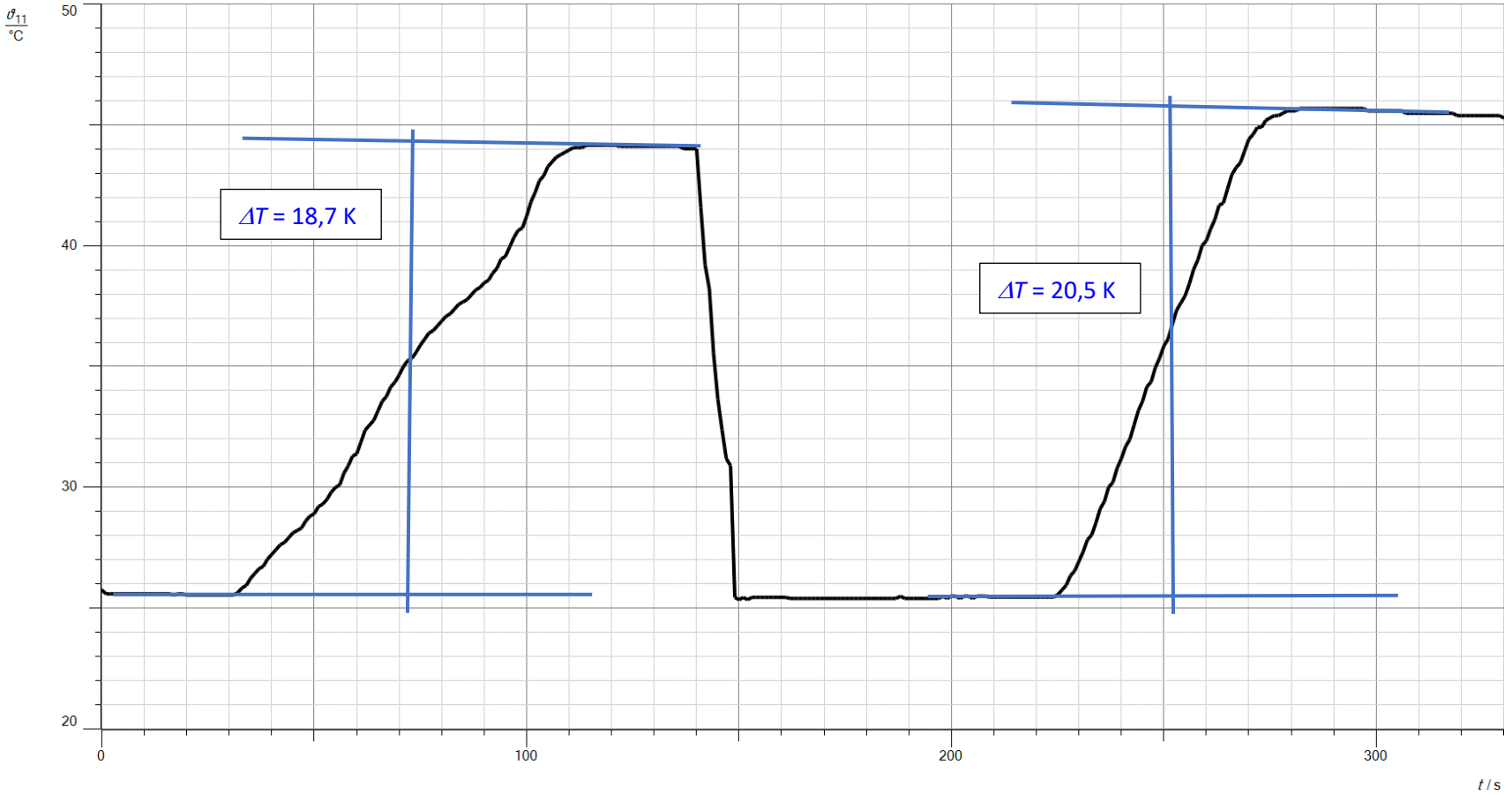
Video 3.5a) Versuche 20.1 (120 mL Autogas) und 20.2 (285 mg Autogas)



Versuch 20.1 Spritze und Kanüle – 120 mL Autogas

$\Delta_c H$ = - $m \cdot c \cdot \Delta T$ = - 112,8 g · 4,19 J/K·g · 18,7 K = **- 8.838 J**

$\Delta_c H/V$ = - 8.838 J/120 mL = - 1.768 kJ/24 L

$\Delta_c H/n$ = - 8.838 J/5 mmol = **- 1.768 kJ/mol**

Versuch 20.2 Mikrobrenner – 285 mg Autogas

$\Delta_c H$ = - $m \cdot c \cdot \Delta T$ = - 112,8 g · 4,19 J/K·g · 20,5 K = **- 9.689 J**

$\Delta_c H/m$ = - 9.689 J/285 mg = **- 34,0 kJ/g**

Video 3.5b) Versuch 20.3 M = 282 mg/120 mL = 56,5 g/24 L, d. h. 56,4 g/mol

$\Delta_c H/m$ = - $\Delta_c H/n$ / M = - 1.768 kJ/mol / 56,4 g/mol = **- 31,3 kJ/g**

$\Delta_c H/n$ = $\Delta_c H/m \cdot M$ = - 34,0 kJ/g · 56,4 g/mol = **- 1.918 kJ/mol**