

What is the purpose of the Resolution Test Mixture supplied in your Qualification Kits - FAQ

The purpose of the Resolution Test Mixture (RTM) is twofold.

1. As a sort of "System Suitability" test, if only to make sure you have prepared the mobile phase correctly.
2. To be sure that the test column is not completely degraded.

You could use just a caffeine injection for this purpose. However, by using a mixture of several peaks as in the RTM, you can graph the total observed variance, which is comprised of **column variance + extra column variance**. The intercept of that regression is the extra column variance.

This information can be useful; for example, most of our Agilent 1100/1200 instruments produce a 120uL^2 of extra column volume variance (or 11uL as the standard deviation). This is adequate for most standard size analytical columns, but too large for a short 2.1 mm type column, and that can be a significant finding. Some older instruments have been found to have $800\text{-}900\text{ uL}^2$ of volume variance which would make using a 2.1 mm column for your analysis, not recommended for use with this instrument.

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