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Application of a Novel Advanced Oxidation Process using Sulfite and Zero-valent Iron in Treatment of Organic Pollutants

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14 **Abstract**

15 A novel advanced oxidation process, combined zero-valent iron and sulfite
16 (Fe⁰/sulfite) system containing oxygen, was firstly developed to efficiently degrade
17 organic pollutants at weak acidic and neutral conditions by selecting X-3B as a target
18 compound. The removal of X-3B was attributed to the formed reactive radicals, such
19 as SO₄^{•-}, SO₅^{•-} and HO[•], in the Fe⁰/sulfite system, and SO₄^{•-} was evidenced as the
20 principal reactive species. The quite low removal efficiency of X-3B (less than 5%)

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