



**Solvent-Free Solid Phase Syntheses of 2-Chloroquinoline-3-carbaldehyde Phenyl Hydrazones and their DNA Cleavage Studies**

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**ABSTRACT**

*In this article, the authors describe the synthesis of 2-chloroquinoline-3-carbaldehyde phenyl hydrazones by two methods – (1) in solution, by stirring the reactants in MeOH at room temperature over a long period of time (2-15 h) and, (2) in solid state by grinding reactants together to form products in dramatically short time (in <15 min). The hydrazones obtained are tested for their DNA cleavage properties and some of them are found to show good chemical nuclease activity in the presence of both oxidizing agent (H<sub>2</sub>O<sub>2</sub>) and reducing agent (MPA). Some of them exhibited hydrolytic activity, and their antioxidant activity was found to be very low.*

**Keywords:** Solvent free synthesis, Green chemistry, DNA cleavage, Quinoline, Hydrazone.

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