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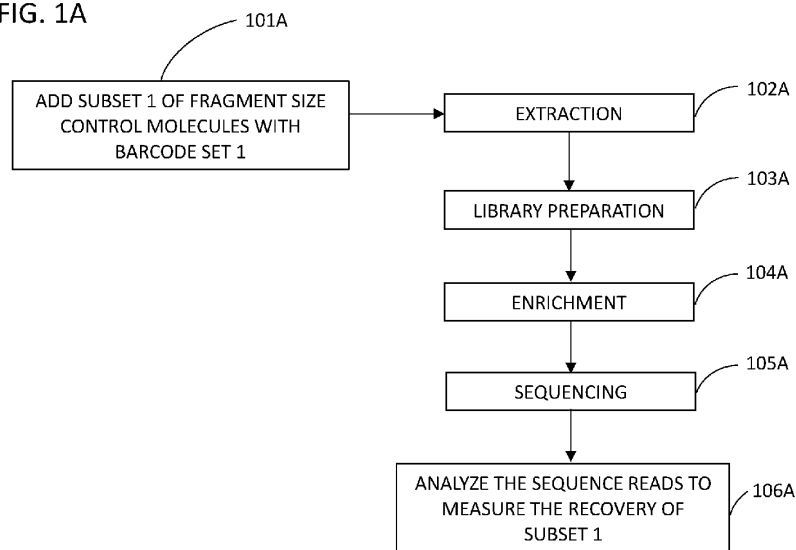
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(54) Title: METHODS, COMPOSITIONS, AND SYSTEMS FOR IMPROVING RECOVERY OF NUCLEIC ACID MOLECULES

FIG. 1A



(57) Abstract: In an aspect, the present disclosure provides a method for analyzing nucleic acid molecules in a sample of polynucleotides, comprising: (a) adding a subset of fragment size control molecules to the nucleic acid molecules, thereby producing a first spike-in sample; (b) extracting nucleic acids from the first spike-in sample; (c) processing at least a subset of the extracted nucleic acids, thereby producing a processed sample, wherein the processing comprises partitioning, tagging, and/or amplifying at least a subset of the first spike-in sample; (d) enriching for at least a subset of the processed sample, thereby producing an enriched sample; (e) sequencing at least a subset of the enriched sample to generate sequence reads; (f) analyzing the sequence reads to generate fragment size scores of the subset of fragment size control molecules; and (g) comparing the fragment size scores with fragment size thresholds.

[Continued on next page]

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