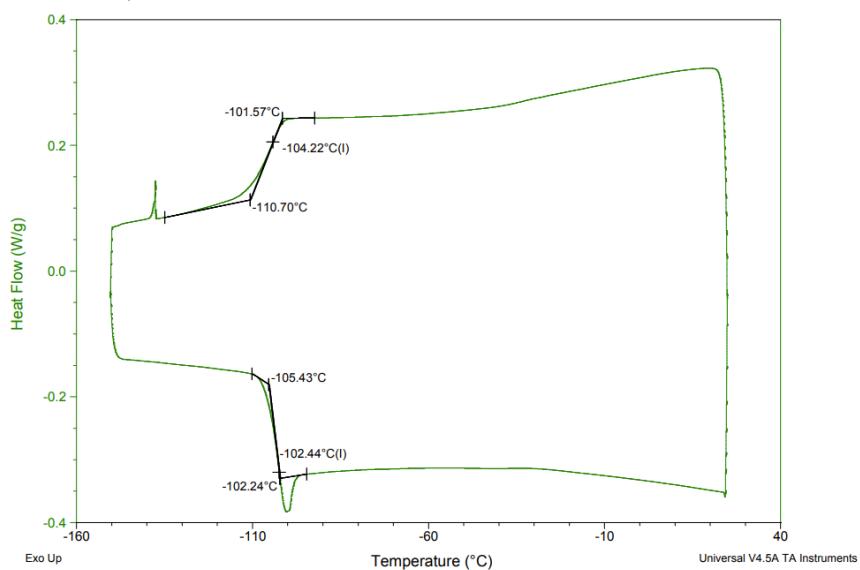


Sample: PD-1  
Size: 10.0900 mg  
Method: PD-1  
Comment: 1,2-Propanediol

DSC

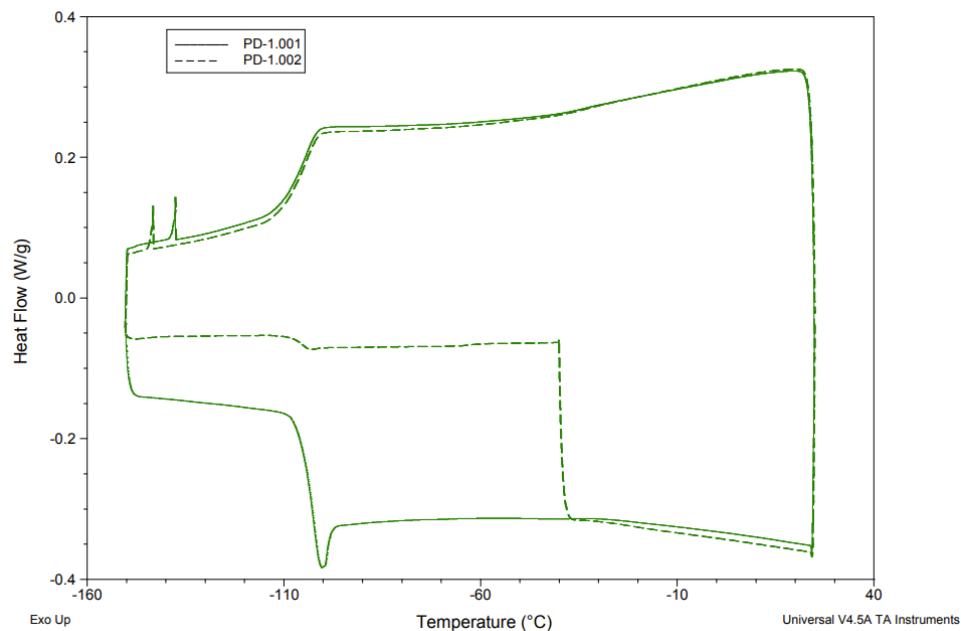
File: C:\Spring 2023\Propanediol\PD-1.001  
Operator: Jonathan Haidet S3G1  
Run Date: 29-Mar-2023 15:08  
Instrument: DSC Q2000 V24.11 Build 124



## DSC Analysis of pure 1,2-propanediol

Procedure:

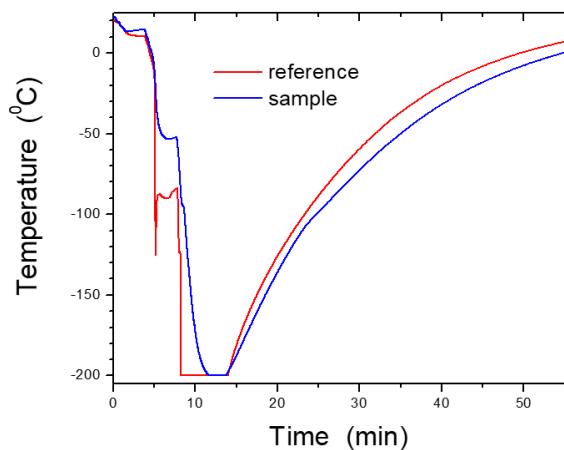
- Equilibrate at 25°C
- Ramp 10°C/min to -150°C
- Isotherm 2 min
- Ramp 10°C/min to 25°C
- Isotherm 0.5 min



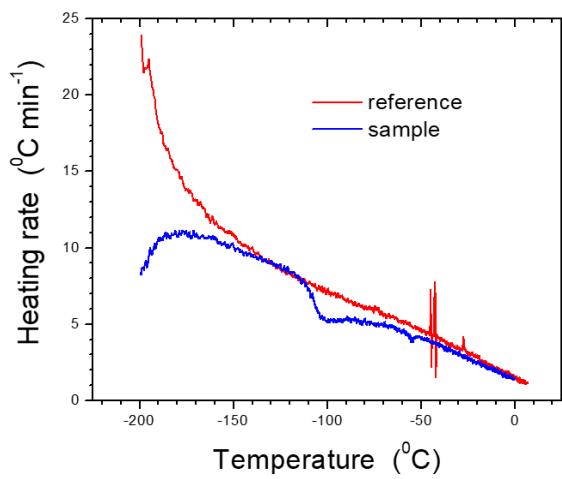
### DSC Analysis of pure 1,2-propanediol

Procedure:

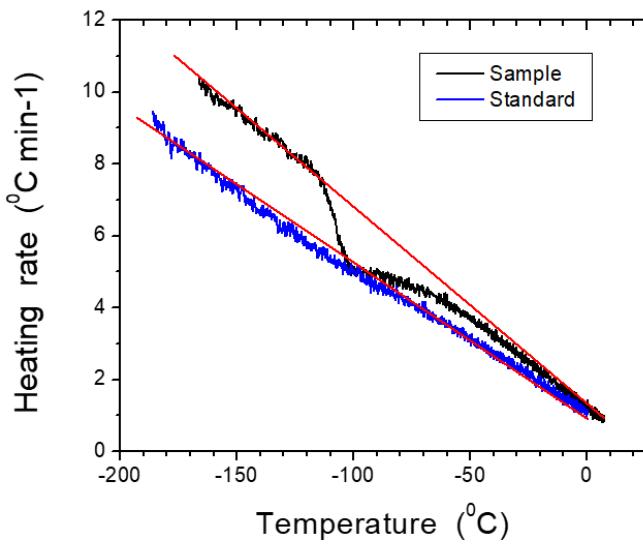
- Equilibrate at 25°C
- Ramp 10°C/min to -150°C
- Isotherm 2 min
- Ramp 1°C/min to -40°C
- Isotherm 0.5 min
- Ramp 10°C/min to 25°C
- Isotherm 0.5 min



Thermal analysis raw data for pure 1,2-propanediol (run 1)



Thermal analysis processed data for pure 1,2-propanediol (run 1)



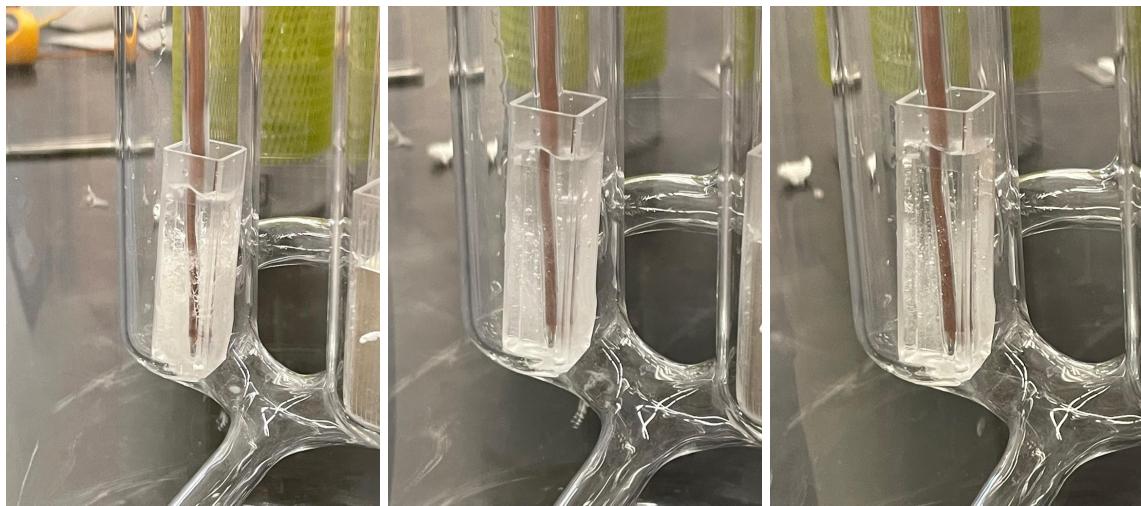
Thermal analysis processed data for pure 1,2-propanediol (run 2) (no raw data given)



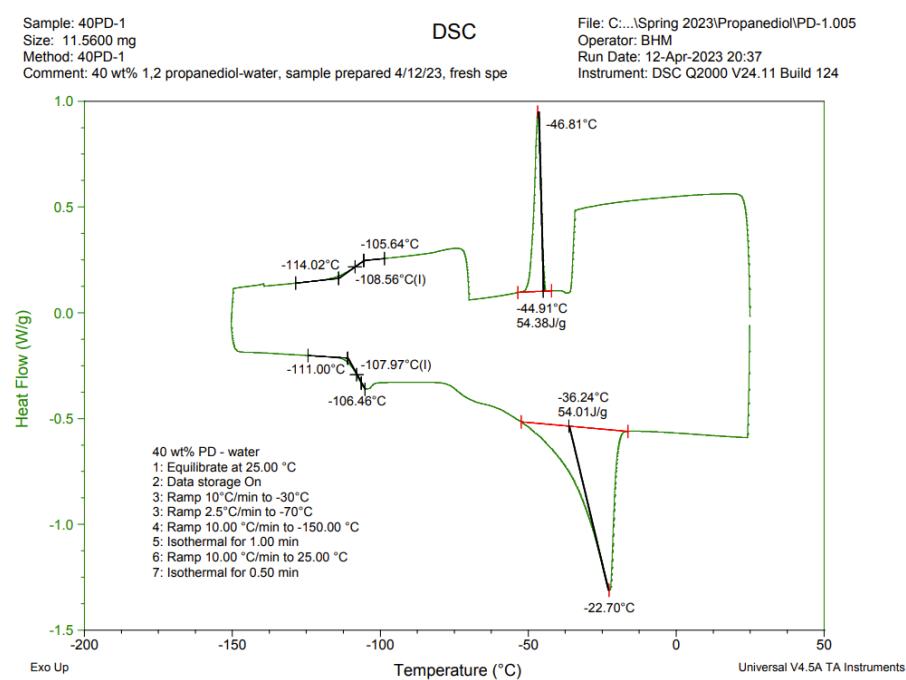
Cracked glass of pure 1,2-propanediol at  $-150^{\circ}\text{C}$  during cooling with liquid nitrogen.



Cracked glass of pure 1,2-propanediol at  $-141^{\circ}\text{C}$  during cooling with liquid nitrogen.



Images of pure 1,2-propanediol during warming at -100°C (left), -60°C (middle), and -30°C (right).

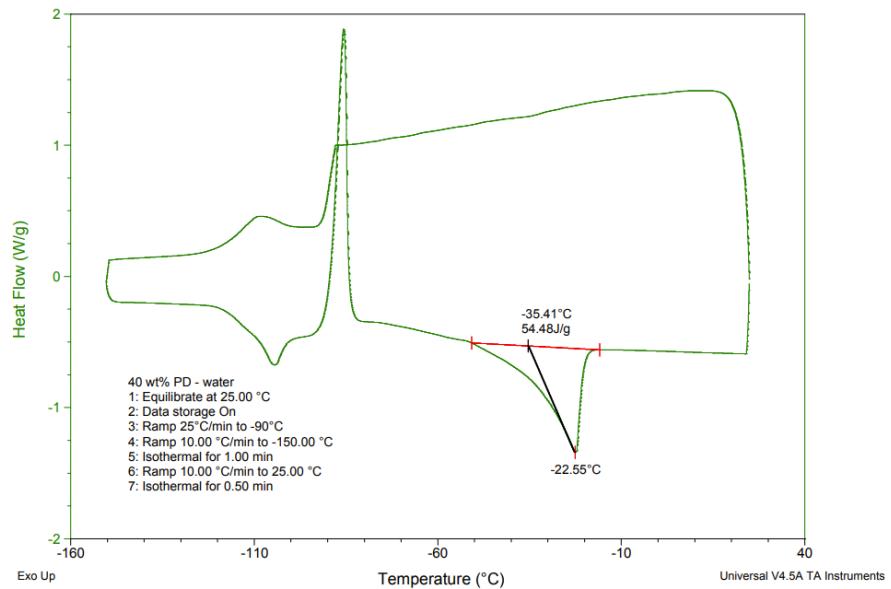


DSC Analysis of 40 w/w% 1,2-propanediol in water

Sample: 40PD-1  
Size: 11.5600 mg  
Method: 40PD-1  
Comment: 40 wt% 1,2 propanediol-water, sample prepared 4/12/23, fresh spe

### DSC

File: C...\Spring 2023\Propanediol\PD-1.007  
Operator: BHM  
Run Date: 12-Apr-2023 22:23  
Instrument: DSC Q2000 V24.11 Build 124

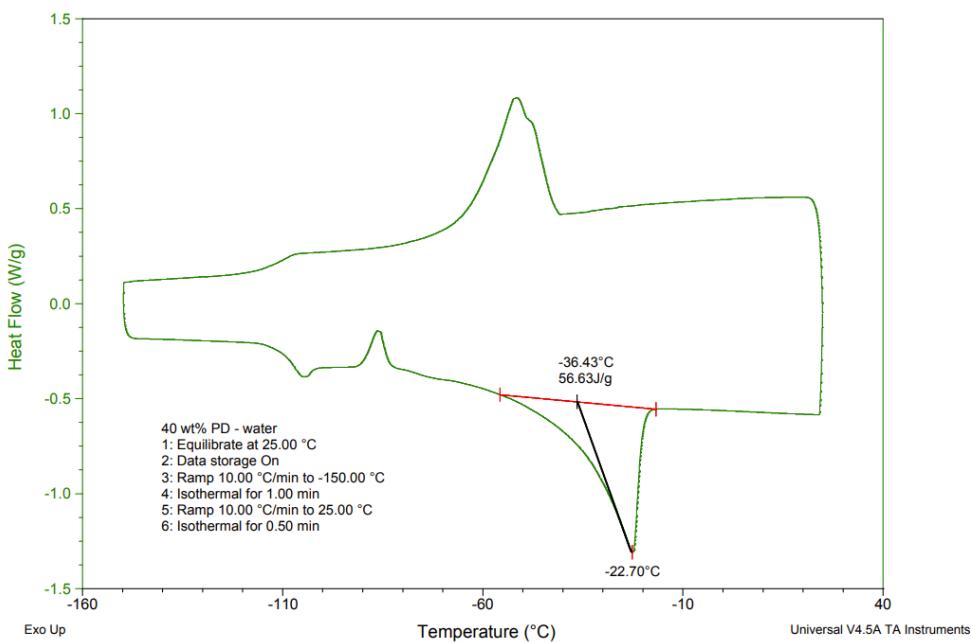


## DSC Analysis of 40 w/w% 1,2-propanediol in water

Sample: 40PD-1  
Size: 11.5600 mg  
Method: 40PD-1  
Comment: 40 wt% 1,2 propanediol-water, sample prepared 4/12/23, fresh spe

### DSC

File: C...\Spring 2023\Propanediol\PD-1.003  
Operator: BHM  
Run Date: 12-Apr-2023 17:43  
Instrument: DSC Q2000 V24.11 Build 124

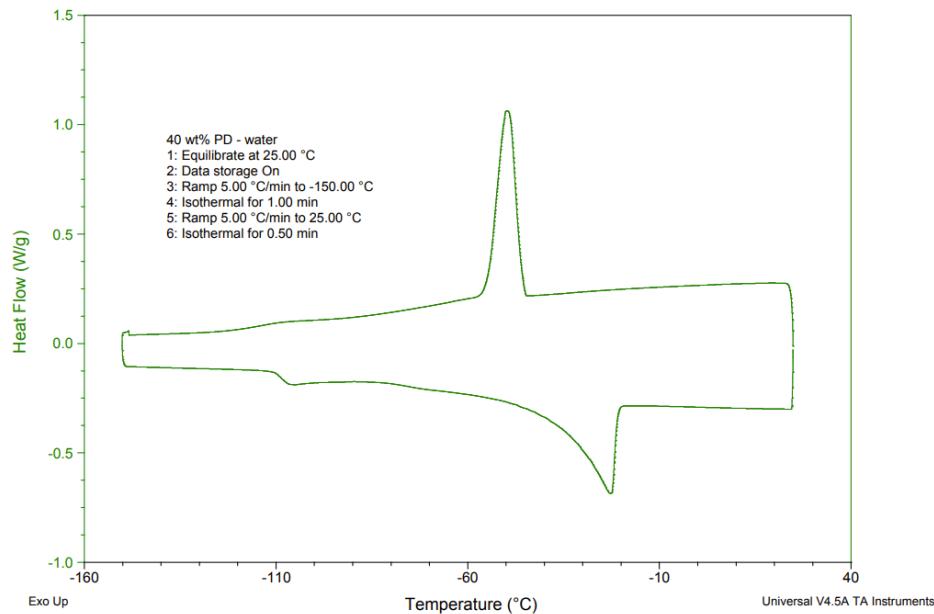


## DSC Analysis of 40 w/w% 1,2-propanediol in water

Sample: 40PD-1  
Size: 11.5600 mg  
Method: 40PD-1  
Comment: 40 wt% 1,2 propanediol-water, sample prepared 4/12/23, fresh spe

### DSC

File: C:\Spring 2023\Propanediol\PD-1.004  
Operator: BHM  
Run Date: 12-Apr-2023 18:54  
Instrument: DSC Q2000 V24.11 Build 124

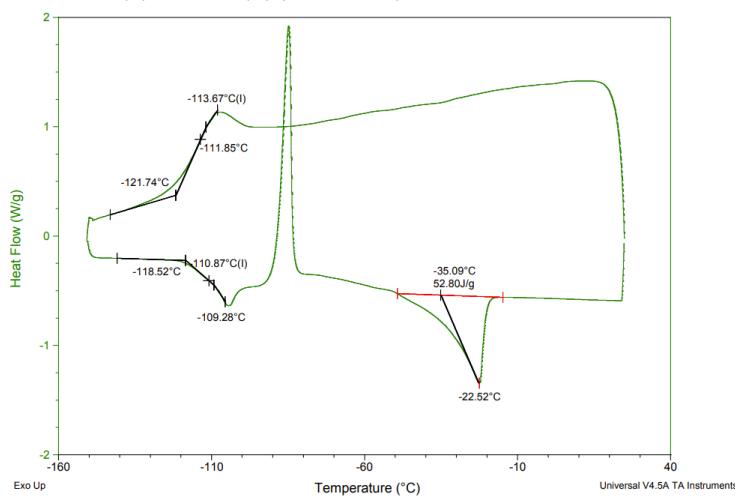


### DSC Analysis of 40 w/w% 1,2-propanediol in water

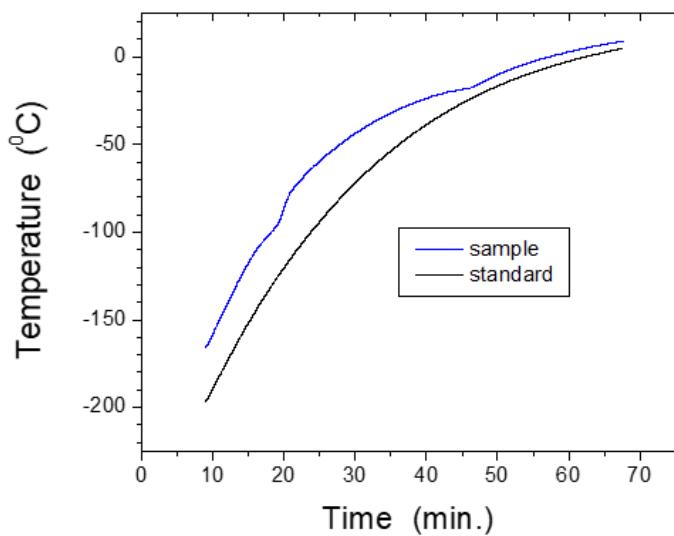
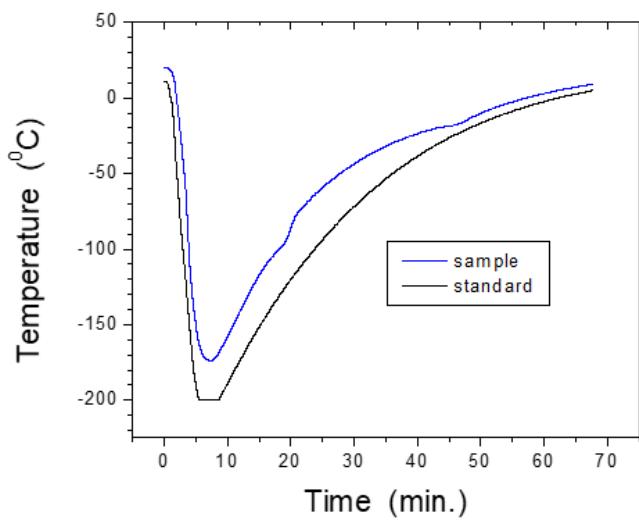
Sample: 40PD-1  
Size: 11.5600 mg  
Method: 40PD-1  
Comment: 40 wt% 1,2 propanediol-water, sample prepared 4/12/23, fresh spe

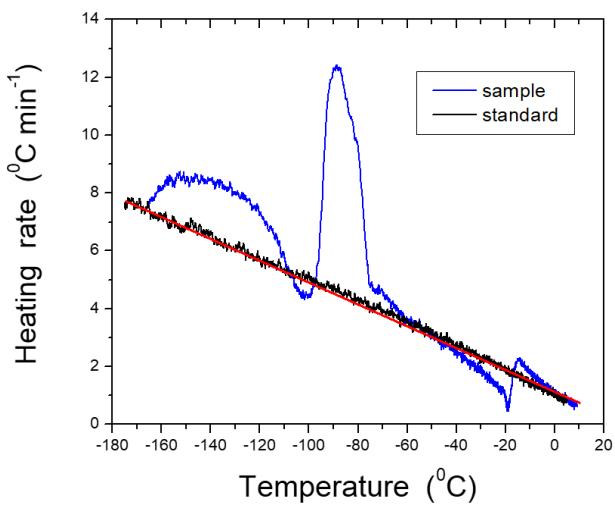
### DSC

File: C:\Spring 2023\Propanediol\PD-1.006  
Operator: BHM  
Run Date: 12-Apr-2023 21:48  
Instrument: DSC Q2000 V24.11 Build 124

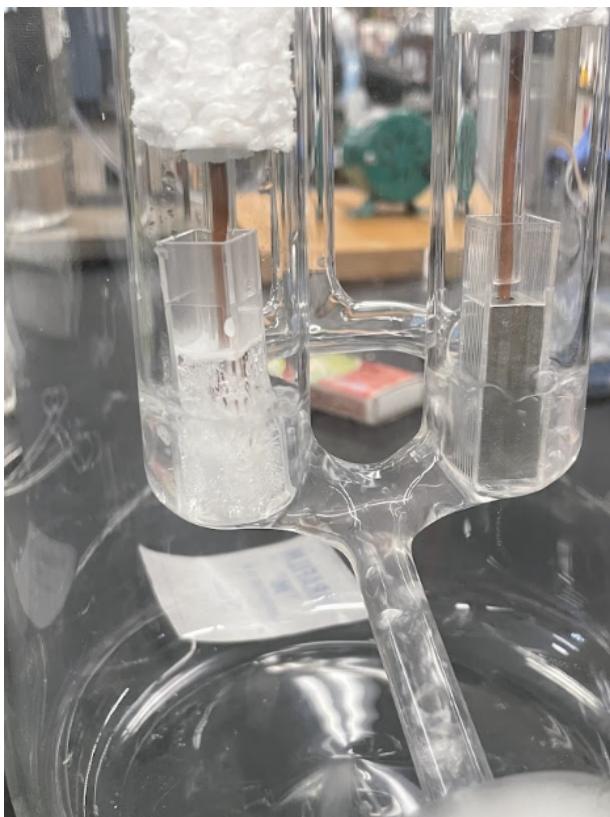


### DSC Analysis of 40 w/w% 1,2-propanediol in water





Processed thermal analysis data for 40 w/w% 1,2-propanediol mixture



Cracked glass of 40 w/w% 1,2-propanediol mixture ( $-154^{\circ}\text{C}$ )



Frost forming in 40 w/w% 1,2-propanediol mixture (-100°C)



Frost fully formed in 40 w/w% 1,2-propanediol mixture (-85°C)



Frost begins melting in 40 w/w% 1,2-propanediol mixture (-40°C)



Frost nearly fully melted in 40 w/w% 1,2-propanediol mixture (-20°C)