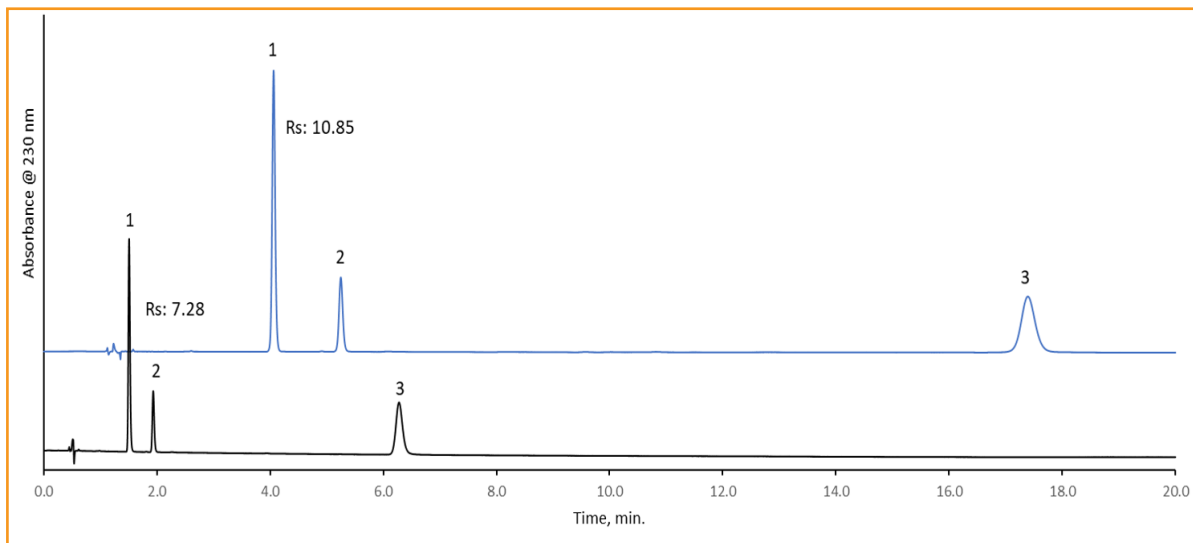




Separation of Lidocaine and Related Impurities - USP Method Modernization

382



TEST CONDITIONS:

Column: HALO 120 Å Elevate C18, 2.7 μ m, 4.6 x 150 mm
(USP: L1)

Part Number: 92274-702

Column: HALO 120 Å Elevate C18, 2.7 μ m, 2.1 x 100 mm
(USP: L1)

Part Number: 92272-602

Mobile Phase A: Potassium Phosphate Buffer, pH: 8.0

Mobile Phase B: Acetonitrile

Isocratic: 30% B

Flow Rate: 1.0, 0.4 mL/min

Back Pressure: 255 bar

Temperature: 30 °C

Injection: 20.0, 3.4 μ L

Sample Solvent: Mobile Phase

Wavelength: PDA, 230 nm

Flow Cell: 1 μ L

Data Rate: 100 Hz

Response Time: 0.05 sec.

LC System: Shimadzu Nexera X2

PEAK IDENTITIES:

1. 2-Cl-N(2-6-dimethylphenyl) Acet-amine (Imp. H)
2. 2-6-Dimethylaniline Hydrochloride (Imp. A)
3. Lidocaine

Lidocaine is a local anesthetic which prevents pain by blocking the signals at the nerve endings in the skin. A USP organic impurities test method is performed using a HALO® Elevate C18 column (L1) allowing for excellent performance with a high pH mobile phase (blue trace). The method runtime is then reduced by >50% along with a significant decrease in mobile phase consumption while still meeting the impurity resolution requirements of no less than 1.5 (black trace).