Transition Curve Fitting Tool: Results

User Information:

Date: 2021-02-17

Starting Values for Optimization

Model: HT (Hyperbolic Tangent)

| Parameter | Initial.Value |
|-----------|---------------|
| C (°C) | 25.000 |
| T0 (°C) | 15.500 |
| lse | 0.046 |
| use | 1.500 |

Model: AHT (Asymmetric Hyperbolic Tangent)

| Parameter | Initial.Value |
|-----------|---------------|
| C (°C) | 25.000 |
| T0 (°C) | 15.500 |
| D | 0.000 |
| lse | 0.046 |
| use | 1.500 |

Model: BUR (Burr)

| Parameter | Initial.Value |
|--------------|---------------|
| k | 1.000 |
| T0 (°C) | 15.500 |
| \mathbf{m} | 0.100 |
| lse | 0.046 |
| use | 1.500 |

Model: ACT (Arctangent)

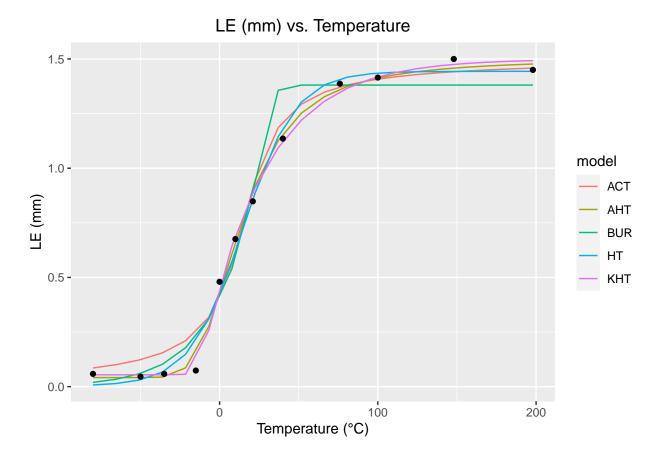
| Parameter | Initial.Value |
|-----------|---------------|
| C (°C) | 25.000 |
| DBTT (°C) | 15.500 |
| lse | 0.046 |
| use | 1.500 |

Model: KHT (Kohout - Asymmetric)

| Parameter | Initial.Value |
|-----------|---------------|
| C (°C) | 25.000 |
| T0 (°C) | 15.500 |
| p | 1.000 |
| lse | 0.046 |
| use | 1.500 |
| | |

Shelf selection: Both shelves were set to be not fixed. The upper shelf was initialized to be 1.5 mm and the lower shelf was initialized to be 0.04572 mm.

Fitted Plot



Coefficients Table

| Model | Coefficient | Estimate | S.E. | Lower Cl | Upper Cl |
|-------|--------------|----------|---------|----------|----------|
| KHT | С | 21.1525 | 1.9068 | 17.5386 | 25.0674 |
| KHT | T0 | -9.7770 | 2.9941 | -14.9944 | -3.7382 |
| KHT | p | 12.6768 | 54.1194 | 4.1261 | 143.9265 |
| KHT | LSE | 0.0542 | 0.0149 | 0.0272 | 0.0853 |
| KHT | USE | 1.4992 | 0.0232 | 1.4574 | 1.5470 |
| AHT | \mathbf{C} | 28.9708 | 2.4375 | 24.1854 | 35.2390 |
| AHT | DBTT | 15.2975 | 1.4371 | 12.3580 | 18.7466 |
| AHT | D | 0.3621 | 0.0875 | 0.0858 | 0.4177 |
| AHT | LSE | 0.0415 | 0.0166 | 0.0162 | 0.0861 |
| AHT | USE | 1.5150 | 0.0380 | 1.4237 | 1.5813 |
| HT | \mathbf{C} | 33.1515 | 4.2812 | 24.0632 | 40.9383 |
| HT | DBTT | 14.8308 | 2.2372 | 11.6246 | 20.3529 |
| HT | LSE | 0.0030 | 0.0301 | 0.0000 | 0.1066 |
| HT | USE | 1.4434 | 0.0358 | 1.3710 | 1.5110 |
| ACT | \mathbf{C} | 26.9575 | 6.8136 | 13.3179 | 39.4581 |
| ACT | DBTT | 15.0942 | 2.9752 | 9.8102 | 21.9762 |
| ACT | LSE | 0.0000 | 0.0473 | 0.0000 | 0.1562 |
| ACT | USE | 1.5030 | 0.0575 | 1.3869 | 1.6053 |
| BUR | k | 0.3740 | 1.4739 | 0.0737 | 5.3264 |
| BUR | T0 | 32.6244 | 11.1196 | -0.2263 | 44.2207 |
| BUR | \mathbf{m} | 0.1012 | 2.5105 | 0.0082 | 2.7579 |
| BUR | LSE | 0.0000 | 0.0652 | 0.0000 | 0.2222 |
| BUR | USE | 1.3806 | 0.0602 | 1.2803 | 1.5126 |

Fit Metrics Table

| | Model | RMSE | AIC | BIC | Converged? |
|---|-------|-------|---------|---------|------------|
| 5 | KHT | 0.031 | -78.171 | -75.261 | Yes |
| 2 | AHT | 0.046 | -68.293 | -65.384 | Yes |
| 1 | HT | 0.065 | -60.336 | -57.911 | Yes |
| 4 | ACT | 0.094 | -51.707 | -49.283 | Yes |
| 3 | BUR | 0.131 | -43.285 | -40.375 | Yes |
| | | | | | |

DBTT Table (°C)

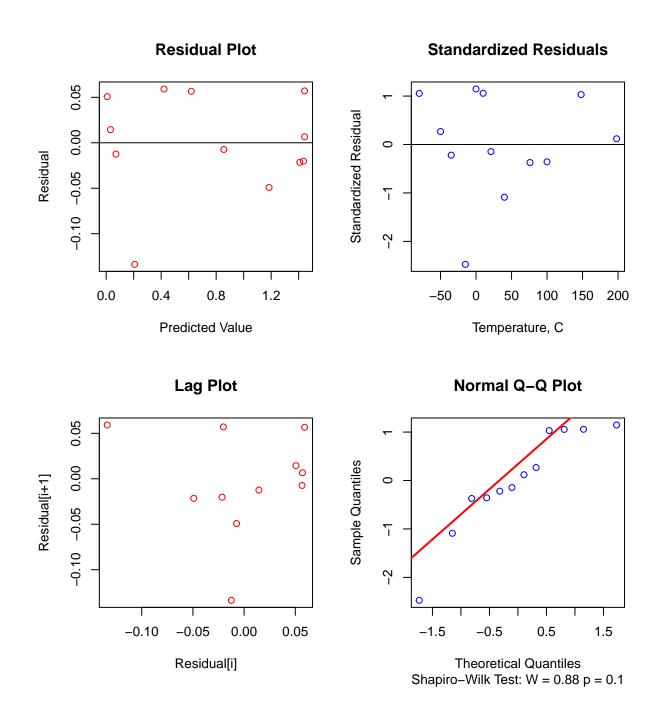
| Model | Estimate | S.E. | Lower CI | Upper CI |
|-------|----------|--------|----------|----------|
| KHT | 14.4254 | 1.3033 | 11.3435 | 17.5072 |
| AHT | 15.2975 | 1.4371 | 12.3580 | 18.7466 |
| HT | 14.8308 | 2.2372 | 11.6246 | 20.3529 |
| ACT | 15.0942 | 2.9752 | 9.8102 | 21.9762 |
| BUR | 14.3115 | 3.6160 | 5.7610 | 22.8619 |

Other Characteristic Temperatures Table (°C)

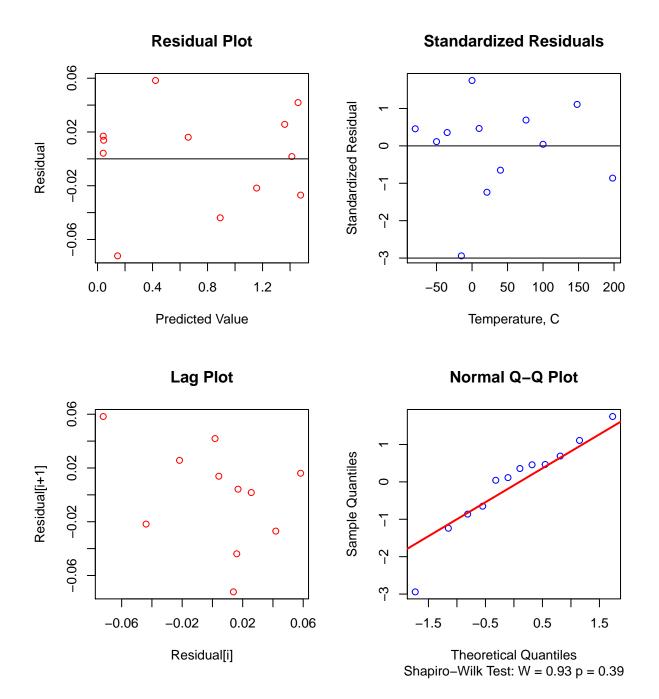
No additional characteristic temperatures selected.

Residuals

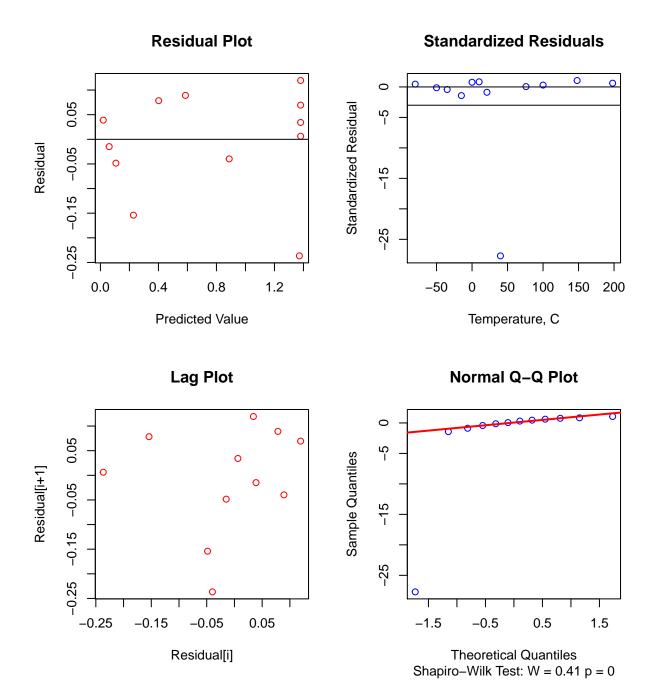
Model: HT



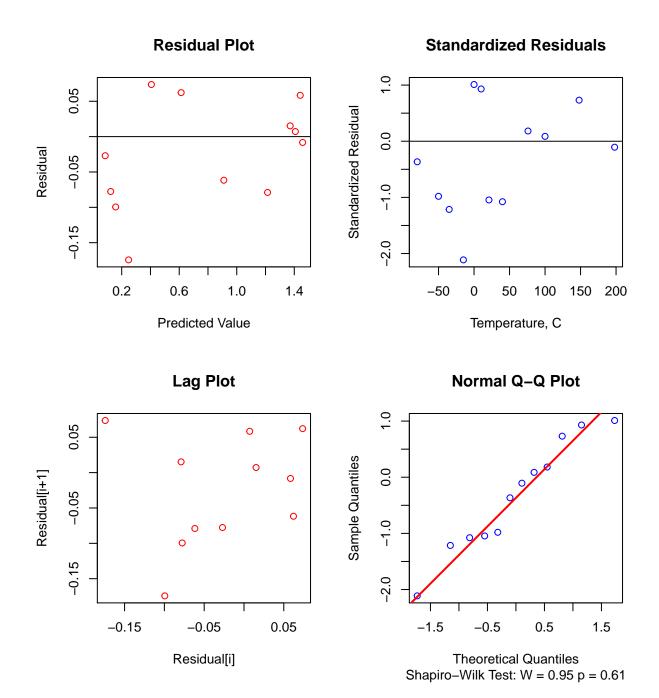
Model: AHT



Model: BUR



Model: ACT



Model: KHT

