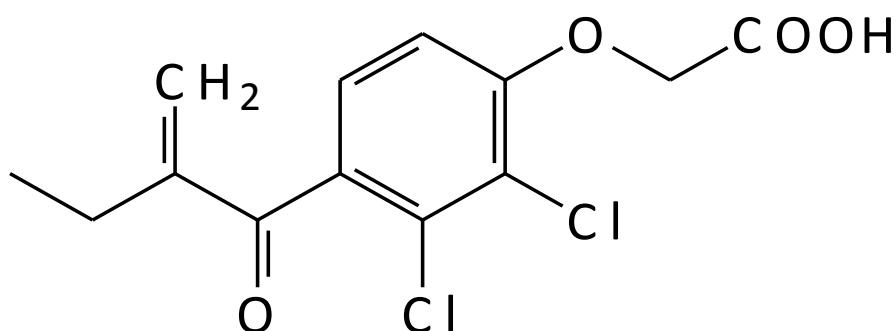


Ethacrynic Acid



Ethacrynic acid is a phenoxyacetic acid derivative containing a ketone and a methylene group. A cysteine adduct is formed with the methylene group and this is the active form.

Trade name Edecrin, is a loop diuretic used to treat high blood pressure and the swelling caused by diseases like congestive heart failure, liver failure, and kidney failure. Unlike other loop diuretics, ethacrynic acid is not a sulfonamide and thus, its use is not contraindicated in those with sulfa allergies.

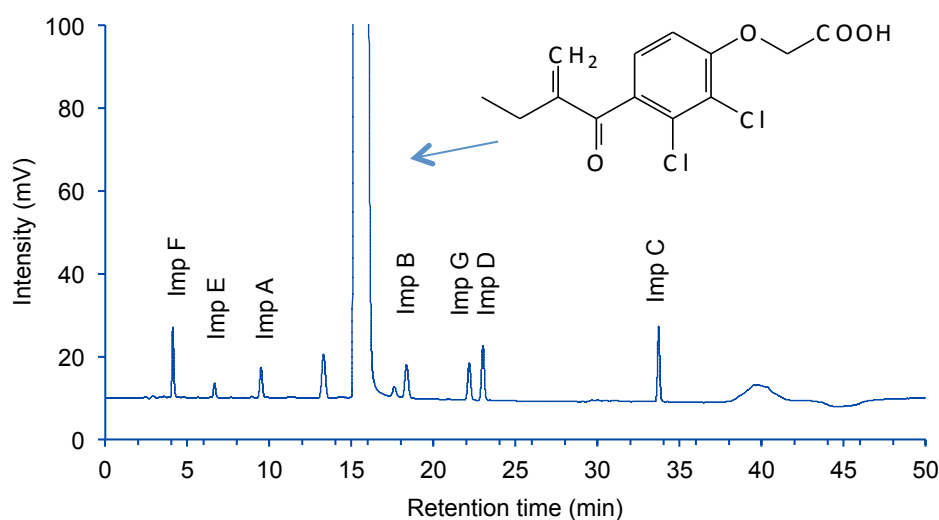
Ethacrynic Acid

Particulate C18 HPLC Column

Chromatographic Conditions

Column: Particulate C18 HPLC column, 250 x 4.6 mm, 5 μ m (1.51456.0008)
Injection: 20 μ L
Detection: Shimadzu 2010 CHT, UV 280 nm
Cell: 10 μ L
Flow Rate: 1.0 mL/min
Mobile Phase (v/v): A: Weigh 10 g of acetic acid and dilute to 1L with water. Adjust pH to 4.5 with dilute ammonia.
B: Methanol
Gradient Program: See Table
Temperature: 50 $^{\circ}$ C
Diluent: Water and acetonitrile 65:45 (v/v)
Sample: Weigh 100 mg of ethacrynic acid in 100 ml volumetric flask.
Add each impurity standard to get a 1 ppm level. Dilute with diluent.
Pressure Drop: 83 Bar (1203 psi)

Time (Min)	% A	% B
0.0	50	50
10.0	50	50
35.0	20	80
40.0	20	80
42.0	50	50
50.0	50	50



Chromatographic Data

No.	Compound	Time (min)	T _{USP}	Theoretical Plates*
1	Imp F	4.1	1.3	8745
2	Imp E	9.5	1.0	17736
3	Imp A	13.3	1.0	19539
4	Ethacrynic acid	15.2	4.3	16100
5	Imp B	18.4	1.0	39284
6	Imp G	22.2	1.0	81421
7	Imp D	23.0	1.0	96857
8	Imp C	33.7	1.0	275157

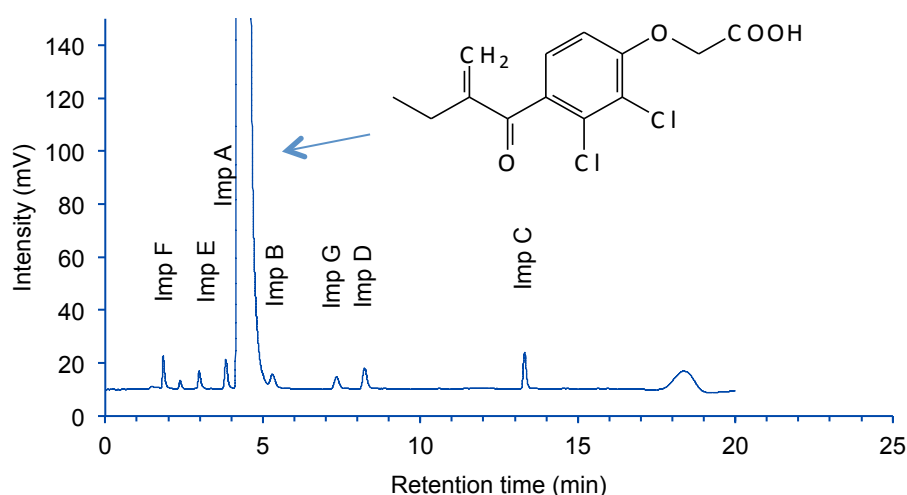
Ethacrynic Acid

Chromolith® HighResolution-18endcapped

Chromatographic Conditions

Column:	Chromolith® HighResolution RP-18endcapped, 100 x 4.6 mm	(1.52022.0001)
Injection:	10 µL	
Detection:	Shimadzu 2010 CHT, UV 280 nm	
Cell:	10 µL	
Flow Rate:	1.0 mL/min	
Mobile Phase (v/v):	A: Weigh 10 g of acetic acid and dilute to 1L with water. Adjust pH to 4.5 with dilute ammonia. B: Methanol	
Gradient Program:	See Table	
Temperature:	45 °C	
Diluent:	Water and acetonitrile 65:45 (v/v)	
Sample:	Weigh 100 mg of ethacrynic acid in 100 ml volumetric flask. Add each impurity standard to get a 1 ppm level. Dilute with diluent.	
Pressure Drop:	71 to 57 Bar (1029 to 826 psi)	

Time (Min)	% A	% B
0.0	50	50
4.0	50	50
14.0	20	80
16.0	20	80
16.8	50	50
20.0	50	50



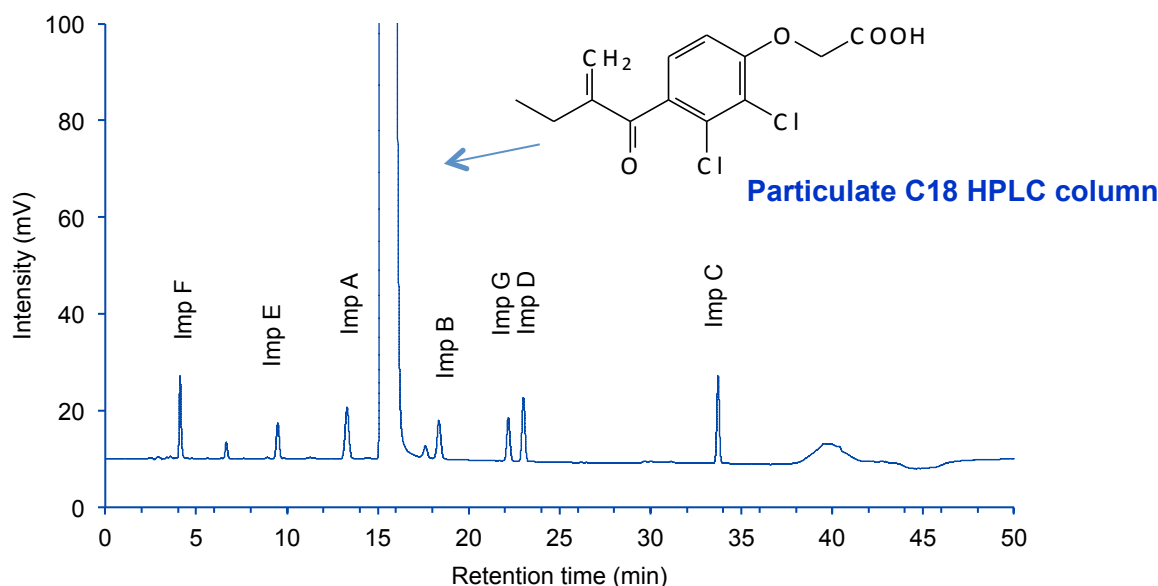
Chromatographic Data

No.	Compound	Time (min)	T _{USP}	Theoretical Plates*
1	Imp F	1.8	1.6	3482
2	Imp E	2.9	1.6	6983
3	Imp A	3.8	1.3	8653
4	Ethacrynic acid	4.3	2.4	1380
5	Imp B	5.3	1.2	6814
6	Imp G	7.3	1.3	11073
7	Imp D	8.2	1.3	19091
8	Imp C	13.3	1.3	99494

Ethacrynic Acid – Method Comparison

Particulate C18 HPLC column

Chromolith® HighResolution-18endcapped



Benefits with Method Transfer:

1. Performance criteria met with both columns
2. Faster analysis with Chromolith®
3. Lower system pressure with Chromolith®

