# Rapid, Robust, Routine Microbore Drug Analysis

## High Throughput Plasma Drug Screening

## TARGA C18

✓ *TARGA microbore columns are very stable under continuous use even at 6x's their optimum flowrate!*

✓ *Formic acid buffer -- No TFA!*

✓ *Unique selectivity for problematic separations.*

✓ *Basic drugs don't tail*

✓ *High sensitivity*

### High Speed Microbore Analysis of Plasma Drug Samples:

Column stability and efficiency are primary issues for researchers developing fast HPLC methods with low detection limits. An example of a very high throughput plasma drug analysis illustrates several performance features of Higgins Analytical's TARGA microbore columns.

*Experimental:* 200µL of plasma is precipitated with MeCN, evaporated to dryness, then dissolved in 10µL of 10% MeOH/ water solution. The 2.5µL injection on a TARGA C18 100x1mm column is equivalent to 50µL of plasma. A 0 - 95% MeCN vs 0.1% aqueous formic acid gradient is run at 300µL/min over 5min, held for 1min, then returned to 0% MeCN by 6.1min. The analysis is repeated every 8 minutes.

Good column efficiency and lifetime are characteristics of TARGA C18 columns, even under these demanding conditions.
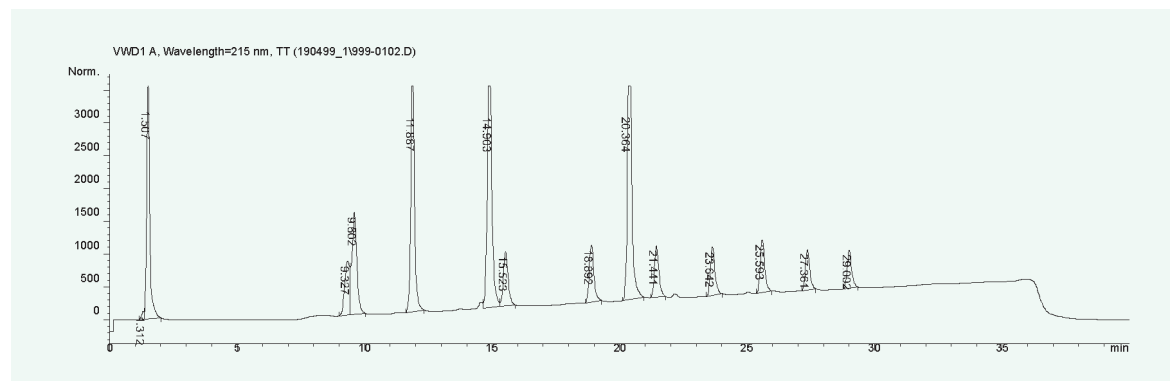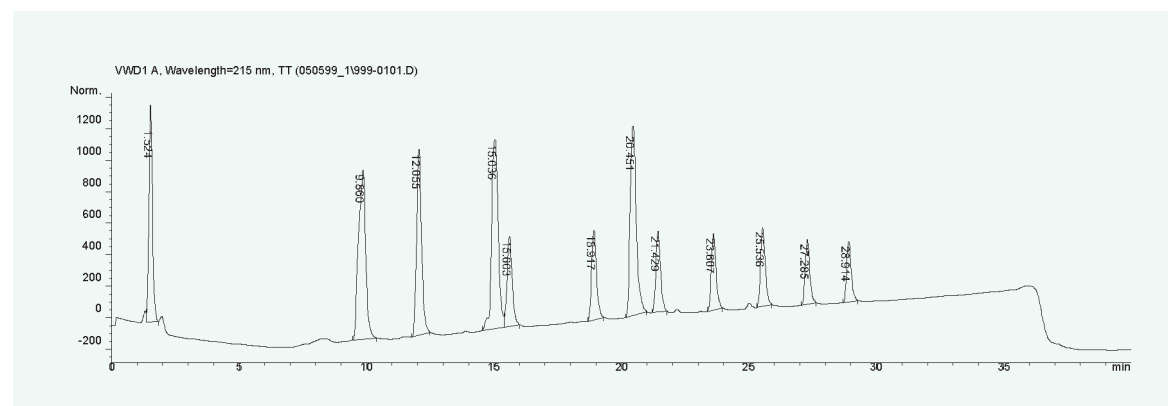


A thirteen component *Column Suitability Gradient Test* on a new 100x1.0mm TARGA C18 Column, P/N TS-1001-C185.
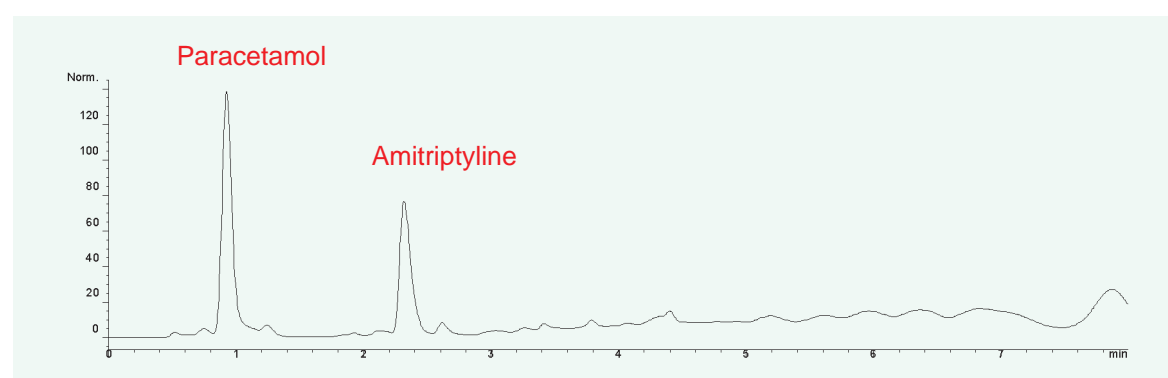


The first analysis of a 10µg/mL plasma drug sample on a new 100x1.0mm TARGA C18 Column. Note the good amitriptyline peak symmetry and efficiency at 300µL/min.
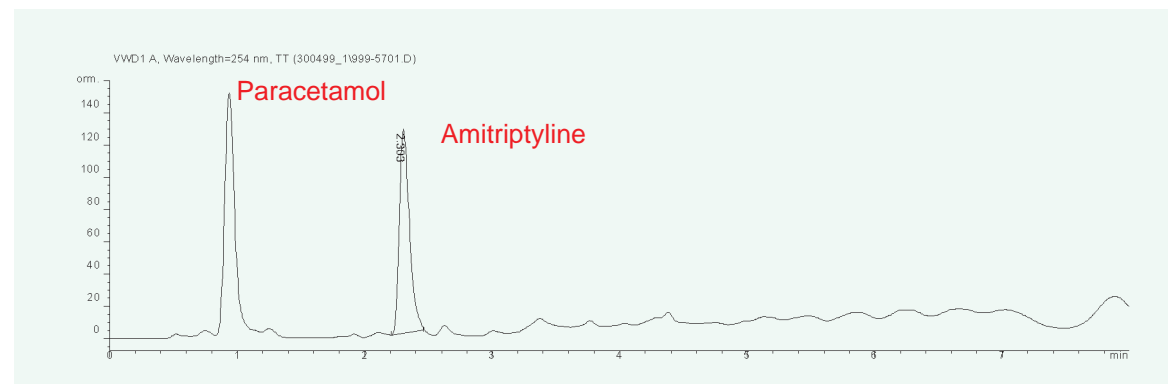


The 80th analysis of plasma drug samples on a 100x1.0mm TARGA C18 Column. No change in retention times or peak shapes even under the high flow rate conditions.



A repeat of the thirteen component *Column Suitability Test* on a 100x1.0mm TARGA C18 Column after 80 analysis of plasma drug samples at a flow rate of 300 µL/min.