METHODS OF POLYNUCLEOTIDE PREPARATION USING MULTIVALENT CATION SALT COMPOSITIONS

ABSTRACT

Aspects of the disclosure include methods for the preparation of a polynucleotide. In some embodiments, the method includes contacting a first polynucleotide composition including: a polynucleotide having a sequence of 7 or more nucleoside subunits and at least two of the nucleoside subunits are joined by a N3′→P5′ thiophosphoramidate inter-subunit linkage; and non-target synthetic products and reagents; with a multivalent cation salt to precipitate a polynucleotide salt including at least one multivalent cation counterion; and separating the polynucleotide salt from the contacted first polynucleotide composition to produce a second polynucleotide composition including the polynucleotide salt. In certain embodiments, the method further includes contacting the polynucleotide salt with a reverse phase chromatography support; and eluting from the chromatography support a third polynucleotide composition including the polynucleotide. Also provided are compositions including a salt of the polynucleotide including at least one multivalent cation counterion.

FIG. 2