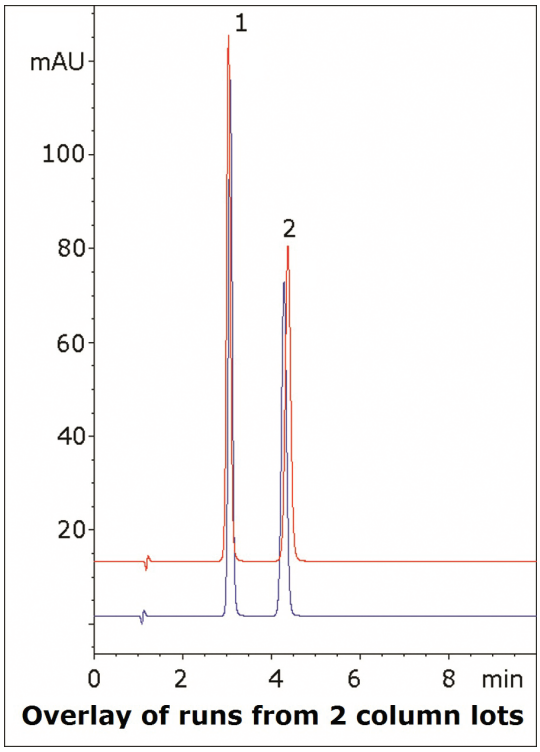
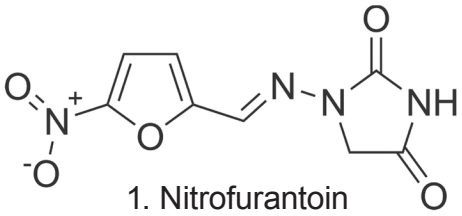
# Furazolidone

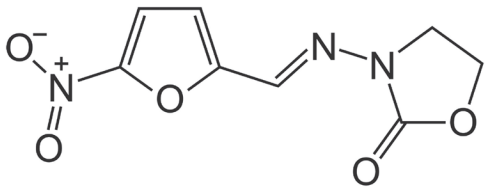
## Improved specificity compared to USP assay method




**Overlay of runs from 2 column lots**




1. Nitrofurantoin




2. Furazolidone

**Note:** Furazolidone is an antibacterial nitrofuran. It is used in both human and veterinary medicine. It is available under the trade name Furoxone®.

### Method Conditions

**Column: Cogent Bidentate C8™**, 4µm, 100Å

**Catalog No.:** 40008-75P

**Dimensions:** 4.6 x 75 mm

**Mobile Phase:** 80% DI $H_2O$ / 20% acetonitrile / 0.1% formic acid (v/v)

**Injection vol.:** 1µL

**Flow rate:** 1.0 mL/min

**Detection:** UV 367 nm

**Sample:** 1mg furazolidone and 1mg nitrofurantoin USP reference standards were dissolved in 1 mL of the mobile phase. The solution was then diluted 1:10 with the same diluent. Peak identities were confirmed with individual standards.

**Peaks:** 1. Nitrofurantoin (Internal Standard)
2. Furazolidone

**$t_0$:** 0.9 min

### Discussion

The USP assay method for furazolidone is performed by UV spectrophotometry. This method by HPLC provides better robustness and specificity for the analysis. Separation of furazolidone from the structurally similar compound nitrofurantoin is shown in the figure.

This compound can be used as an internal standard, leading to more robust quantitation.

Furthermore, the ability of this method to distinguish amongst similar compounds demonstrates how it is less prone to interference from impurities or degradants.



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