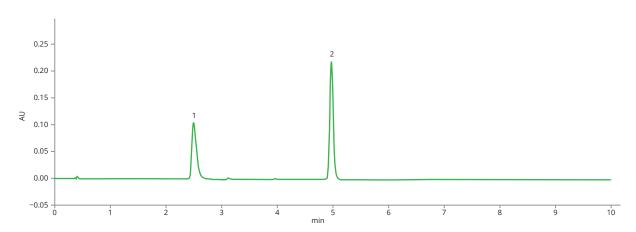
Dissolution profile pyridoxine and benfotiamine

The development of the HPLC method for vitamin mixtures in drug products is always challenging, taking into account the requirements of analytical methods in pharmaceutical production. Shown below is a chromatogram of dissolution profile of tablets that contain a mixture of pyridoxine hydrochloride and benfotiamine. ARION® Polar C18 column provides a perfect resolution factor and peaks symmetry in a long sequence of analysis.

| Substance | Pyridoxine hydrochloride, CAS number 58-56-0 | | |
|-----------|--|--|--|
| Synonym | Vitamin B6 | | |
| Substance | Benfotiamine, CAS number 22457-89-2 | | |



Test mixture on ARION® column

HCI OH
$$\frac{N}{N}$$
 OH $\frac{N}{N}$ OH $\frac{N}{N}$

Pyridoxine hydrochloride

Benfotiamine



Dissolution profile pyridoxine and benfotiamine

| Column | ARION® Polar C18, 3.0 μm | | | |
|-------------------------|--|-------|-------|--|
| Dimensions | 50 mm × 4.6 mm | | | |
| Part number | ARI-5721-IG46 | | | |
| Mobile phase | A: 50mM KH ₂ PO ₄ + 0.3 ml 85% H ₃ PO ₄ (pH=3.0) | | | |
| | B: ACN and A, 160/840 (v/v) | | | |
| Gradient elution | Time | A (%) | B (%) | |
| | 0 | 100 | 0 | |
| | 2 | 100 | 0 | |
| | 2.1 | 20 | 80 | |
| | 5 | 20 | 80 | |
| | 5.1 | 100 | 0 | |
| | 8 | 100 | 0 | |
| | 10 | 100 | 0 | |
| Flow rate | 1.6 ml/min | | | |
| Temperature | 22 °C | | | |
| Detection | UV at 222 nm | | | |
| Injection volume | 10 μΙ | | | |
| Analytes | 1. Pyridoxine | | | |
| | 2. Benfotiamine | | | |