

Temperature calibration of in-situ cell

Test conditions

(BL01B1's)

Cell type : In-situ SUS cell (PF Akane type, heater ϕ 8 mm)

Date : 2023/4/3

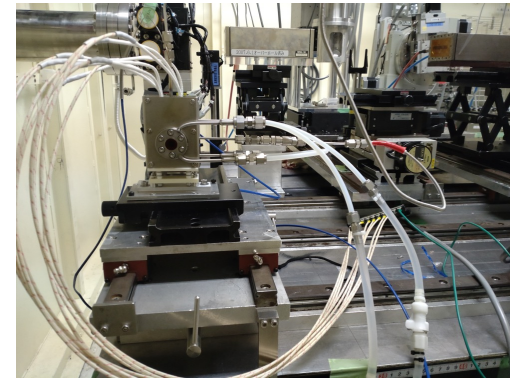
Cooling water temperature : 25.0 °C

Gas : He / N₂

Flow rate : 200 ccm

Thermocouple position : Center with sample pellet

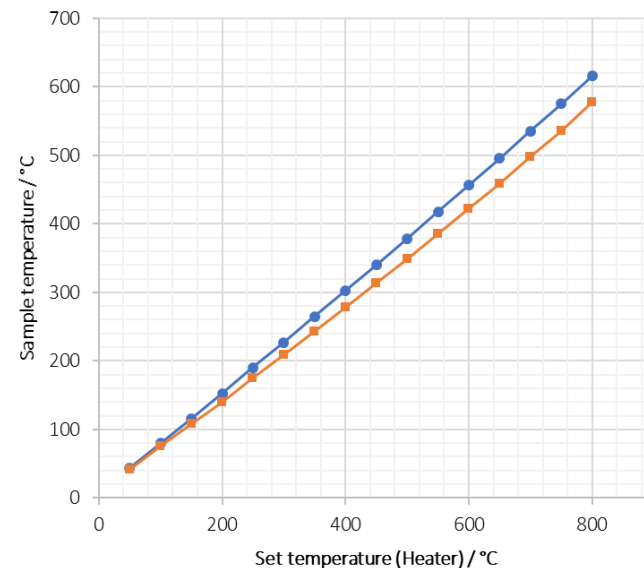
Heater : Hakko GLC2303 200V/300W × 4



Heater temp. / °C	[He] Sample temp. / °C	[N2] Sample temp. / °C
50	43.9	42.2
100	79.8	75.2
150	115.8	107.9
200	152.6	140.2
250	190.1	174.8
300	227.1	209.0
350	264.7	242.9
400	302.7	277.9
450	340.3	313.1
500	378.4	348.5
550	417.7	385.1
600	456.6	422.1
650	495.8	459.1
700	535.4	497.3
750	575.1	536.4
800	615.8	577.9

Flow rate dependence (800 °C set)

Flow rate / ccm	[He] Sample temp. / °C	[N2] Sample temp. / °C
200	615.8	577.9
100	610.6	563.3
50	608.9	553.1



Temperature calibration of in-situ cell

(Kyoto-Kosen Prof. Hosokawa's)

Test conditions

Cell type : In-situ SUS cell (PF Akane type, heater ϕ 3/8 inch)

Date : 2022/11/24

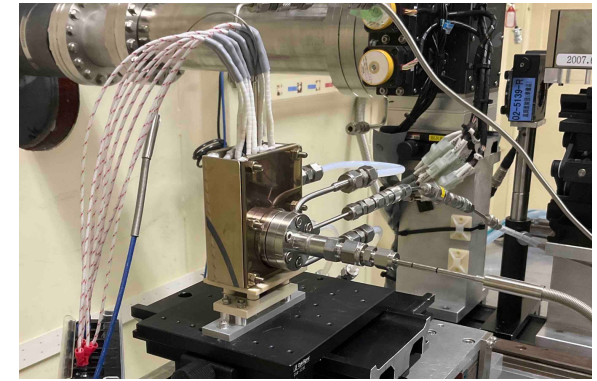
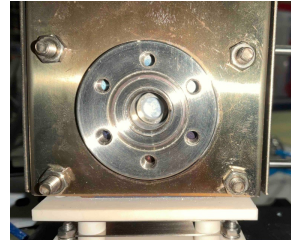
Cooling water temperature : 25.0 °C

Gas : He / N₂

Flow rate : 200 ccm

Thermocouple position : Center with sample pellet

Heater : Watlow G3A73 120V/300W × 4



Heater temp. / °C	[He] Sample temp. / °C	[N2] Sample temp. / °C
50	41.7	37.6
100	73.9	63.0
150	105.0	88.4
200	138.2	115.8
250	172.4	144.0
300	206.6	174.1
350	240.8	203.7
400	276.0	234.5
450	312.0	266.1
500	347.7	299.1
550	384.4	333.4
600	422.0	368.7
650	459.8	405.6
700	497.7	443.6
750	535.3	482.8
800	573.1	523.0

Flow rate dependence (800 °C set, Gas : N₂)

Flow rate / ccm	Sample temp. / °C
200	523.0
100	506.7
50	496.7

