

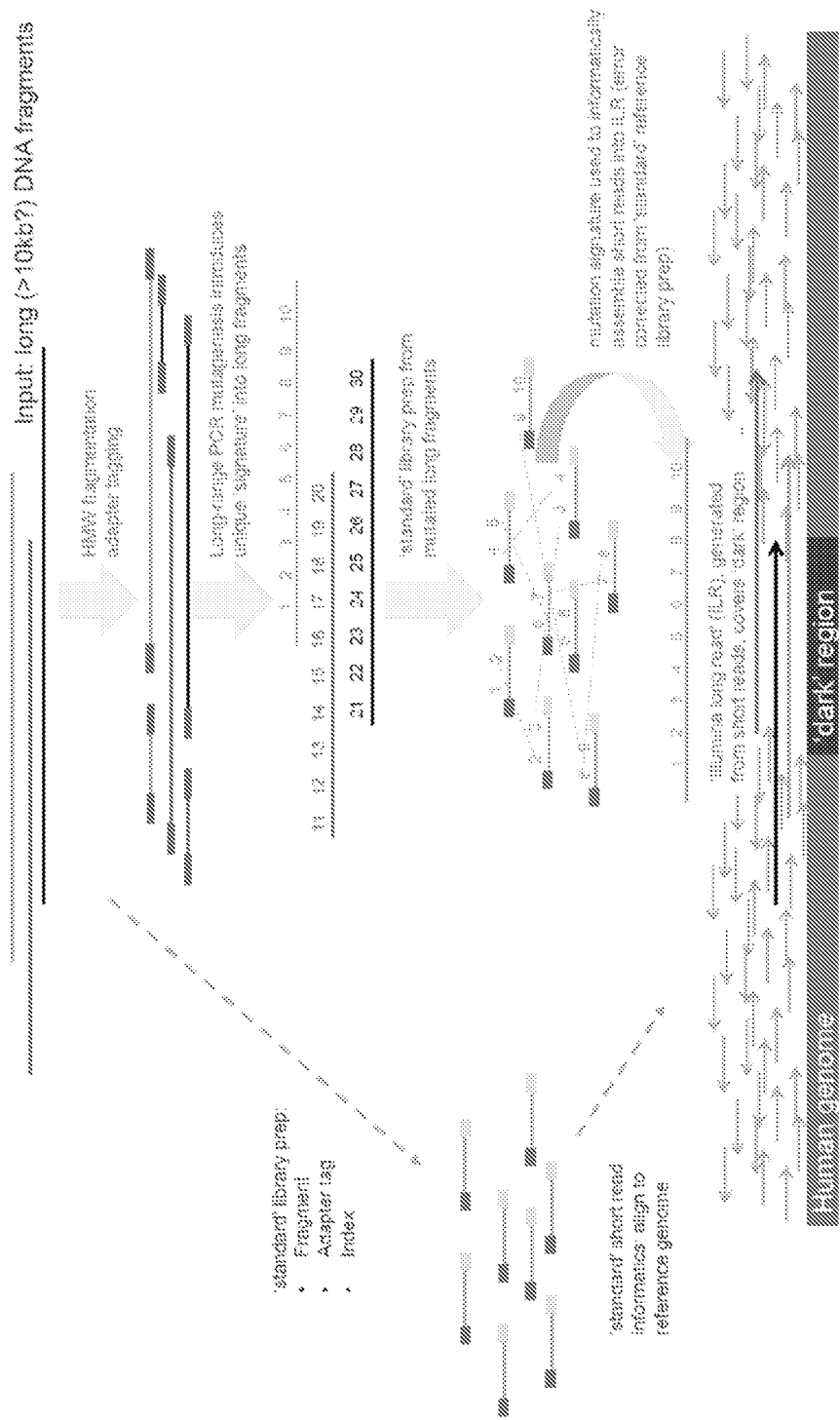


FIG. 1

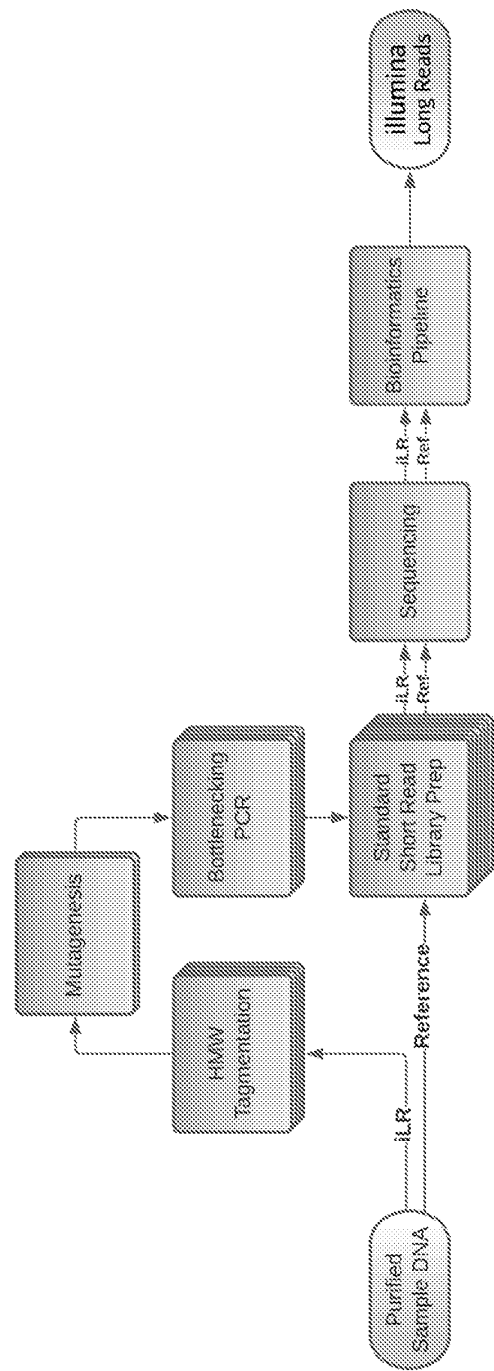


FIG. 2

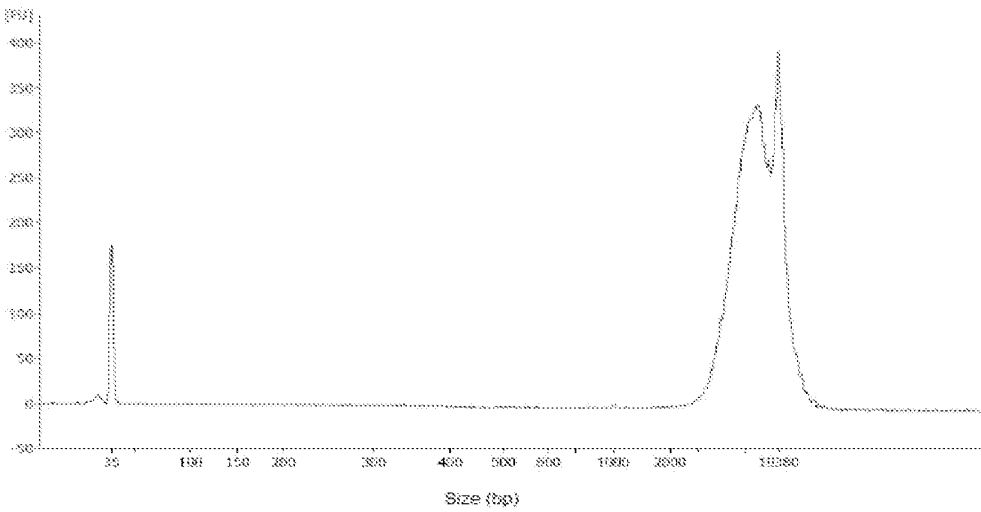


FIG. 3A

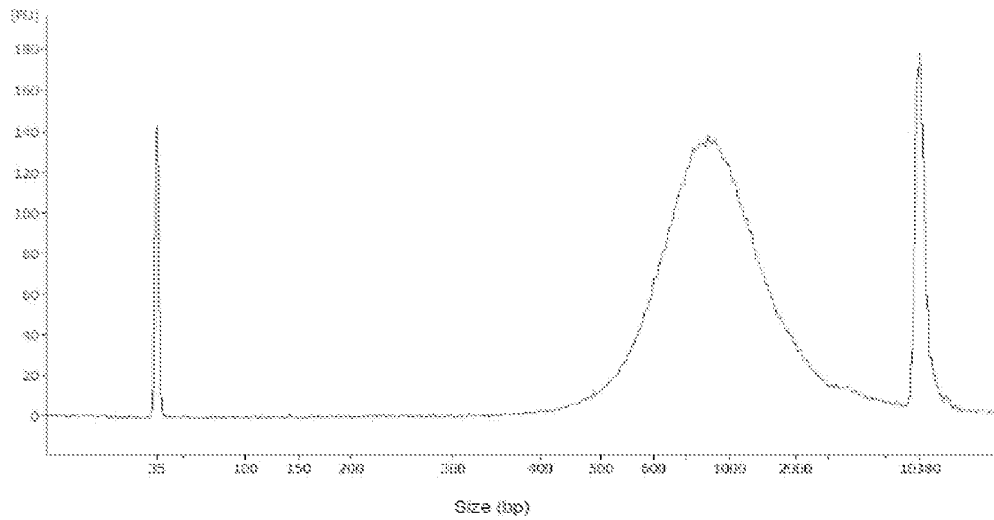


FIG. 3B

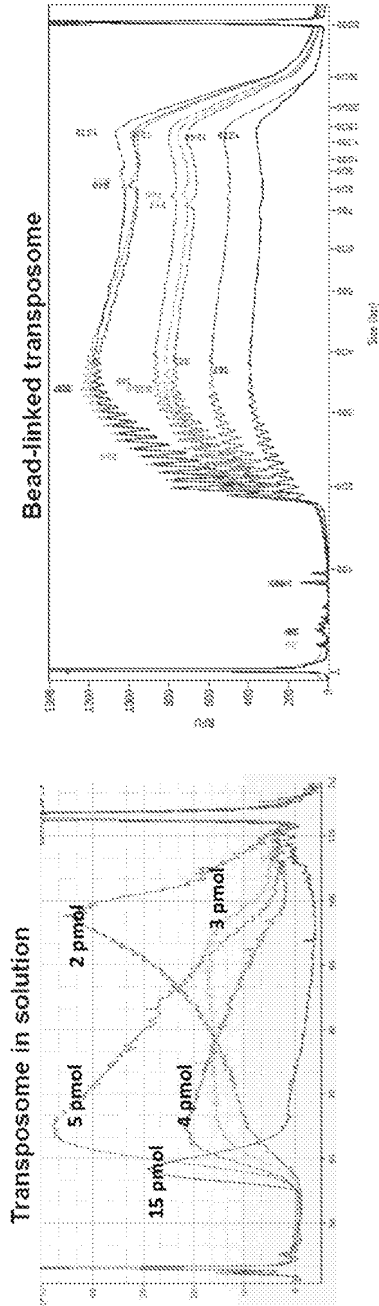


FIG. 4A

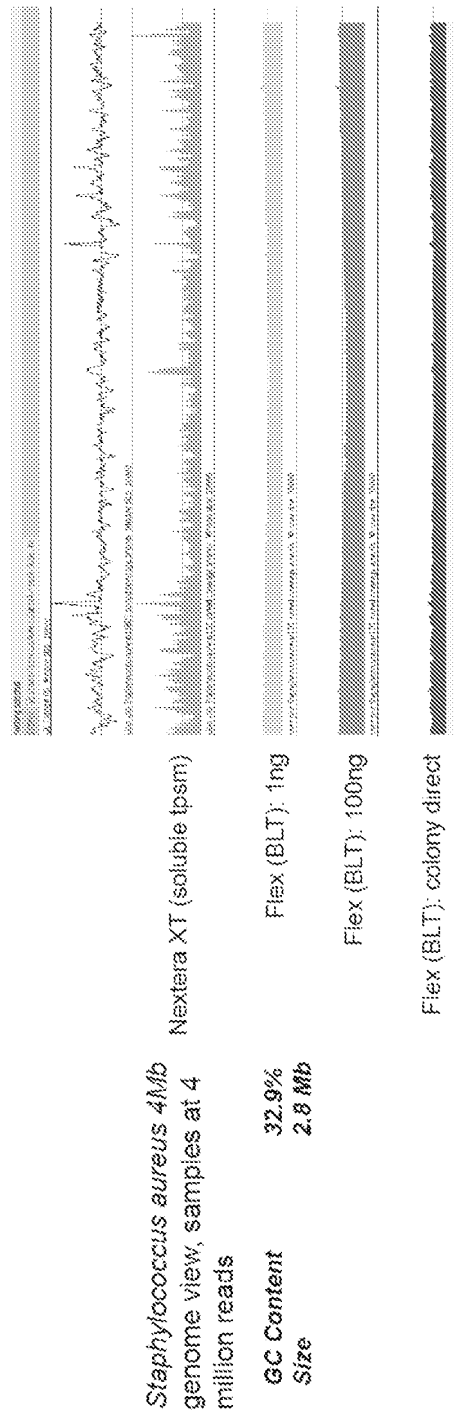


FIG. 4B

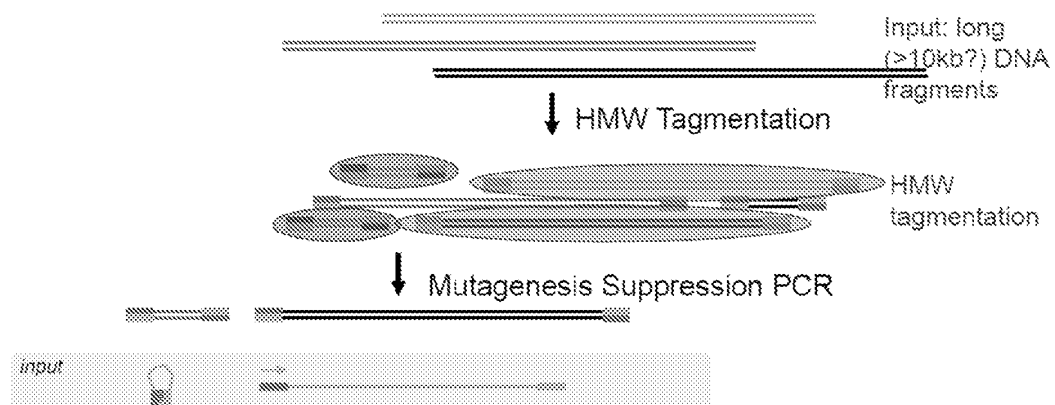


FIG. 5

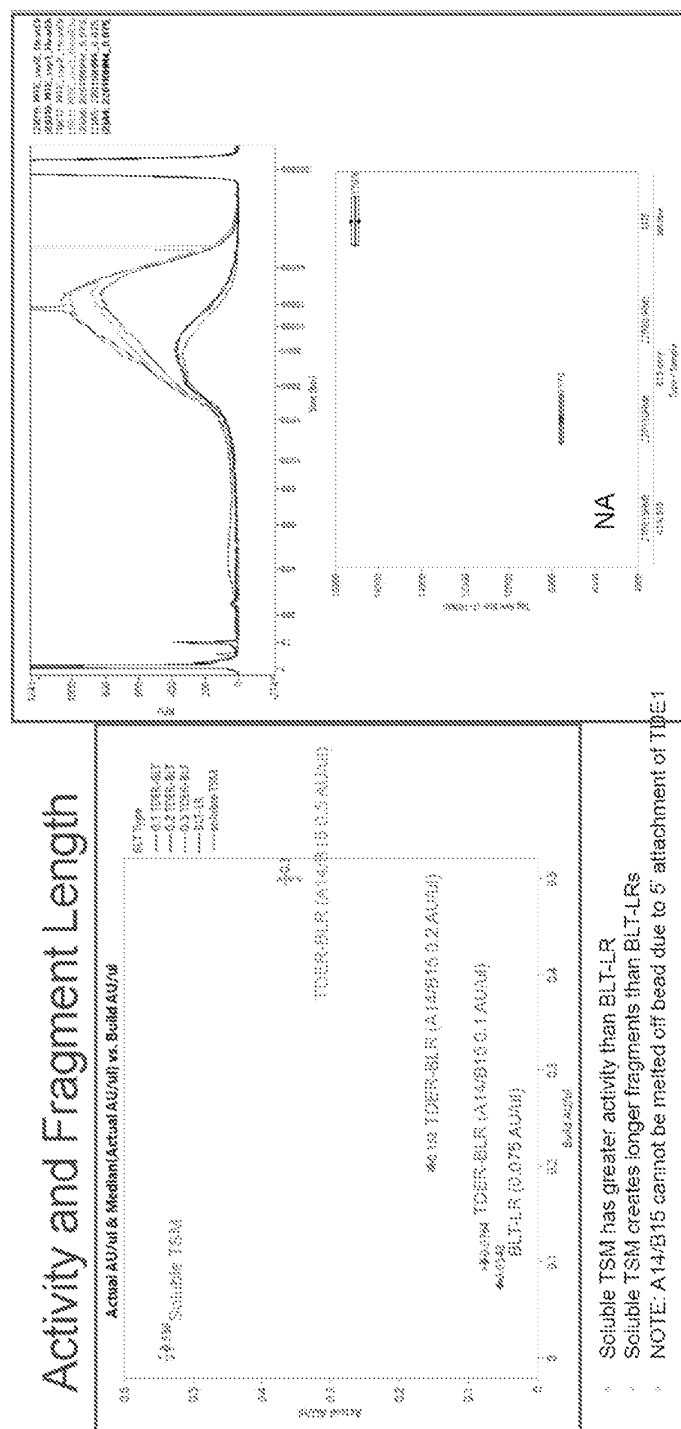


FIG. 6

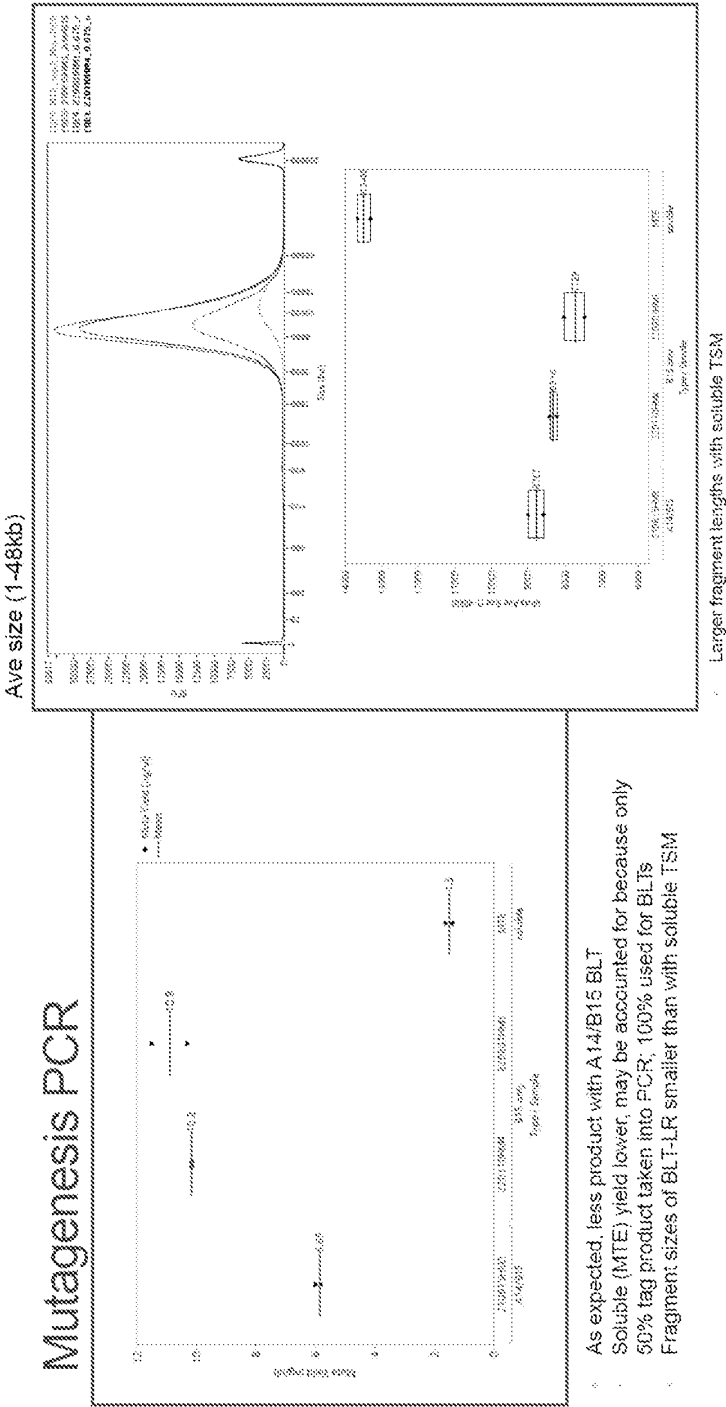


FIG. 7

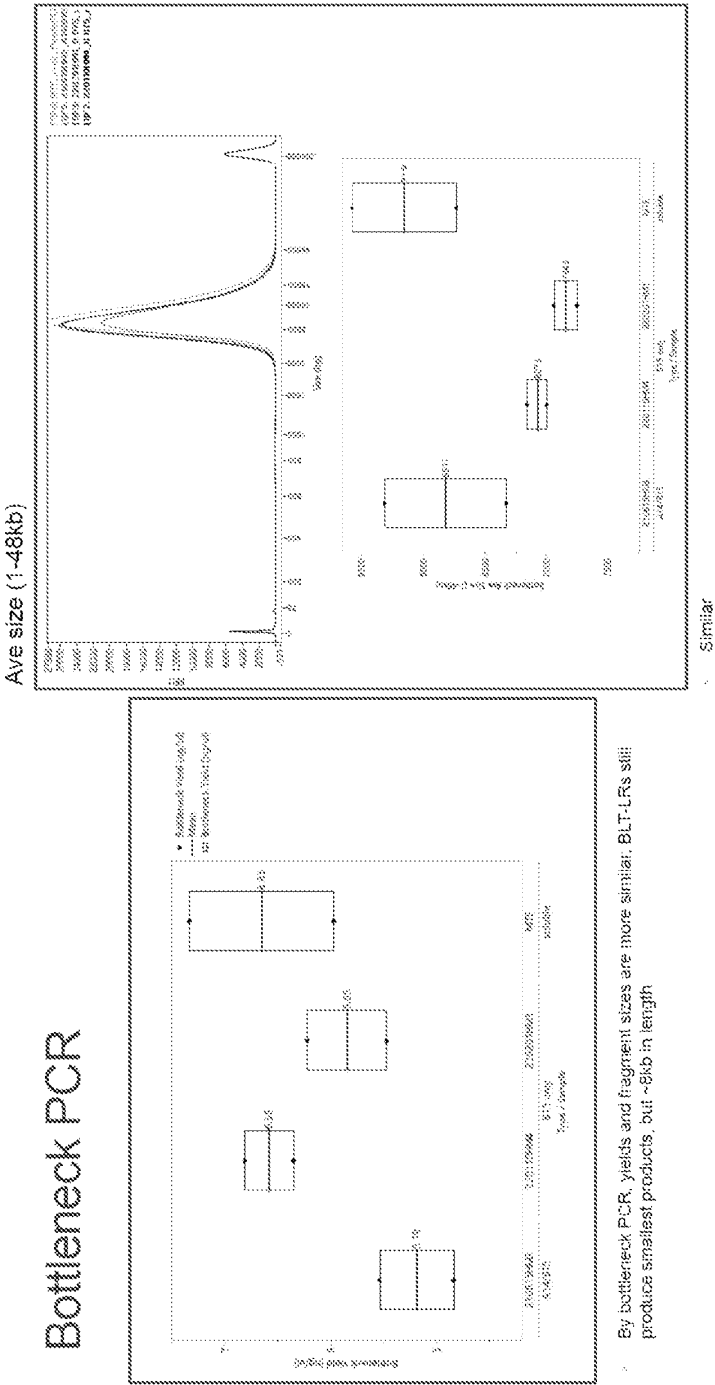


FIG. 8

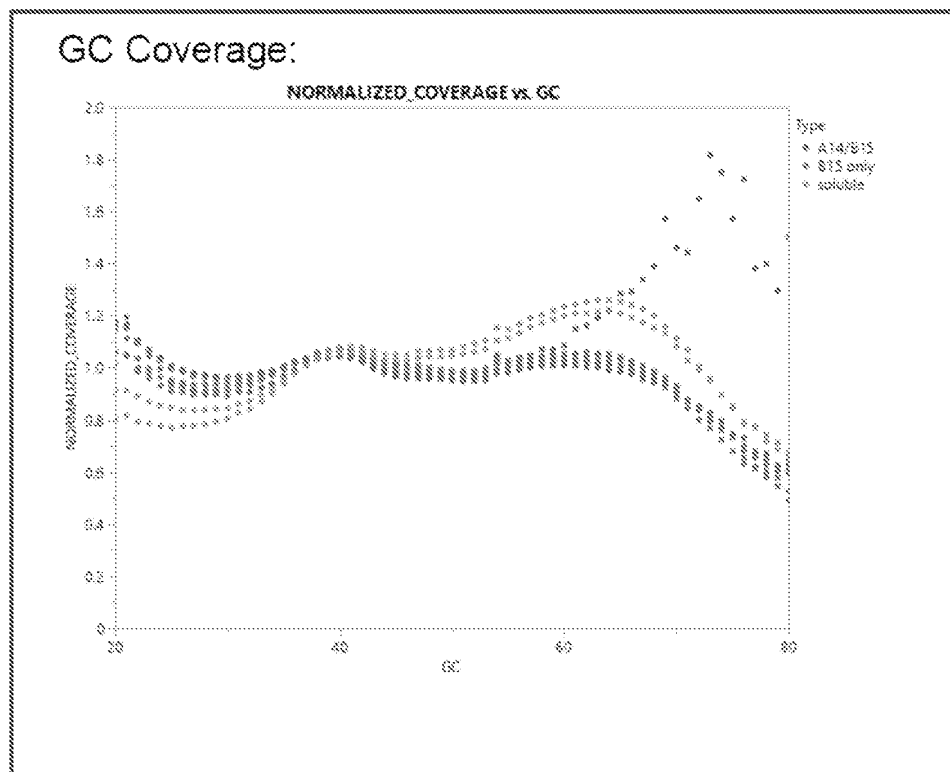


FIG. 9

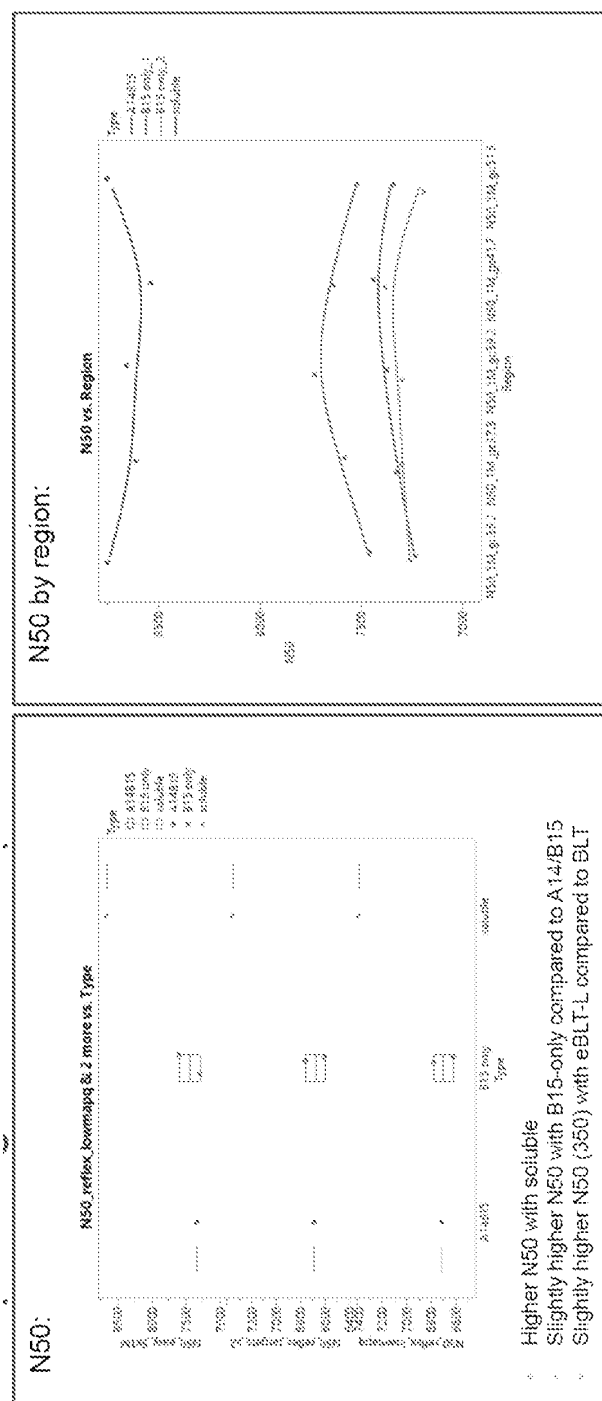


FIG. 10

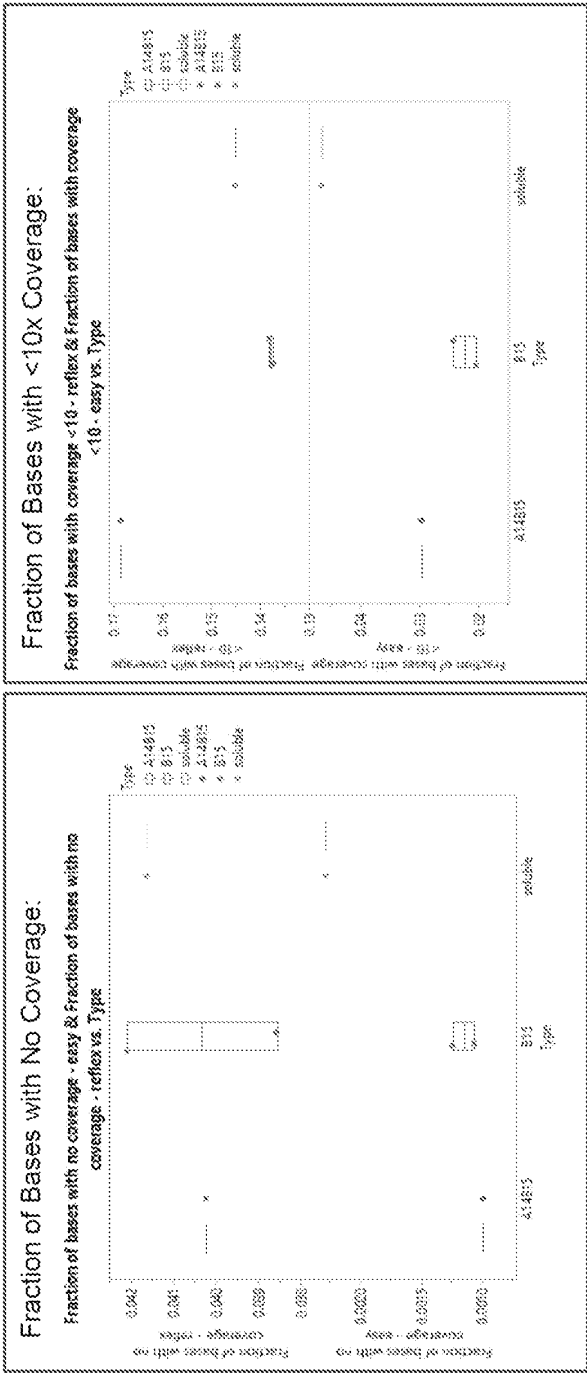


FIG. 11

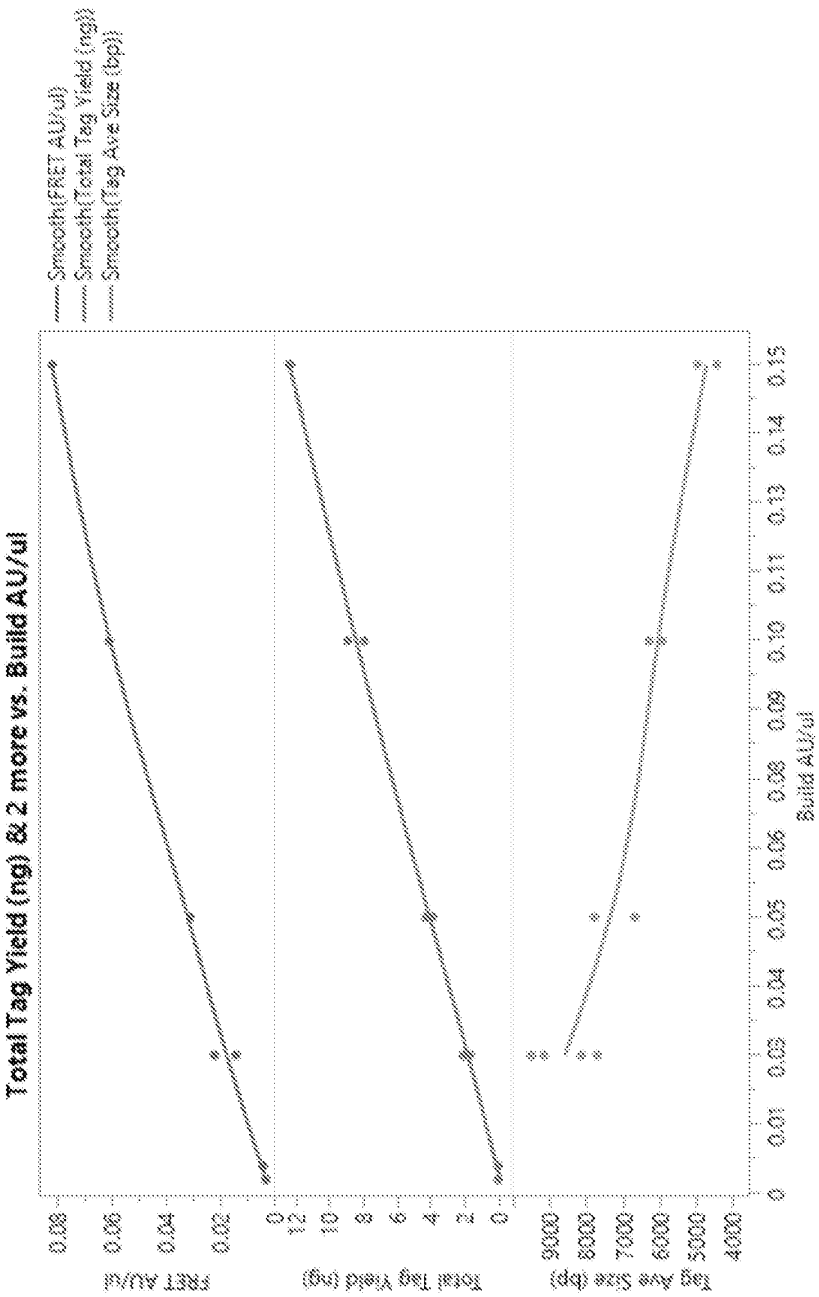


FIG. 12

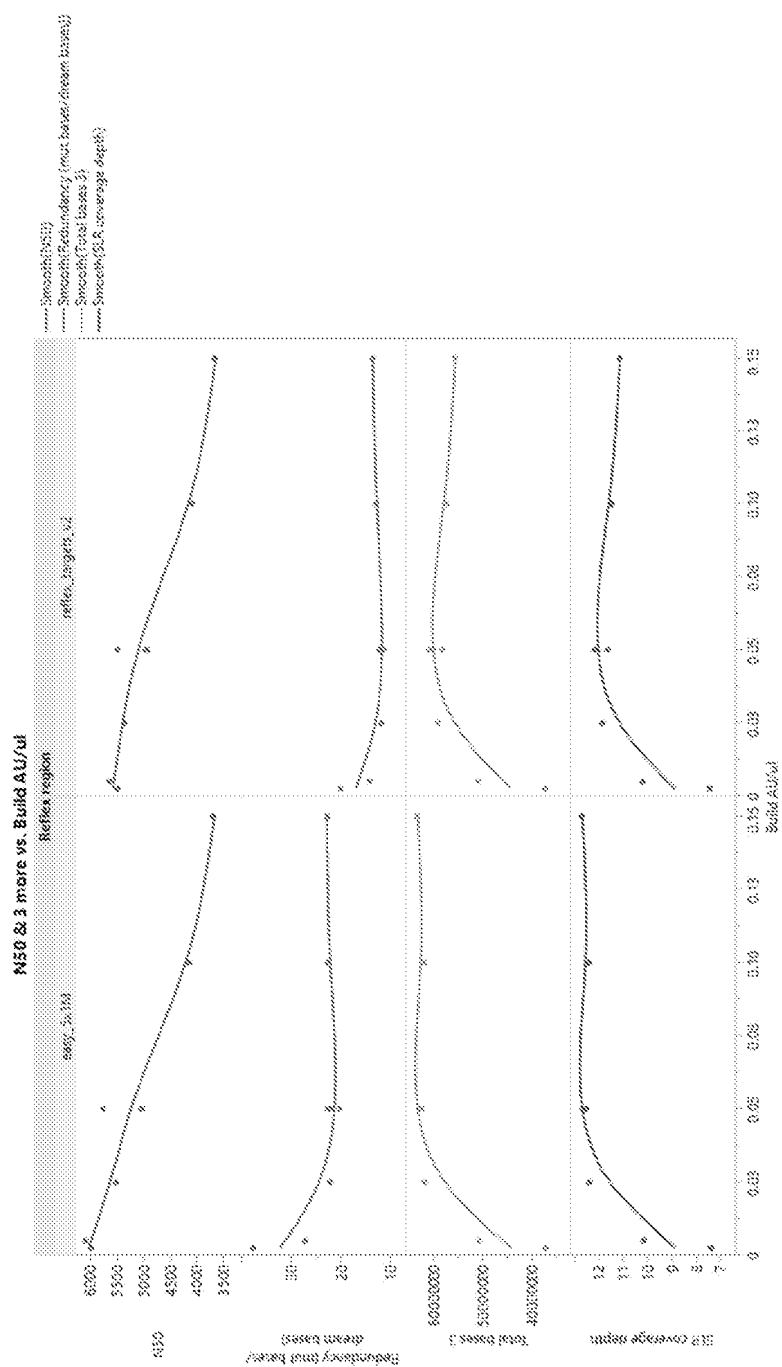


FIG. 13

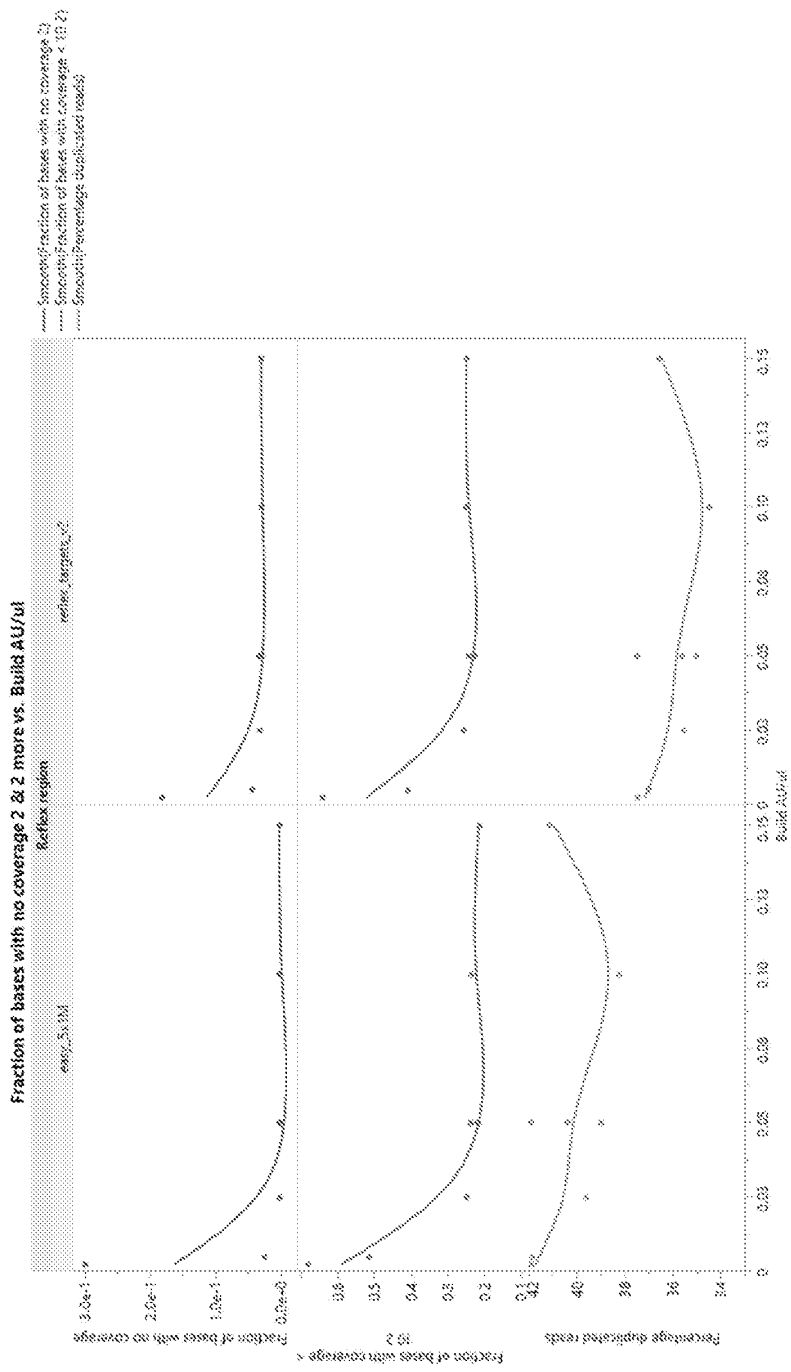


FIG. 14

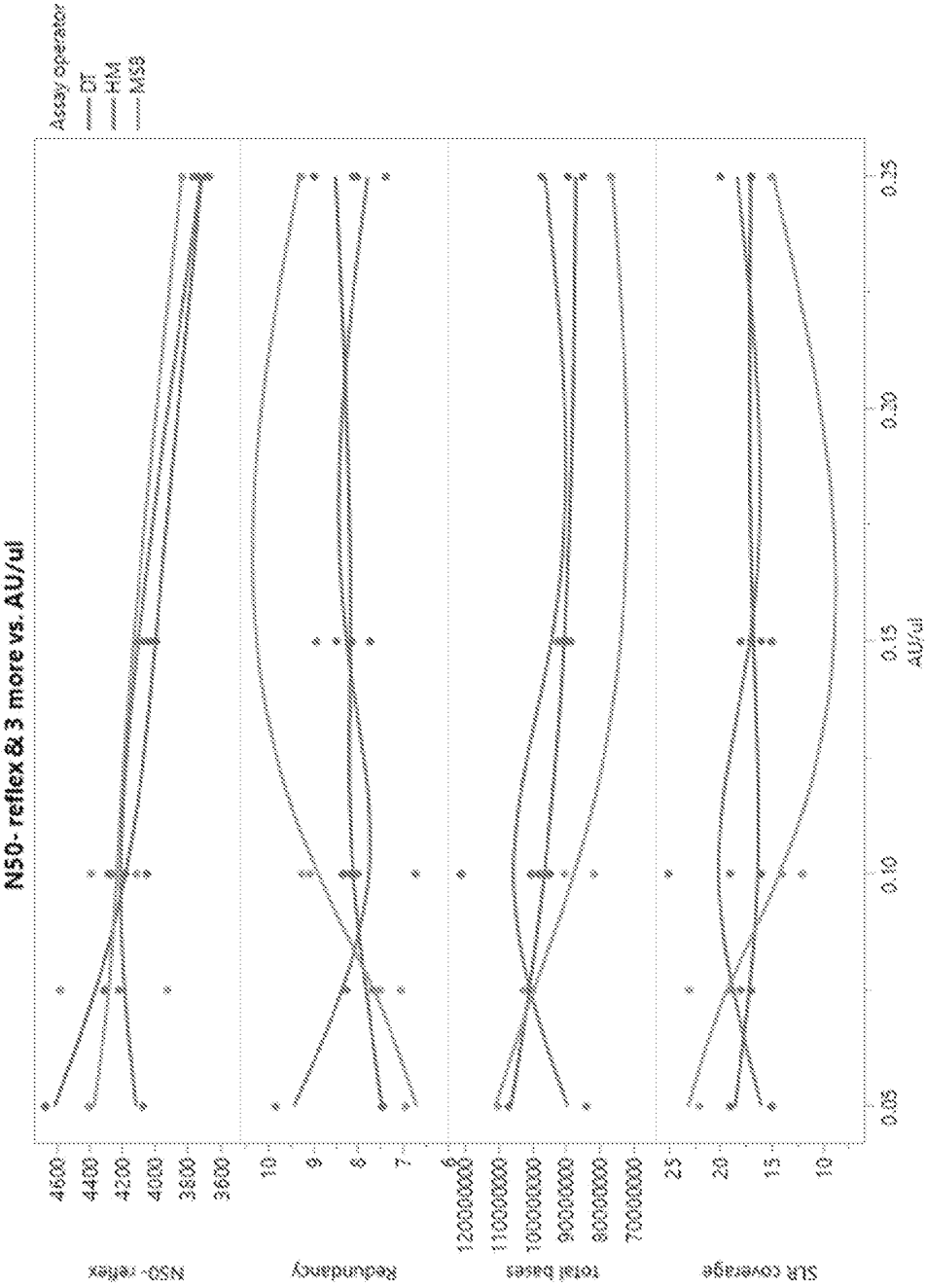
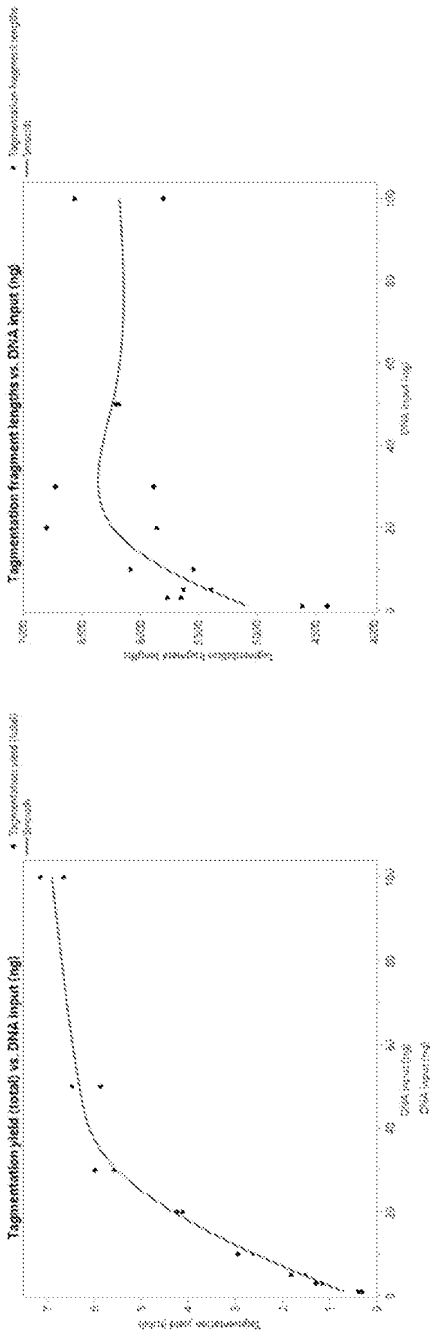
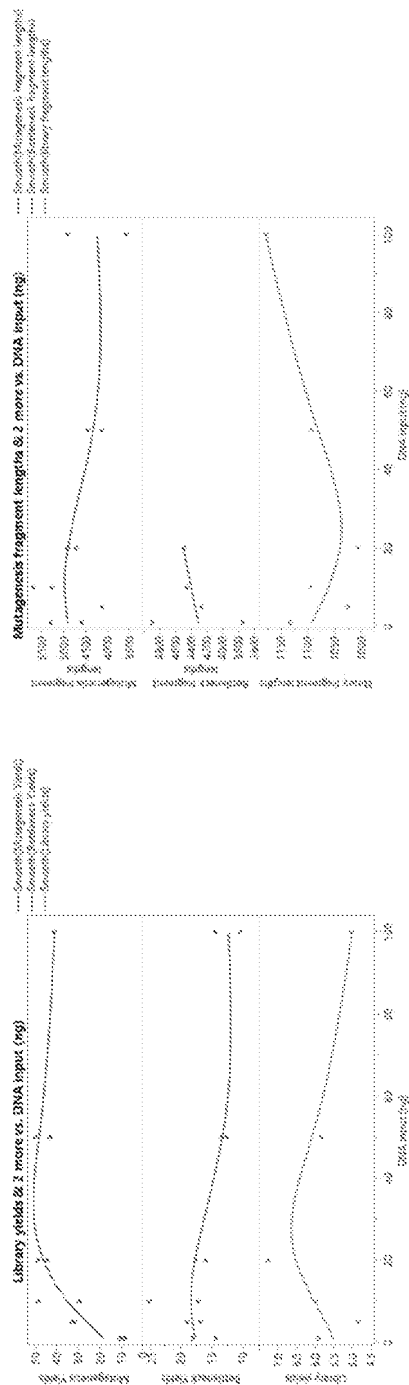


FIG. 15



• Yield and fragment size plateaus after 20-30ng of input DNA

FIG. 16



- Yields reach maximum around 20ng of DNA input, fragment sizes unaffected by increased DNA input
- Sequence 1ng, 10ng, 20ng and 100ng to determine cliff edges for metrics

FIG. 17

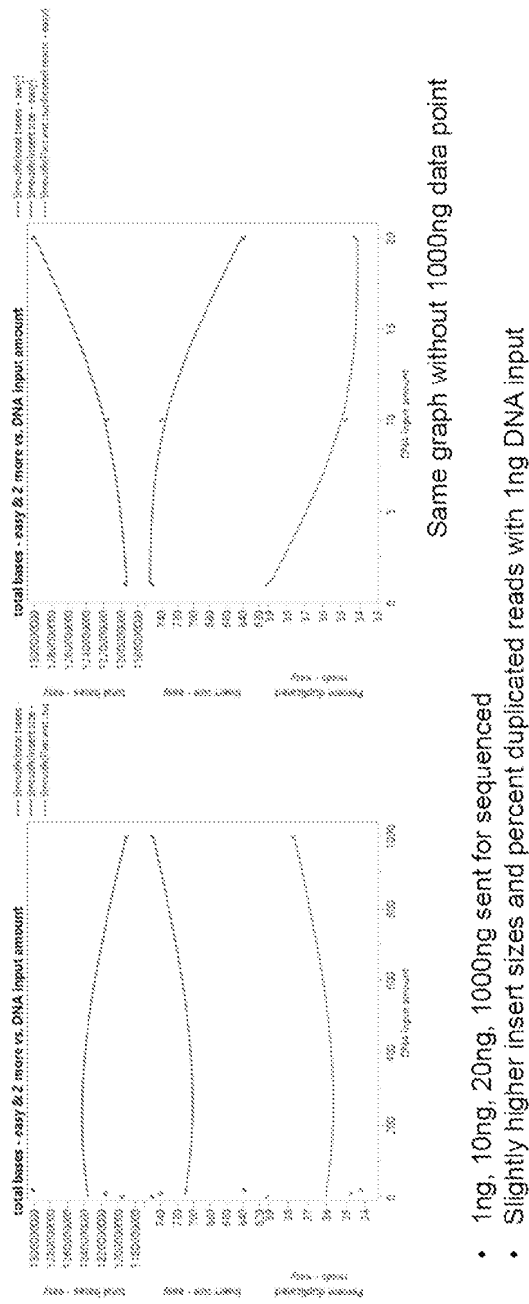
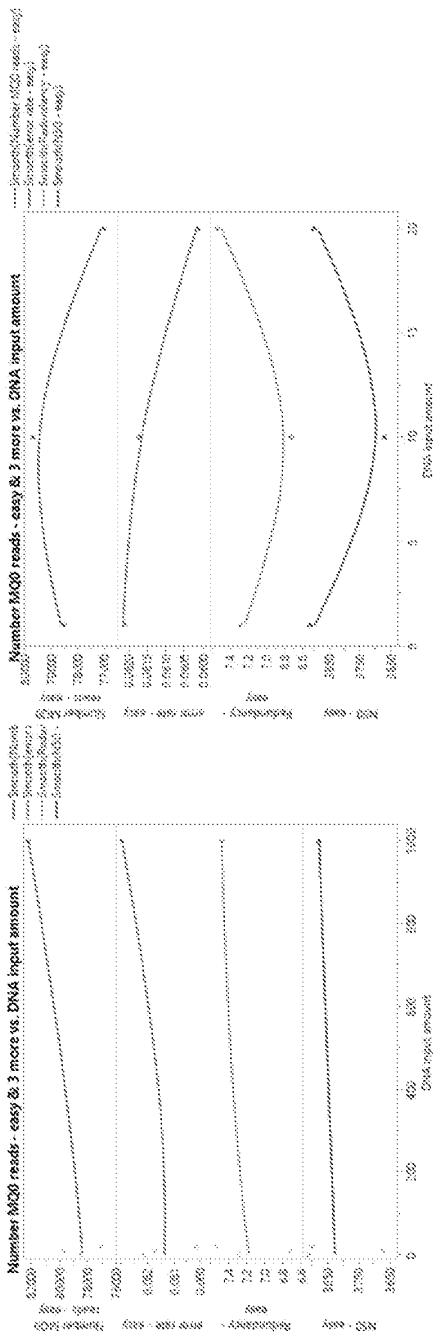
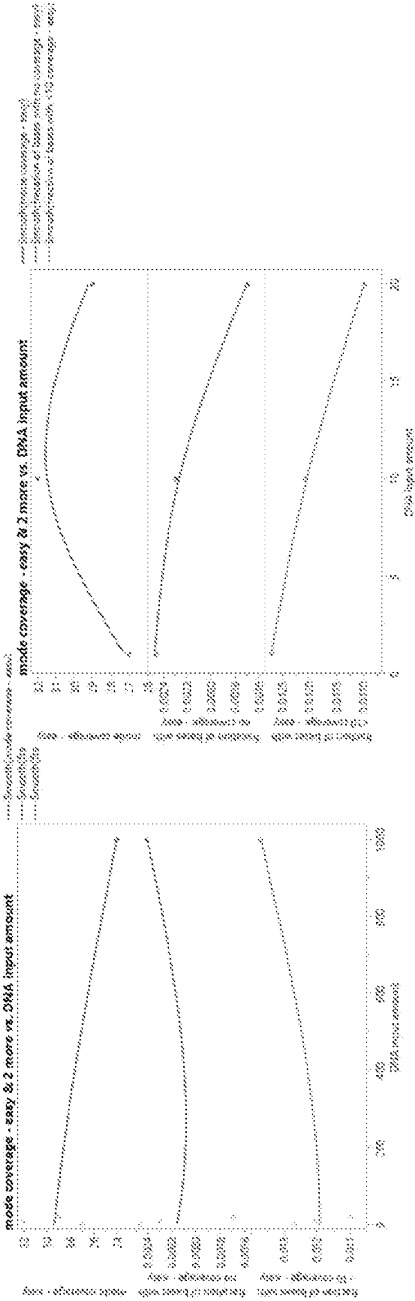


FIG. 18



Minimal differences observed in error rates, read quality, redundancy, or N50s

FIG. 19



- Similar coverage across all DNA input amounts, all points within normal variation
- Slight decrease in mode coverage as fraction with <0/10x increases

FIG. 20

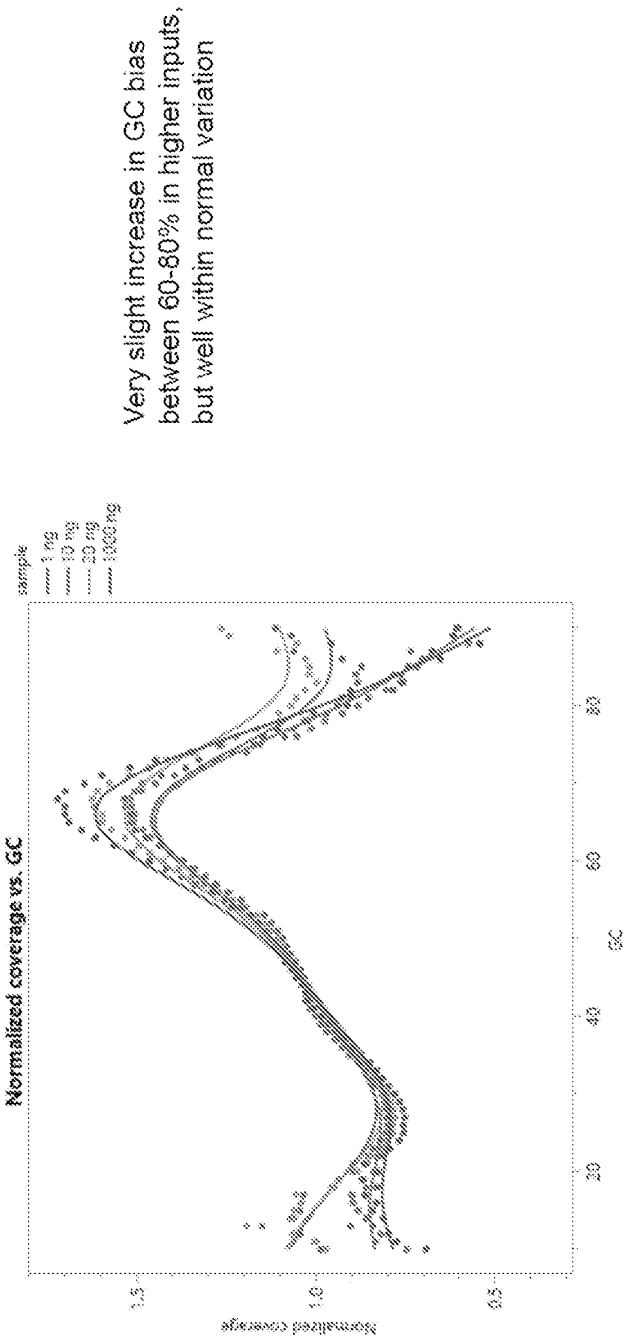


FIG. 21

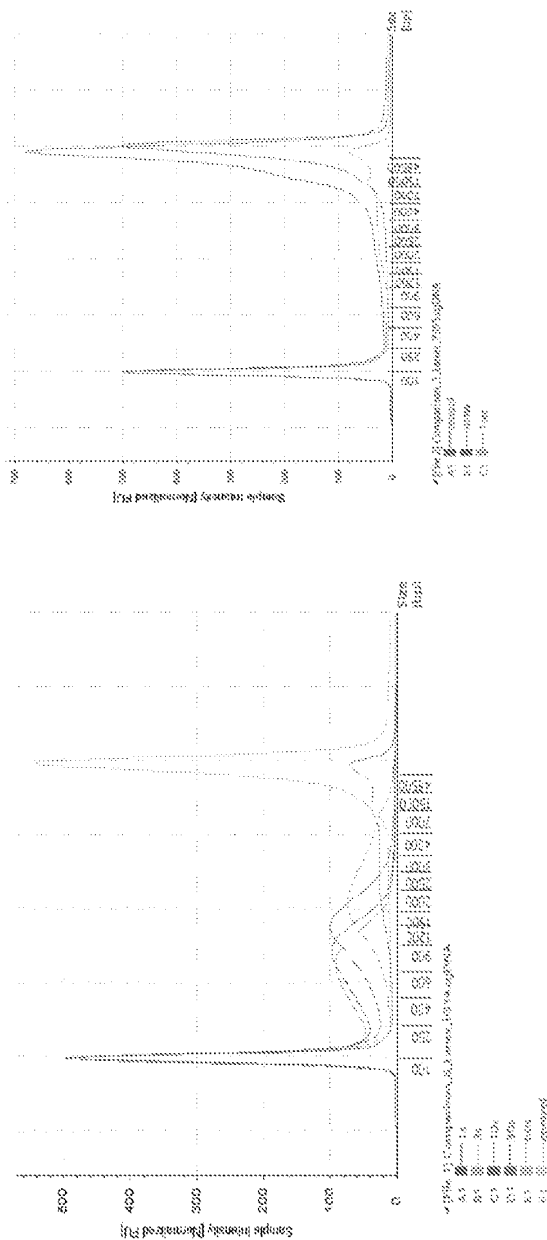
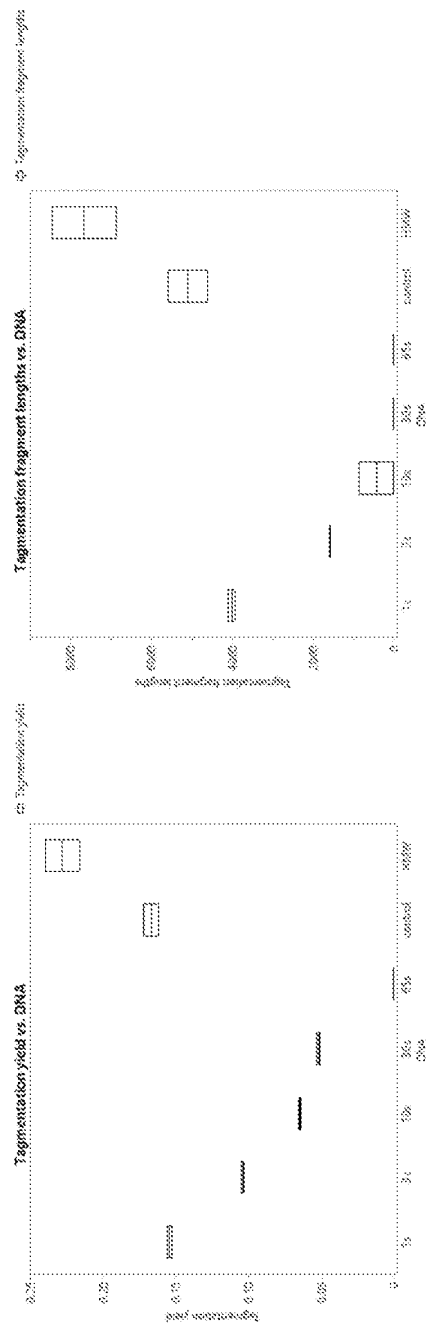
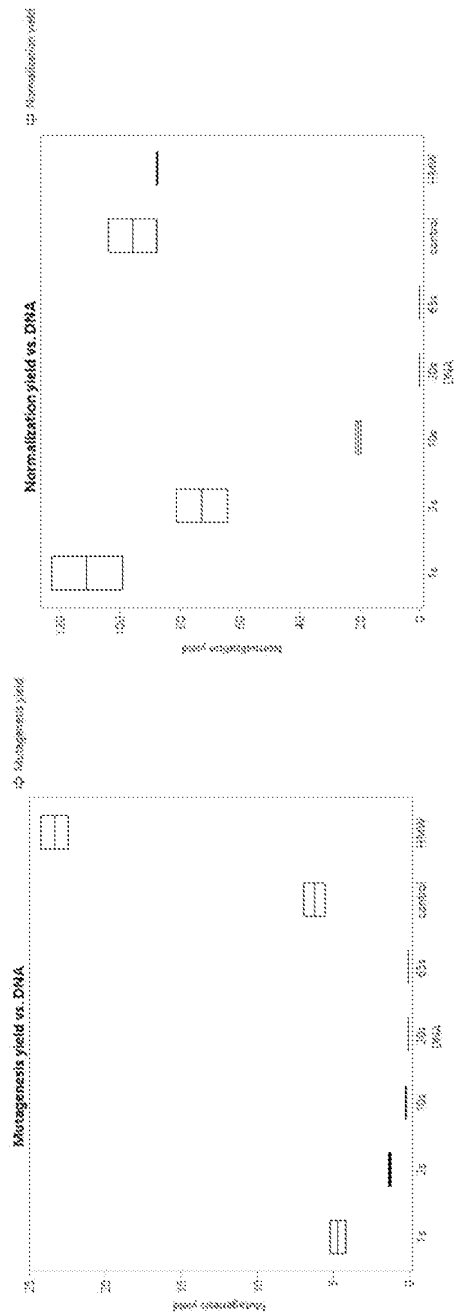


FIG. 22



- 1 second covaris-sheared DNA has similar fragment size and yield to control
- >1 second shearing quickly reduces size and yield

FIG. 23



• Mutagenesis PCR yield sharply reduced at >1 second shearing

FIG. 24A

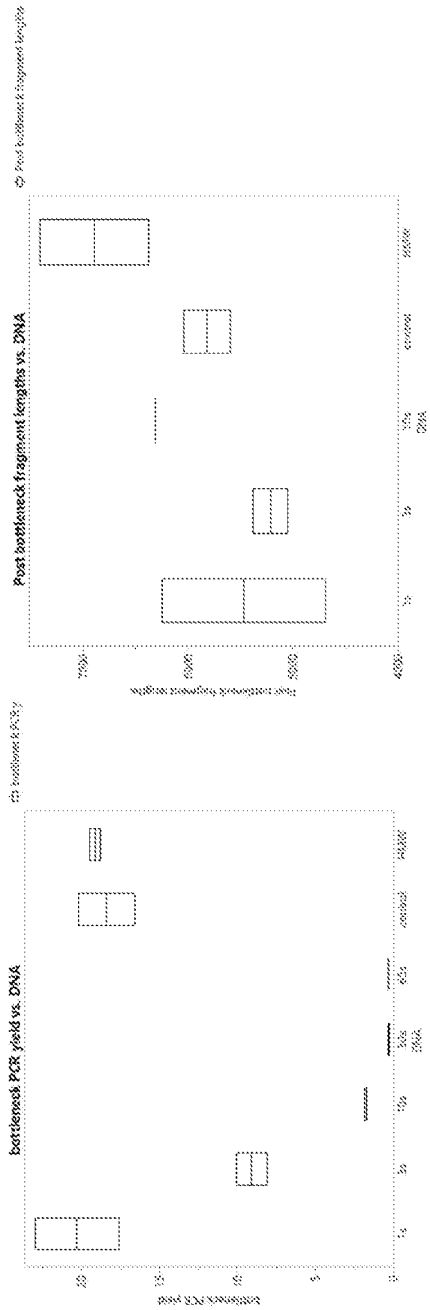
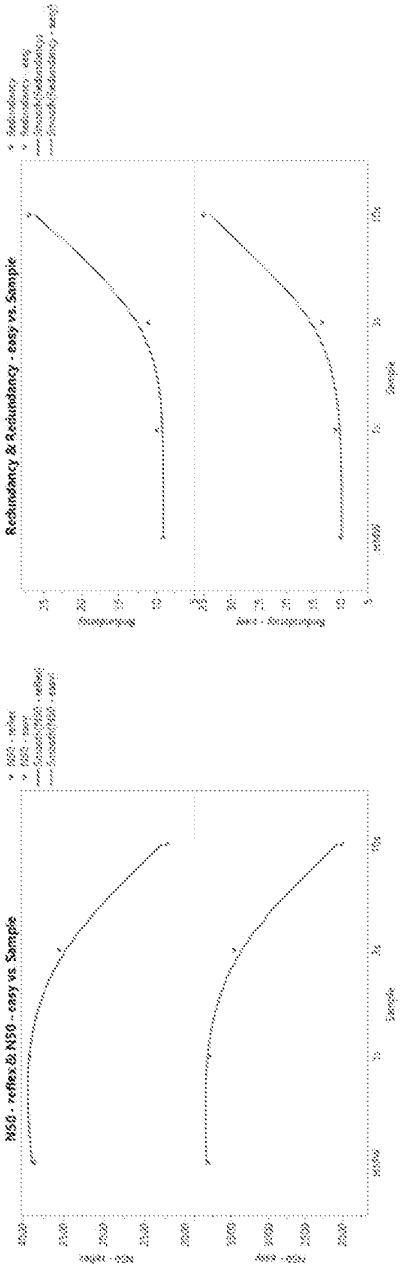
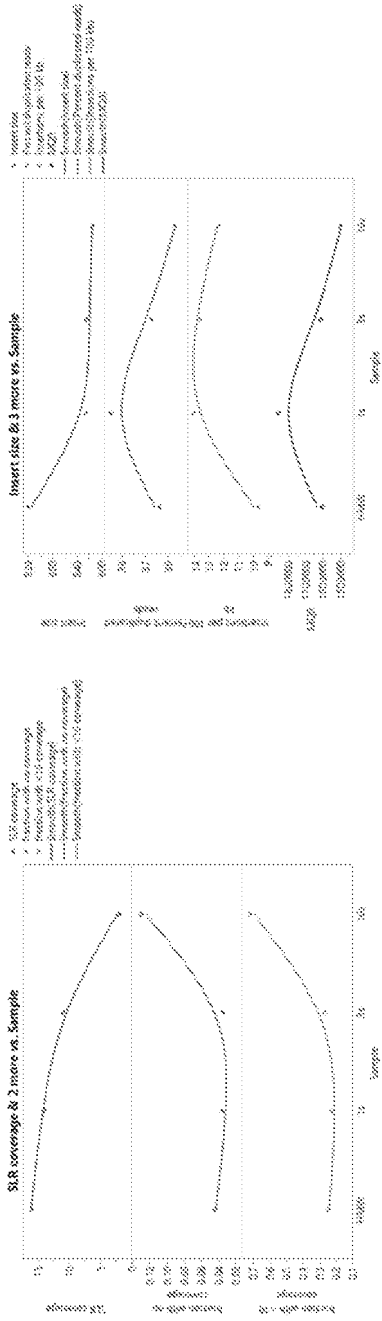


FIG. 24B



• N50s decline and redundancy increases at > 3 seconds shearing

FIG. 25



• Coverage metrics decline > 3 seconds shearing

FIG. 26

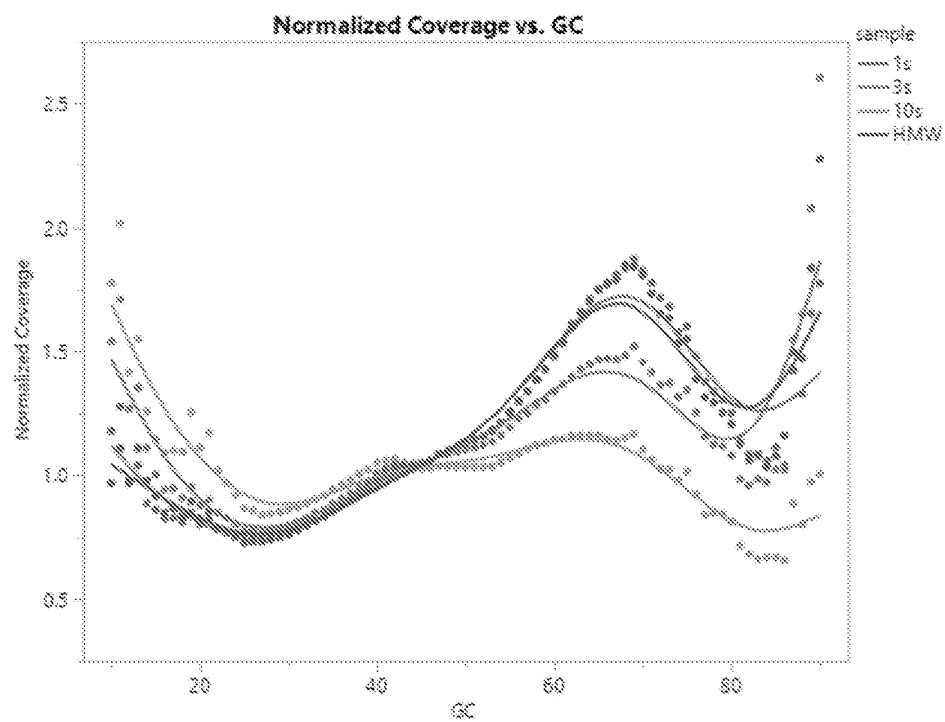
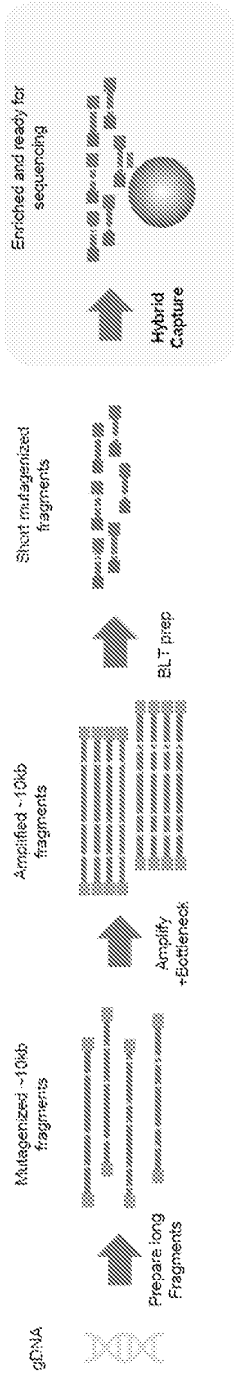


FIG. 27

Short Fragment Enrichment



Long Fragment Enrichment

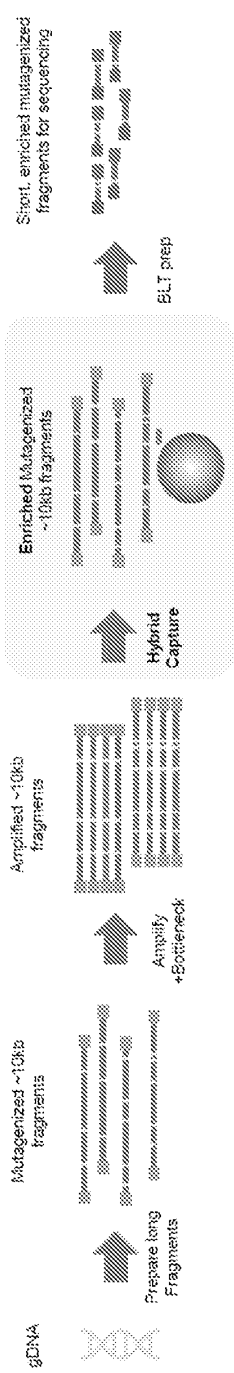


FIG. 28

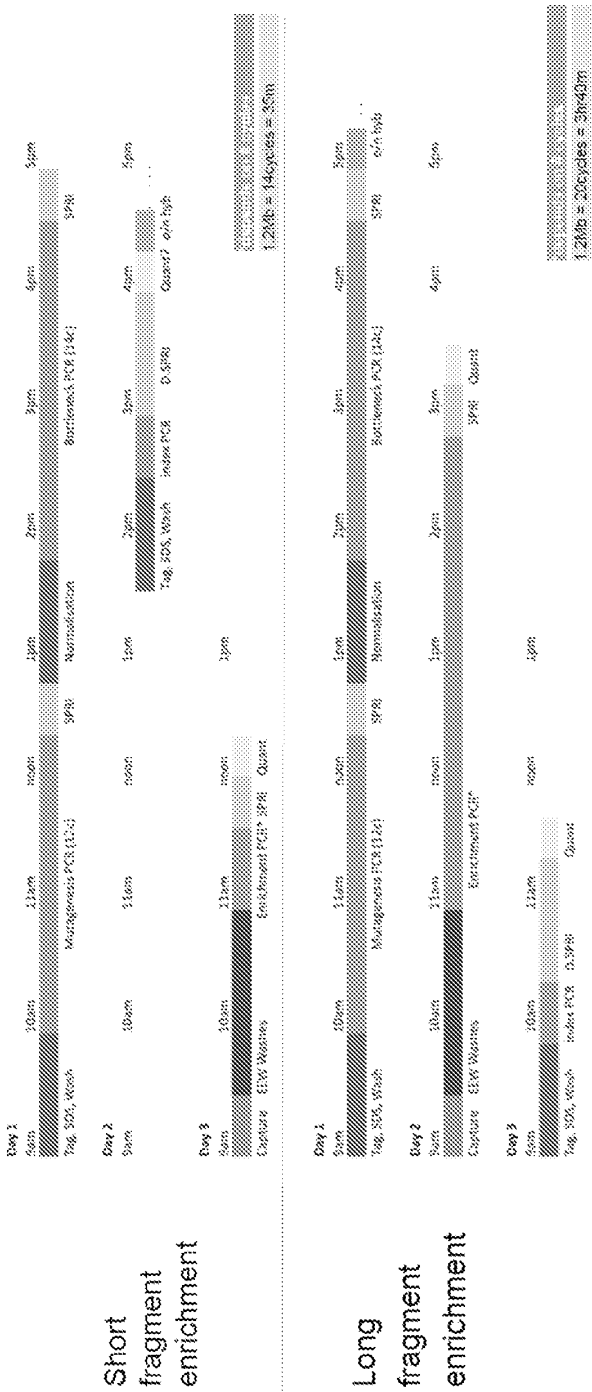


FIG. 29

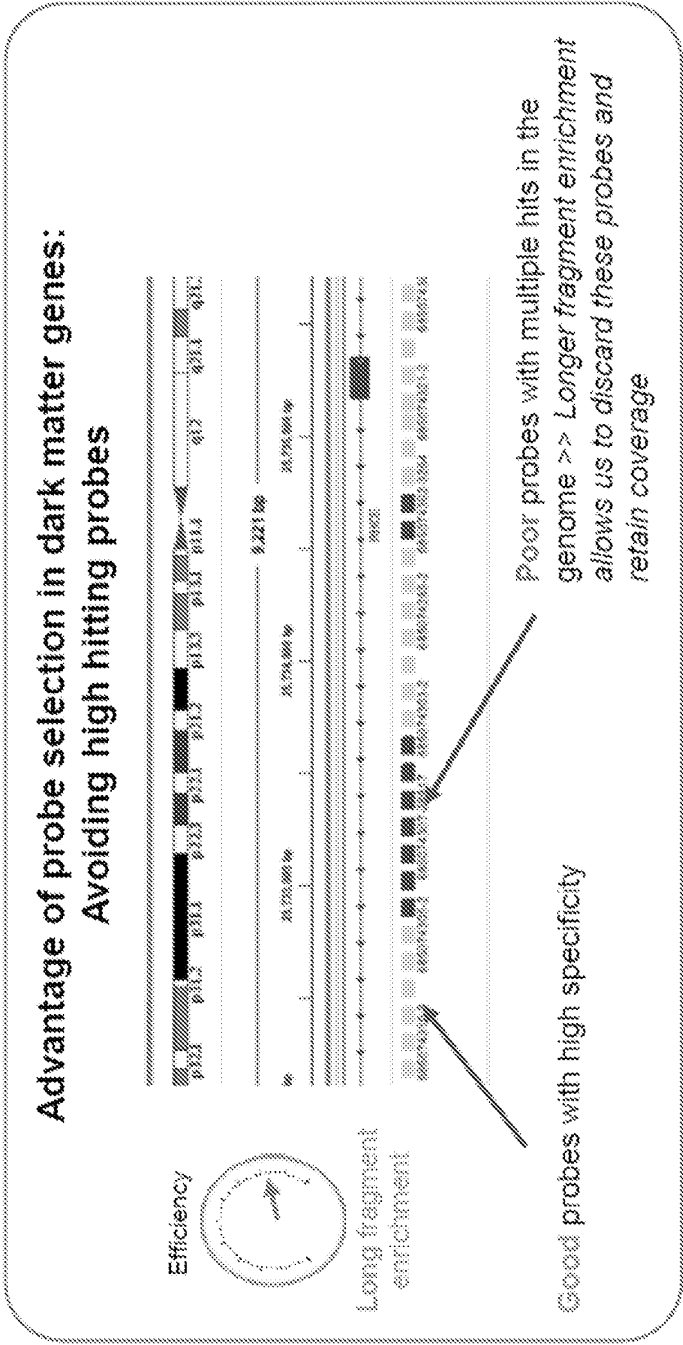


FIG. 30

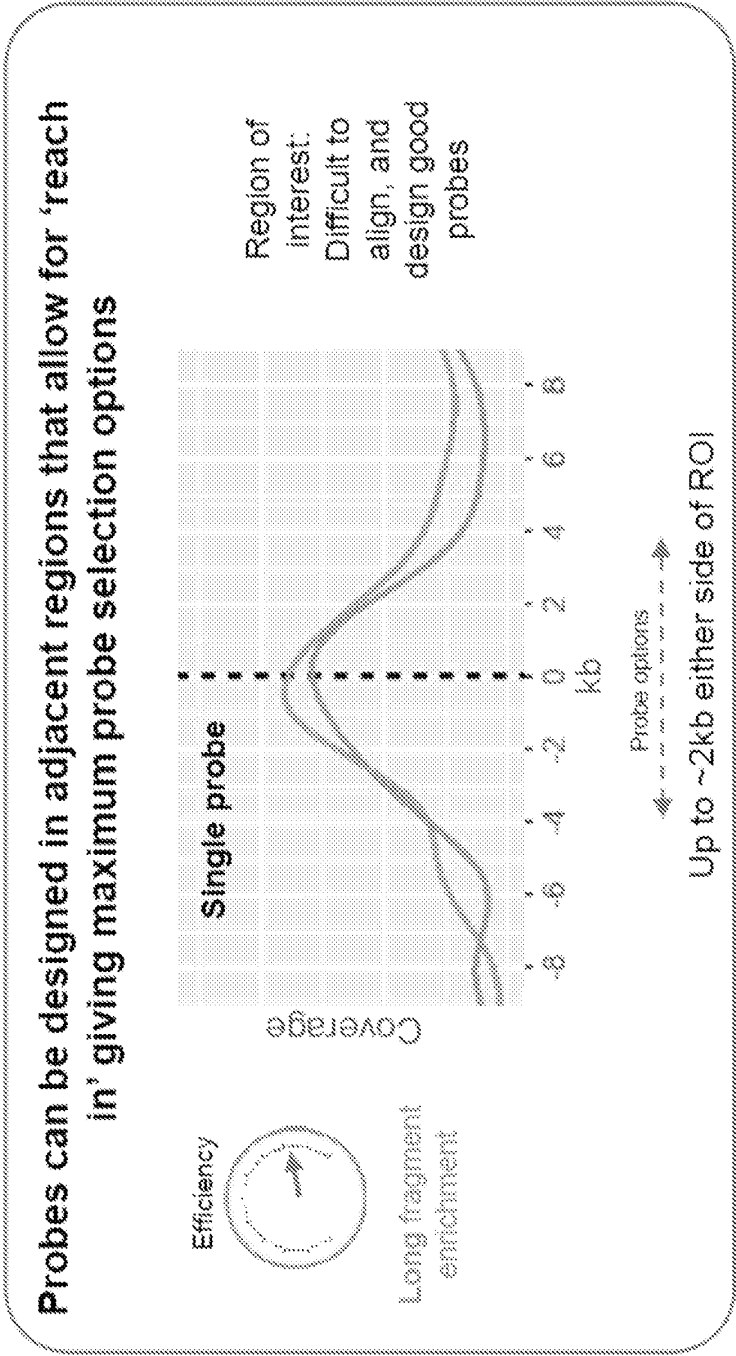


FIG. 31

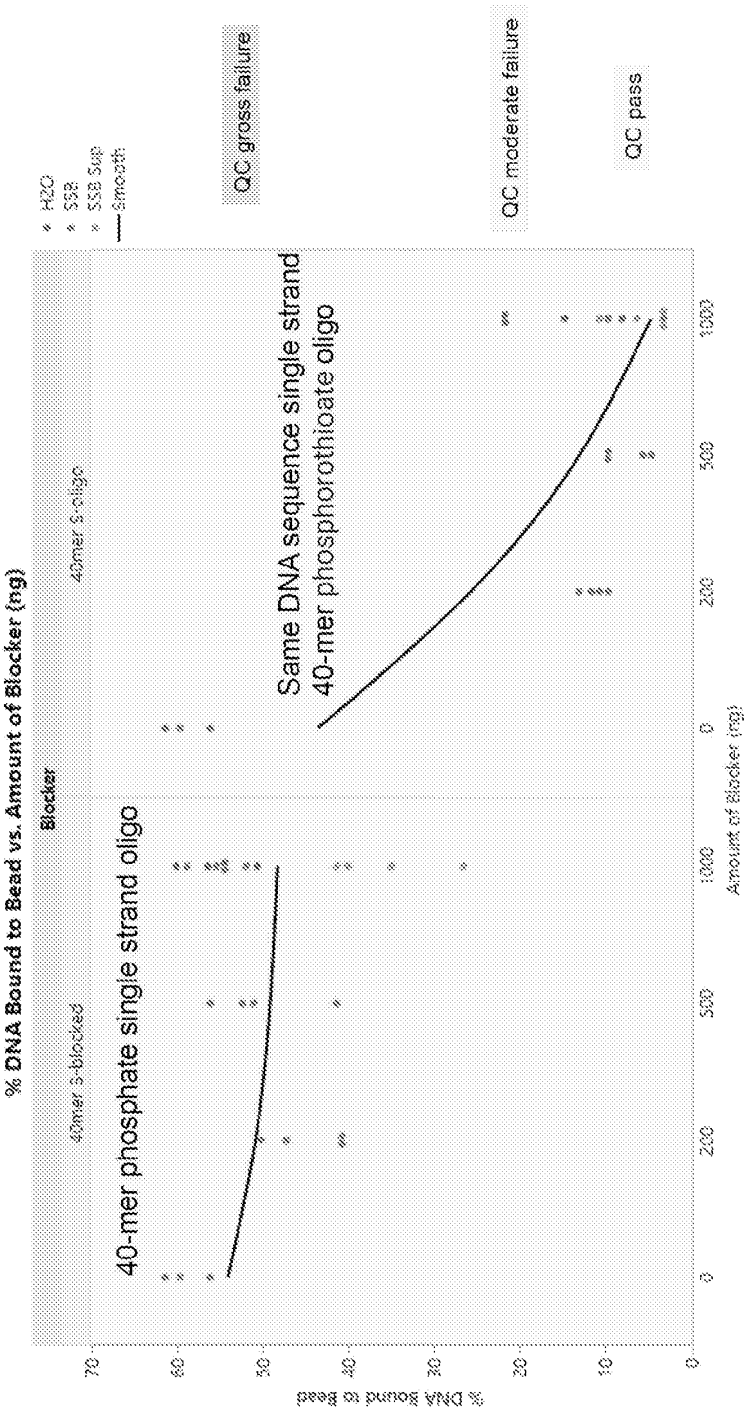


FIG. 32A

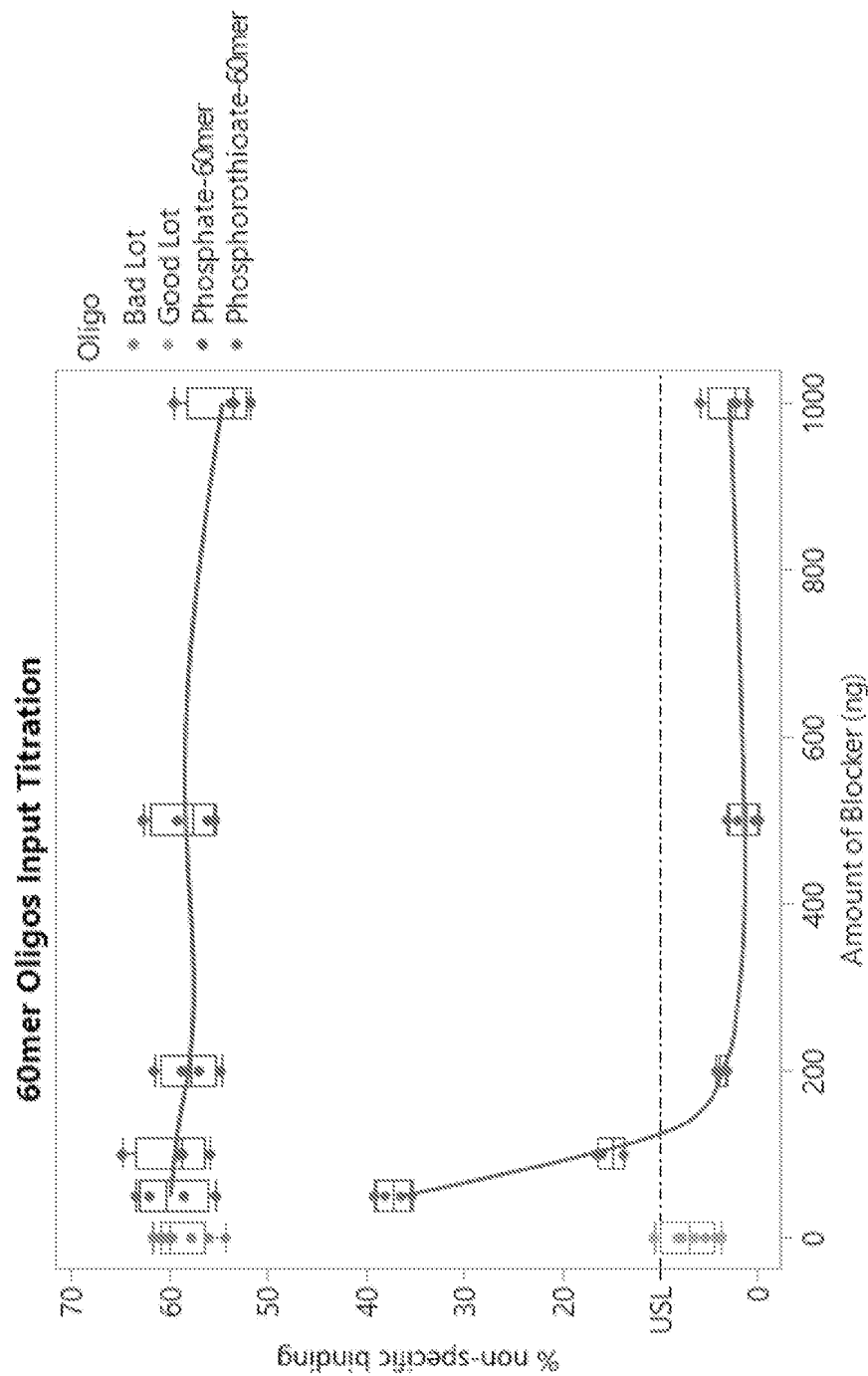


FIG. 32B

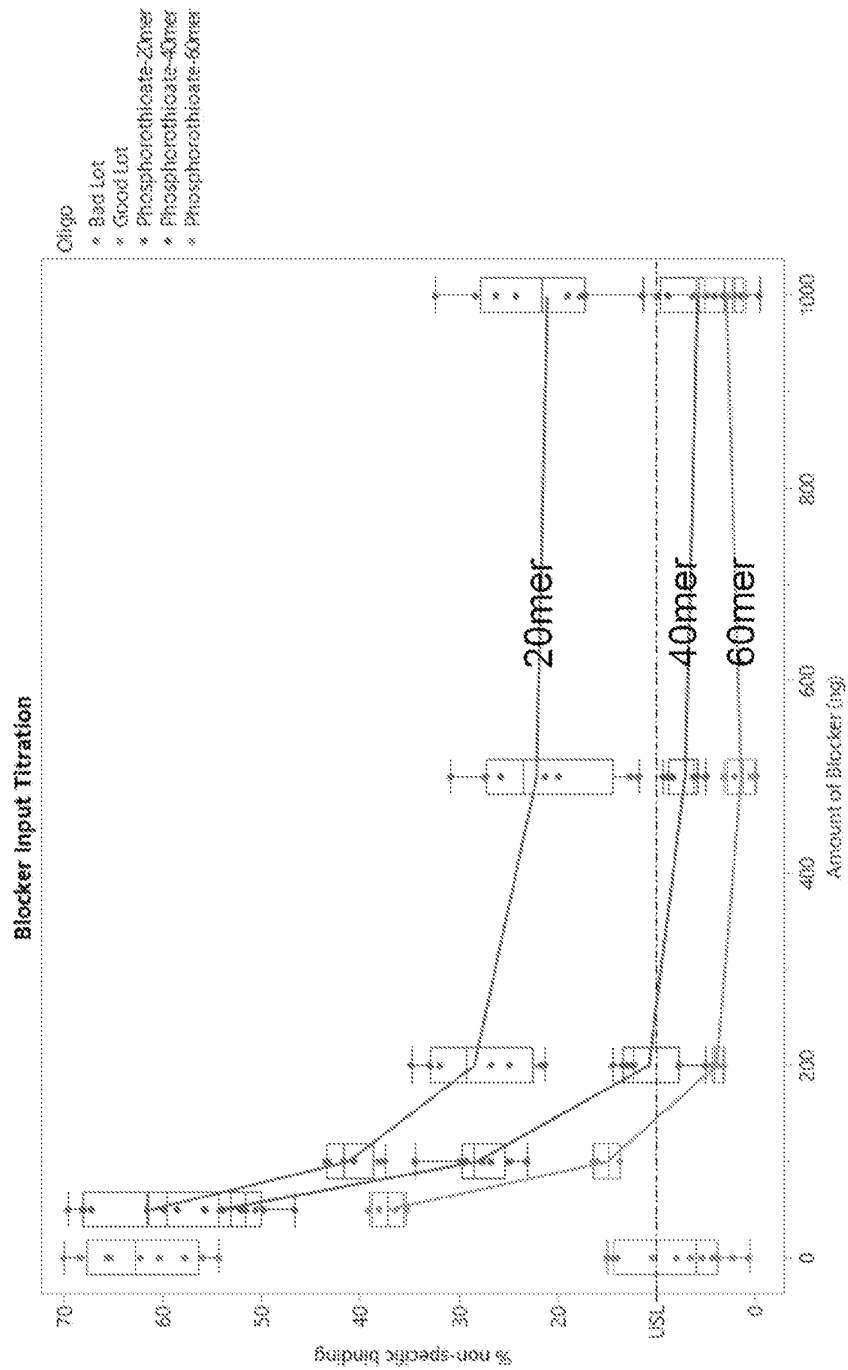


FIG. 33

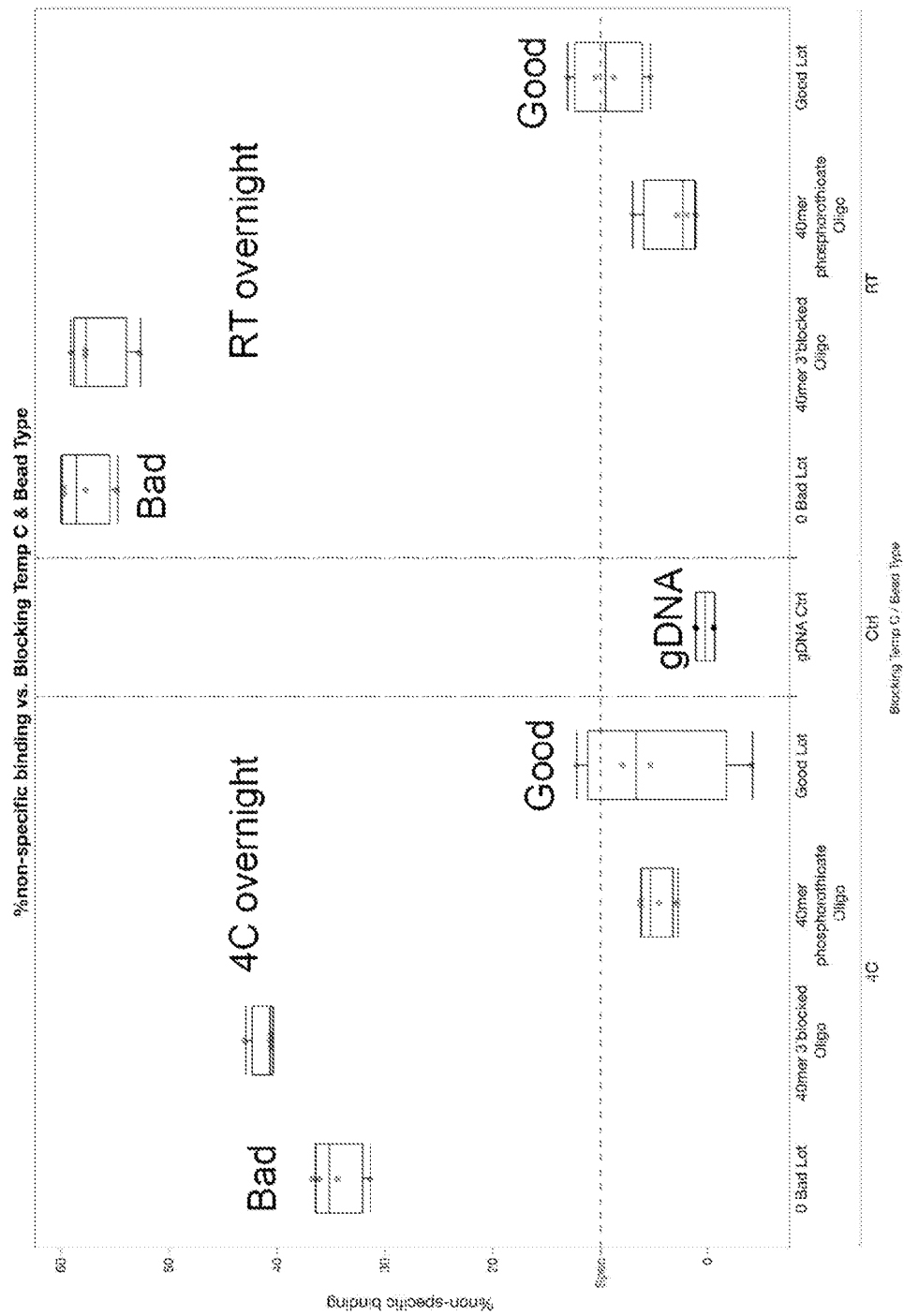


FIG. 34

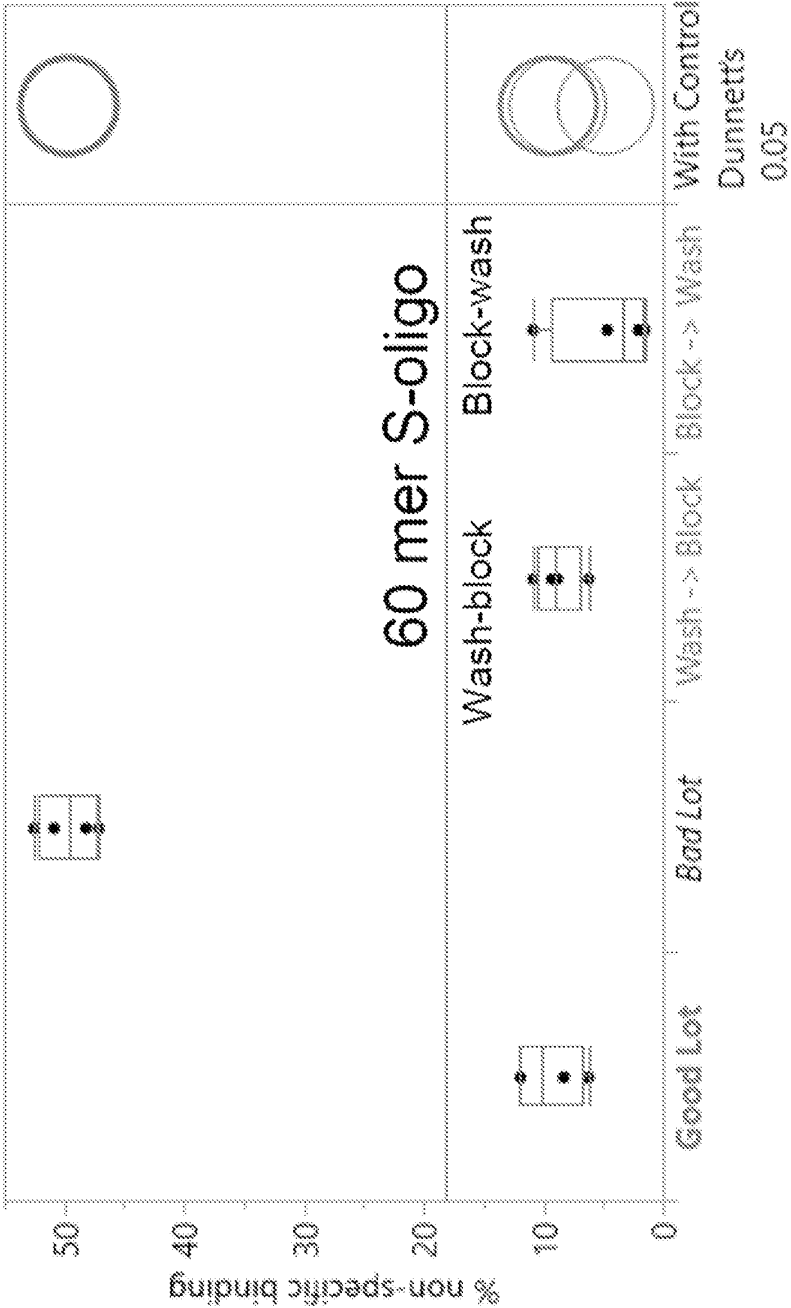


FIG. 35

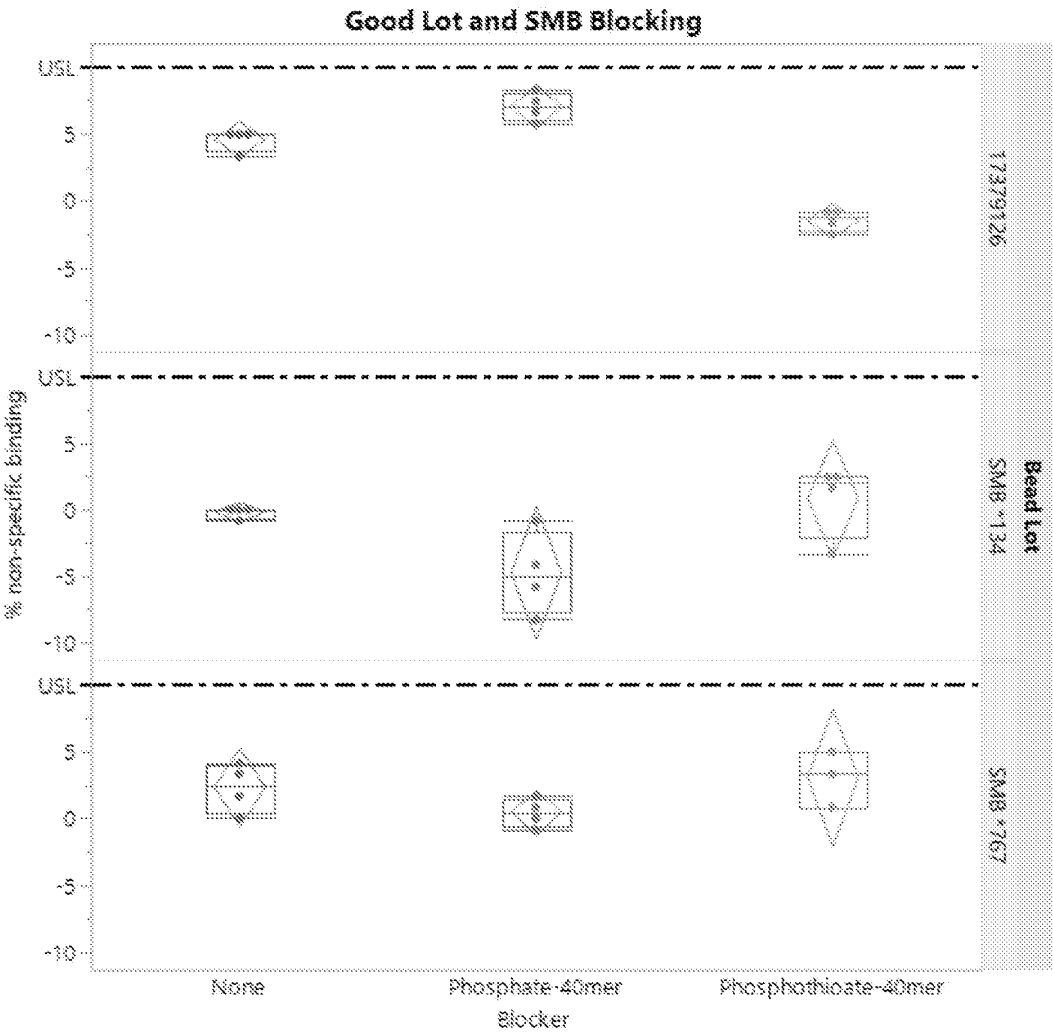


FIG. 36

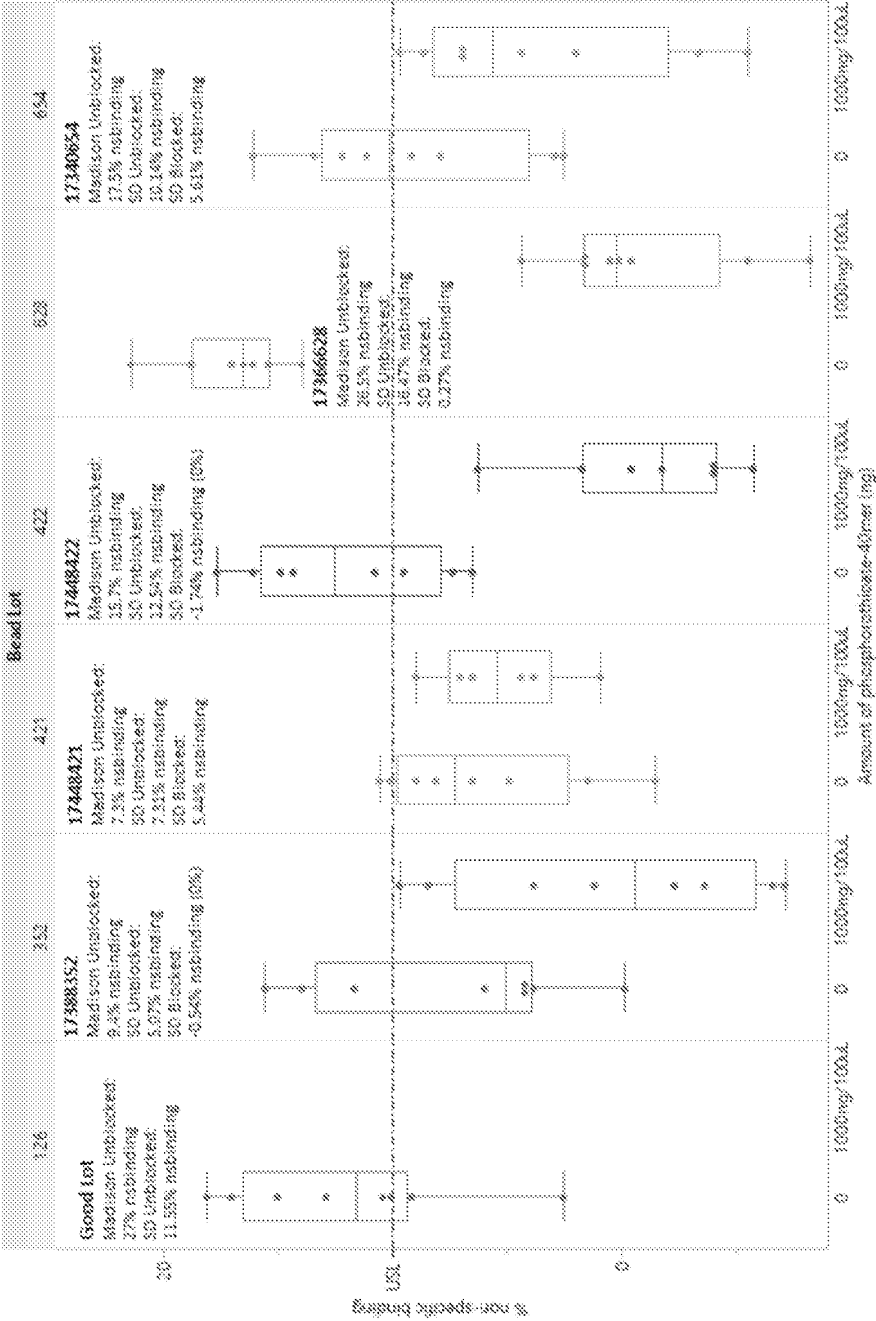


FIG. 37

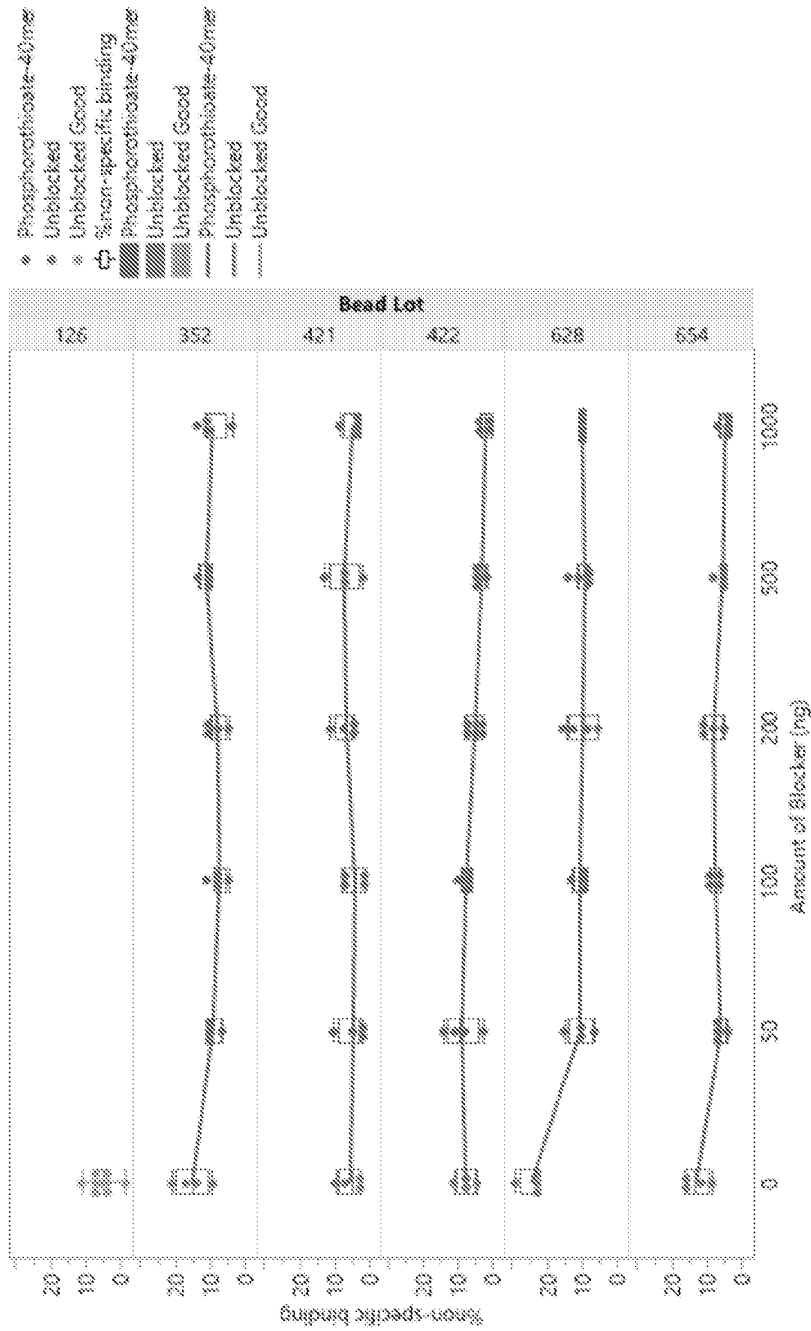


FIG. 38

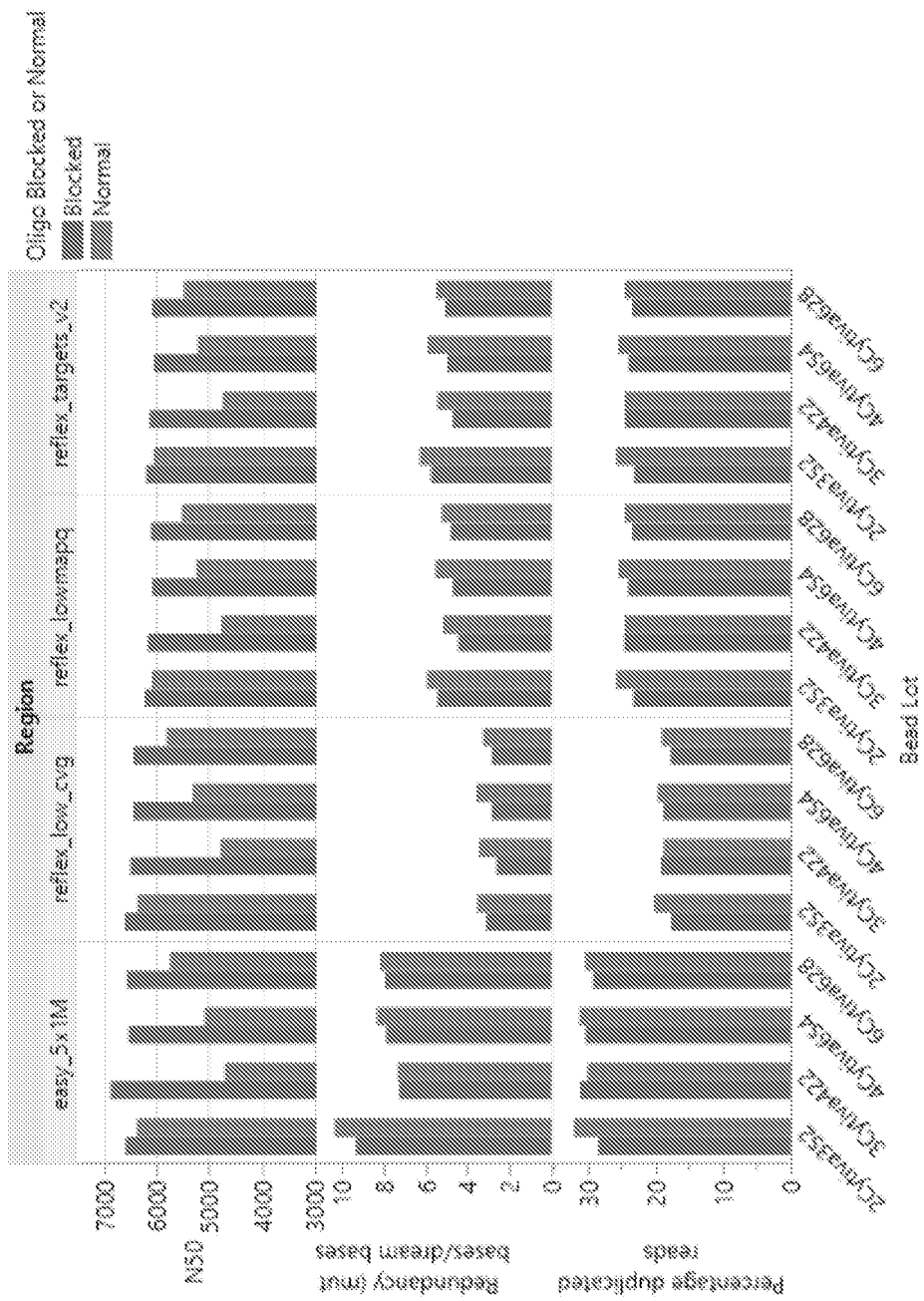
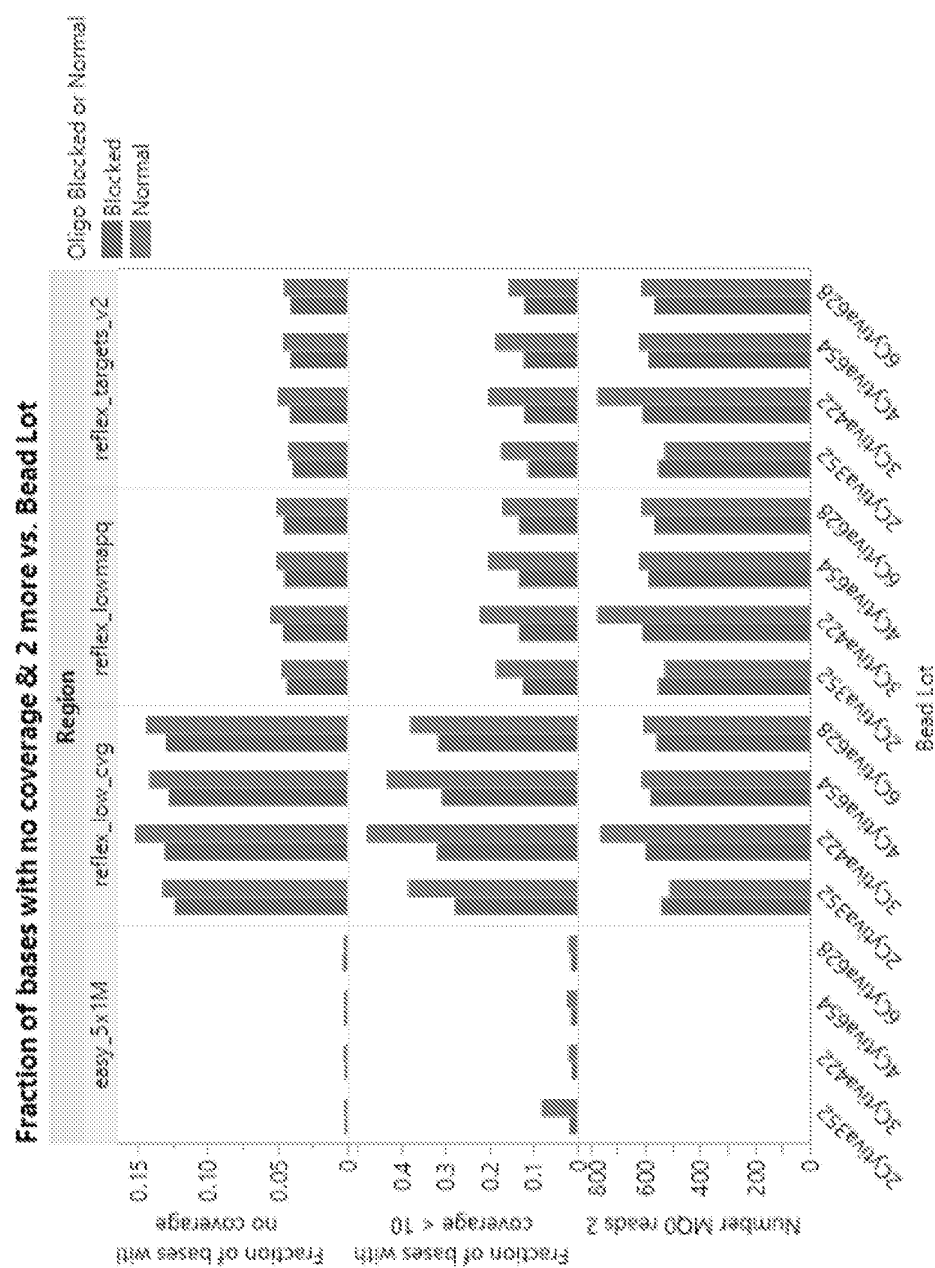


FIG. 39



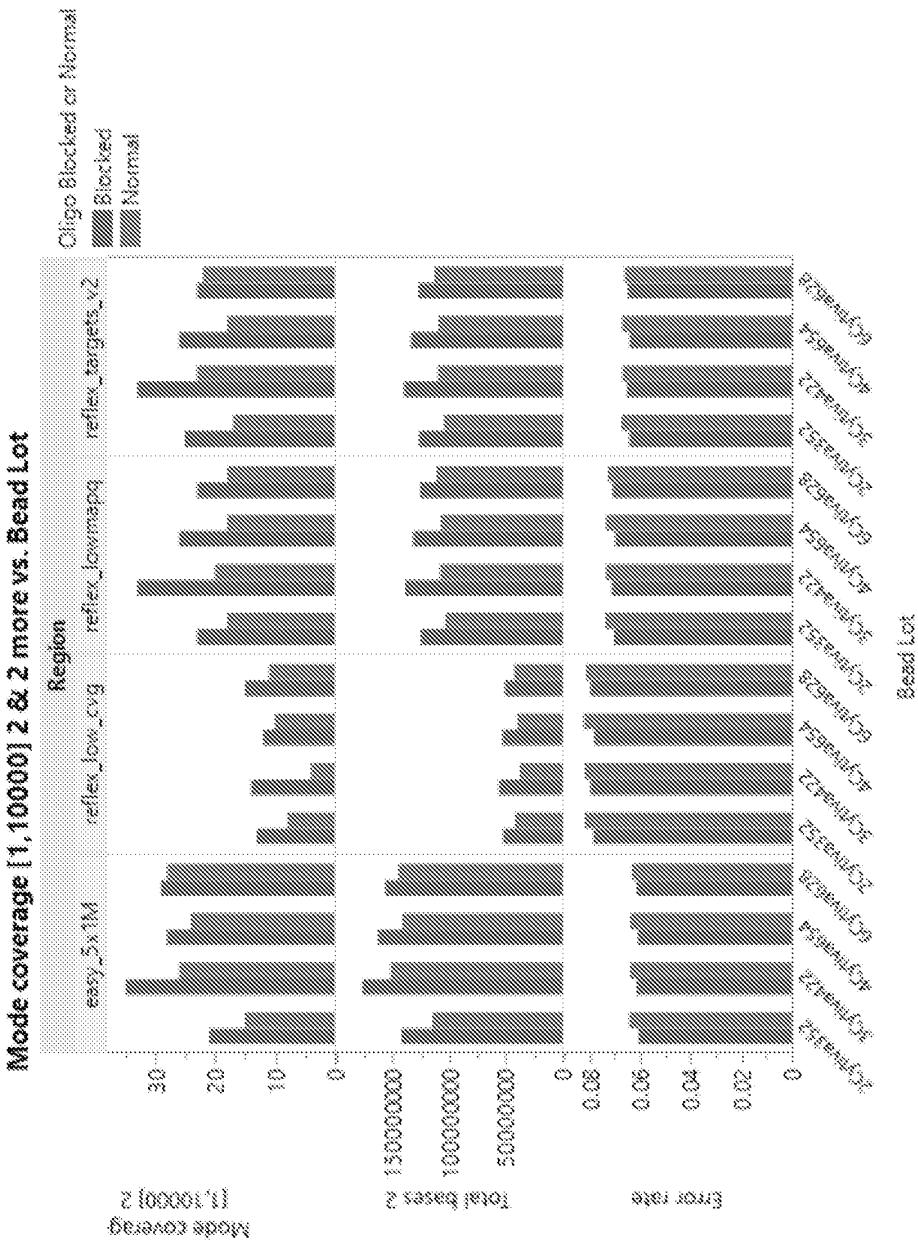


FIG. 40B

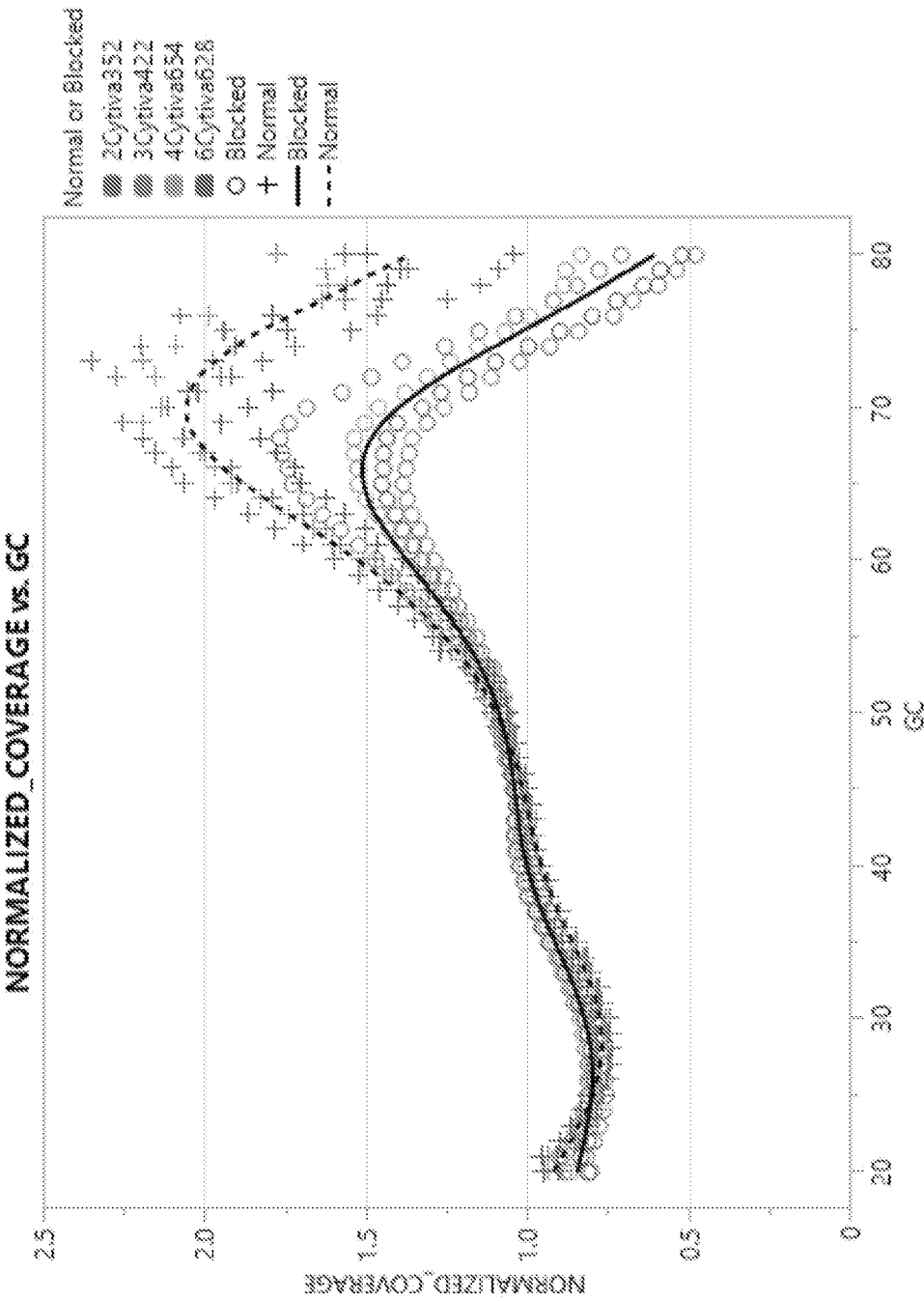


FIG. 41

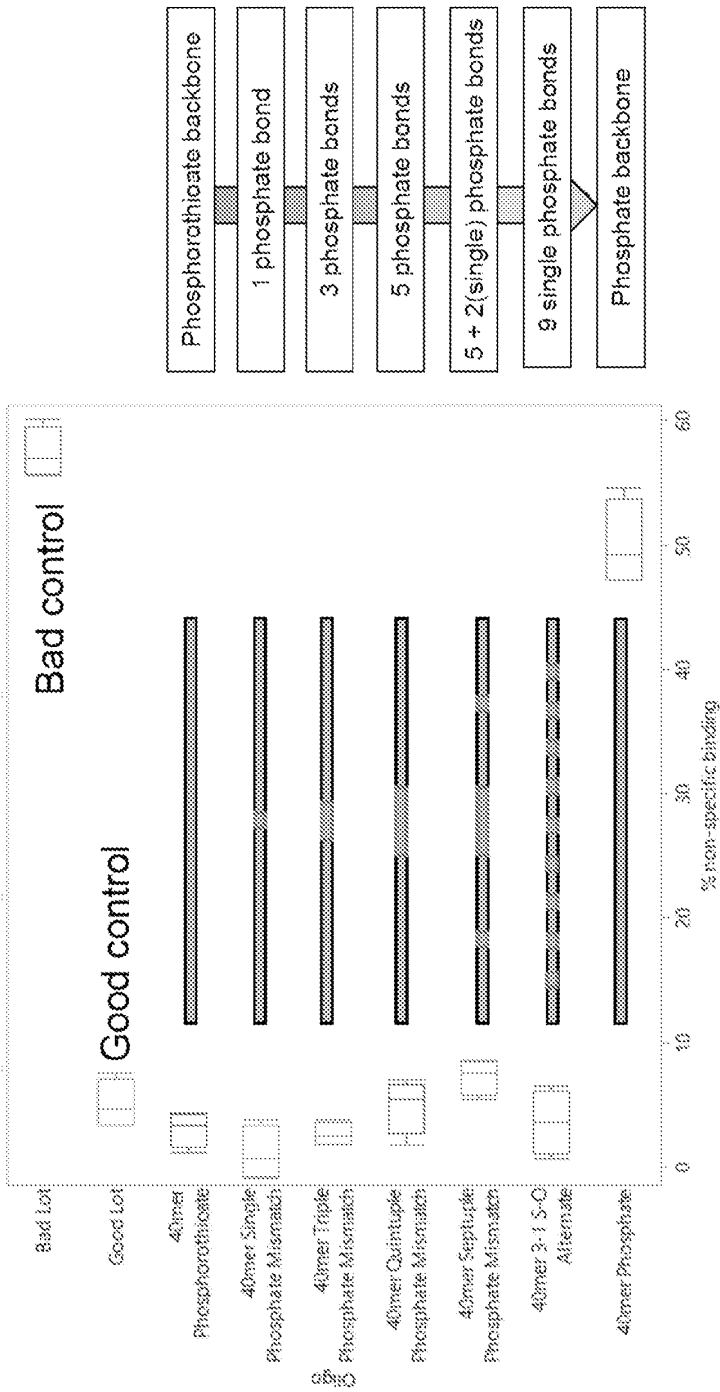


FIG. 42

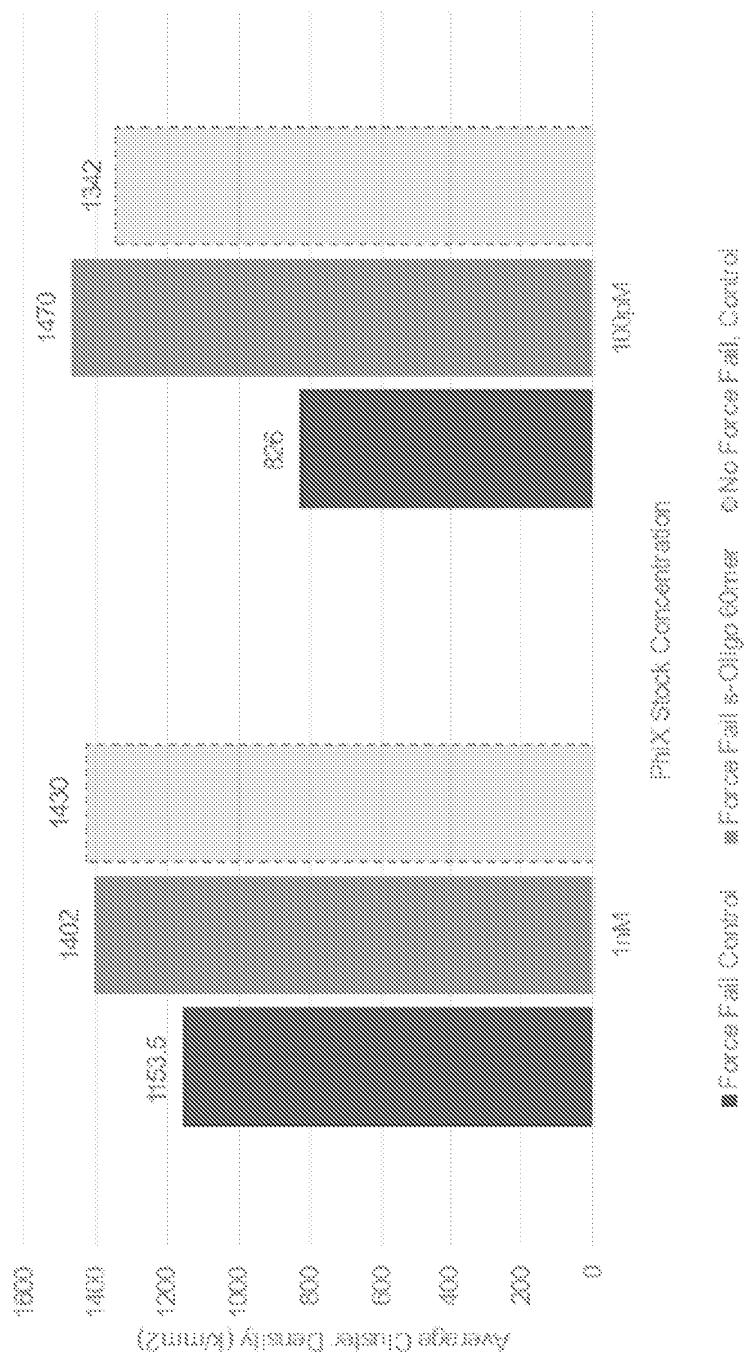


FIG. 43

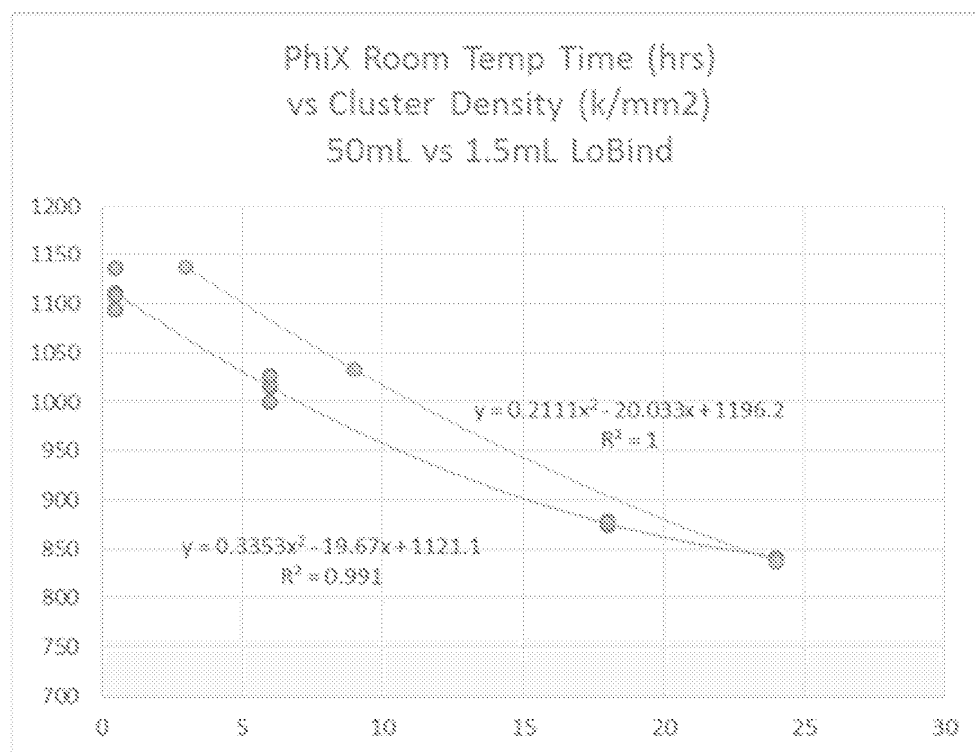


FIG. 44

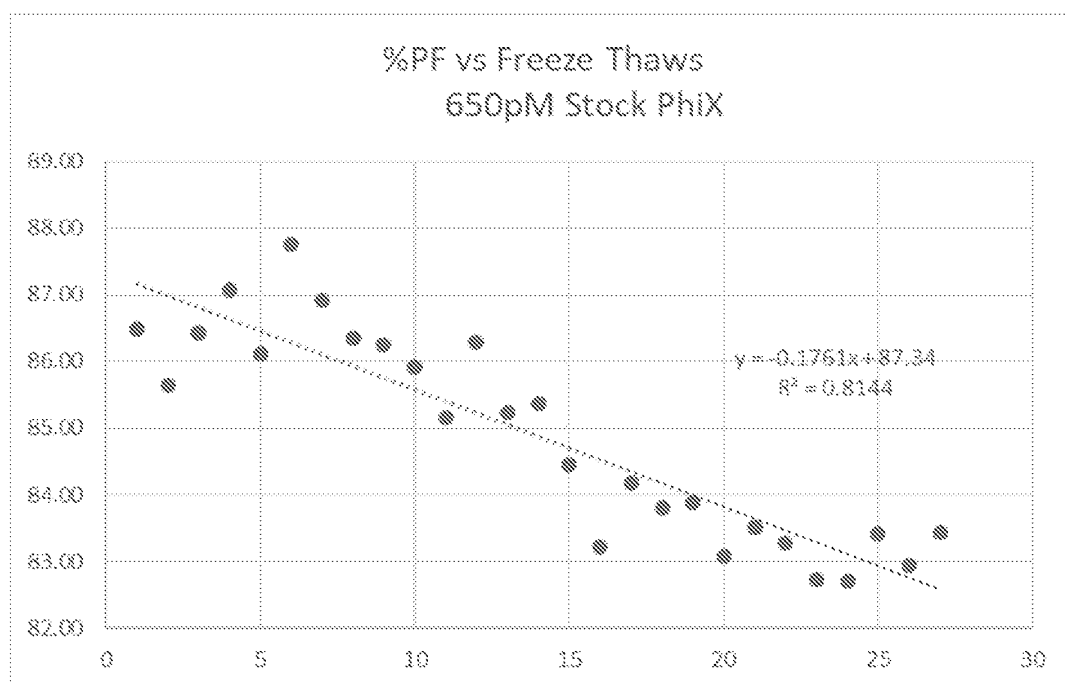


FIG. 45

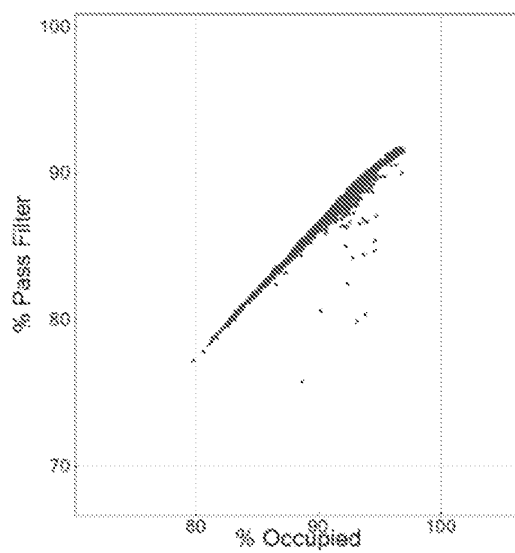


FIG 46A

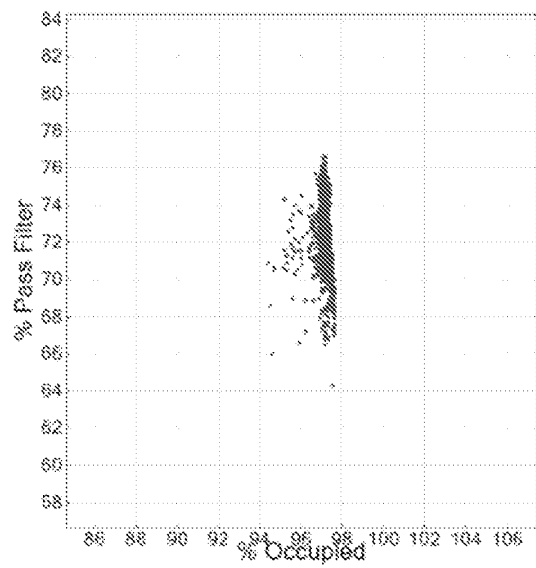


FIG. 46B

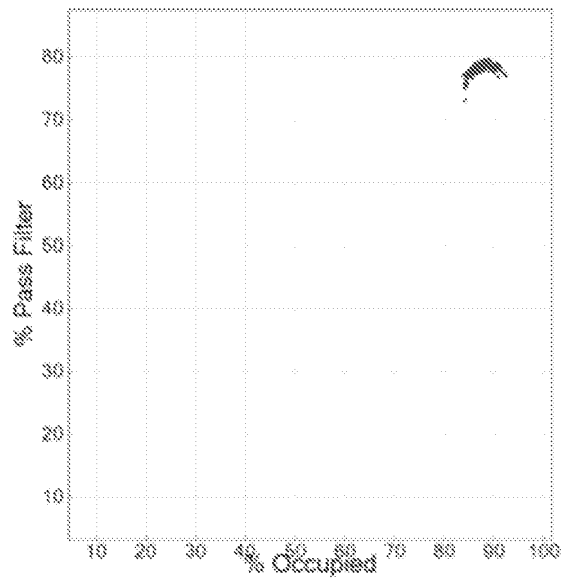


FIG. 46C

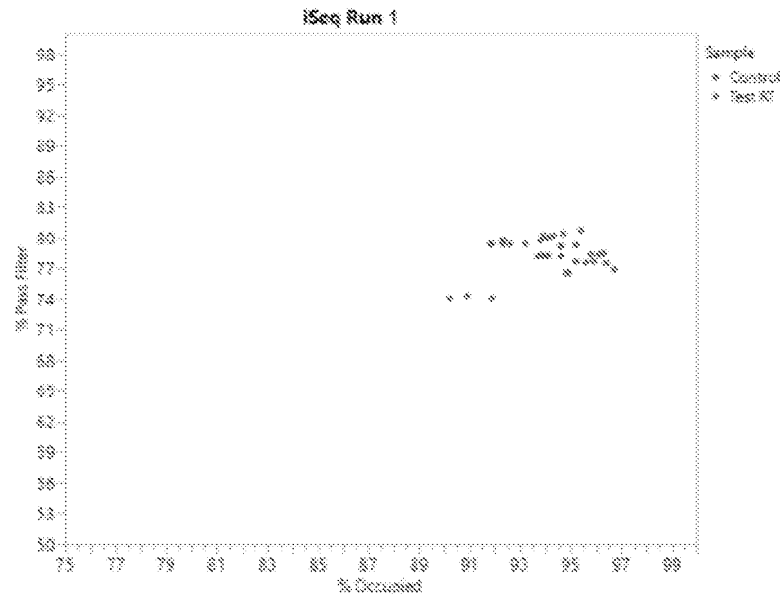


FIG. 47A

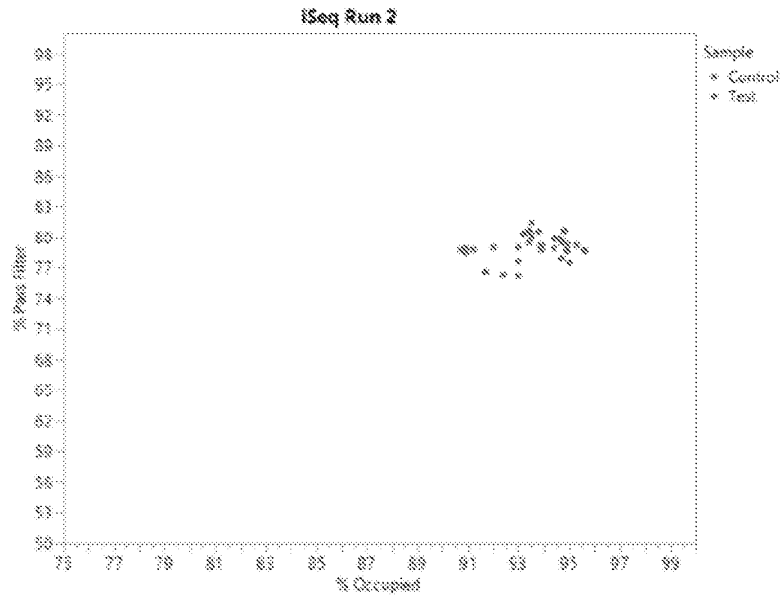


FIG. 47B

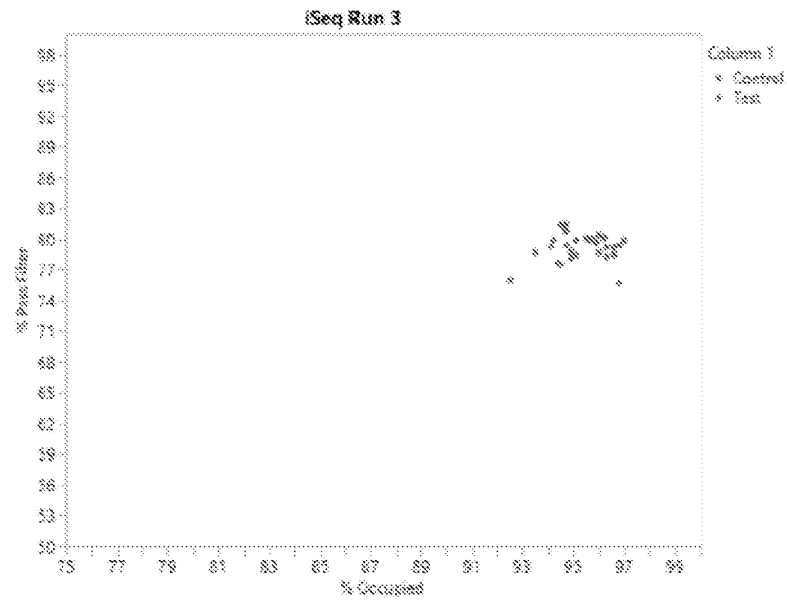


FIG. 47C

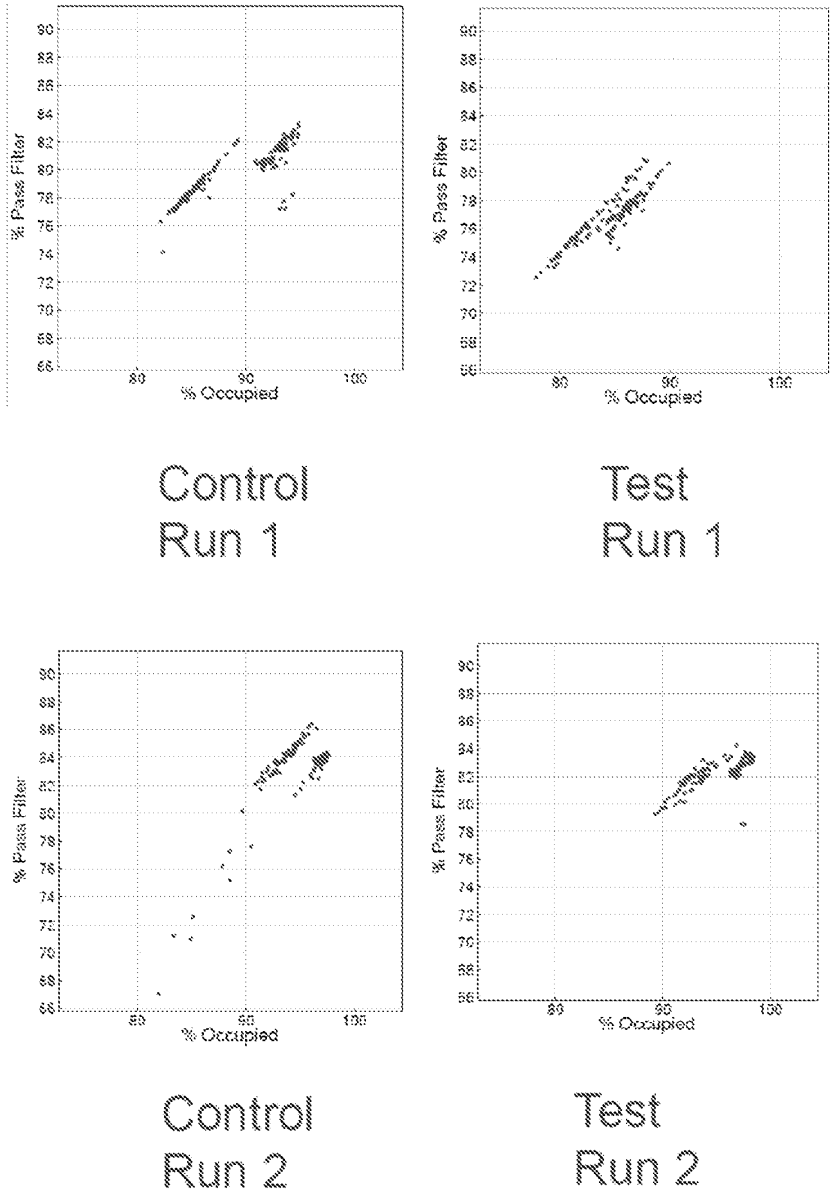


FIG. 48

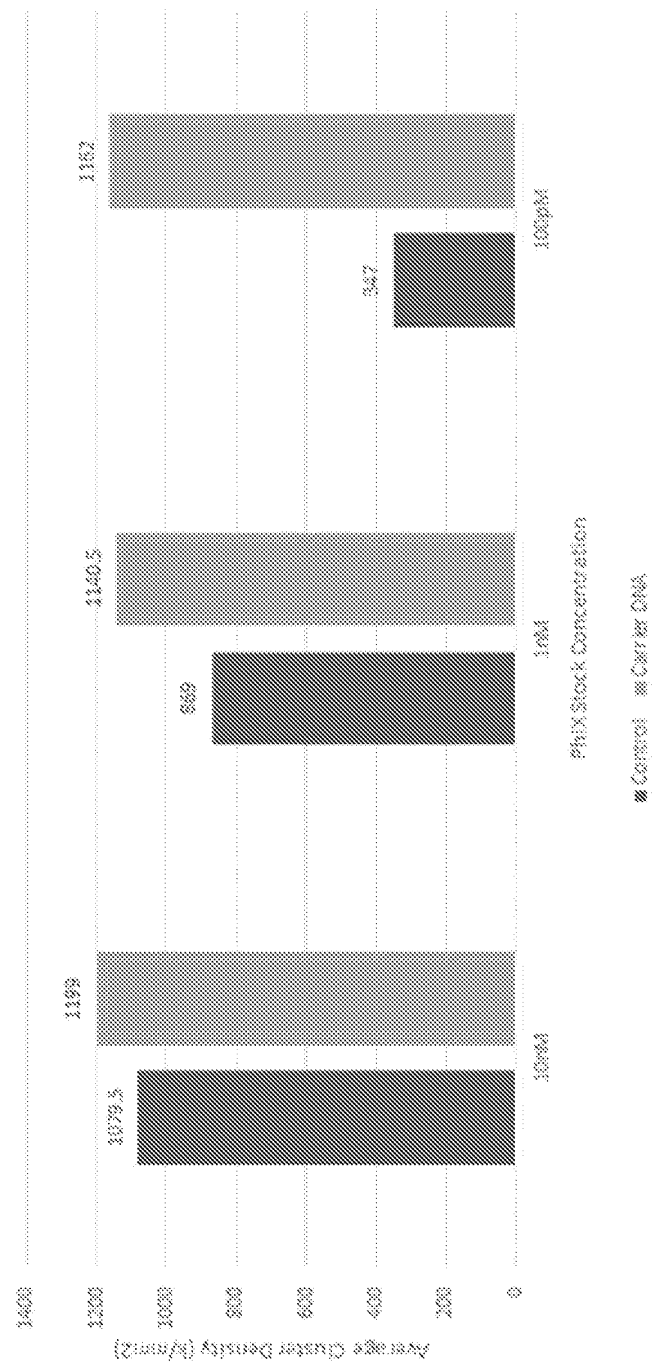


FIG. 49