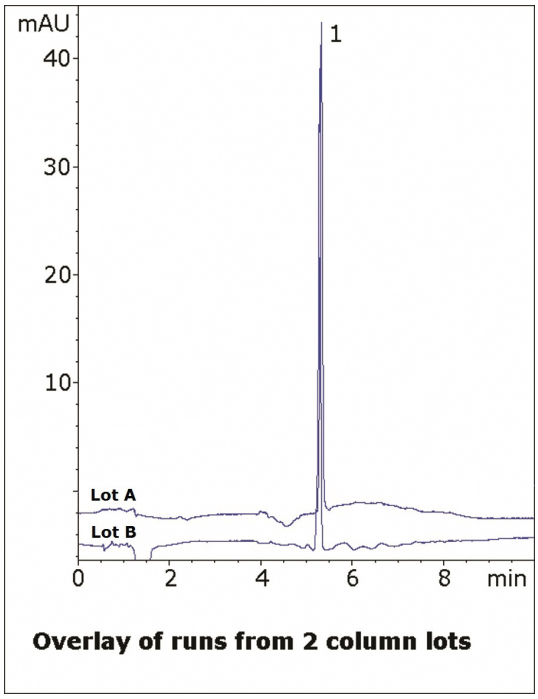
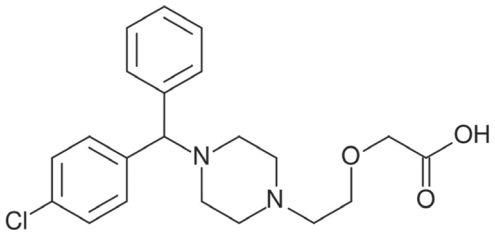
Cetirizine Tablet

High efficiency API peak in real formulation



Overlay of runs from 2 column lots



Cetirizine

Note: Cetirizine is a second-generation antihistamine used to treat allergies (e.g. hay fever, hives, etc.). It used to be available only by prescription in the U.S., but is now sold over the counter. The trade name is Zyrtec®, but generic versions are now available.

Method Conditions

Column: Cogent Diamond Hydride™, 4µm, 100Å

Catalog No.: 70000-7.5P

Dimensions: 4.6 x 75 mm

Solvents: A: DI H_2O / 10 mM ammonium acetate
B: 95% acetonitrile / 5% solvent A (v/v)

Gradient:

time (min.)	%B
0	100
2	100
6	50
7	100

Post Time: 3 min

Injection vol.: 1µL

Flow rate: 1.0 mL/min

Detection: UV 230 nm

Sample: 10mg strength cetirizine tablet was ground and added to a 25 mL volumetric flask with a portion of 50/50 solvent A / solvent B. After sonicating 10 min, it was diluted to mark and mixed. Then a portion was filtered with a 0.45µm nylon syringe filter (MicroSolv Tech Corp.) and diluted 1:4 with the same diluent.

Peak: 1. Cetirizine

t_0: 0.9 min

Discussion

This method shows how very high efficiency peak shapes can be achieved with the Cogent Diamond Hydride column. The cetirizine peak is well retained and shows excellent peak symmetry. Even with ion pair reversed phase methods, a peak of this high efficiency and symmetry would be difficult to obtain. Here ion pair agents are not necessary, which means the method is suitable for LC-MS. Furthermore, the high organic content is more amenable to MS detection as well.

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