



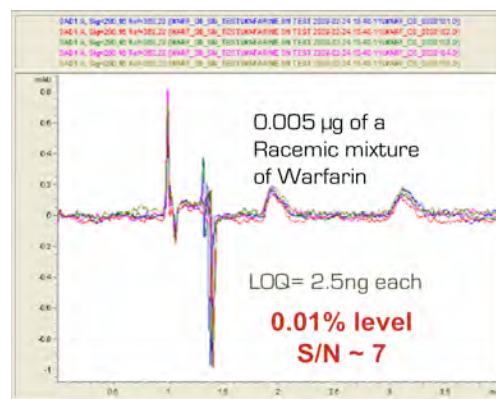
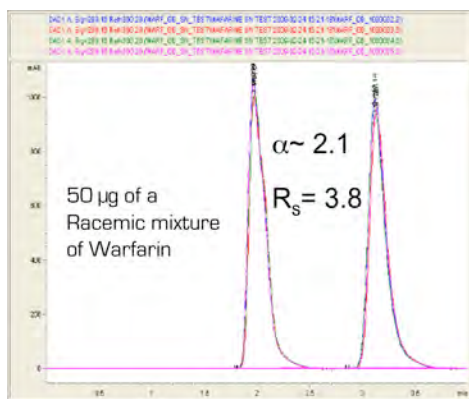
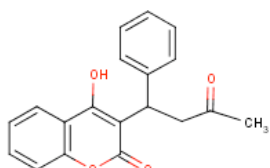
Aurora SFC Fusion™ A5

Application Note

Improved Chiral Dynamic Range And Reproducibility

By Terry Berger and Kimber Fogelman

Aurora SFC Systems, Inc. April, 2009



Equipment

- Agilent Model 1200 Binary Pump
- Degasser
- Agilent Plate Autosampler
- Agilent Oven
- Agilent 80 Hz DAD w/ High Pressure flow cell
- Agilent ChemStation
- Aurora SFC Fusion A5 Module

Conditions

3ml/min of 30%[MeOH +0.4% DMEA], 30°C, 200 Bar, Chiralcel ODH, 4.6 x 250mm, 5µm d_p, 280nm, pk wd =

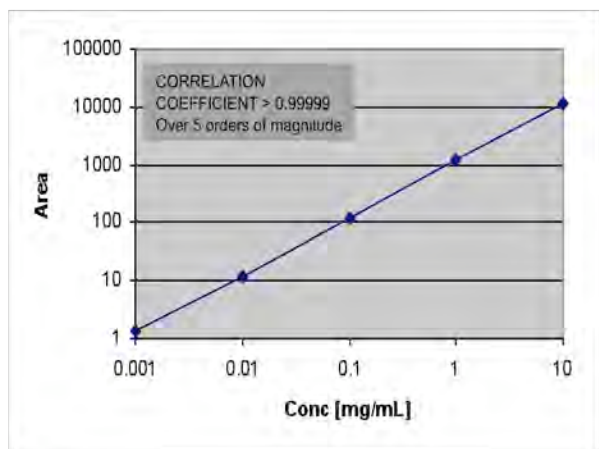
Results

Five superimposed injections of 5µL each enantiomer gives full-scale response at 1000 mAU. Four 10-fold dilutions lead to quantitation of the enantiomers at 0.01%.

At 0.1%, five injections display retention time RSD of better than 0.2% with area precision of 2.07%. Even at this low concentration the S/N remains above 50 with excellent linearity.

Reproducibility

Conc.	Ret. Time, min	Area Counts	S/N
100%	1.966±/-0.46%	11,772±/-0.27%	>16K-67K
10%	1.960±/-0.56%	1232.5±/-0.46%	4846
1%	1.948±/-0.70%	116.97±/-0.31%	538
0.1%	1.944±/-0.15%	12.30±/-2.07%	>57.6
0.01%	1.950±/-0.27%	1.332±/-14.22%	7.9



Conclusion

Best sensitivity and widest dynamic range ever recorded in SFC. These results indicate SFC is suitable for use in all aspects of analysis including chiral, trace metabolites, impurities, QA/QC, API, GLP, GMP, etc.