

DRAGO EVALUATION REPORT.

Minimum Temperature:	
Parameter	Model: Drago 4934
ADVANCED Range	
Stability: Dry Block	50 °C = ± 0.0098 °C
Stability: Liquid Bath	50 °C = ± 0.009 °C
Display Resolution	0.01°C.
BASIC / SITE Range	
Stability: Dry Block	50°C = ± 0.008 °C
Stability: Liquid Bath	50°C = ± 0.006 °C
COMMON Specifications	
Uniformity - Between Wells Dry Block Mode (Radial)	50°C = 0.009°C
Uniformity - Lower 40mm (Axial) Dry Block Mode	50°C = 0.017°C
Uniformity - Radial Bath Mode	50°C = 0.007°C
Uniformity - Lower 40mm (Axial) as Liquid Bath	50°C = 0.004°C
Loading	-----
Mid Temperature:	
ADVANCED Range	
Stability: Dry Block	150 °C = ± 0.016 °C
Stability: Liquid Bath	150 °C = ± 0.006 °C
Display Resolution	0.01°C.
BASIC / SITE Range	
Stability: Dry Block	150°C = ± 0.018 °C
Stability: Liquid Bath	150°C = ± 0.006 °C
COMMON Specifications	
Uniformity - Between Wells Dry Block Mode (Radial)	150°C = 0.008°C
Uniformity - Lower 40mm (Axial) Dry Block Mode	150°C = 0.021°C
Uniformity - Radial Bath Mode	150°C = 0.015°C
Uniformity - Lower 40mm (Axial) as Liquid Bath	150°C = 0.014°C
Loading	-----
Maximum Temperature:	
ADVANCED Range	

Minimum Temperature:	
Parameter	Model: Drago 4934
Stability: Dry Block	250°C = ±0.022°C
Stability: Liquid Bath	250°C = ±0.020°C
Display Resolution	0.01°C.
BASIC / SITE Range	
Stability: Dry Block	250°C = ±0.024°C
Stability: Liquid Bath	250°C = ±0.021°C
COMMON Specifications	
Uniformity - Between Wells Dry Block Mode (Radial)	250°C = 0.011 °C
Uniformity - Lower 40mm (Axial) Dry Block Mode	250°C = 0.025°C
Uniformity - Radial Bath Mode	250°C = 0.019°C
Uniformity - Lower 40mm (Axial) as Liquid Bath	250°C = 0.023°C
Loading	-----
Response Times	
Heating Time	30°C to 250°C = 40 minutes.
Cooling Time	250°C to 30°C = 90 minutes.

Equipment used for Evaluation:

**Two x Platinum Resistance Thermometers 4mm diameter x 215mm long: 6mm Sensing length
Isotech Model 935-14-12: Serial Nos: AO12 and AO4.**

TTI-2 Precision Thermometer Serial No: TTI-2/3.

TEST METHOD

Dry Block Radial Test Method: A 935-14-12 was placed in each of the 4.5mm holes of the block. Measurements from each PRT were recorded and then the two PRTs were swapped between the two pockets of the block and the measurements were repeated. The lab conditions were 20°C±3 °C

Dry Block Axial Test Method: A 935-14-12 PRT was placed in each of the 4.5mm holes of the block, Then AO4 PRT was raised in 20mm steps and AO12 PRT remained in position at the bottom of the block and the temperature difference between the two PRTs was recorded. The lab conditions were 20°C ±3 °C.

Liquid Bath Radial Test Method: 2 935-14-12 PRTs were used, one was placed on the left side of the liquid container and the 2nd was placed on the right side of the liquid container (each PRT was held in place using a clamp). Measurements from each PRT were recorded and then the two PRTs were swapped (again held in place with a clamp) and the measurements were repeated. The lab conditions were 20°C±3 °C

Liquid Bath Axial Test Method: 2 935-14-12 PRTs were used, the 2 PRTs were placed at the bottom of the liquid container and a measurement was made. Then AO4 PRT was raised in 20mm steps and AO12 PRT remained in position at the bottom of the liquid container, the temperature difference between the two PRTs was recorded. The lab conditions were 20°C ±3 °C.

Dry Block Stability Method: A 935-14-12 was placed into one of the 4.5mm holes of the block. The probe was then connected to the TTI-2. The stability was logged over a 30 minute period. The lab conditions were $20^{\circ}\text{C} \pm 3^{\circ}\text{C}$.

Liquid Bath Stability Method: A 935-14-12 was placed into the liquid container. The probe was then connected to the TTI-2. The stability was logged over a 30 minute period. The lab conditions were $20^{\circ}\text{C} \pm 3^{\circ}\text{C}$.