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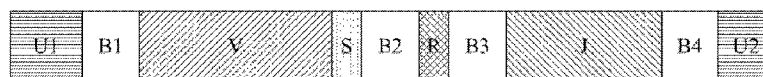


Fig. 1

(57) Abstract: Compositions and methods are described for standardizing the DNA amplification efficiencies of a highly heterogeneous set of oligonucleotide primers as may typically be used to amplify a heterogeneous set of DNA templates that contains rearranged lymphoid cell DNA encoding T cell receptors (TCR) or immunoglobulins (IG). The presently disclosed embodiments are useful to overcome undesirable bias in the utilization of a subset of amplification primers, which leads to imprecision in multiplexed high throughput sequencing of amplification products to quantify unique TCR or Ig encoding genomes in a sample. Provided is a composition comprising a diverse plurality of template oligonucleotides in substantially equimolar amounts, for use as a calibration standard for amplification primer sets. Also provided are methods for identifying and correcting biased primer efficiency during amplification.