

**Degradation of methylene blue by E-Fenton process coupled with  
peroxymonosulfate via free radical and non-radical oxidation  
pathways**

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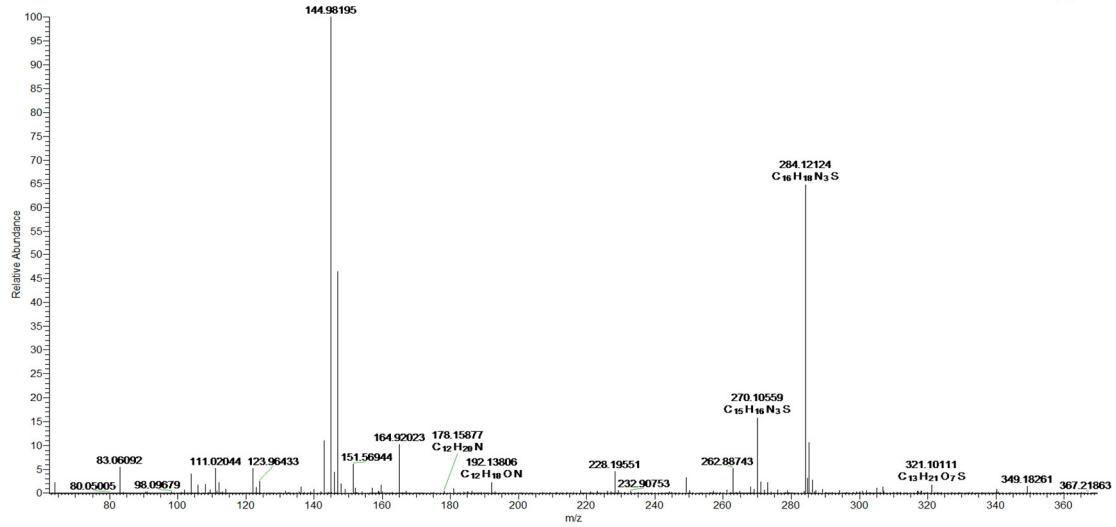
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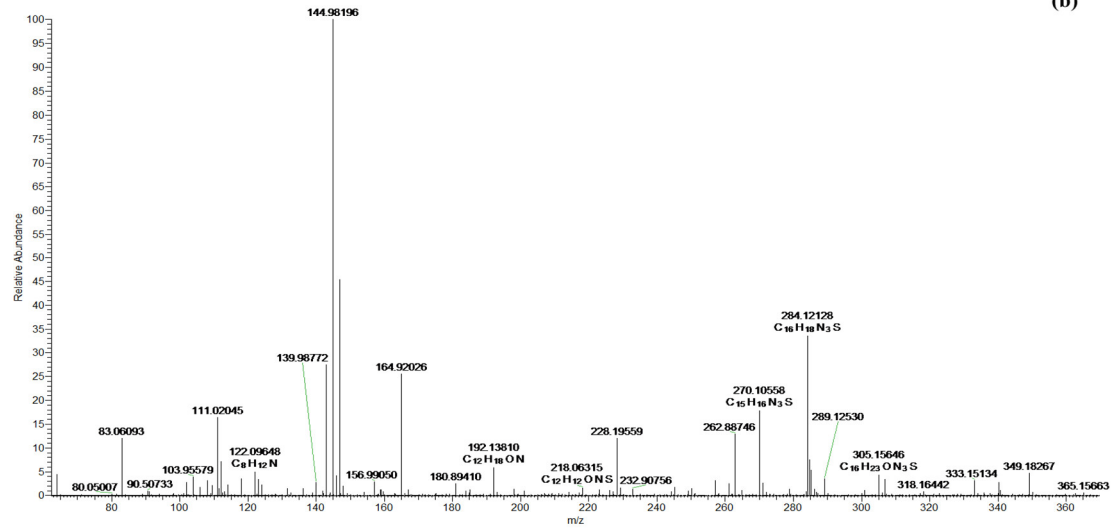
*New Journal of chemistry*

3 #540-3910 RT: 1.43-9.92 AV: 180 SB: 12 4.87-5.15, 4.87-5.15 NL: 2.74E7  
T: FTMS + c ESI Full ms [50.0000-750.0000]



(a)

4 #540-3910 RT: 1.45-10.06 AV: 184 SB: 12 4.95-5.24, 4.95-5.23 NL: 1.01E7  
T: FTMS + c ESI Full ms [50.0000-750.0000]



(b)

Fig.S1 MS spectra of MB after the degradation by EF-PMS process at different time: (a)20min, (b) 40 min.

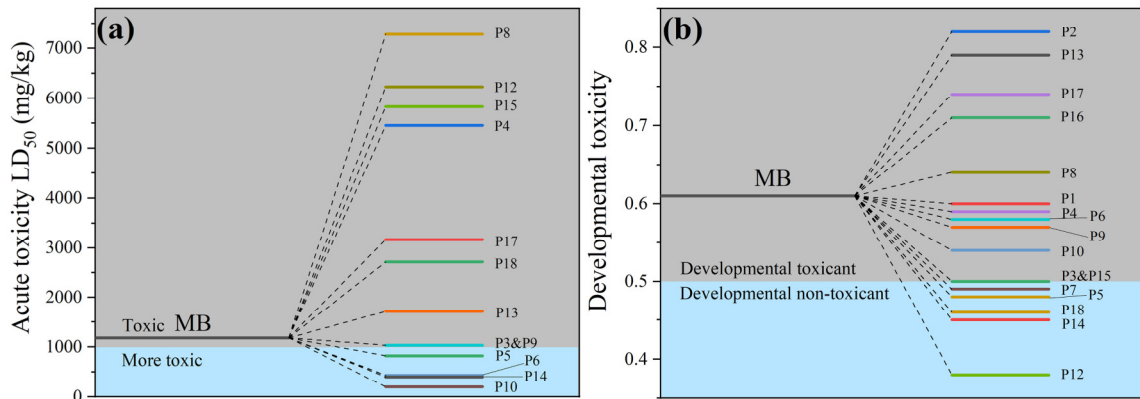
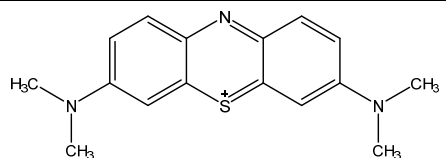
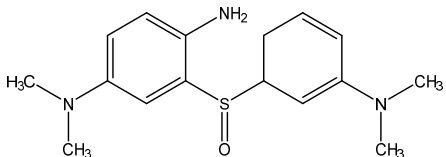
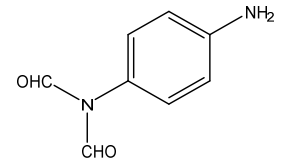
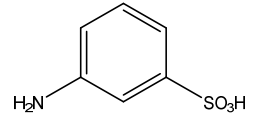
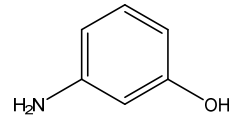
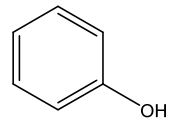
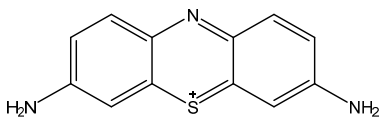
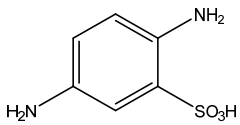
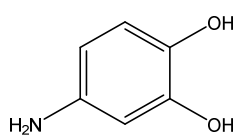
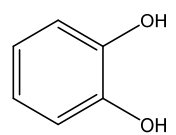
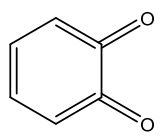
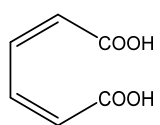
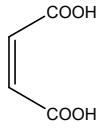
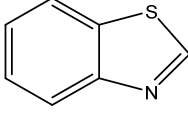
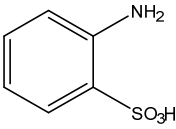
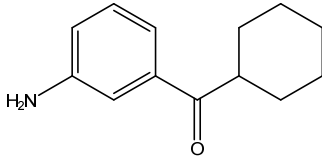
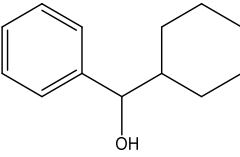
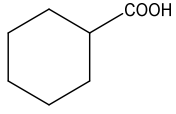


Fig.S2 (a) Acute toxicity, (b) developmental toxicity of MB and degradation intermediates in EF-PMS process

Table S1 Byproducts from the degradation of MB

Number	Molecular Formula	m/z	Possible structural formula
P1	$C_{16}H_{18}N_3S$	284	
P2	$C_{16}H_{23}ON_3S$	305	
P3	$C_8H_8N_2O_2$	164	
P4	$C_6H_7O_3NS$	173	
P5	$C_6H_7ON$	109	
P6	$C_6H_6O$	94	
P7	$C_{12}H_{10}N_3S$	228	
P8	$C_6H_8O_3N_2S$	188	
P9	$C_6H_7O_2N$	125	
P10	$C_6H_6O_2$	110	
P11	$C_6H_4O_2$	108	
P12	$C_6H_6O_4$	142	

P13	$C_4H_4O_4$	116	
P14	$C_7H_5NS$	135	
P15	$C_6H_7O_3NS$	173	
P16	$C_{13}H_{17}ON$	203	
P17	$C_{13}H_{18}O$	190	
P18	$C_7H_{12}O_2$	128	
P19	$C_5H_{10}O_2$	102	$CH_3(CH_2)_3COOH$
P20	$C_2H_4O_2$	60	$CH_3COOH$