

## TET phosphoramidite, 6-isomer

<http://www.lumiprobe.com/p/tet-amidite>

TET phosphoramidite for synthesis of fluorescently labeled oligonucleotides, pure 6-isomer.

TET (tetrachlorofluorescein) is a green-fluorescent fluorescein derivate (absorption maximum at 519 nm, emission maximum at 535 nm).

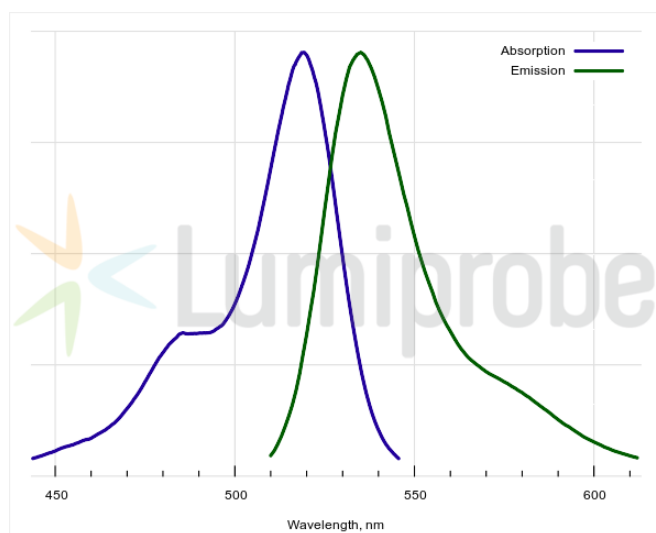
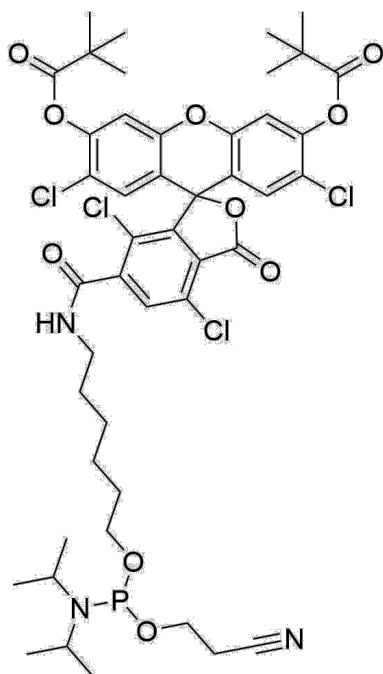
TET phosphoramidite is used for synthesis of fluorescently-labeled primers and hybridization probes for qPCR. TET can be used with DusQ1 fluorescence quencher (can be used with 500 Å [DusQ1 CPG 500](#)).

5'-labeled primers are used with non-labeled reverse primers for microsatellite amplification via PCR followed by fragment analysis. TET-labeled amplification products can be analyzed using various sequencers for capillary electrophoresis, including ABI PRISM® 310 Genetic Analyzer.

## Recommendations for using the reagent:

Condensation: 3 min.

Deprotection: standard conditions with 25% ammonium hydroxide; deprotection time depends on oligonucleotide composition and nucleobase protecting groups (deprotection for 17 hours at 55°C removes all protecting groups from standard nucleobases). AMA (solution of 30% ammonium hydroxide/40% aqueous methylamine 1:1 v/v) can be used with ~5% non-fluorescent side product forming. To avoid formation of the side product, start deprotection with ammonium hydroxide (30 min at room temperature), then add an equal volume of 40% aqueous methylamine and continue deprotection as required with AMA (10 min at 65°C).



**Absorption and emission spectra of TET**

### General properties

Appearance:	white solid foam
Molecular weight:	981.72
CAS number:	877049-90-6
Molecular formula:	C <sub>46</sub> H <sub>54</sub> N <sub>3</sub> Cl <sub>4</sub> O <sub>10</sub> P
IUPAC name:	2',4,7,7'-tetrachloro-6-(((2-cyanoethoxy)(diisopropylamino)phosphaneyl)oxy)hexyl)carbamoyl)-3-oxo-3H-spiro[isobenzofuran-1,9'-xanthene]-3',6'-diyl bis(2,2-dimethylpropanoate)
Solubility:	Good solubility in acetonitrile and DCM
Quality control:	NMR <sup>1</sup> H and <sup>31</sup> P, HPLC-MS (95%)
Storage conditions:	Storage: 12 months after receipt at -20°C in the dark. Transportation: at room temperature for up to 3 weeks. Avoid prolonged exposure to light. Desiccate.

**Spectral properties**

Excitation/absorption 519  
maximum, nm:

$\epsilon$ , L·mol<sup>-1</sup>·cm<sup>-1</sup>: 100000

Emission maximum, 535  
nm:

Fluorescence 0.47  
quantum yield:

CF<sub>260</sub>: 0.17

CF<sub>280</sub>: 0.09

**Oligo synthesis details**

Diluent: anhydrous acetonitrile (prepare a 0.1 M solution, storage 1 week).