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(54) Title: FLUORESCENT INTENSITY ASSAY FOR DUPLEX AND TRIPLEX NUCLEIC ACID HYBRIDIZATION IN SOLUTION UTILIZING FLUORESCENT INTERCALATORS

(57) Abstract: The invention provides a homogeneous assay for nucleic acid hybridization. The fluorescent intensity of a hybridization medium containing a probe, a target and an intercalating agent is a function of the hybridization efficiency of the probe with respect to the target. The assay can detect specific hybridization between single-stranded probes and non-denatured double-stranded targets to form triplexes, thus obviating the need to denature the targets. The assay can also detect duplex hybridization complexes. The assay can be used to identify accessible regions in folded nucleotide sequences, to determine the number of mismatched pairs in a hybridization complex, and to map genomes.