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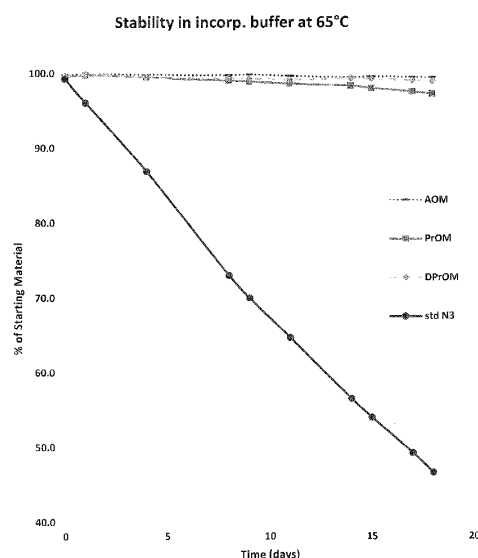


FIG. 1

(57) Abstract: Embodiments of the present disclosure relate to nucleotide and nucleoside molecules with acetal or thiocarbamate 3'-OH blocking groups. Also provided herein are methods to prepare such nucleotide and nucleoside molecules, and the uses of fully functionalized nucleotides containing the 3'-OH blocking group for sequencing applications.

[Continued on next page]

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