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Cytogenotoxic effect of propanil using the *Lens culinaris* Med and *Allium cepa* L test

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Highlights

- Propanil from 2 ppm causes cell cycle inhibition in the root meristem of *L. culinaris* and *A. cepa*.
- *Lens culinaris* is more sensitive than *Allium cepa*.
- The presence of micronuclei, show the high cytogenotoxicity of propanil.

Abstract

Propanil can produce methemoglobinemia, hemolytic anemia, hepatotoxicity, metabolic disorder and nephrotoxicity. It also has a genotoxic effect, although it is not listed as a carcinogen and it continues to be applied excessively throughout the world. Consequently, in this study the cytogenotoxic effect of propanil was evaluated, using apical root cells of *Allium cepa* and *Lens culinaris*. In which, *L. culinaris* seeds and *A. cepa* bulbs were subjected to 6 treatments with propanil (2, 4, 6, 8, 10 and 12 mg L^{-1}) and to distilled water as control treatment. Subsequently, the root growth was measured every 24 h for 3 days. N

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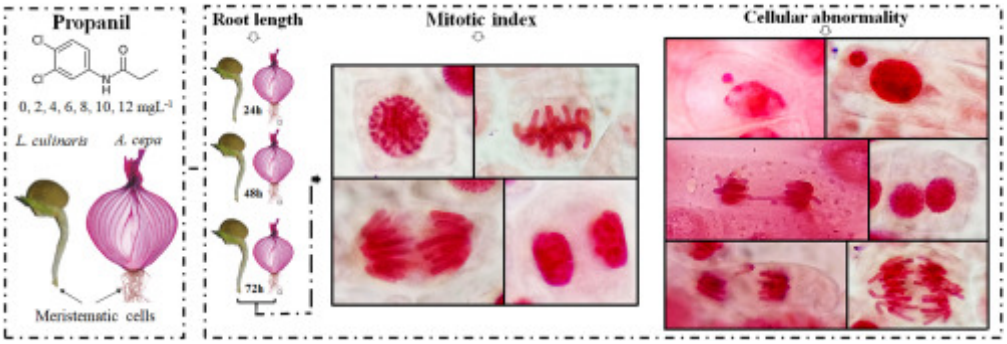
Graphical abstract



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Keywords

Bioindicator; Environmental toxicity; Micronuclei; Mutagenic; Nuclear abnormalities

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