**Supplementary Content**

**Table 1S.** Comparison of pseudo first order kinetic data the NAP Degradation and TOC Removal rates during UV-TiO2 and UV-TiO2 + Membrane processes

|  |  |  |
| --- | --- | --- |
| PHE Concentration (mg/L) | NAP Degradation  | TOC Removal |
| (UV-TiO2) | (UV-TiO2) + Membrane | (UV-TiO2) | (UV-TiO2) + Membrane |
| K (min-1) |  R2 | K (min-1) |  R2  | K (min) -1 |  R2  | K (min-1) |  R2  |
| 5 | 0.008 | 0.9978 | 0.014 | 0.9896 | 0.004 | 0.9559 | 0.0124 | 0.9912 |
| 10 | 0.0068 | 0.9993 | 0.0089 | 0.9941 | 0.0035 | 0.9609 | 0.0087 | 0.9954 |
| 15 | 0.0059 | 0.9992 | 0.0069 | 0.9894 | 0.0027 | 0.9473 | 0.0071 | 0.9859 |
| 20 | 0.0051 | 0.997 | 0.005 | 0.9768 | 0.002 | 0.9241 | 0.0049 | 0.9818 |
| 25 | 0.0045 | 0.9979 | 0.0035 | 0.9732 | 0.0015 | 0.9096 | 0.0042 | 0.9472 |



**Figure 1S**. Effect of (a) NAP concentrations and (b) pH on NAP removal during membrane separation; [NAP] =5 mg/L, Time = 180 minutes



**Figure 2S.** Effect of TiO2 dosage, feed solution pH and NAP concentrations on NAP degradation (a), (c) & (e) and TOC removal efficiencies (b), (d) & (f); [NAP] =5 mg/L, [TiO2] = 0.5 g/L, Time = 180 minutes.

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**Figure 3S.** The pseudo first order kinetic plot of (a) ln ([NAP]0/[NAP]t)and (b) ([TOC]0/[TOC]t ) versus time for NAP degradation during UV-TiO2 process