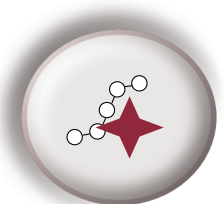




# Oligonucleotide APIs

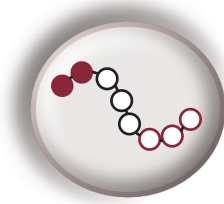
## Innovative Manufacturing Technology



**Low Purification Loss**



**High Stability**

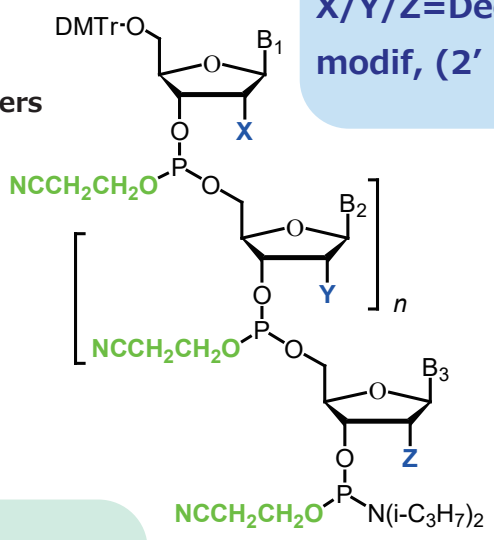


**Flexible Design**

### Benefit of Blockmer™

- Reduced shortmer impurities
- Shortened process and save solvents
- Easy handling as same as existing monomers
- Difficult steps (ex. GGGG) can be skipped
- Chiral S-oligos can be obtained

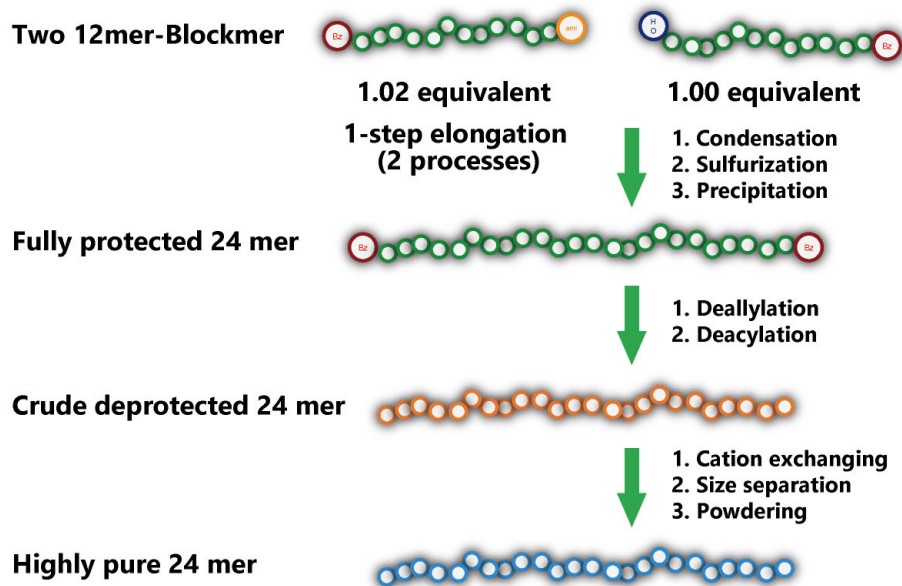
Used with Various Nucleotides  
 X/Y/Z=Deoxy, Ribo(2' -O-TBS),  
 modif, (2' -F, Ome, LNA, etc.)



**Protecting Groups**  
 = Cyanoethyl, Allyl, Prolinol, etc.

## Liquid Phase Synthesis

### Blockmer™ Manufacturer to Shorten Oligonucleotide Synthesis

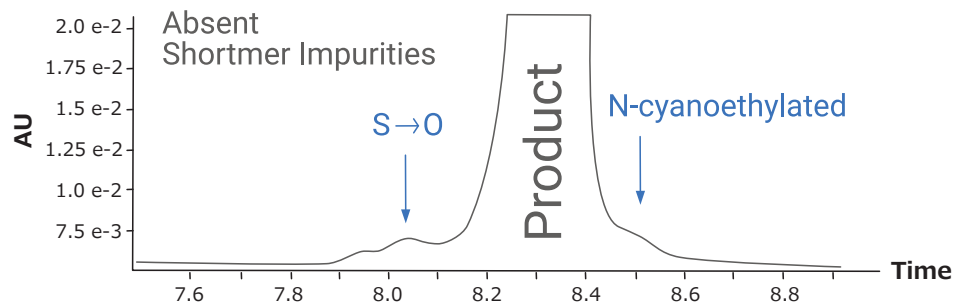


## Solid Phase Synthesis

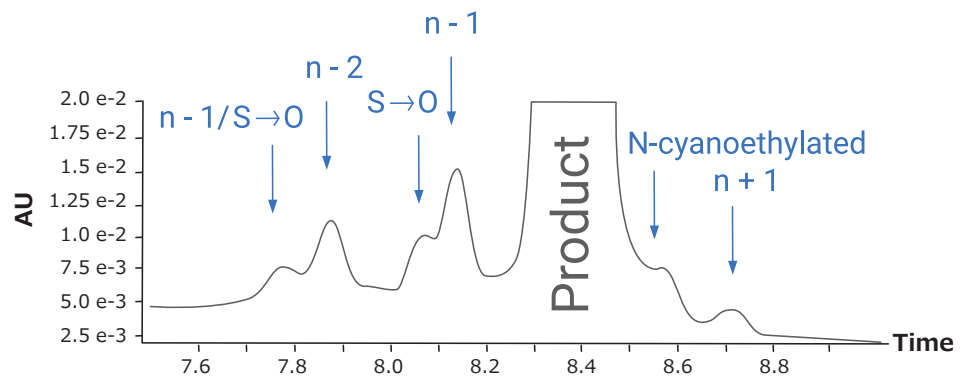
### Synthesis with Blockmer™ at the 5' end yields higher quality Oligos.



Using trimer Blockmer™  
(24 mer, full thiolated)



Using CE-monomers  
(24 mer, full thiolated)



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