BlackBerry[®] Quencher 650 CPG II (3'-BBQ-650[®] CPG II) Product No. BL 2020 Product Information



3'-BBQ-650[®] CPG II (BL 2020) is faster cleaving compared to its predecessor, 3'-BBQ-650[®] CPG (BL 2010). The best strategy for deprotection and cleavage of oligonucleotides constructed from BL 2020 is a two step procedure. Following synthesis, the resulting oligonucleotide should first be treated with 10% diethylamine in acetonitrile for 5-10 minutes in order to deprotect the backbone phosphate groups. Second, standard mild protocols to cleave other protecting groups and liberate the oligo from the support are performed (e.g. NH₄OH or AMA at 65 °C for 10 min.). This two step procedure guards against the cyclic phosphate side reaction that leads to quencher label loss. Cleavage is complete within five minutes with NH₄OH. See Summary below for a comparison of the 3'-BBQ-650[®] CPG products that we offer.

The lipophilicity of the BBQ-650[®] moiety may require the use of relatively high concentrations of the organic mobile phase in RP-HPLC purifications, especially with shorter oligonucleotides.

For quantification, the following extinction coefficients may be useful, which were determined using a simple BBQ-650[®] chromophore (i.e., no oligonucleotide): At 598 nm in methanol, $\varepsilon = 40,667 \text{ M}^{-1}\text{cm}^{-1}$; at 260 nm in methanol, $\varepsilon = 15,077 \text{ M}^{-1}\text{cm}^{-1}$.

Compound	Column Wash	Cleavage Conditions	Deprotection
3'-BBQ-650 [®] CPG (BL 2010)	None	Ammonium Hydroxide or AMA; 2 hours	12 hours, 55 °C
3'-BBQ-650 [®] CPG II (BL 2020)	10% Diethyl Amine for 5-10 minutes, then blow dry 10 min.	Ammonium Hydroxide; 5 min. or AMA; 2 hours	65 °C for 10 min.
3'-BBQ-650 [®] CPG III (BL 2030)	None	AMA only; 20 min.	65 °C for 10 min.

3'-BBQ-650 [®]	CPG Product Comparison Summar	y
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