Dew Point and Condensation

Dew Point is the temperature at which moisture will condense out of the air. If the temperature of any surface is at or below the dew point temperature then dew (conde

Here are some examples of Dew Point conditions:

- 85°C and 85% RH, the Dew Point is 80.9°C
- 23°C and 50% RH, the Dew Point is 12°C
- 23°C and 10% RH, the Dew Point is -10°C
- 0°C and 50% RH, the Dew Point is -9°C
- 0°C and 10% RH, the Dew Point is -28°C
- -20°C and 50% RH, the Dew Point is -28°C
- -20°C and 10% RH, the Dew Point is -44°C

For each of these conditions, moisture will condense on any surface which is at or below the Dew Point temperature.

In a humidity chamber, you need to make sure that your test sample temperature is always above the Dew Point temperature to prevent condensation from forming on to stabilize at the desired temperature before raising the humidity level.

When testing at sub-zero temperatures...
If the chamber is soaking at a low temperature and then heated up rapidly, the temperature of your test sample will always lag the air temperature to some extent. This during transitions. If the temperature of your test sample is below the Dew Point for any particular condition, moisture will condense on the product. The only way to gu your test sample when heating up from low temperatures is with Dry Air Purge or GN2 (Gaseous Nitrogen) Purge. This will ensure that the chamber is always dry (low h