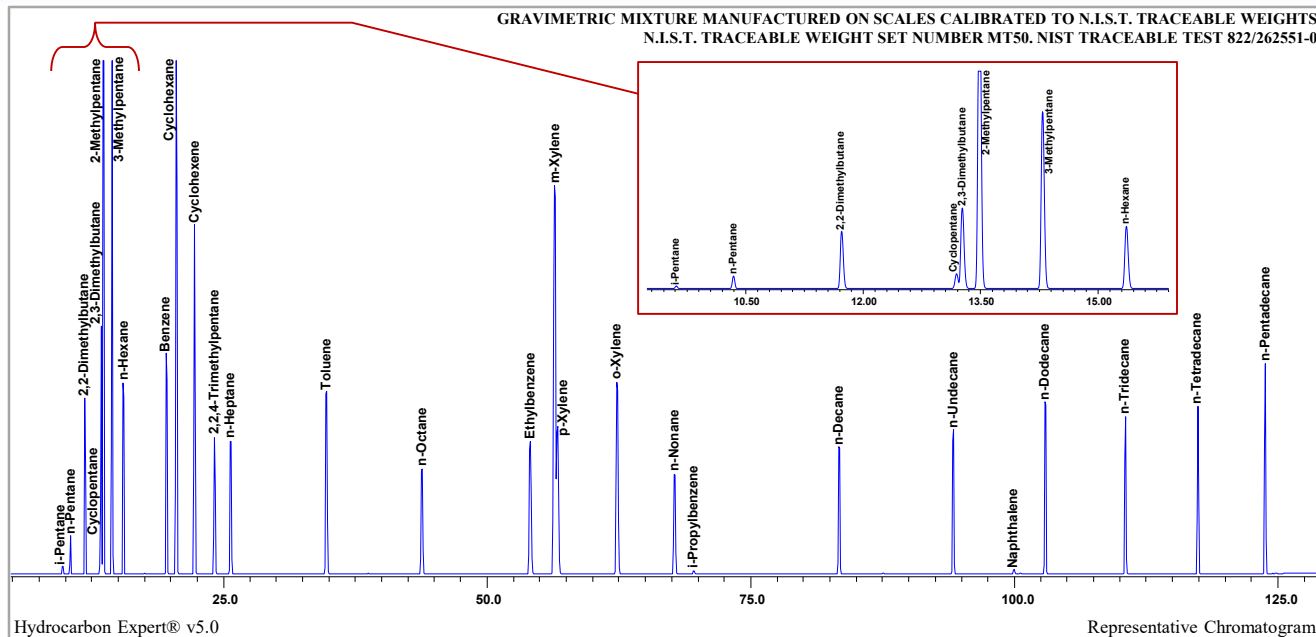


Certificate of Analysis

SD-053-036 Lot # 101617ES

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



SD-053-036 Gravimetric Detailed Hydrocarbon Analysis (DHA) Standard for D6729 and D6730

Lot #: 101617ES Exp: Oct. 2019

Column: SD-009 (100m x 0.25mm x 0.5µm) Inlet: S/SL at 275°C with 125:1 split Carrier: UHP He at 1.8 mL/min (constant flow)

Oven: 35°C (13 min hold) to 45°C at 10°C/min (15 min hold) to 60°C at 1°C/min (15 min hold) to 220°C at 2°C/min (5 min hold) to 275°C at 10°C/min

Detector: FID at 285°C Injection Volume: 0.2 µL

| Component | Concentration (wt.%) | Uncertainty (±wt.%) | Component | Concentration (wt.%) | Uncertainty (±wt.%) |
|------------------------|-------------------------|------------------------|------------------|-------------------------|------------------------|
| Isopentane | 0.037 | 0.015 | Ethylbenzene | 4.288 | 0.021 |
| n-Pentane | 0.304 | 0.012 | m-Xylene | 13.647 | 0.255 |
| 2,2-Dimethylbutane | 1.804 | 0.039 | p-Xylene | 3.720 | 0.114 |
| Cyclopentane | 0.355 | 0.030 | o-Xylene | 5.628 | 0.088 |
| 2,3-Dimethylbutane | 2.531 | 0.083 | n-Nonane | 2.695 | 0.062 |
| 2-Methylpentane | 10.296 | 0.284 | Isopropylbenzene | 0.051 | 0.008 |
| 3-Methylpentane | 5.269 | 0.117 | n-Decane | 2.423 | 0.090 |
| n-Hexane | 2.226 | 0.038 | n-Undecane | 2.449 | 0.085 |
| Benzene | 2.883 | 0.032 | Naphthalene | 0.072 | 0.003 |
| Cyclohexane | 9.817 | 0.041 | n-Dodecane | 2.798 | 0.124 |
| Cyclohexene | 5.652 | 0.102 | n-Tridecane | 2.468 | 0.096 |
| 2,2,4-Trimethylpentane | 2.609 | 0.018 | n-Tetradecane | 2.681 | 0.130 |
| n-Heptane | 2.653 | 0.007 | n-Pentadecane | 3.405 | 0.150 |
| Toluene | 4.129 | 0.017 | | | |
| n-Octane | 2.669 | 0.027 | Impurities | 0.441 | 0.046 |

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