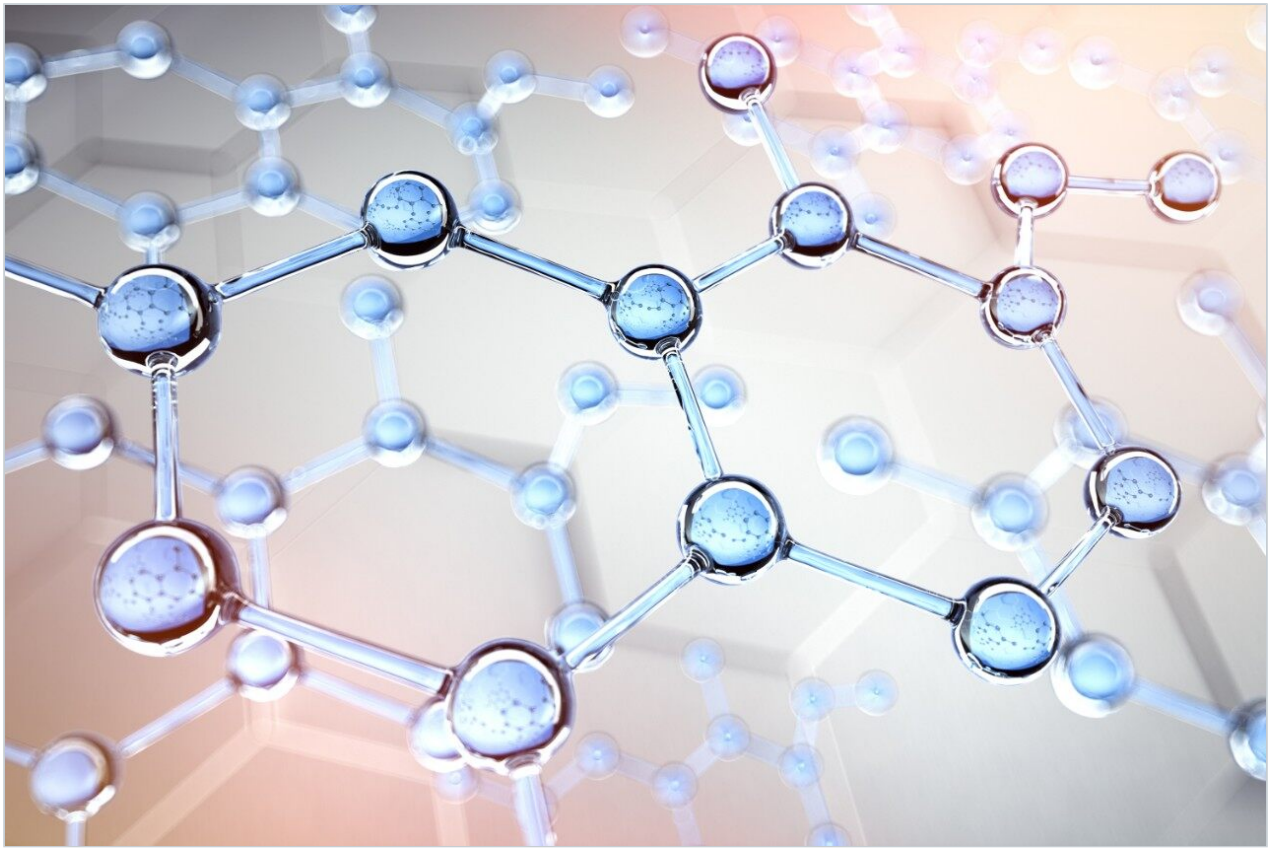
Waters™

Application Note

# Hydrophobic Bases: Group of Antihistamines

Waters Corporation



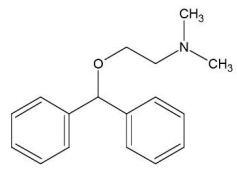
This is an Application Brief and does not contain a detailed Experimental section.

## Abstract

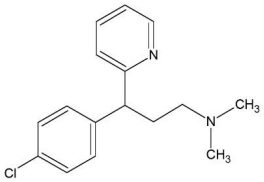
This application brief highlights the analysis of hydrophobic bases.

## Introduction

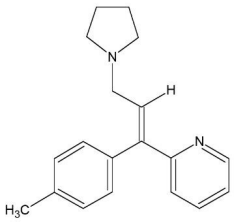
Compounds used in this application brief are shown below.




Diphenhydramine




Chlorpheniramine




Triprolidine

## Experimental

### Conditions

| | |
|---|---|
| Column: | SunFire $C_{18}$ 4.6 x 150 mm, 5.0 µm (p/n: 186002559) |
| Mobile phase A: | Water |
| Mobile phase B: | Acetonitrile |
| Mobile phase C: | 1% HCOOH in water |
| Flow rate: | 1 mL/min |

| | |
|---|---|
| Injection volume: | 10 µL |
| Sample concentration: | 10 µg/mL in water;<br>Diphenhydramine: 50 µg/mL |
| Temperature: | 30 °C |
| Detection: | UV @ 254 nm |
| Instrument: | Alliance 2695 with 2996 PDA |

| Compounds | USP tailing |
|---|---|
| 1. Chlorpheniramine | 1.15 |
| 2. Triprolidine | 1.16 |
| 3. Diphenhydramine | 1.75 |

## Conditions

| | |
|---|---|
| Column: | SunFire $C_8$ 4.6 x 150 mm, 5.0 µm (p/n: 186002737) |
| Mobile phase A: | Water |
| Mobile phase B: | Acetonitrile |
| Mobile phase C: | 1% HCOOH in water |
| Flow rate: | 1 mL/min |
| Injection volume: | 10 µL |

| | |
|---|---|
| Sample concentration: | 10 µg/mL in water;<br>Diphenhydramine: 50 µg/mL |
| Temperature: | 30 °C |
| Detection: | UV @ 254 nm |
| Instrument: | Alliance 2695 with 2996 PDA |

| Compounds | USP Tailing |
|---|---|
| Chlorpheniramine | 1.01 |
| Triprolidine | 1.1 |
| Diphenhydramine | 2.17 |

## Conditions

| | |
|---|---|
| Column: | SunFire $C_8$ 4.6 x 100 mm, 5.0 µm (p/n: 186002731) |
| Mobile phase A: | Water |
| Mobile phase B: | Acetonitrile |
| Mobile phase C: | 1% HCOOH in water |
| Flow rate: | 1 mL/min |
| Injection volume: | 10 µL |
| Sample concentration: | 10 µg/mL in water; |

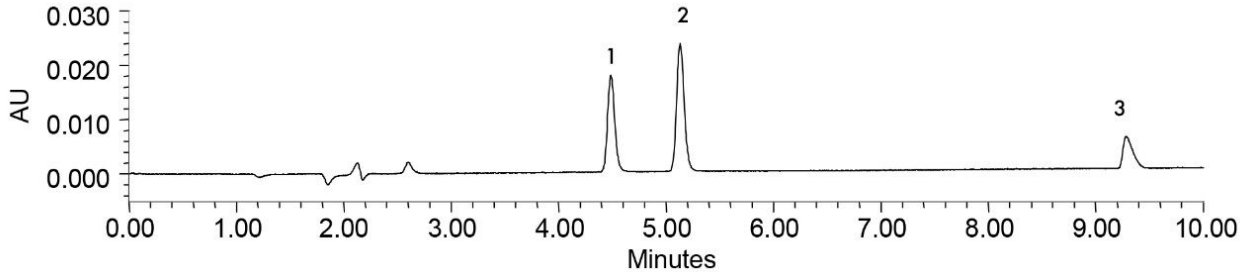
| | |
|---|---|
| | Diphenhydramine: 50 µg/mL |
| Temperature: | 30 °C |
| Detection: | UV @ 254 nm |
| Instrument: | Alliance 2695 with 2996 PDA |

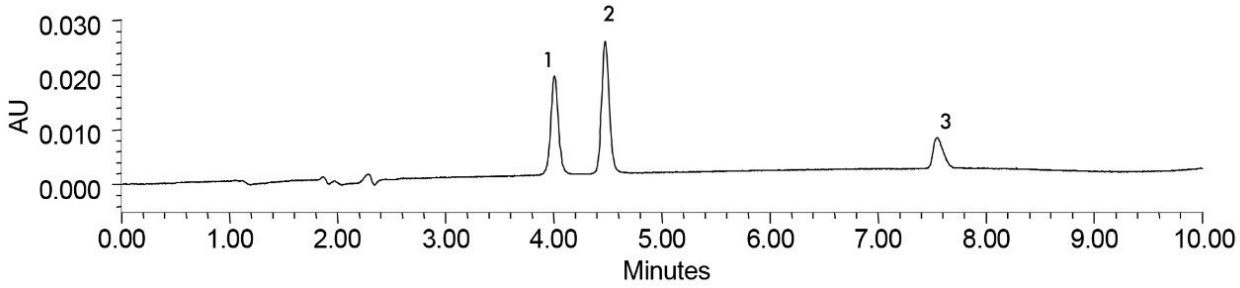
| Compounds | USP tailing |
|---|---|
| 1. Chlorpheniramine | 1.21 |
| 2. Triprolidine | 1.05 |
| 3. Diphenhydramine | 1.31 |

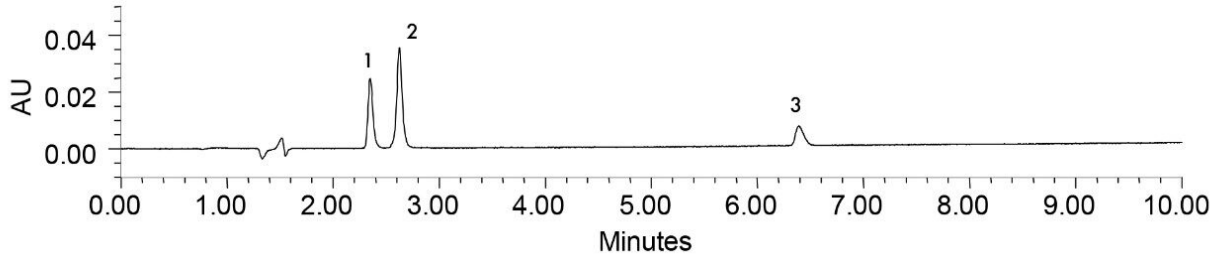
### Gradient

| Time (min) | Profile | | |
|---|---|---|---|
| | %A | %B | %C |
| 0.0 | 75 | 15 | 10 |
| 10.0 | 60 | 30 | 10 |
| 12.0 | 75 | 15 | 10 |
| 20.0 | 75 | 15 | 10 |

## Results and Discussion

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