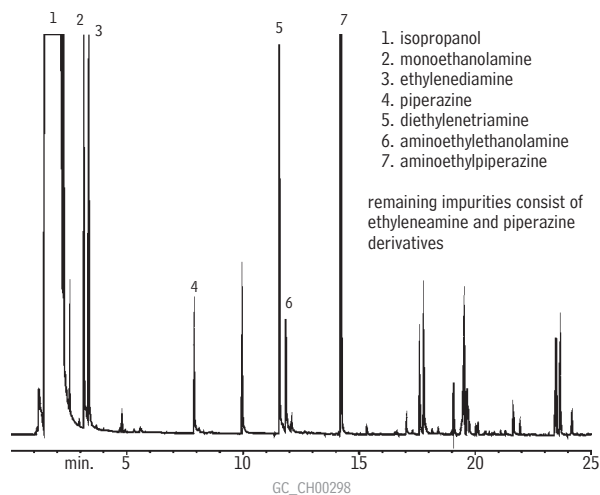


## Ethyleneamines

## Rtx®-5 Amine



1. isopropanol
2. monoethanolamine
3. ethylenediamine
4. piperazine
5. diethylenetriamine
6. aminoethylethanolamine
7. aminoethylpiperazine

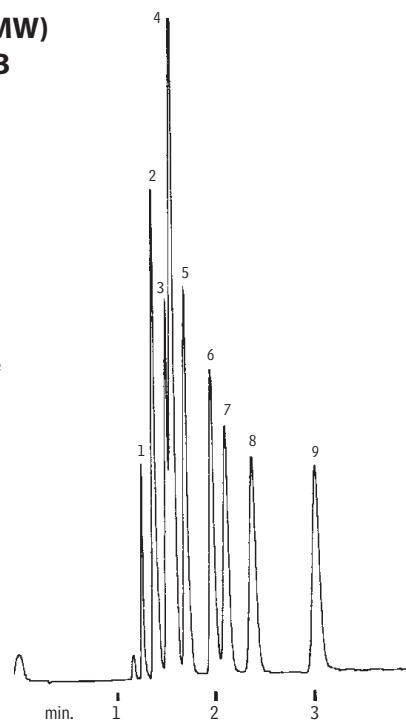
remaining impurities consist of ethyleneamine and piperazine derivatives

Column: Rtx®-5 Amine, 30m, 0.25mm ID, 0.50 $\mu$ m (cat.# 12338)  
 Sample: 3.0 $\mu$ L split injection of ethyleneamine industrial sample  
 On-column conc.: ~5-80ng  
 Oven temp.: 40°C (hold 4 min.) to 315°C @ 10°C/min. (hold 5 min.)  
 Inj./det. temp.: 315°C  
 Carrier gas: hydrogen  
 Linear velocity: 43cm/sec. set @ 40°C  
 FID sensitivity: 6.4 x 10<sup>-11</sup> AFS  
 Split ratio: 20:1

## Amines (low MW)

## Stabilwax®-DB

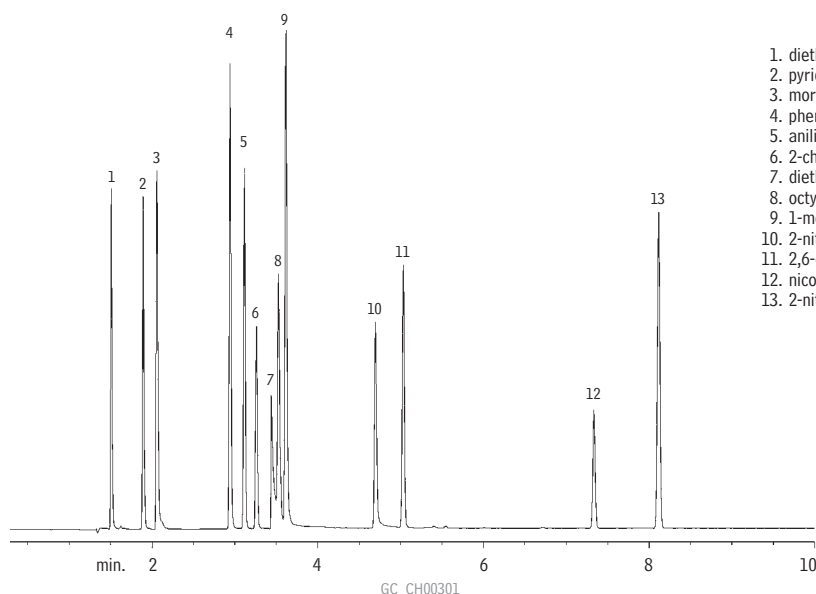
1. trimethylamine
2. dimethylamine
3. ethylamine
4. methylamine
5. isopropylamine
6. *n*-propylamine
7. *tert*-butylamine
8. diethylamine
9. *sec*-butylamine



Column: Stabilwax®-DB, 30m, 0.53mm ID, 1.0 $\mu$ m (cat.# 10855)  
 Sample: 1.0 $\mu$ L direct injection of amines in water  
 Oven temp.: 45°C  
 Inj./det. temp.: 250°C  
 Carrier gas: hydrogen  
 Linear velocity: 40cm/sec. (flow rate: 5cc/min.)  
 FID sensitivity: 1 x 10<sup>-11</sup> AFS  
 Recommended inlet liner: Uniliner®

## Amines &amp; Phenols

## Rtx®-5 Amine



1. diethylamine
2. pyridine
3. morpholine
4. phenol
5. aniline
6. 2-chlorophenol
7. diethylenetriamine
8. octylamine
9. 1-methyl-2-pyrrolidinone
10. 2-nitrophenol
11. 2,6-dimethylaniline
12. nicotine
13. 2-nitroaniline

Column: Rtx®-5 Amine, 30m, 0.32mm ID, 1.0 $\mu$ m (cat.# 12354)  
 Sample: 1.0 $\mu$ L split injection of amines and phenols in water  
 On-column conc.: 22ng  
 Oven temp.: 120°C to 220°C @ 10°C/min.  
 Inj./det. temp.: 305°C  
 Carrier gas: hydrogen  
 Linear velocity: 38cm/sec. set @ 120°C  
 FID sensitivity: 6.4 x 10<sup>-11</sup> AFS  
 Split ratio: 25:1