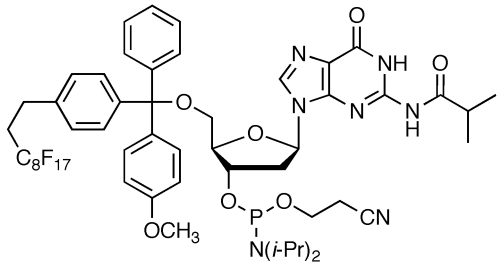
FMMT-N^2-iBu-dG CEP (FL 1220)

Product Information



*When a more robust fluorous tag is required, the **fluorous monomethoxytrityl (FMMT)** group may be employed as an alternative to the fluorous dimethoxytrityl (FDMT) group.*

(See Product # FL 1200 for the FDMT version of this phosphoramidite, i.e., FDMT-N^2-iBu-dG CEP.)

The fluorous affinity purification of oligonucleotides[1] normally involves the use of FDMT-tagged nucleoside phosphoramidites, but in cases where a more robust trityl group is required, such as when HPLC purification with minimal detritylation is necessary, FMMT-tagged nucleoside phosphoramidites are available.

Use: FMMT-N^2-iBu-dG CEP couples with greater than 95% efficiency (typically >98%) under the standard conditions recommended for popular synthesizers. The synthesis should be run in the trityl-on mode.

After cleavage from the support and nucleobase deprotection using standard techniques, the fluorous-tagged oligonucleotide may be purified by RP-HPLC or by cartridge purification using a Fluoro-Pak™ column.

If purification using HPLC is desired, an RP-HPLC or fluorous HPLC column can be used in conjunction with a solvent system such as Mobile A = 0.1 M TEAA and Mobile B = acetonitrile. The FMMT-tagged oligonucleotide will elute at high acetonitrile content, typically ≥50%, depending on structure. Collect the desired tagged material, dry, and detritylate with 80% aqueous acetic acid as usual.

If cartridge purification is desired, use a Fluoro-Pak column (FP 7210 or FP 7220) and Loading Buffer (LB 7100). See "*User Guide: Fluorous Purification of Oligonucleotides*", which is included in with your purchase or may be downloaded at www.berryassoc.com/literature/fluorousguide.pdf. As usual, ammonia removal is not required. Since the FMMT group is less acid labile than the FDMT group, passing 3% aqueous trifluoroacetic acid through the Fluoro-Pak column at a slower rate than the standard protocol is recommended. Alternatively, the on-column detritylation can be skipped and the FMMT-on oligonucleotide may be eluted with 50-90% MeCN/H_2O. Evaporate to dryness and detritylate with 80% aqueous acetic acid at room temperature.

The final detritylated oligonucleotides are obtained with high recovery, free from failure sequences.

Reference:

1. Pearson, W. H.; Berry, D. A.; Stoy, P.; Jung, K.-Y.; Sercel, A. D. *J. Org. Chem.* **2005**, *70*, 7114-7122.