

**Comparing the efficacy of various methods for sulfate radical generation for antibiotics degradation in synthetic wastewater: Degradation mechanism, kinetics study, and toxicity assessment**

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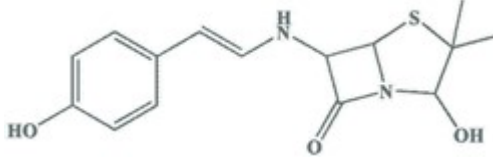
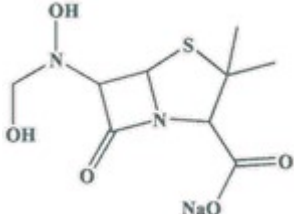
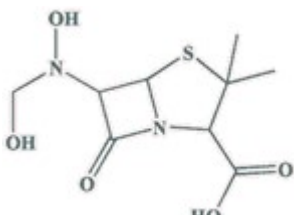
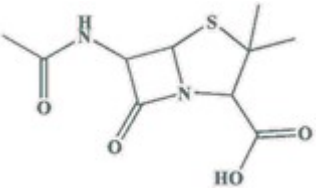
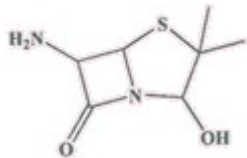
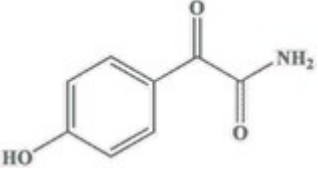
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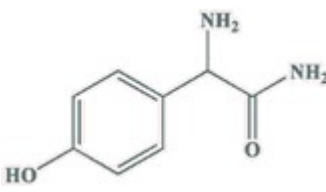
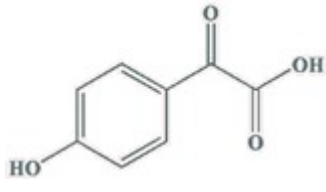
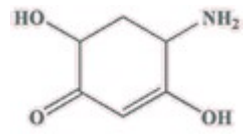
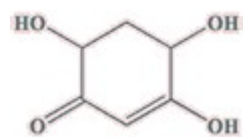
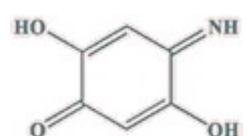
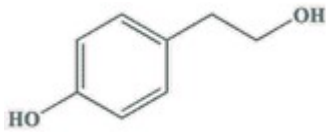
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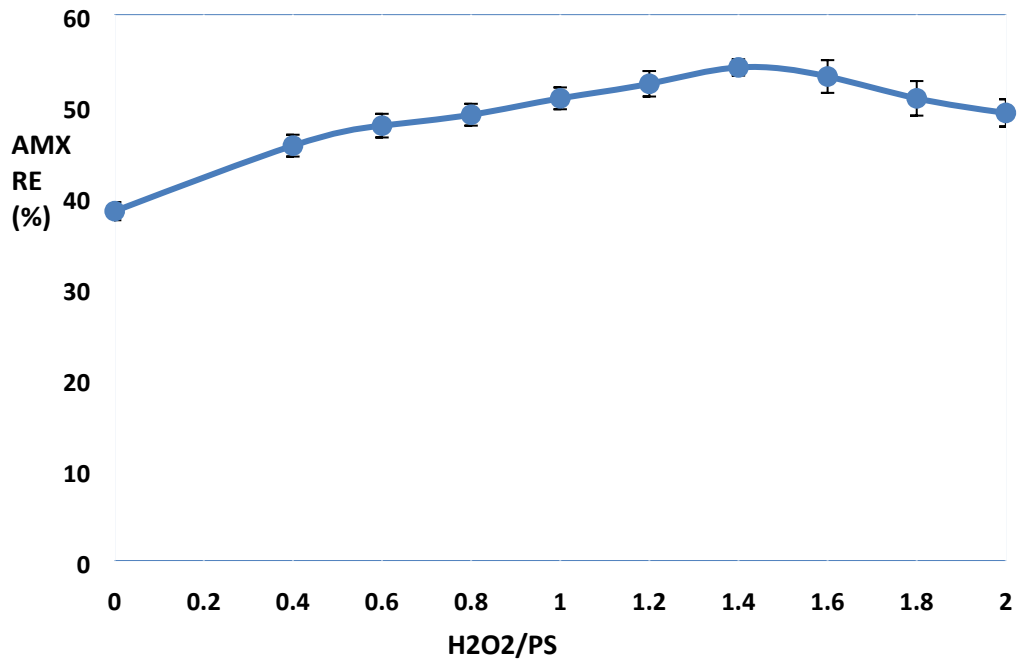
**Table 1S.** Identification of degradation intermediates of AMX by LC-MS (positive ion mode ESI mass spectra).

Intermediates	Degradation Time (min)	m/z	Corresponding intermediates of Dexamethasone
AMX	5	365.4	
A1	5	364	
A2	5	388.2	
A3	5	384.2	
A4	5	349.3	
A5	5	340.3	

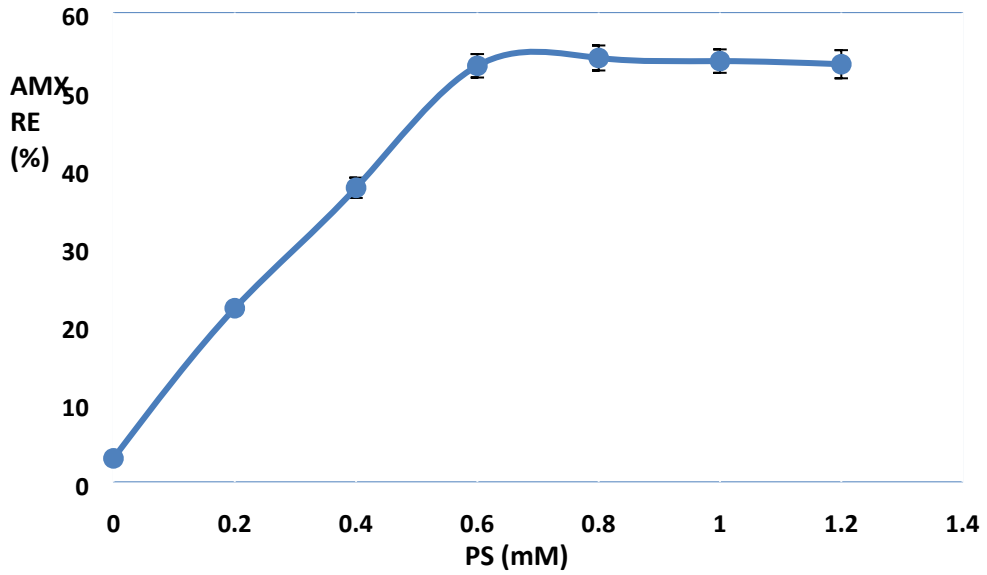
A6	5	307	
A7	10	285	
A8	10	263	
A9	5	259.1	
A10	20	189.3	
A11-1	5	165.2	

A11-2	5	166	
A11-3	5	166	
A12	10	143.2	
A12-2	10	144	
A13	20	139.3	
A13-2	20	138	

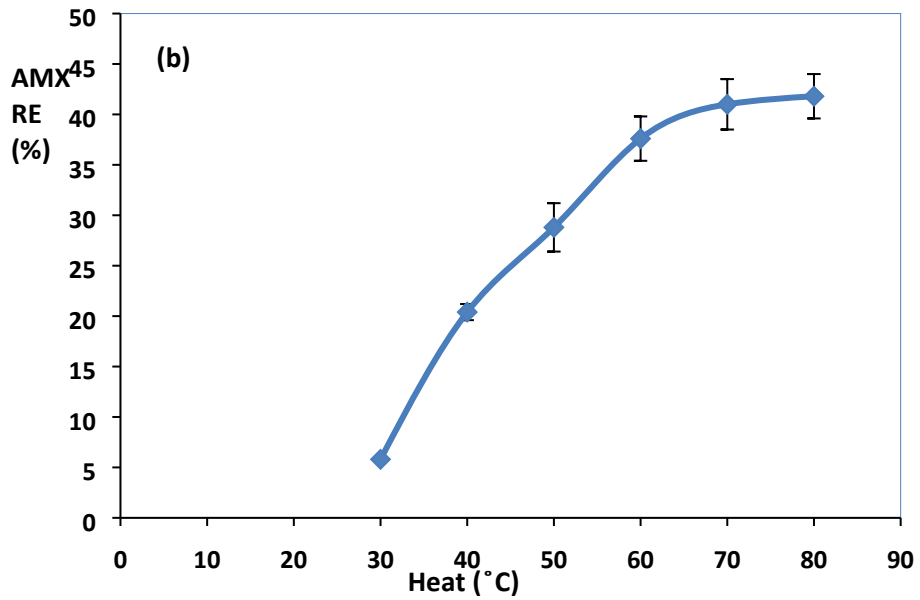
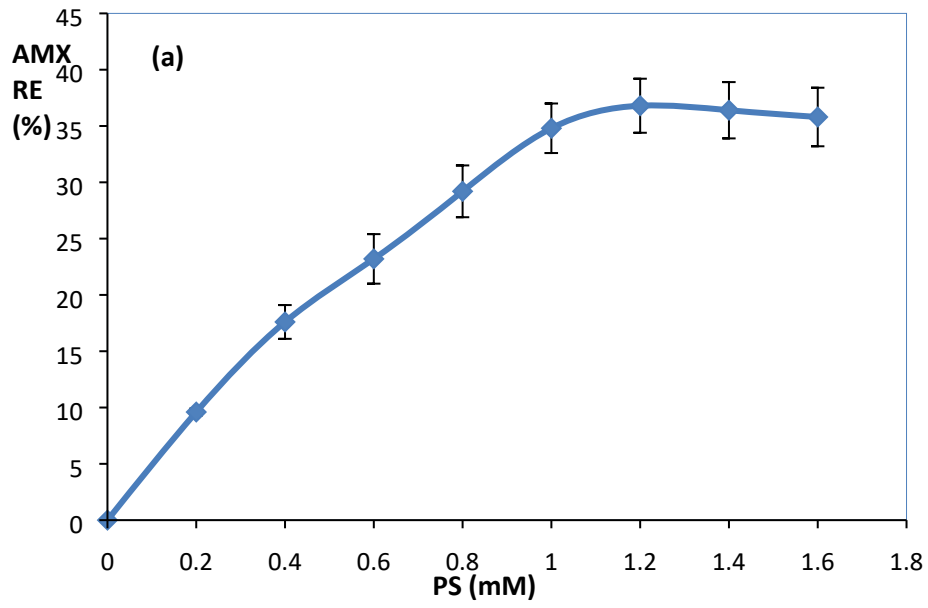
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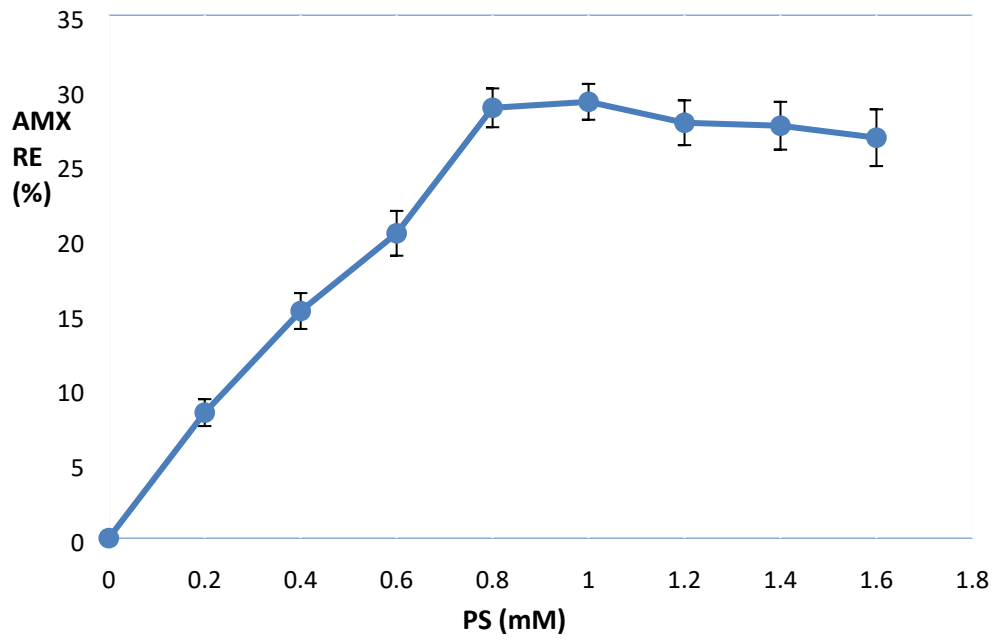
**Fig. 1S:** The effect of H<sub>2</sub>O<sub>2</sub>/PS ratio on AMX degradation  
(pH=7, AMX= 50 mg/L, time= 30 min)



**Fig 2S:** The effect of persulfate concentration in UV/PS process  
(pH=3, AMX= 50 mg/L, time= 15 min)



**Fig. 3S:** The effect of PS (a) and heat (b) on PS activation  
(pH=5, AMX= 50 mg/L, time= 30 min)



**Fig. 4S:** The effect of PS concentration on the US/PS process  
(pH=5, AMX= 50 mg/L, time= 30 min, US= 30kHz)