What is the mobile phase used in the DIY Chemical Solutions HPLC Qualification Kits and how much is used - FAQ

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The " Do It Yourself", **Chemical Solutions HPLC Qualification Kits** are designed for ease of use and compatibility with most standard HPLC systems. The mobile phase formulation is optimized to support both **isocratic** and **gradient** system performance checks using NIST-traceable standards.

Mobile Phase Composition

- 14:86 Acetonitrile : 0.1% Acetic Acid in Water (v/v)
  - To prepare the aqueous component: Add 1 mL of glacial acetic acid per liter of water to make a 0.1% solution.
  - Mix 140 mL of acetonitrile with 860 mL of the 0.1% acetic acid solution to make 1 liter of mobile phase.

Tolerance: 12%-16% in acetonitrile absolute composition.
0.08%-0.12% acetic acid absolute composition.

This composition provides:

- Low UV background, ideal for UV detector qualification
- Stable baseline for both isocratic and gradient testing
- Compatibility with a wide range of analytes and column chemistries

Volume Requirements

- For isocratic system testing: Prepare 1 liter of mobile phase.
- For gradient system testing: Prepare 2 liters to ensure sufficient volume for method development, equilibration, and multiple injections.

Additional Tips

- Always use HPLC-grade solvents and freshly prepare the mobile phase to avoid contamination or degradation.
- Filter and degas the mobile phase before use to prevent baseline noise and pump cavitation.
- Store unused mobile phase in amber bottles at room temperature and use within 24–48 hours for best results.

📦 Click ***HERE*** for PQ and HSQ Kit™ ordering information and images.

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