

DNASCRIPT

SYNTAX

DNA ON DEMAND

Benchtop convenience

Same-day results



Invest in Productivity, Control, and Simplicity

DNA Script introduces a new paradigm in DNA synthesis, the SYNTAX Platform, powered by Enzymatic DNA Synthesis (EDS) technology to accelerate innovation. Designed for ease-of-use, productivity, convenience, control, and confidentiality, the SYNTAX Platform enables automated nucleic acid synthesis on your benchtop in your lab.

With same-day synthesis and a menu of modifications, researchers can access oligos for a range of SynBio and Genomics workflows anytime, eliminate bottlenecks in productivity, and iterate rapidly to accelerate innovation.

Welcome to the bio-revolution.



Increase Productivity

- Optimize assays faster with same-day oligo synthesis
- Save time and costs by printing the quantities you need when you need them
- Higher productivity and predictable project schedules accelerate innovation and reduce hidden project costs



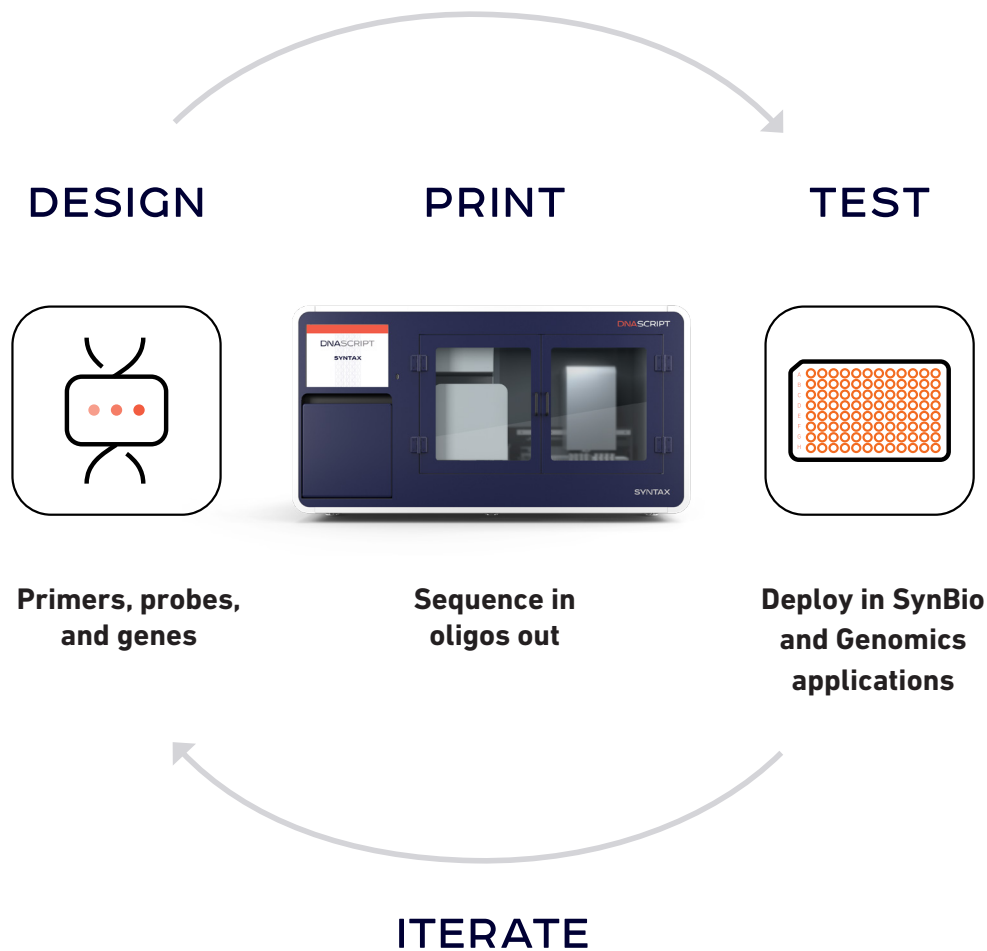
Take Control

- Control over your workflow schedule
- Maintain confidentiality over your sequences
- Less risk of delays due to third-party manufacturing, logistical challenges, or unpredictable global events (e.g., pandemic)



Simplify Workflows

- Utilize without need for specialized infrastructure, training, skills, or experience
- Sufficient for single use and rapid iteration
- Plug-and-play into existing workflows



Seamless integration into existing workflows

Oligonucleotides are needed for almost every established and emerging genomics and life science application. The SYNTAX Platform produces molecular biology-ready oligos, which can be rapidly deployed in new or existing workflows.

The Console Software accepts oligo sequences, designed using your favorite software tools, in commonly used formats. Following synthesis, the SYNTAX Platform desalts, quantifies, and normalizes oligos, ready for the next step in your workflow with standard equipment and protocols.



System Capabilities



- Fully automated, walk-away synthesis
- Plug-and-play integration



- Parallel synthesis in 96-well or 384*-well plates
- Flexibility for up to 120 oligos per run
- Modifications enabled



- 15 - 30 minutes setup time per run
- Same-day synthesis of 15 - 120 nt oligos
- Synthesize oligos overnight for next-day use

Console Software



- Intuitive, remote interface to plan and track every synthesis run



- Plan and coordinate runs, view progress, monitor instrument performance, and manage results



- Web-based or on-premises options available





SYNTAX Kits

96



96



384



Standard Kit / **Genomics**

High-Fidelity Kit / **SynBio**

High Plex Kit* / **High-Throughput**



Length

15 - 80 nt

15 - 120 nt

15 - 80 nt



Quantity

≥ **550 pmol**

≥ 200 pmol

≥ 100 pmol



Coupling Efficiency

~99.4%

~**99.6%**

~**99.6%**



Label Options

**Fluorophores, quenchers,
biotin**

NA

NA



Degenerate Bases

Yes

Yes

NA



Oligos per Run

96

96

384

The Enzymatic Synthesis Revolution

DNA Script has pioneered Enzymatic DNA Synthesis with three core innovations:

Synthesis Enzymes (TdT)

DNA Script has developed and optimized a portfolio of proprietary synthesis enzymes engineered to perform *de novo* synthesis of nucleic acids with high fidelity and high coupling efficiency.

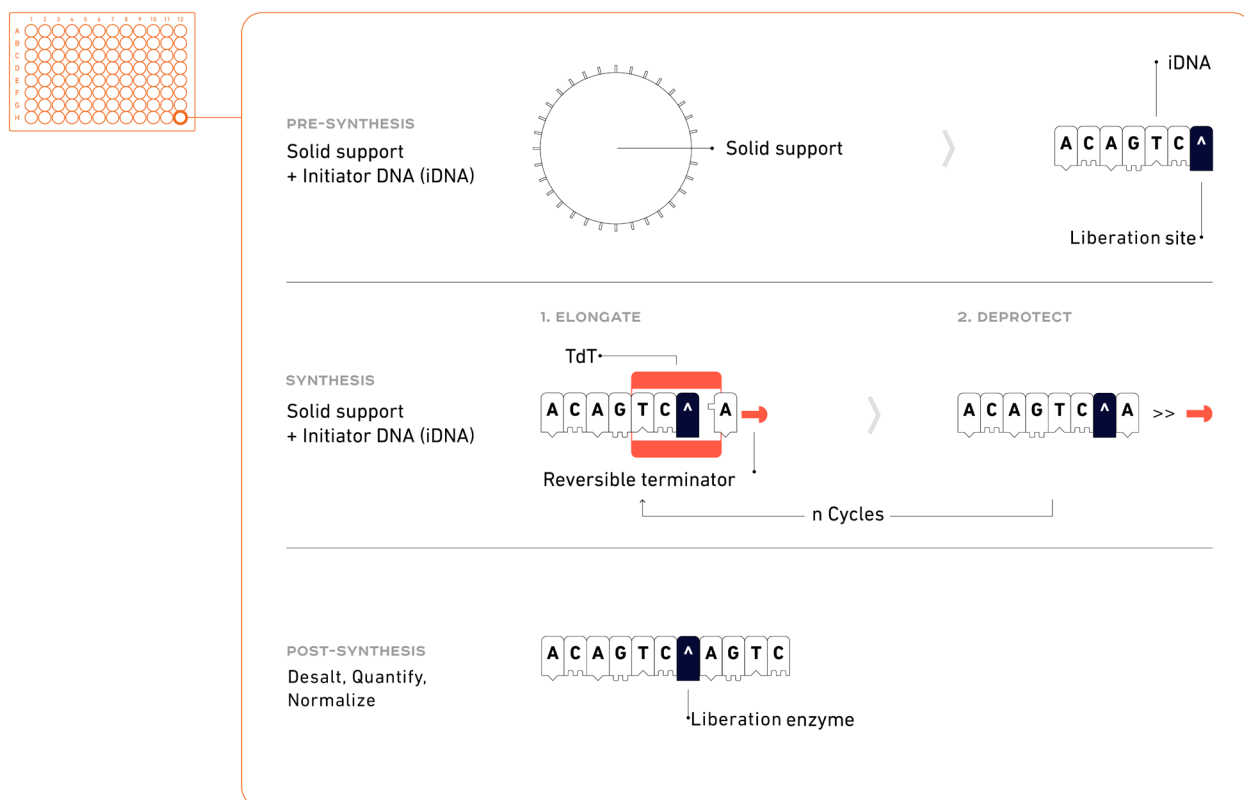
Reversibly Terminated Nucleotides

DNA Script has developed a range of modified nucleotides containing a reversible terminator on the 3' position to enable the incorporation of one, and only one, nucleotide per addition cycle.

Solid Support

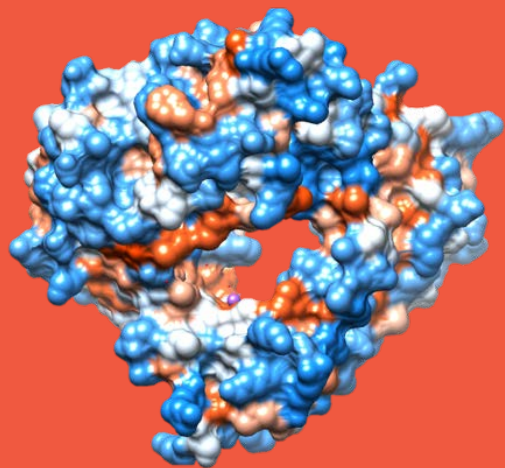
DNA Script's solid support has two key functions: provide a cleavable initiator DNA (iDNA) molecule to initiate synthesis, and ensure that chemical and physical properties are optimal for enzymatic reactions. The physical and chemical properties of the solid support are optimized to enable the synthesis of full-length DNA to support SynBio and Genomics applications and provide a surface to which the iDNA is bound.

The iDNA contains an enzymatically cleavable entity and uniquely can be customized to incorporate a conserved sequence into each oligo synthesized.



Synthesis Workflow

Oligos are synthesized in a cyclic, two-step process. 1) Elongate: the synthesis enzyme adds a single nucleotide to the iDNA. 2) Deprotect: the reversible terminator of the nucleotide is removed, leaving the strand ready to be elongated again. Steps 1 and 2 are repeated until the user-defined sequence length is reached. Following completion of the last synthesis cycle, enzymatic liberation is performed to release all bases downstream from the liberation site. The resulting oligos are desalted, quantified, and normalized. Molecular biology-ready oligos are collected, and the system may be prepared for another run within just 30 minutes.



ENZYMATIC SYNTHESIS

DNA as
Nature Intended



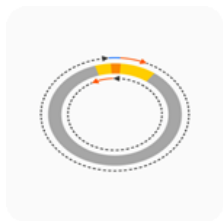
REAL-TIME qPCR, PCR

Same-day Response to results



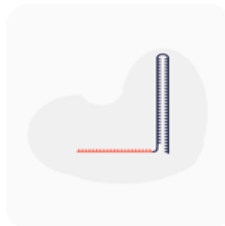
GENE ASSEMBLY

Faster Gene Assembly with
Oligos printed on demand



PROTEIN ENGINEERING

Control your protein engineering timelines



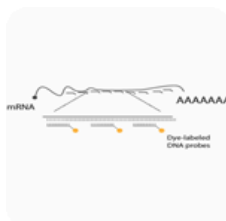
CRISPR GENE EDITING

Rapid In-House Gene Editing



NGS TARGET ENRICHMENT

Secure your NGS pipeline on-site



RNA FISH

Design, Print, and go
Fishing in the same-day

About DNA Script

DNA Script has pioneered Enzymatic DNA Synthesis (EDS), a high-performance, lower-carbon alternative to phosphoramidite synthesis. Its product, SYNTAX™, is a user-friendly benchtop printer enabling on-premise production of custom DNA. The platform serves various applications: gene synthesis, protein engineering, and genomics, delivering unprecedented quality, speed, and control while maintaining confidentiality.

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