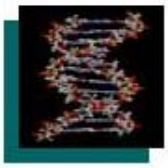

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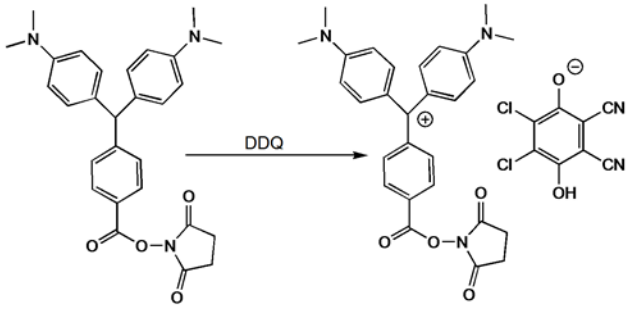
Specification Sheet: Leuco-Malachite Green NHS Ester Part No. HPT1103

Product Name	**Leuco Malachite Green NHS Ester**
Chemical Name	4-[bis-(4-dimethylaminophenyl)-methyl]-benzoic N-hydroxysuccinimide ester
Formula	$C_{28}H_{29}N_3O_4$
Molecular Weight	471.550
Purity	>95%
Appearance	Light green powder
Odor	None
Solubility in Water	Non-Soluble
Storage	Store RT, desiccate

Description **Leuco-Malachite Green-NHS Ester** is the labeling reagent precursor of malachite green. Once it is linked to a macro-molecule through reaction with a primary amino group followed by oxidation with reagents like DDQ in solution, a malachite green moiety is generated. It can also be used as a precursor material for any malachite green derivative that involves a primary amino reaction. See below for methods of oxidation and conversion.



Leuco-Malachite Green **Malachite Green**

Conjugation Summary
The succinimide ester of Leuco-Malachite Green (21 mg, 30.11 micromol) is dissolved in 1.0 mL methyl sulfoxide. The amino-oligo is then dissolved in 800 microL of 0.2 M sodium carbonate buffer (pH 9.5). The ester solution (400 microL) is added to the amino-oligo solution. The mixture is then left for 16 hour at 4 degrees C, after which, it is chromatographed on a Sephadex G-25 column using deionized water/carbonate buffer (50/50) as eluent.

Oxidation to Malachite Green
Excess DDQ (2,3-dichloro-5,6-dicyano quinone) is dissolved in DMSO or DMF, and added to the solution of leuco-malachite green – target conjugate. The leuco-malachite green moiety is immediately oxidized to malachite green, which results in an intense green-blue coloration.