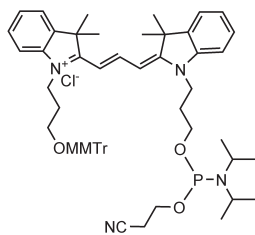


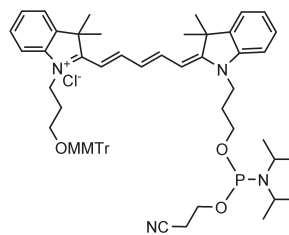
New Products

Cyanine Dye

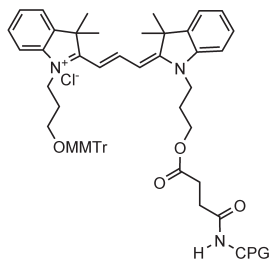
Phosphoramidites & CPGs



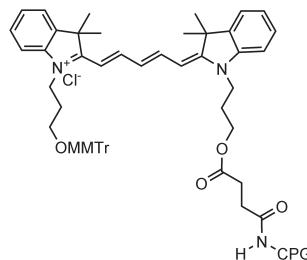
5'-Cyanine-3-CE Phosphoramidite (**2520**)



5'-Cyanine-5-CE Phosphoramidite (**2521**)



3'-Cyanine-3 SynBase™ CPG 1000 (**2412**)



3'-Cyanine-5 SynBase™ CPG 1000 (**2413**)

**Direct, cost-effective
3'-labelling with cyanine is
available for the first time.**

Cyanine dyes are used as fluorescent markers in oligonucleotide synthesis, primarily for molecular diagnostics such as the preparation of probes used in monitoring real-time PCR, fluorescence in situ hybridisation (FISH) and in SERRS based DNA detection assays. Their emission spectra can be tuned by altering the length of the polymethine chain and solubility in organic or aqueous solvents can be altered via the substituents on the aromatic ring.

The most commonly used phosphoramidite dyes are Cyanine-3 (**2520**) and Cyanine-5 (**2521**). These are generally attached to the 5'-end of an oligonucleotide during automated synthesis, however are easily incorporated within the sequence of nucleotides. The MMTTr-protection on the hydroxyl group is removed in the same way as DMTr protection. Internal incorporation is not common due to the lack of heterocyclic base in their structure and as such they do not have the ability to participate in base pairing. This can destabilise any duplexes formed.

For 3'-attachment, we have introduced the equivalent 3'-modified 1000Å CPG supports, 3'-Cyanine-3 (**2412**) and 3'-Cyanine-5 (**2413**). Previously this was done by adding the dye post-synthetically onto an amino-modified oligonucleotide or by adding the amidite to a support functionalised with a modification that will not interfere with the use of the oligonucleotide (e.g. phosphate, spacer). 3'-Labelling is particularly useful in FRET where the FRET partner is incorporated either at the 5'-end or within the oligonucleotide sequence.

Link is an ISO 9001 certified manufacturer of oligonucleotide synthesis reagents. Our extensive range of products includes a wide choice of phosphoramidites and CPG solid supports for use in fluorescent studies.