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(54) **Title:** COMPOSITIONS AND METHODS FOR STABILIZING LUMINOGENIC SUBSTRATES

(57) **Abstract:** Disclosed herein are compositions and methods for stabilizing a luminogenic substrate such as coelenterazine or a functional analog thereof. The functional analog may be furimazine. The composition may include the luminogenic substrate, a thionucleoside, and an organic solvent, in which the thionucleoside is present in an amount effective to stabilize the luminogenic composition against decomposition. The method provided herein stabilizes the luminogenic substrate against decomposition by contacting the luminogenic substrate with an effective amount of the thionucleoside in the presence of the organic solvent. Also provided herein is a kit containing the composition.

