- **Amphion-bonded silica stationary phase**
- **Enhanced hydrophilic interaction brings higher retention for polar and hydrophilic compounds**
- **Different selectivity from common HILIC packing materials**
- **Simple mobile phase used for the separation of polar compounds**

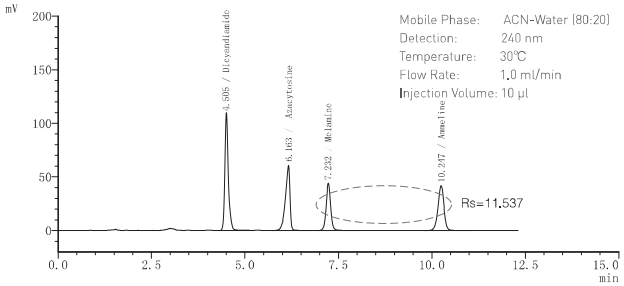
Ultisil™ HILIC Amphion

Structural Formula	
pH Range	2.0-8.0
Particle Size	5 μm
Surface Area(m^2/g)	320(120 Å)
Carbon Loading(%)	6(120 Å)
USP List	/
Endcapped	N/A

Comparison
Separation of 4 Polar Compounds (Dicyandiamide, Azacytosine, Melamine, Ammeline)

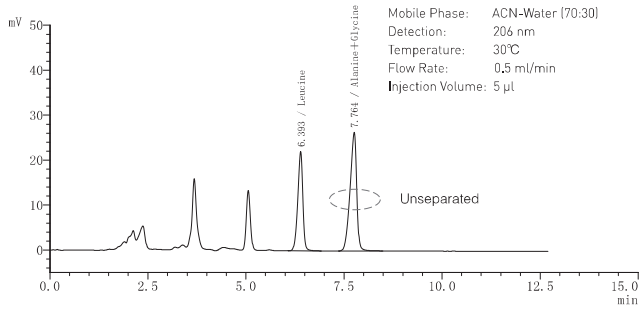


Ultisil ™ Hilic SiO_2, 5 μm, 4.6×250 mm

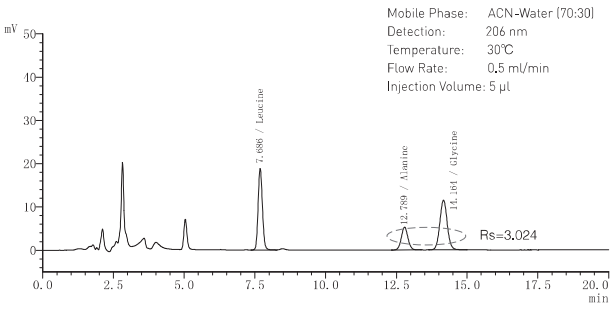


Ultisil ™ Amphion Ⅱ, 5 μm, 4.6×150 mm

Separation of 3 Aliphatic Amino Acids (Leucine, Alanine, Glycine)

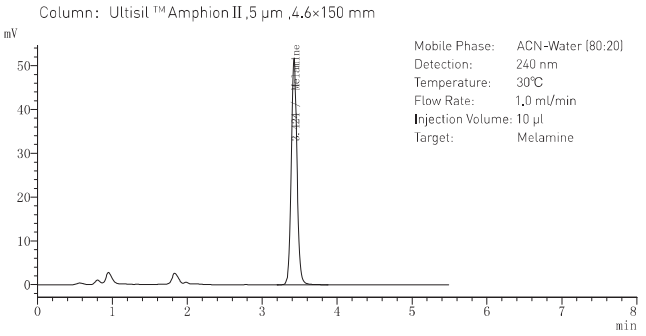


Ultisil ™ Hilic SiO_2, 5 μm, 4.6×150 mm



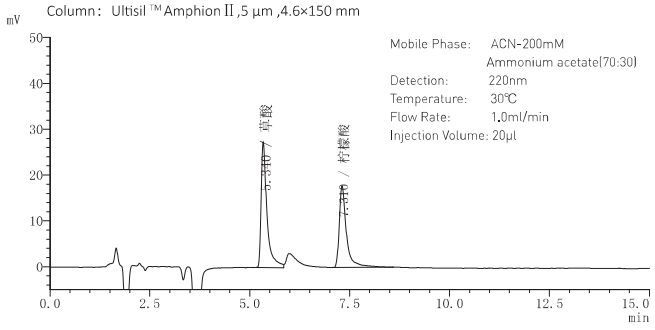
Ultisil ™ Amphion Ⅱ, 5 μm, 4.6×150 mm

Determination of Melamine



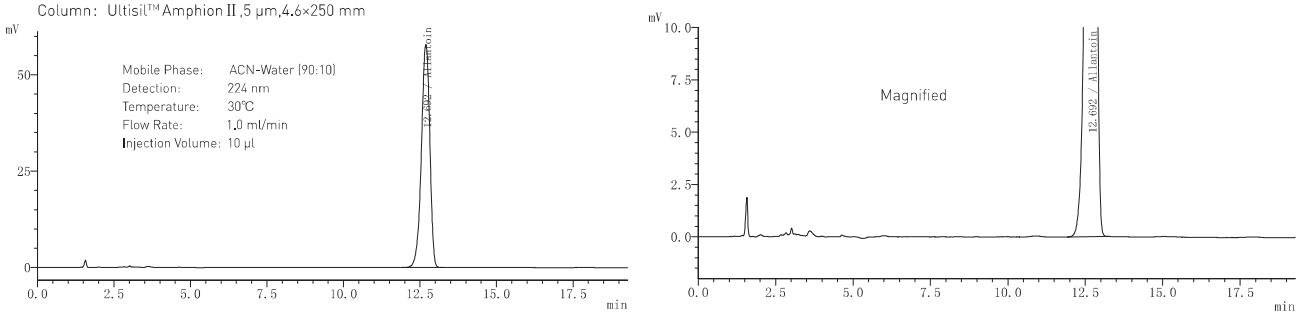
Rt	Plates	Tailing Factor
3.424	8087	1.094

Separation of Citrate and Oxalate



Compound	Rt	Plates	Resolution
Oxalate	5.340	7540	--
Citrate	7.310	9487	7.214

Determation of Allantoin



Rt	Plates	Tailing Factor
12.692	10196	0.892

Before use, flush with 50 column volumes of mobile phase (acetonitrile/water, 80:20) to equilibrate. Before injection, flush with 20 column volumes of mobile phase to equilibrate. For gradient analysis, flush with 10 column volumes of original mobile phase between injections.

Note:

1) Shifts of retention time may occur, if not sufficiently equilibrated.

2) Acetonitrile is the most common mobile phase solvent in HILIC mode. Other water-soluble polar organic solvents can also be used as mobile phases. The comparison of elution strength is:THF<Acetone<Acetonitrile<Isopropanol<Ethanol<Methanol<Water.

3) Long-period equilibration required, after using buffer salt mobile phase (like ammonium formate, ammonium acetate etc.) and buffer salt being flushed off.

4) After use, flush off the buffer salt in the column and store in 100% acetonitrile solvent.

Ultisil™ HILIC Amphion II

Particle size	Column ID (mm)	Column Length (mm)										Guard Cartridge	Guard Column Holder
		30	33	50	75	100	125	150	200	250	300	10mm length	
5 μm 120 Å	2.1	00274-31009	09274-31009	00274-31010	00274-31011	00274-31012	00274-31013	00274-31014	00274-31015	00274-31016		00808-24039	00808-01107
	3.0	00274-31018	-	00274-31019	00274-31020	00274-31021	00274-31022	00274-31023	00274-31024	00274-31025	-	00808-24039	00808-01107
	4.0	00274-31027	-	00274-31028	00274-31029	00274-31030	00274-31031	00274-31032	00274-31033	00274-31034	00274-31035	00808-04029	00808-01101
	4.6	00274-31036	11274-31036	00274-31037	00274-31038	00274-31039	00274-31040	00274-31041	00274-31042	00274-31043	00274-31044	00808-04029	00808-01101

Don't see your needed size or format? Contact Welch or your local distributor for other dimensions.