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Determination of some nitroaromatic compounds and some related pharmaceutical compounds using flow injection-chemiluminescence method

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A rapid flow injection-chemiluminescence (FI-CL) method was used for determination of 4-nitrophenol and some nitroaromatic compounds. These compounds, which have electron-donating group on the ortho and para positions, undergo on-line reduction using a minicolumn of zinc reductor in acidic medium to their corresponding aminophenols. The produced aminophenols were reacted with permanganate ion and polyphosphoric acid in the presence of dimethyl sulfoxide as enhancer for the produced CL. The method extended to include some related nitroaromatic compounds of pharmacological interest with similar structural formations representative such as metronidazole, furazolidone, nitrofurantoin and nitrazepam.

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