

The biomonitoring of exposed workers

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Workers involved in the production and/or handling of graphene-based nanomaterials could be exposed to them, but very few biomonitoring studies are available on their possible genotoxic effects. We used different biological matrices to evaluate local or systemic genotoxic, oxidative and inflammatory effects induced on workers potentially exposed to Few Layered graphene nanoflakes and solvents during the production process in an industrial start up company. We performed Buccal Micronucleus Cytome assay, fpg-comet test and measurements of oxidized DNA bases and pro-inflammatory cytokine. The study confirms that BMCyt and fpg-comet assays could represent suitable sensitive biomarkers of early genotoxic and oxidative effects.