Determination of Purity of Titanocene Dichloride

1   Method Summary

The sample was dissolved in acetonitrile and tested with acetonitrile and water as the mobile phase. The stainless-steel column with C18 as the filler and variable ultraviolet detector are used to separate and determine the purity of Titanocene Dichloride with area normalization.

2   Reagents and Solutions

2.1   Acetonitrile: chromatographically pure

2.2   New steamed double distilled water

3   Instruments

3.1   High pressure liquid chromatography; variable UV wavelength detector; chromatographic data processor or chromatography workstation

3.2   Column: 250mm × 4.6mm (i.d) stainless steel column, filled with ODS (C18) filler, particle size 10μm

3.3   Micro Injector: 50 μL

4   Operating Conditions

4.1   Column temperature: room temperature

4.2   Mobile phase: acetonitrile + water = 70+30

4.3   Flow rate: 1mL/min

4.4   Detection wavelength: 220nm

4.5   Injection volume: 20μL

4.6   Retention time: About 2.16min

The above operating parameters are typical, and the given parameters can be appropriately adjusted according to the characteristics of different instruments to obtain the best results.

5   Determination Steps

Approximately 0.5 g (accurate to 0.0002 g) of the sample was weighed into a 500 mL volumetric flask, dissolved in acetonitrile, and diluted to the mark with a mobile phase. Under the above operating conditions, after the baseline of the instrument was stabilized, 20 μL of the sample solution was injected and determine the purity by area normalization.

6. Allowable Difference

The difference between two parallel determination results shall not be greater than 1.0%.