NUCLEIC ACID SOLUTION SULFURIZATION REAGENTS

Proligo® Reagents

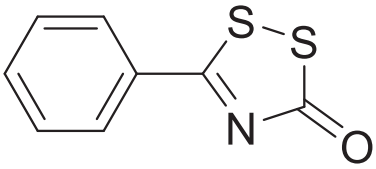
SULFUR 42 – 3-Phenyl-1,2,4-Dithiazoline-5-one

Product Description

Chemical Formula: $C_8H_5NOS_2$
Molecular Weight: 195.27
Storage: 2-8°C

Product List

M076000-1G Sulfur 42
M076000-2G Sulfur 42



Method

- Use anhydrous acetonitrile to dissolve Sulfur 42. It is important to maintain anhydrous conditions when dissolving the reagent in acetonitrile.
- Dichloromethane, tetrahydrofuran or toluene can be applied with similar success. The solvent for dissolution of the reagent should be dry (< 50ppm).
- A 0.1M solution is recommended for the synthesis of phosphorthioates.
- Gently swirl the vial until the powder is completely dissolved.
- Once Sulfur 42 has been dissolved the resulting solution is stable in Acetonitrile for up to 3 weeks at room temperature.
- Attach the dissolved sulfurizing reagent to the appropriate position on the synthesizer. Ensure that the delivery line to the synthesis chamber is sufficiently primed.
- Enter the sequence of the oligonucleotide you wish to synthesize.
- The monomer addition cycle in the synthesizer must be changed from 'coupling-capping-oxidation' to coupling-sulfurization-capping'.
- For DNA synthesis the application of 3 equivalents of Sulfur 42 and a contact time of 60 seconds are recommended.
- Proceed as you would with a standard DNA oligonucleotide synthesis using standard protocols (despite the changes introduced above).
- Cleave and deprotect the oligonucleotide following standard protocols with ammonia. EDTA (ethylenediaminetetraacetic acid) may be added during deprotection (at c = 10 µM) in order to keep desulfurization at a minimum level.