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Gas chromatographic conditions

- 30 metre, 0.25 mm id, 1 micron CP-Sil 5 MS
 - Pressure 30 psig
 - Helium carrier, split 15:1 total flow 50 mL/min
 - Flow velocity 61 cm/sec, 3.7 mL/min
 - Oven temperature: As per individual chromatograms
 - Injector temperature: 300 C, insulated with wool
 - Detector: FID, optimum flow rates
 - Test solute: Most aggressive of alcohols - methanol, ethanol, and 2-propanol
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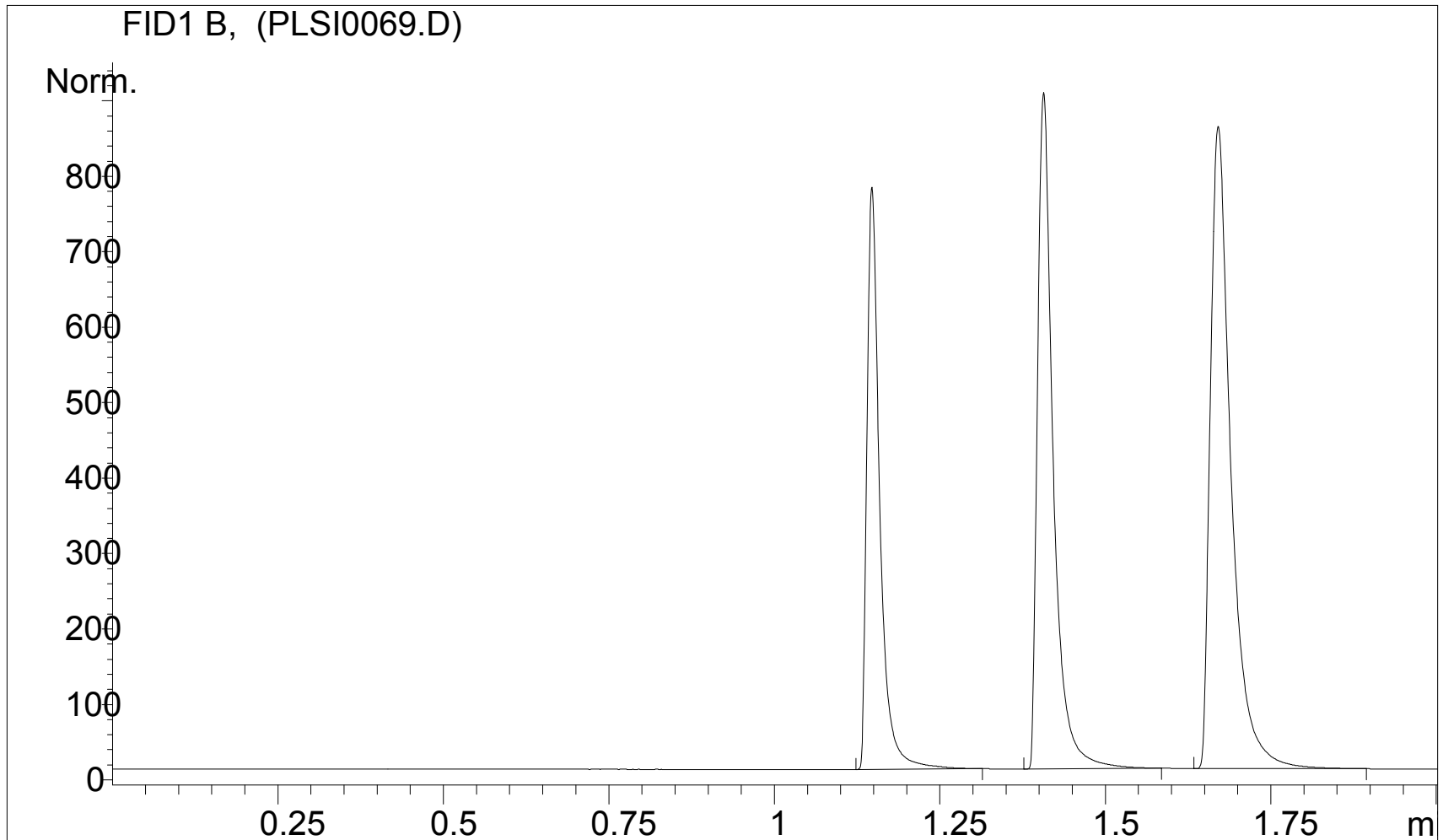
PLIS valve involved in study

- SN 2:
 - Standard PLIS with 2 uL volume
- SN 3:
 - Sulfinert deactivated, with 2 uL volume and heat sink

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• SN 2 - 40 C isothermal

Methanol, ethanol, and 2-propanol in hexane (ca 0.1% v/v)

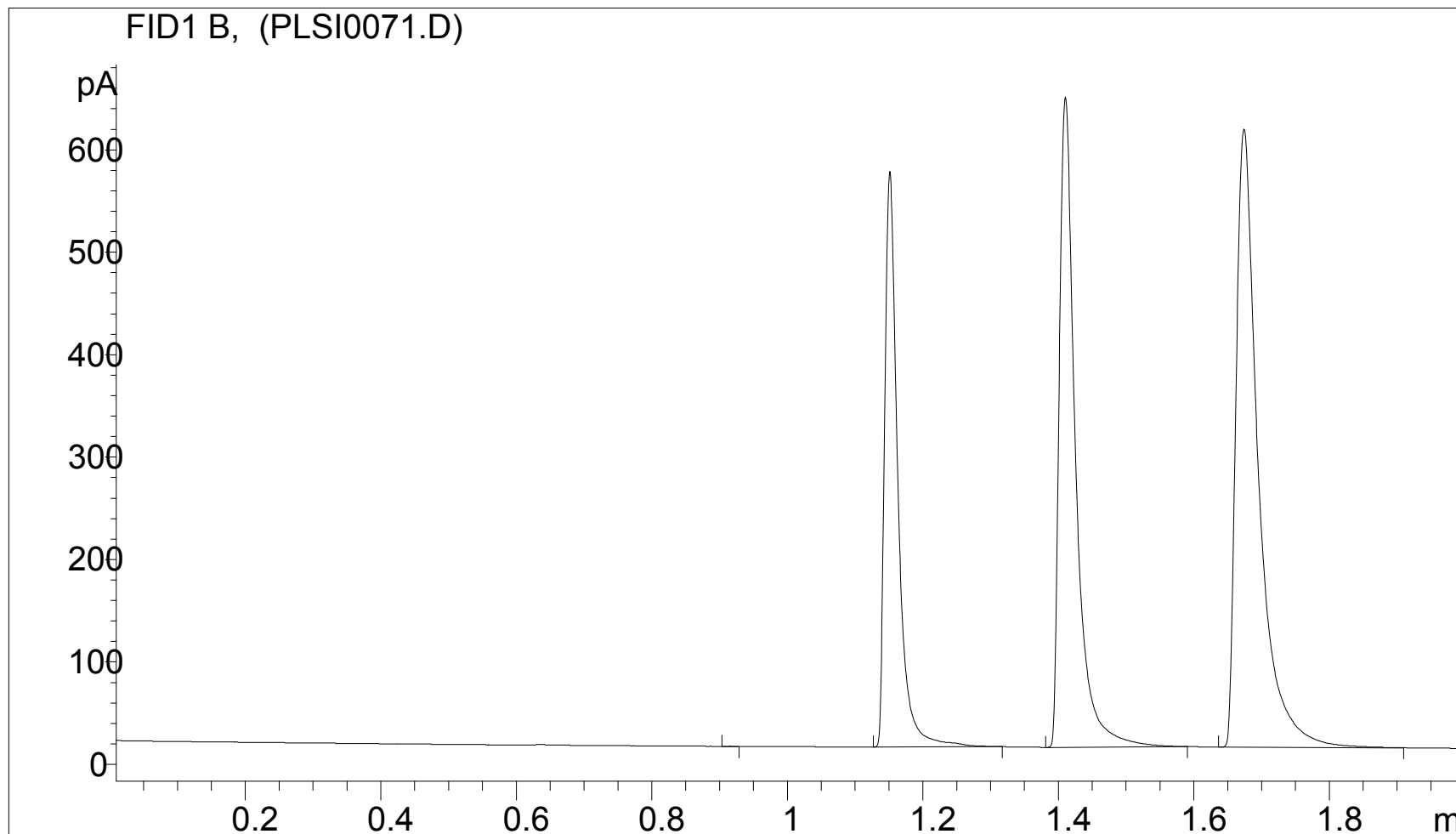
Chromatogram courtesy of Dow Chemical Canada, Western Canada Operations, Analytical Sciences,
Jim Luong and Ronda Gras



§N 3 - 40 C isothermal

Methanol, ethanol, and 2-propanol in hexane (ca 0.1% v/v)

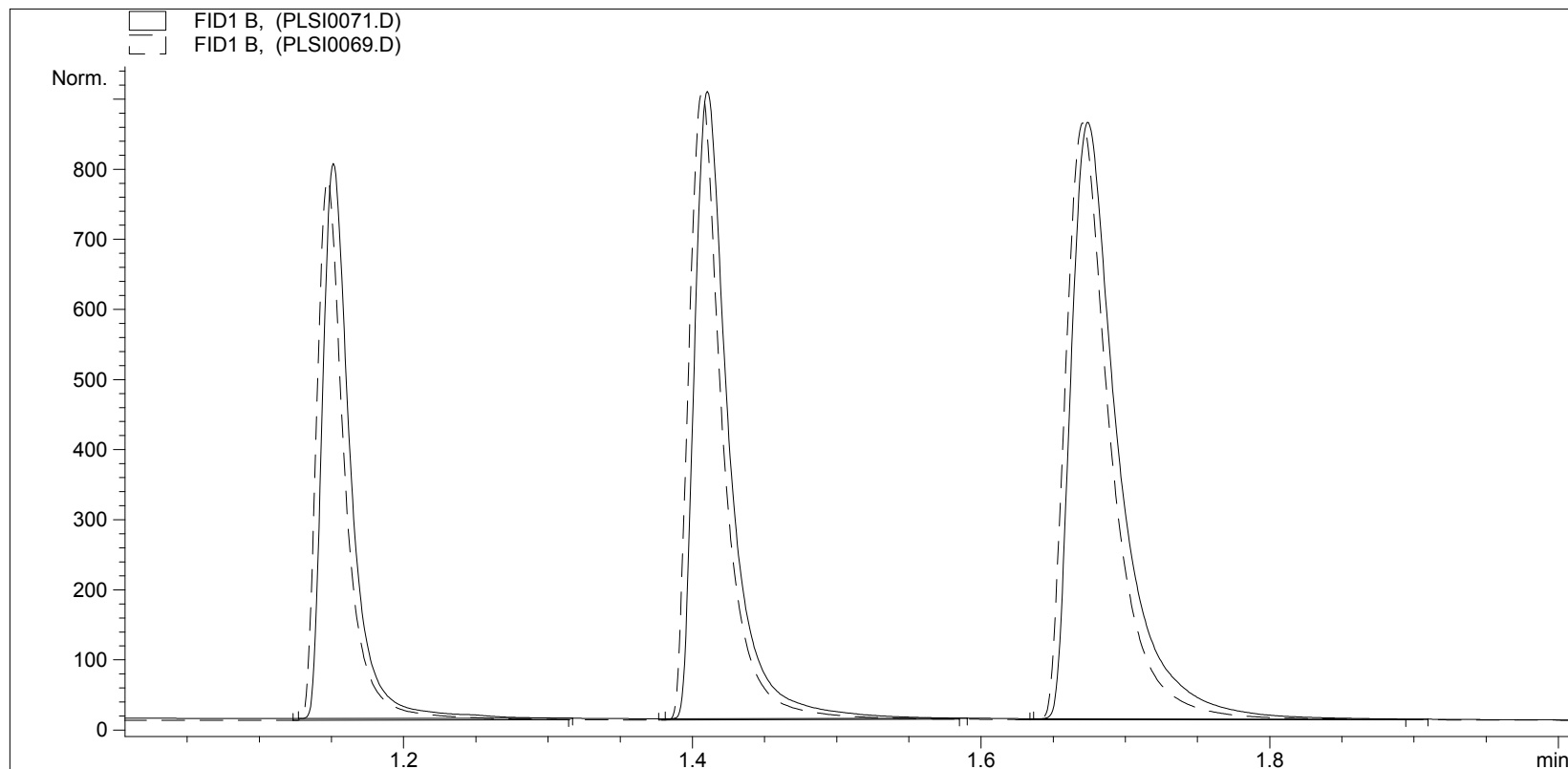
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SN 3 - 40 C isothermal

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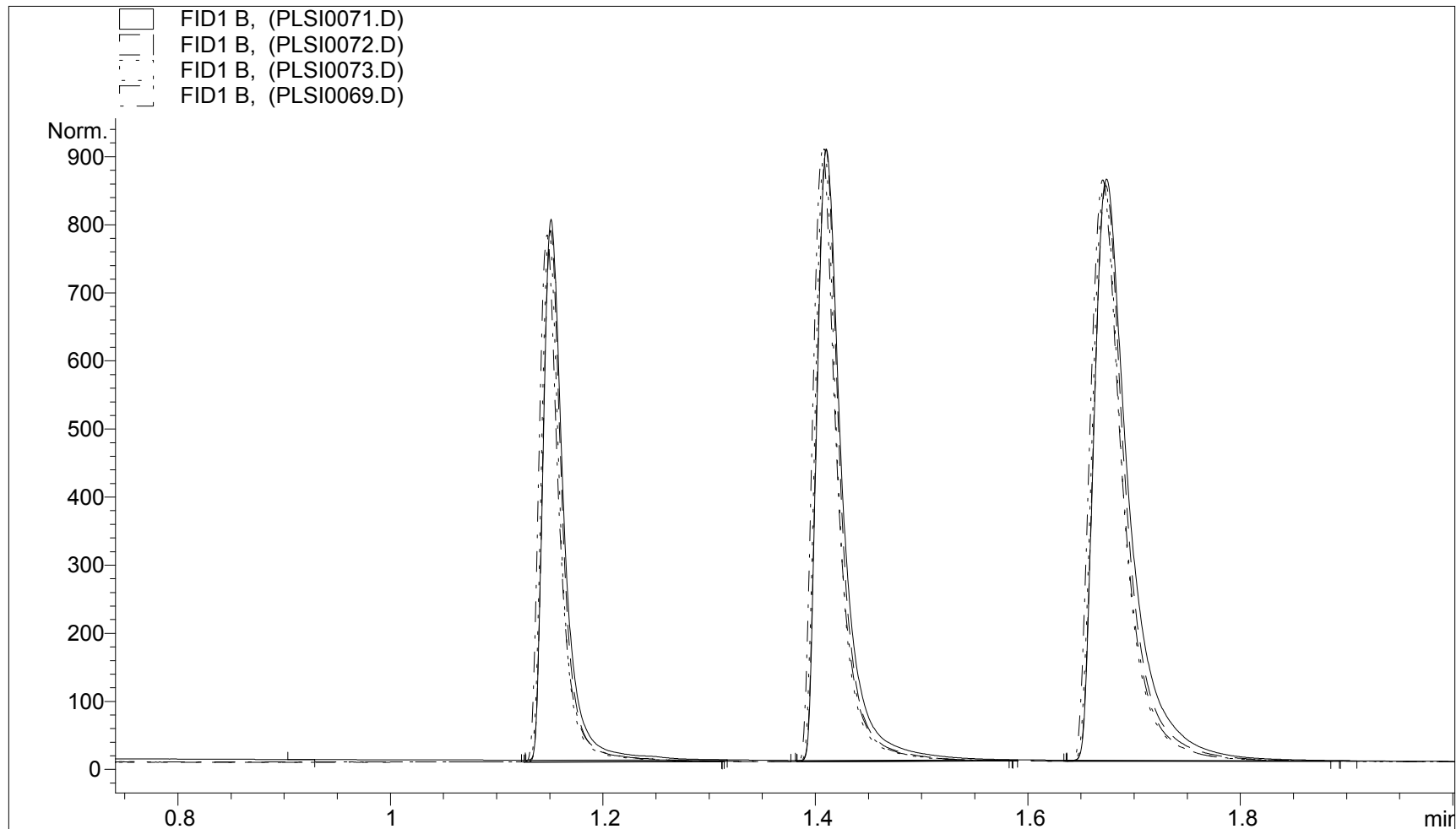
Chromatogram courtesy of Dow Chemical Canada, Western Canada Operations, Analytical Sciences,
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• Overlay of 3 runs of SN 3 and one SN 2(PLIS 0069) - as benchmark - 40 C
• isothermal

Methanol, ethanol, and 2-propanol in hexane (ca 0.1% v/v)

Chromatogram courtesy of Dow Chemical Canada, Western Canada Operations, Analytical Sciences,
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70 C vs. 80 C MEG & DEG

Chromatogram courtesy of Dow Chemical Canada, Western Canada Operations, Analytical Sciences,
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