

(a)

Freezing Temperature (°C)

-34 -32 -30 -28 -26 -24 -22 -20 -18 -16 -14 -12 -10 -8 -6 -4 -2 0

Atkinson Quartz *

 $T_{50} = -14.4\text{ }^{\circ}\text{C}$
 $\Delta T_{50}^{\text{wet}} = -7.3\text{ }^{\circ}\text{C}$
 $\Delta T_{50}^{\text{dry}} = +0.1\text{ }^{\circ}\text{C}$

Fluka Quartz *

 $T_{50} = -15.2\text{ }^{\circ}\text{C}$
 $\Delta T_{50}^{\text{wet}} = -4.1\text{ }^{\circ}\text{C}$
 $\Delta T_{50}^{\text{dry}} = +1.3\text{ }^{\circ}\text{C}$

Fused Quartz *

 $T_{50} = -16.6\text{ }^{\circ}\text{C}$
 $\Delta T_{50}^{\text{wet}} = -4.4\text{ }^{\circ}\text{C}$
 $\Delta T_{50}^{\text{dry}} = -1.1\text{ }^{\circ}\text{C}$

Bombay Chalcedony

 $T_{50} = -9.6\text{ }^{\circ}\text{C}$
 $\Delta T_{50}^{\text{wet}} = -0.1\text{ }^{\circ}\text{C}$
 $\Delta T_{50}^{\text{dry}} = -0.9\text{ }^{\circ}\text{C}$

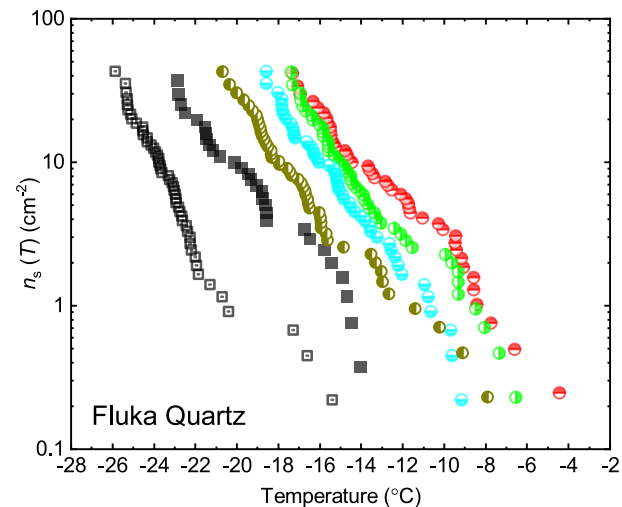
Blank test #1

Blank test #2

Blank test #3

Wet heat handling blank

Dry heat handling blank

 Non heated
 Wet heated (95 °C for 30 min)
 Dry heated (250 °C for 30 min)
 T_{50}
(b)**(c)**