

## Basic Compounds Analysis

### Rtx®-Volatile Amine Columns (fused silica)

- Unique selectivity for baseline resolution of all volatile amines.
- Excellent inertness assures accuracy and sensitivity for volatile amines, including free ammonia.
- Highly robust phase withstands repeated water injections, resulting in longer column lifetime.
- High temperature stability (290 °C) ensures elution of amines up to C16 and allows contaminants to be removed by “baking out” the column.

The Rtx®-Volatile Amine column was designed specifically for analyzing volatile amines in difficult matrices, such as water. The unique base deactivation creates an exceptionally inert surface for these sensitive compounds, resulting in highly symmetric peaks which allow low detection limits. The stable bonded phase yields a column that is not only retentive and highly selective for these compounds, but is also very robust and able to withstand repeated water injections. Comparisons made by customers performing routine volatile amine applications have shown the Rtx®-Volatile Amine column outperforms other amine-specific columns, especially for peak shape and lifetime. Each Rtx®-Volatile Amine column is held to stringent quality specifications and tested with a specially designed test mix that includes basic compounds to ensure exceptional inertness, reliability, and reproducibility. These qualities assure consistent performance and make the Rtx®-Volatile Amine column the best choice for volatile amines analysis.



### similar phases

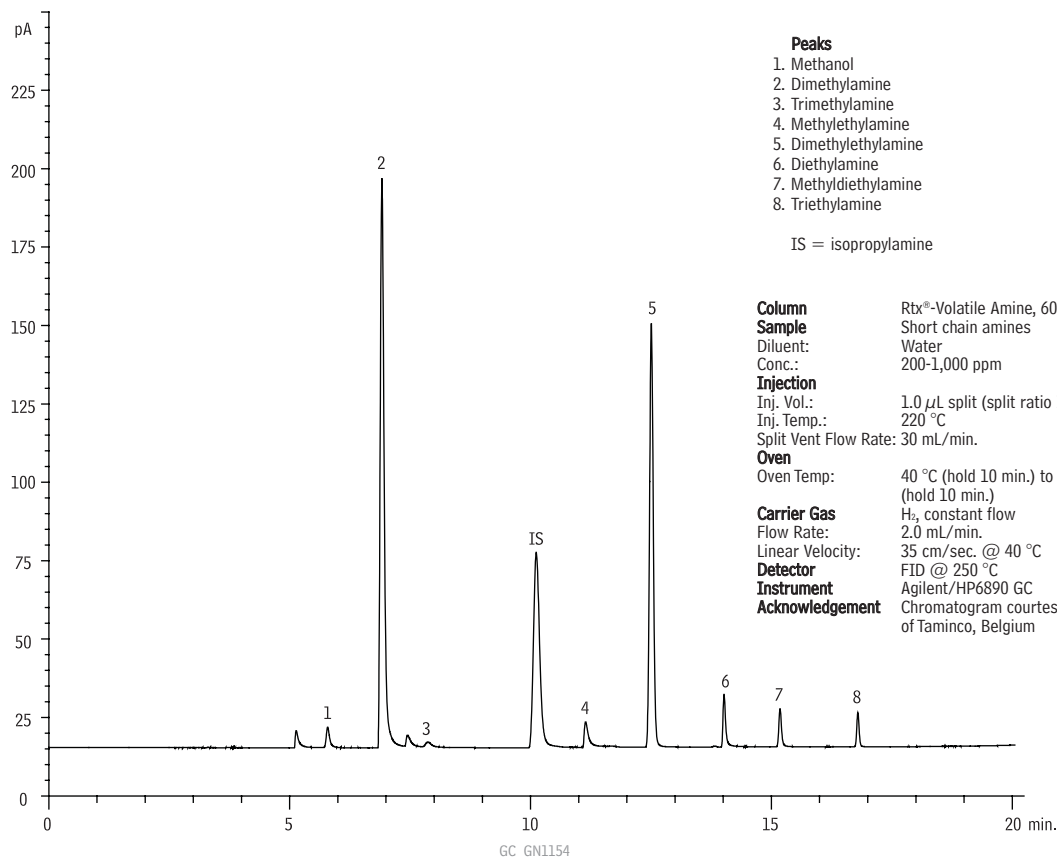
Direct replacement for CP-Volamine, thick-film CP-Sil 8 for amines, and other amine-deactivated columns coated with low polarity polysiloxane phases.

### please note

We recommend using base-deactivated fused silica guard columns (**page 34**) and base-deactivated liners (**page 213**) with Rtx®-Volatile Amine columns.

ID	temp. limits	15-Meter	30-Meter	60-Meter
0.32mm	-60 to 290°C	18076	18077	18078

### Short chain amines in water on an Rtx®-Volatile Amine column.



#### Peaks

1. Methanol
2. Dimethylamine
3. Trimethylamine
4. Methylethylamine
5. Dimethylethylamine
6. Diethylamine
7. Methyldiethylamine
8. Triethylamine

IS = isopropylamine

**Column** Rtx®-Volatile Amine, 60 m, 0.32 mm ID (cat.# 18078)  
**Sample** Short chain amines  
**Diluent:** Water  
**Conc.:** 200-1,000 ppm  
**Injection**  
**Inj. Vol.:** 1.0 µL split (split ratio 15:1)  
**Inj. Temp.:** 220 °C  
**Split Vent Flow Rate:** 30 mL/min.  
**Oven**  
**Oven Temp:** 40 °C (hold 10 min.) to 250 °C at 20 °C/min. (hold 10 min.)  
**Carrier Gas**  
**Flow Rate:** H<sub>2</sub>, constant flow  
 2.0 mL/min.  
**Linear Velocity:** 35 cm/sec. @ 40 °C  
**Detector** FID @ 250 °C  
**Instrument** Agilent/HP6890 GC  
**Acknowledgement** Chromatogram courtesy of Mr. Gilbert Baele of Taminco, Belgium