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Title: One pot synthesis of magnetic graphene/carbon nanotube composites as magnetic dispersive solid-phase extraction adsorbent for rapid determination of oxytetracycline in sewage water

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1 **One pot synthesis of magnetic graphene/carbon nanotube composites**  
2 **as magnetic dispersive solid-phase extraction adsorbent for rapid**  
3 **determination of oxytetracycline in sewage water**

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11

12 **Abstract**

13 A simple and time-saving one pot synthesis of magnetic graphene/carbon nanotube  
14 composites (M-G/CNTs) was developed that could avoid the tedious drying process  
15 of graphite oxide, and G/CNTs were modified by Fe<sub>3</sub>O<sub>4</sub> nanoparticles in the reduction  
16 procedure. It contributed to a shorten duration of the synthesis process of M-G/CNTs.

17 The obtained M-G/CNTs were characterized and the results indicated that CNTs and  
18 Fe<sub>3</sub>O<sub>4</sub> nanoparticles were served as spacer distributing to the layers of graphene,  
19 which was beneficial for enlarging surface area and improving extraction efficiency.

20 Moreover, M-G/CNTs showed good magnetic property and outstanding thermal  
21 stability. Then M-G/CNTs were applied as adsorbent of magnetic dispersive solid-

22 phase extraction for rapid extraction and determination of oxytetracycline in sewage  
23 water. Under the optimum conditions, good linearity was obtained in the range of

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