PC Spacer (photocleavable) is a non-nucleosidic moiety that can be used as an intermediary to attach any available phosphoramidite modification at either end of an oligonucleotide through a UV photo-cleavable C3 spacer, as well as insert such a spacer internally. An example is the use of PC Spacer to incorporate a photo-cleavable 6-FAM tag onto the 5’-end of oligonucleotides immobilized on glass slides. These fluorescently-labeled oligo arrays were then UV irradiated in order to test the efficacy of photo-cleavage in removing the 6-FAM tag from these oligos, as part of developing sequencing-by-synthesis applications (1).

Cleavage Protocol
Cleavage occurs by irradiation with near-UV light (300-350 nm), complete cleavage occurs within 5 minutes. Try using a Black Ray XX-15 UV lamp (Ultraviolet Products Inc., San Gabriel, CA) at a distance of 15 cm (emission peak 365 nm, 300 nm cut-off, 1.1 mW intensity at~31 cm).

References