

Quaternary HPLC Pumps Qualification - Tech Information

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The Chemical Solutions™ Qualification Kits are designed to support performance qualification across a wide range of HPLC pump configurations—including single-channel, binary, ternary, and quaternary gradient systems.

How it works:

The gradient qualification tests are based on a core method called GRDAB, which evaluates the A/B solvent channels. In this method, the B channel is visualized using the Gradient Visualization Solution (GVS), allowing for precise absorbance-based assessment of gradient accuracy and proportioning.

For systems with more than two solvent channels:

- **Ternary systems** are tested using the GRDCB method, which evaluates the C/B* combination.
- **Quaternary systems** require an additional method, GRDDB, to assess the D/B* channel performance.

Each method follows the same principles of gradient formation and absorbance monitoring, ensuring consistent and reliable qualification across all pump types.

Why this matters:

- Ensures accurate solvent proportioning across all channels
- Detects valve switching errors or gradient non-linearity
- Supports regulatory compliance and method transfer validation

 For more information, please Click [Here](#).