



Performance Qualification

• Step Accuracy: STD C-D Gradient_3

• Instruments and Fluidics

| <i>Instrument Name</i> | <i>Model</i> | <i>Supplier's Name</i> | <i>Serial Number</i> |
|------------------------|-------------------------|------------------------|----------------------|
| Pump | G1311 | Thermo Scientific | DE91608906 |
| UV Detector | G1315 | Thermo Scientific | DE91608491 |
| Chromeleon Datasystem | V. 6.80 SR16 Build 5387 | Thermo Scientific | 1904 |

| <i>Accessories</i> | <i>Description</i> |
|------------------------|--------------------------------|
| Back Pressure Device | Capillary (L:15 m; ID:0,18 mm) |
| Solvent C for Gradient | Water (HPLC-Grade) |
| Solvent D for Gradient | Water + 0.1% Acetone |

• Additional Information

Customer: Customer's Name
 Operator: Operator's Name
 Operator's Jobtitle
 Execution Date: 2026-avr.-01
 Next Qualification: 2026-oct.

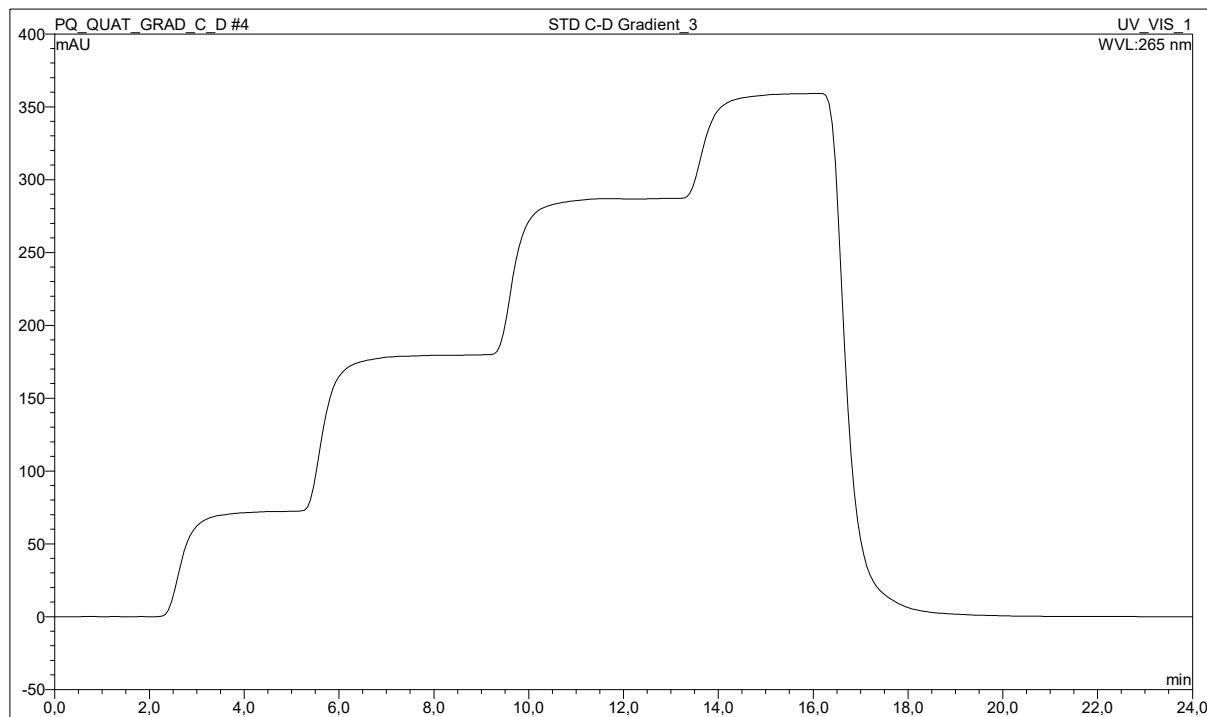
• Limits and Test Results

| | <i>Limit</i> | <i>Observed max. Deviation</i> | <i>Result of all Steps</i> |
|---------------|--------------|--------------------------------|----------------------------|
| Step Accuracy | <= 1,500 % | 0,277 % | Test passed |
| Step Ripple | <= 0,500 % | 0,040 % | Test passed |

• Signatures

| | <i>Signature</i> | <i>Date</i> |
|-------------------------|------------------|-------------|
| Submitter / Operator: | | |
| Reviewer: | | |
| Approver (e-sig. only): | | |

• **Chromatogram of STD C-D Gradient_3**



Flow [ml/min]: **2,000**

• Data of STD C-D Gradient_3

| Observed Value [mAU] | Expected Value [%] | Calculated Value [%] | Abs. Critical Deviation [%] | Calculated Deviation [%] | Result |
|-----------------------------|---------------------------|-----------------------------|------------------------------------|---------------------------------|---------------|
| 0,00 | 0,00 | 0,000 | 1,500 | 0,000 | ok |
| 70,77 | 20,00 | 19,800 | 1,500 | -0,200 | ok |
| 179,21 | 50,00 | 50,136 | 1,500 | 0,136 | ok |
| 286,95 | 80,00 | 80,277 | 1,500 | 0,277 | ok |
| 357,45 | 100,00 | 100,000 | 1,500 | 0,000 | ok |

• Ripple of STD C-D Gradient_3

| Step [%] | Ripple [mAU] | Calculated Ripple [%] | Critical Ripple [%] | Result |
|-----------------|---------------------|------------------------------|----------------------------|---------------|
| 20,00 | 0,142 | 0,040 | 0,500 | ok |
| 50,00 | 0,042 | 0,012 | 0,500 | ok |
| 80,00 | 0,099 | 0,028 | 0,500 | ok |