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(54) Title: HOMOGENEOUS CHEMILUMINESCENCE ASSAY METHODS WITH INCREASED SENSITIVITY

(57) Abstract: Methods are disclosed for determining an analyte in a medium suspected of containing the analyte. One method comprises treating a medium suspected of containing an analyte under conditions such that the analyte, if present, causes a photosensitizer and a chemiluminescent compound to come into close proximity. The photosensitizer generates singlet oxygen and activates the chemiluminescent compound when it is in close proximity. Non-specific signal generated by singlet oxygen not in proximity is reduced or suppressed using a singlet oxygen quencher (SOQ). The activated chemiluminescent compound subsequently produces light. The amount of light produced is related to the amount of analyte in the medium. Use of Noise Modulation Agents significantly improves signal-to-noise ratios and assay sensitivity. Compositions and kits are also disclosed.



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