Oligonucleotide synthesis and purification is a complex, multi-step process. Final product quality is influenced by numerous factors that, while carefully monitored, cannot always be controlled. It is critical to both the manufacturer and end-user that oligonucleotide purity be known, and the purity be of sufficient quality for the end application, to ensure optimal performance and minimize ambiguous results.

**Accurately Assess Purity**

**Ensure Quality Product**

Purity analysis of oligonucleotides with the OLIGO PRO II Automated Oligonucleotide Analyzer. The electropherogram on the left shows a 57.99% pure oligonucleotide sample. The electropherogram on the right depicts a high purity oligonucleotide sample at 93.71%.

Advanced Analytical’s **OLIGO PRO II Automated Oligonucleotide Analyzer** provides high resolution, accurate assessments of oligonucleotide purity with unsurpassed sample throughput via parallel capillary gel electrophoresis. Capillary arrays with the option of 12, 24, or 96 capillaries are available and completely interchangeable, enabling seamless scalability. Streamlined operation, ready-to-use reagents, and dedicated software offer a complete solution for ensuring product quality.

Broad Sizing Range - Patented Oligel separation matrix enables single nucleotide resolution through 60-mer lengths under appropriate sample load.
Award-Winning Technology

Unique, Unmatched Capabilities

Advanced Analytical's parallel capillary gel electrophoresis-UV detection (CGE-UV) and separation technology dramatically improves laboratory throughput and efficiency while minimizing sample consumption and reducing operational costs.

CGE-UV is a standard method for assessing oligonucleotide purity, providing high separation resolution and direct detection of ssDNA and ssRNA without the sequence and size dependent variations encountered in mass spectrometry or fluorescence-based methods.

Scalable

Quickly adjust throughput with interchangeable 12, 24, or 96 capillary arrays. Simple capillary array design is easy to handle.

Sample Capacity

Load up to three 96-well plates for unattended oligonucleotide analysis. Plates can be loaded and prioritized while the system is running.

Direct Detection

Direct UV detection of oligonucleotides, no intercalating dye required.

Compact

Small instrument footprint saves bench space.
Features and Benefits

- **Fast Separations**
  Complete 12, 24, or 96 separations in about 1 hour.

- **Improve Product Quality**
  Monitor synthesis performance to demonstrate purity of ssDNA or ssRNA.

- **Wide Sizing Range**
  Achieve n-1 resolution through 60-mers.

- **Throughput for All Labs**
  Variable throughput with the option of 12, 24, or 96 capillary arrays.

- **Direct Detection of Oligos**
  No dye labeling needed, uses UV detection.

- **Simplified Report Generation**
  Advanced peak integration software and data reporting capabilities.

Specifications

- **Array Sizes:** 12, 24, or 96 capillaries
- **Detection:** Online, fixed wavelength UV absorbance at 254 nm
- **Sample Injection:** Simultaneous electrokinetic injection from a 96-well microplate
- **Sample Format:** Desalted to maximize injection efficiency; 1 – 5 µM concentration range
- **Sample Volume Required:** Typical volume 100 µL/well (minimum of 20 µL/well)
- **Oligo Sizing Range:** Up to 60-mer lengths under appropriate sample load
- **Software:** Proprietary OLIGO PRO II software for system control/data analysis
- **Data Export Format:** CSV, PDF, JPEG, BMP, or PNG for individual samples or entire sample set
- **Environmental Conditions:** Indoor use, normal laboratory environment; lab temperature 15 - 25°C
- **Relative Humidity Range:** 15 – 60% (non-condensing)
- **Electrical:** 100 – 200 VAC; 50 – 60 Hz (200 – 230 VAC; 50 – 60 Hz available); 15 A
- **Instrument Dimensions:** 67.31 cm H x 48.26 cm W x 61 cm D (26.5 x 19 x 24 in)
- **Instrument Weight:** 102 Kg (125 lbs)