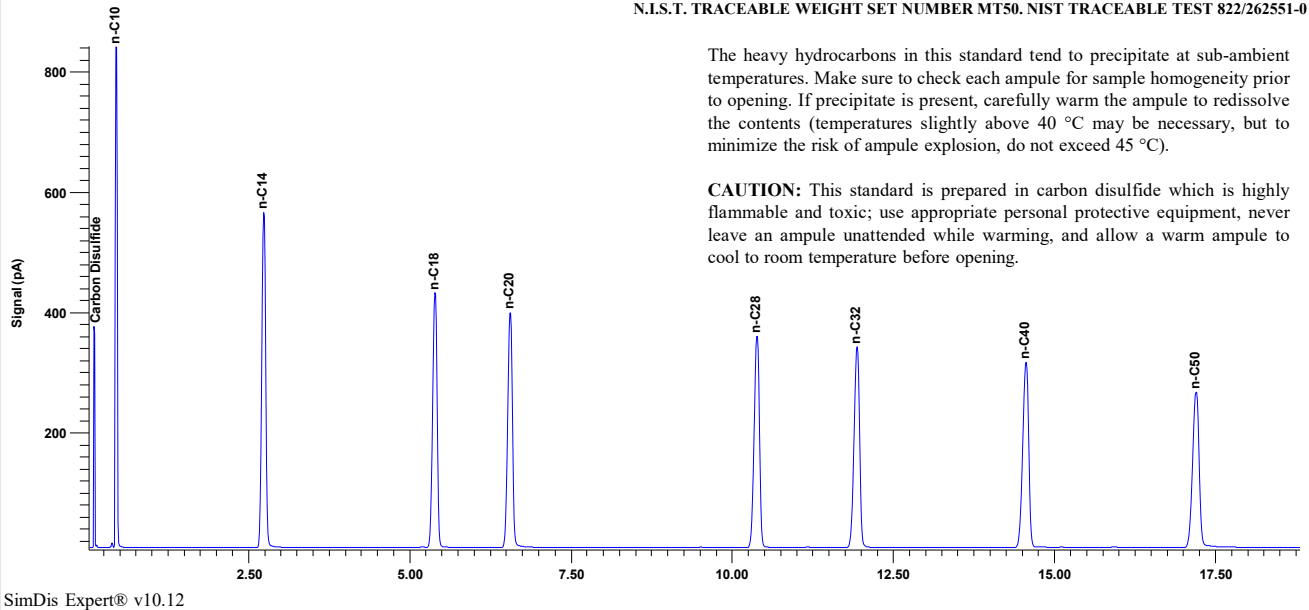


Certificate of Analysis

SD-SS3E-05Q Lot # 050619ES

GRAVIMETRIC MIXTURE MANUFACTURED ON SCALES CALIBRATED TO N.I.S.T. TRACEABLE WEIGHTS
N.I.S.T. TRACEABLE WEIGHT SET NUMBER MT50. NIST TRACEABLE TEST 822/262551-0



The heavy hydrocarbons in this standard tend to precipitate at sub-ambient temperatures. Make sure to check each ampule for sample homogeneity prior to opening. If precipitate is present, carefully warm the ampule to redissolve the contents (temperatures slightly above 40 °C may be necessary, but to minimize the risk of ampule explosion, do not exceed 45 °C).

CAUTION: This standard is prepared in carbon disulfide which is highly flammable and toxic; use appropriate personal protective equipment, never leave an ampule unattended while warming, and allow a warm ampule to cool to room temperature before opening.

SD-SS3E-05Q Detector Relative Response Factor Standard for ASTM D7169

Lot #: 050619ES Exp: May 2024

Column: SD-002HTE2 (5m x 0.53mm x 0.1µm) **Inlet:** 80°C-390°C at 15°C/min **Carrier:** UHP He at 20 mL/min (constant flow)
Oven: 30°C-390°C at 15°C/min (5 min final hold) **Detector:** FID at 400°C **Injection Volume:** 0.2 µL

Component		Purity (%)	Mass (mg)
n-Decane	n-C ₁₀	99.4	45.3
n-Tetradecane	n-C ₁₄	99.9	45.6
n-Octadecane	n-C ₁₈	99.2	40.8
n-Eicosane	n-C ₂₀	99.9	40.1
n-Octacosane	n-C ₂₈	99.8	40.4
n-Dotriacontane	n-C ₃₂	99.0	39.9
n-Tetracontane	n-C ₄₀	99.2	40.2
n-Pentacontane	n-C ₅₀	98.0	39.9

Calculate the Relative Response Factor of the FID according to the following equation:

$$F_i = \frac{M_i \times P_i \times A_{C_{20}}}{A_i \times M_{C_{20}} \times P_{C_{20}}}$$

M_i = Mass of Paraffin (mg) A_i = Peak Area of Paraffin
 P_i = Purity of Paraffin (%) $M_{C_{20}}$ = Mass of Eicosane (mg)
 $A_{C_{20}}$ = Peak Area of Eicosane $P_{C_{20}}$ = Purity of Eicosane (%)

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