

Large-scale dye-labeled oligonucleotides

Company

Midsized, US-based company developing tools for translational medicine, *in vitro* diagnostic applications, and a wide variety of research initiatives.

Background

The client provided project guidelines that included oligonucleotides for use in a proprietary platform. These oligonucleotides required the use of Invitrogen™ Alexa Fluor™ and Dyomics dyes in addition to photo-cleavable (PC) spacers, and L-DNA. In their search, they had evaluated several suppliers in order to find a source that produced consistent, repeatable oligonucleotides in milligram and gram scales over the course of a year.

Client's needs

- **Purification:** HPLC
- **Delivered scales:** milligram to gram
- **Formulation:** delivered dried down
- **Delivery format:** 2 mL tube
- **Specification sheet/Certificate of Analysis (CoA):** delivered with oligos



Challenges

The client needed consistent oligos at milligram-to-gram scales. This requirement demanded extensive process development from the R&D lab, operations, and both project management and product management teams.

Partnership

Understanding the specific requirement of our client is at the core of our business. Whether the opportunity is large or small, Thermo Fisher Scientific will develop an integrative partnership with our client—providing quality oligos, quickly and reliably, and at desired volume.



Results

Within a few weeks of establishing a partnership, the client received their first product package and tested the quality of our oligonucleotides. After securing successful results for their project and noting the superior quality of the material, the client placed a few more pilot orders required for assessing scale needs to fit into their R&D plans. Regular discussions with the client about project goals helped our teams design the oligonucleotide synthesis process and ensure consistent manufacturing.

Summary

By partnering with our client, we were able to provide exact specifications that were unique to the project's needs. We were able to meet their delivery timelines that enabled them to secure successful results. We were also able to work with them on a long-term pricing model that provided a viable solution within their budget. Ultimately, the client was able to bring their technology to market on time and within their budget.

About us

At Thermo Fisher Scientific, we have over 25 years of experience in providing a complete range of custom-synthesized oligonucleotide primers, probes, and genes, all built to your specifications. With trusted Applied Biosystems™ TaqMan® Assays and innovative Invitrogen™ GeneArt™ Gene Synthesis services, you can expect quality, reliability, and convenience.

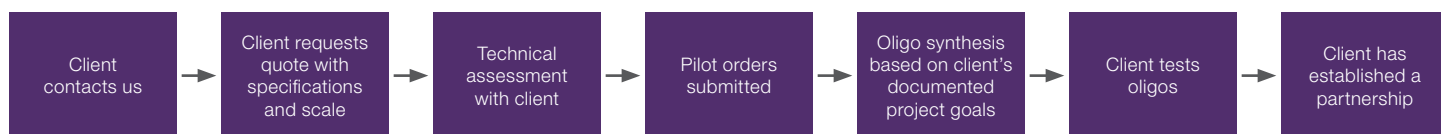
A solid worldwide infrastructure helps ensure on-time delivery, long-term sustainability, and superior service and support. Our team works with you on every step of your research journey.

Quality control

At Thermo Fisher Scientific, we use state-of-the-art automated processes to increase performance, speed, and capacity. This means you will receive high-quality custom DNA oligos quickly and efficiently.

Our quality control (QC) processes include 100% in-process trityl monitoring with up to 12 measurements taken for every base addition, and analysis by capillary electrophoresis, mass spectrometry (MS), optical density, and liquid chromatography–MS (LC-MS) to verify the yield and purity of the product.

General workflow of the project request process



Contact our specialists for your specific project requirements at oligoinquiries@thermofisher.com

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