Analysis of Six Aromatic Amines Using a Core Enhanced Technology Accucore HPLC Column

Instrument: Jasco HPLC System

Sample Preparation
Primary standards of each amine were prepared in acteonitrile at a concentration of 1 mg/mL, with the exception of 2,4,5 trimethylaniline which was supplied at a concentration of 200 ng/mL.
Working standard contained the following:
80 ng/mL of 2,4,5 trimethylaniline
200 µg/mL of 2,4-diaminotoluene, o-toluidine and 2-methyoxy-5-methylaniline
60 µg/mL of 4,4-oxydianiline and 4,4-methylene-bis (2-chloroaniline)

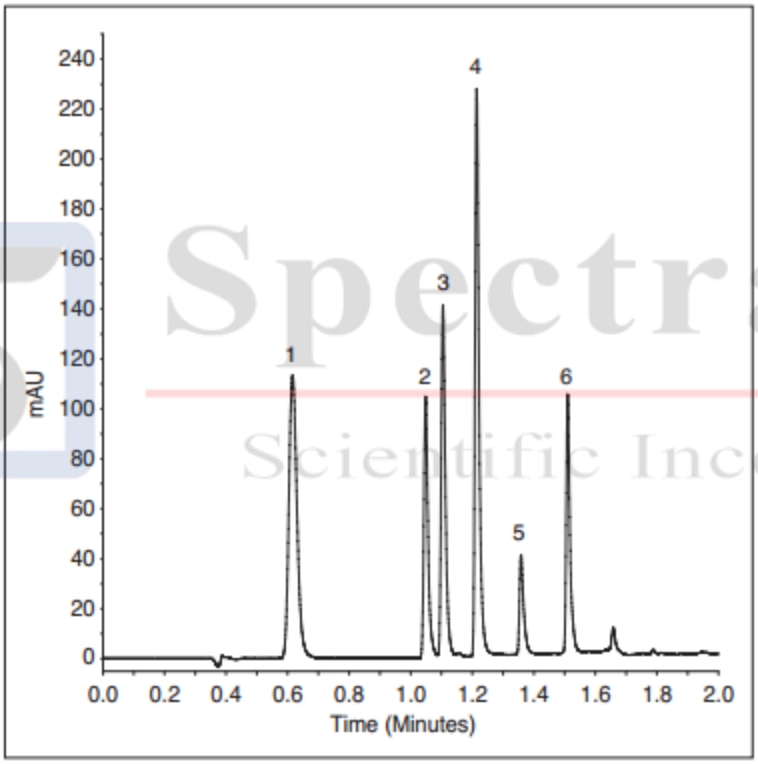
Thermo Scientific Column	Part Number
Accucore PFP 2.6 µm 100 x 2.1mm Measured pressure: 300 bar	17426-102130

Thermo Scientific Accela	
Column temperature	45 °C
Injection volume	1 µL
Flow rate	0.6 mL/min
UV detection	254 nm

Mobile Phase
Mobile phase A: 25 mM Ammonium acetate pH 5.0
Mobile phase B: Acteonitrile
Gradient: 20-100%B in 1.5 minutes

Peak	Analyte	Retention time (min)
1	2,4-Diaminotoluene	0.616
2	4,4-Oxydianiline	1.048
3	O-Toluidine	1.105
4	2-Methyoxy-5-methylaniline	1.214
5	2,4,5-Trimethylaniline	1.357
6	4,4-Methylene-bis (2-chloroaniline)	1.509

Table 1: Peak identity and position of the aromatic amines obtained from Accucore PFP



Reference: https://fscimage.thermoscientific.com/images/D02480~.pdf