

# Manual Removal of 5'-Trityl (DMT) From Trityl-On DNA Oligos Following Deprotection

Oligonucleotides can be prepared on the DNA synthesizer either trityl-on or trityl-off (trityl = DMT) by making the selection at the beginning of the synthesis. Virtually all applications require DNA to be trityl-off, or detritylated, so that they have a free 5' hydroxyl.

However, the trityl-on option is selected when purifying using an OPC cartridge or certain types of HPLC. After purification, trityl-on oligonucleotides must be detritylated manually. The 5' dimethoxytrityl (DMT) is readily cleaved by limited exposure to mild acidic conditions to minimize depurination.

## Materials:

80% acetic acid

## Procedure

1. Dissolve the dried, deprotected oligo in 1 ml 80% acetic acid. Mix by vortexing.
2. Incubate for 1 hour at room temperature.
3. Dry the detritylated oligo using vacuum centrifugation.
4. A reverse-phase desalting procedure may then be used to remove the free DMT from the oligo solution.

## Reference

"Evaluating and Isolating Synthetic Oligonucleotides-The Complete Guide" Applied BioSystems, Inc., 1992, p A-7.