

RECOMMENDED VENDORS FOR OLIGONUCLEOTIDE SYNTHESIZER SETUP AND MATERIALS



This guide provides a list of recommended vendors and equipment needed to properly set up your laboratory for oligonucleotide synthesis using Sierra Biosystems and K&A synthesizers. **Sierra Biosystems and K&A Labs are not affiliated with any of the listed vendors, and inclusion in this document does not constitute an endorsement.** Customers should evaluate vendors based on their own needs, procurement policies, and location.

1. Gas Supply and Gas Regulators

Item	Recommended Vendors
Argon or Nitrogen Gas Cylinders (≥99.999% purity)	- Airgas - Praxair - Matheson Gas
CGA-580 Regulator (0–60, 0-100 or 0-200 psi outlet range)	- Concoa - Swagelok - Airgas - Matheson Gas
Regulator and Tube Fittings (¼” or 6.35mm)	- Swagelok - McMaster-Carr - Grainger

2. Ventilation Equipment

Item	Recommended Vendors
Laboratory Fume Hoods (Ducted or Ductless)	- Labconco - AirClean Systems - Thermo Fisher Scientific
Ventilation Snorkels (Articulating Arms)	- Diversitech - Nederman - Labconco
Ventilation Blowers / Fans (for fume hoods)	- Fantech - Labconco - Air Control Industries
Ducting Supplies (Flexible Ducting, Exhaust Tubing)	- Grainger - McMaster-Carr - Airgas
Ventilation Installation Services (if needed)	- Local certified HVAC or lab installation specialists

Notes for Customers:

- **Ducted fume hoods** are generally recommended for oligonucleotide synthesis due to solvent vapors.
- **Snorkel arms** are useful if a fume hood is not available, but must meet minimum air draw requirements (-2 in H₂O or 100 ft/min).
- **Snorkel arms** are highly recommended for Shasta's due to their size and for use during calibration
- Always **verify compliance** with local fire codes and OSHA/health authority regulations regarding chemical ventilation.
- **Certification:** It's strongly recommended to have fume hoods certified annually to ensure proper airflow.

3. Optional Equipment for Advanced Processing

Item	Recommended Vendors
Heating Block / Ovens	- Cascade (consult with K&A or Sierra Biosystems for purchase) - Eppendorf - Thermo Fisher - Benchmark Scientific
Evaporators / Vacuum Concentrators	- Labconco - Eppendorf - Thermo Scientific
Analytical Equipment (Nanodrop, HPLC, Mass Spec)	- Thermo Fisher (Nanodrop) - Agilent Technologies (HPLC, LC-MS) - Shimadzu (HPLC, MS)

4. Raw Materials for Oligo Synthesis

Item	Recommended Vendors
Phosphoramidites (DNA, RNA, Modified Bases)	- Glen Research - Oligo Solutions - ChemGenes - Biosearch Technologies (LGC) - Thermo Fisher - HonGene Biotech
Columns/Plates (CPG Support)	- Glen Research - ChemGenes - Oligo Solutions - Biocomma - Biosearch Technologies

Item	Recommended Vendors
Anhydrous Acetonitrile (HPLC/Synthesis Grade)	- Sigma-Aldrich - Fisher Scientific
Deblocking, Capping, and Oxidizing Reagents	- Glen Research - ChemGenes - Sigma-Aldrich
28–40% Ammonium Hydroxide	- Sigma-Aldrich - Fisher Scientific - VWR
Purification Cartridges (e.g., GlenPak)	- Glen Research - Biosearch Technologies

Notes for Customers:

- **DNA Amidite and Reagents** must be on hand for the initial installation verification. It is also recommended to keep DNA reagents on hand for troubleshooting purposes
- **Methylamine and Acetic Anhydride** may require permits depending on location. Please verify with your local regulatory authority before ordering.
- **Instrument Compatibility:** If you are unsure about reagent bottle sizes or fitting types, please contact Sierra Biosystems or K&A before purchasing.
- **Bulk Discounts:** Some suppliers offer bulk purchase discounts for gas cylinders, reagents, or consumables — it may be worth asking when ordering.
- **Freshness Matters:** Always use freshly prepared or recently opened reagents for cleavage, deprotection, and purification. Old or expired reagents can significantly reduce oligonucleotide yield, purity, and performance.
- **Twist Columns** can be utilized on a K&A instrument but due to their size, two twist columns can not be used side by side.

5. Chemical Storage and Handling

Item	Recommended Vendors
Flammable Storage Cabinets	- Justrite - Eagle Safety Cabinets - Lab Safety Supply
Hazardous Waste Disposal Supplies	- Fisher Scientific - VWR - Safety-Kleen (for chemical waste pickup services)

Contact for Assistance:

For any purchasing or setup questions, please reach out:

Email: serviceteam@sierrabio.com or info@KA-labs.de