Specifications

Note • *Specifications are for both the TruSpec Macro and TruSpec Micro unless otherwise indicated.*

Range (TruSpec CHN Macro)*

Carbon ..... 50 ppm or 0.005% to 50%

Hydrogen..... 200 ppm or 0.02% to 50%

Nitrogen ..... 80 ppm or 0.008% to 100%

Range (TruSpec CHN(S) Micro) (@ 2 mg)*

Carbon ..... 0.002% to 100%

Hydrogen..... 0.02% to 50%

Nitrogen ..... 0.02 to 50%

Sulfur..... 0.04 to 65%

Oxygen..... 0.04 to 100%

Precision (TruSpec CHN Macro)*

Carbon ..... 25 ppm or 0.5% RSD

Hydrogen..... 100 ppm or 1.0% RSD

Nitrogen ..... 40 ppm or 0.5% RSD

Precision (TruSpec CHN(S) Micro) (@ 2 mg)*

Carbon ..... <1% RSD or ±0.001% (whichever is greater)

Hydrogen..... <1% RSD or ±0.01% (whichever is greater)

Nitrogen ..... <1% RSD or ±0.01% (whichever is greater)

Sulfur..... <1% RSD or ±0.02% (whichever is greater)

Oxygen..... <1% RSD or ±0.02% (whichever is greater)

Readability..... 0.0001 ppm

Analysis Time

CHN ..... 4 minutes

CHNS ..... 4 minutes

Oxygen..... 2 minutes

Sample Size (TruSpec Macro)..... up to 1 gram

Sample Size (TruSpec Micro) ..... up to 1 mg**

Instrument Requirement

TruSec Micro Kits ..... TruSpec CHN, model TRSCHN (serial numbers 3280 or above)

Detection Method

Carbon ..... Optimized, Low-Noise, Non-Dispersive Infrared Absorption

Hydrogen..... Optimized, Low-Noise, Non-Dispersive Infrared Absorption

Nitrogen ..... Optimized, Low-Drift, Thermal Conductivity (TC) Cell

Sulfur..... Optimized, Low-Noise, Non-Dispersive Infrared Absorption

Gasses Required

Carrier..... Helium (99.99% pure) @ 35 psi (2.41 bars) ±10%

Combustion..... Oxygen (99.99% pure) @ 35 psi (2.41 bars) ±10%

Pneumatic..... Compressed Air (oil and water free) @40 psi (2.76 bars) ±10%

Furnace Type ..... Resistance, both Primary and Afterburner, maximum temperature 1100°C

Autoloader..... 30 position, stackable to 120 samples

Dimensions (CHN/CHNS)

Width ..... 27 inches (69 cm)

Height ..... 31 inches (79 cm)

Depth..... 28 inches (71 cm)

Dimensions (Oxygen Add-On)

Width ..... 15 inches (38 cm)

Height ..... 12 inches (30 cm)

Depth ..... 22 inches (56 cm)

Weight (CHN/CHNS))..... 250 pounds (113 kilograms)

Power

Determinator..... 230 V~ ±10% 50/60 Hz, 12 Amps

Computer ..... 115/230 V~ ±10% 50/60 Hz, 5/3 Amps

Monitor..... 90-264 V~ 50/60 Hz, 1.6 Amps

Oxygen Add-On ..... 230 V~ ±10% 50/60 Hz, 18 Amps max.

*Adjusting sample size may extend instrument range.

**A microbalance (6-place) is required for microanalysis.