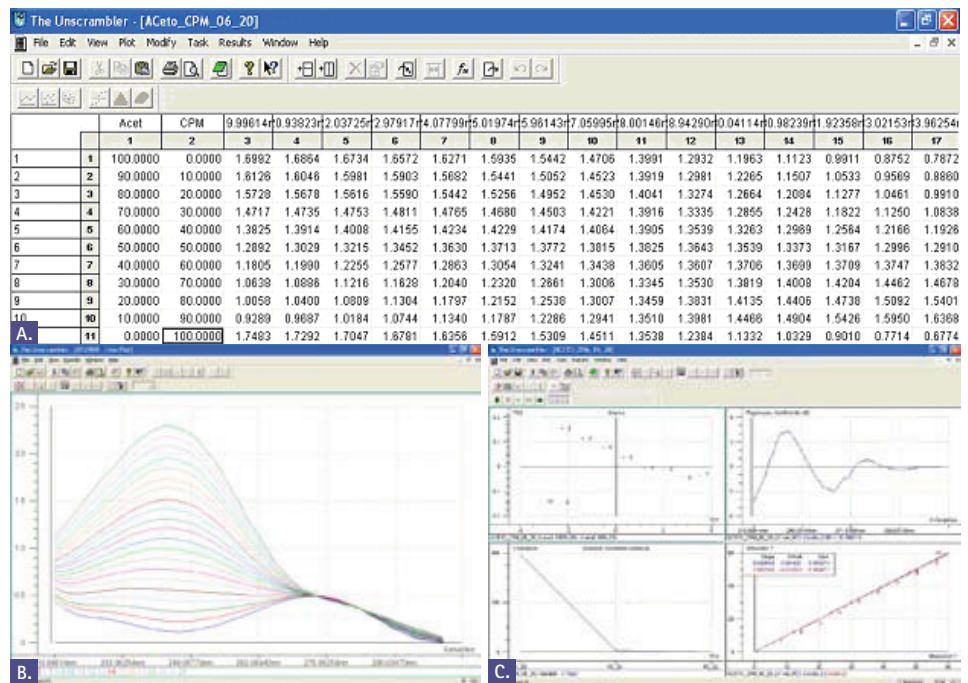


# Multicomponent Analysis with UV-Vis

Traditionally, pharmaceutical products with more than one active component have been relegated to analysis using HPLC. An alternative solution, however, is available through the partnership created by Varian and CAMO Software, Inc. The Unscrambler® software package works in conjunction with Varian's UV Dissolution Software to provide a multicomponent analysis (MCA) solution for products with multiple active drugs. The procedure to create a model file using Unscrambler is simple and cost-effective – see the basic steps below:

- » Prepare stock standard solutions of the active components of the drug product.
- » From the stock solutions, prepare varying concentration combinations (minimum of 20).
- » Analyze these solutions using the Scan application of Varian's UV Dissolution Software.
- » Import the Scan data into CAMO's Unscrambler Software.
- » Enter the concentrations in the data table.
- » Using Unscrambler, perform a PLS2 regression to create the model file.
- » Setup a dissolution method from the Varian UV Dissolution Software and select the model file created in Unscrambler.
- » Execute the dissolution test. Results of each component's rate of release are based on the model file and displayed in a separate report.



A variety of applications within the Unscrambler Software allow the user to identify, define and quantitate the amount of multiple active pharmaceutical ingredients (APIs) within a single formulation. The figures show: (a) varying percentages of each API, (b) scans with various concentrations of the API, and (c) PLS2 regressions that are used to quantitate the amounts of API in unknown concentrations.

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The Dissolution Discussion Group (DDG) Web site is an invaluable resource for you to research best practices and get direct, timely feedback from industry peers. Although sponsored by Varian, DDG is a vendor-neutral forum for open scientific discussion in an environment that is free from regulatory oversight.

Register on [www.dissolution.com](http://www.dissolution.com) to participate in interactive scientific discussions on the latest regulatory issues in quality control, R&D challenges, and more.



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