Supplementary information for

Removal of contaminants from canal water using microwave synthesized zero valent iron nanoparticles

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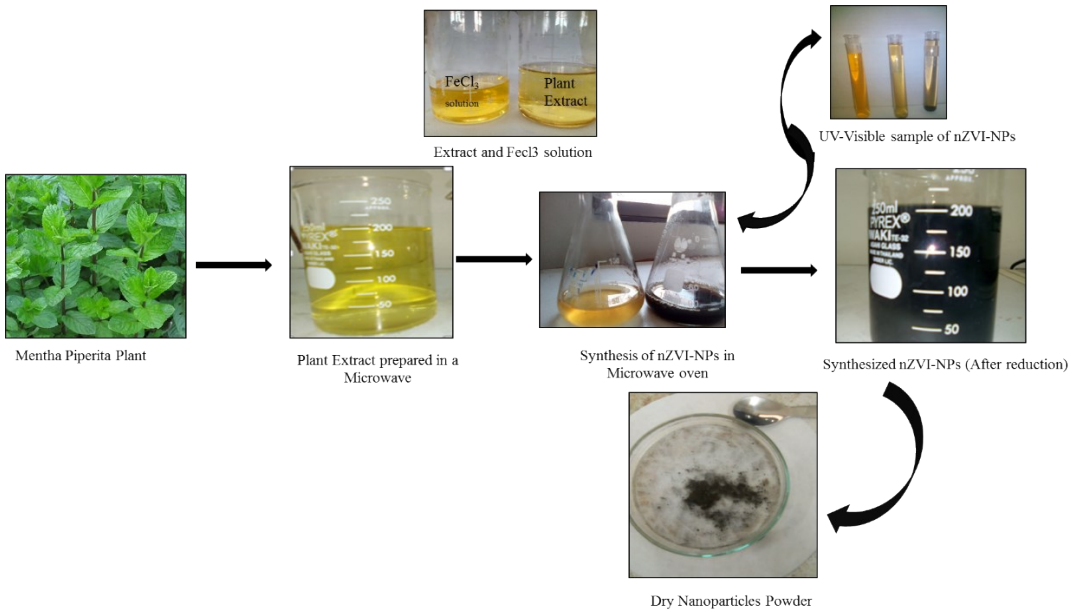

Figure S1. Synthesis of nanoscale zero valent iron nanoparticles (nZVI-NPs) from Mentha Piperita Plant

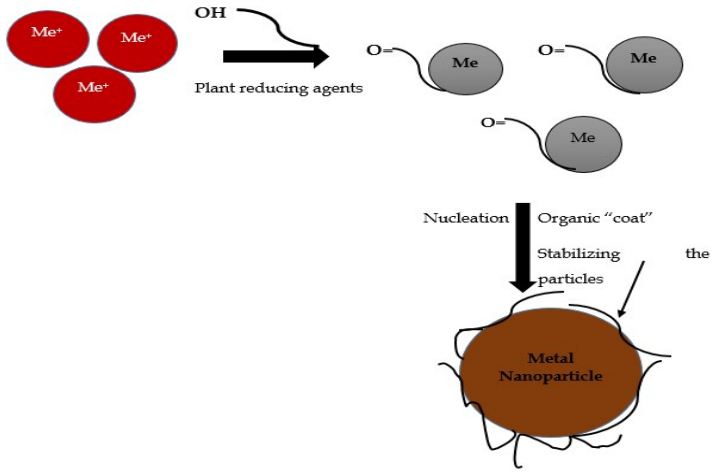

Figure S2. Schematic illustration of synthesis of *Mentha piperita* leaf extract stabilized nZVI-NPs.

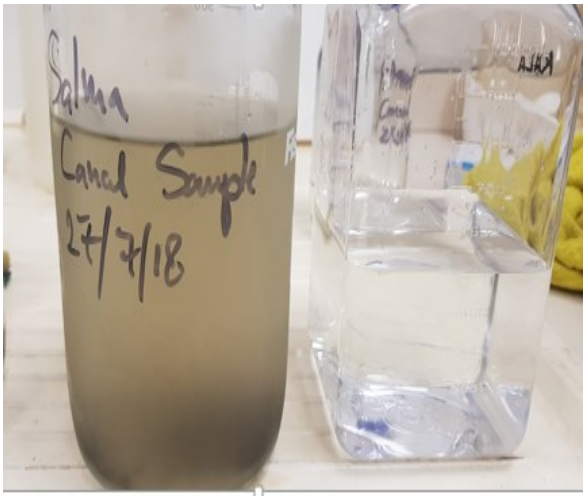

Figure S3. Water sample collected from the Worcester and Birmingham canal at the University of Birmingham on 27th July 2019, before (left) and after (right) filtration. Filtered samples were stored in the fridge until use.

Table S1. Qualitative analysis of phytochemicals of plant extract

S. No	Phyto- constituents	Tests
1	Alkaloids	Wanger's test
2	Saponins	Foam test
3	Flavonoids	Alkaline reagent test
4	Tannins	Braymer's test
5	Terpenoids	Salkowki's test
6	Phlobatannins	Phlobatannin (Precepitate) test
7	Phenol	Ferric chloride ($FeCl_3$) test
8	Cardiac glucosides	Keller kelliani's test
9	Proteins	Ninhydrine test
10	Carbohydrates	Molisch's test
11	Oil & fats	Spot test

Table S2. Change in the intensities of color during synthesis of nZVI-NPs

Solutions	Before reduction	After reduction	Colour Intesnsity
Mint leaves extract	Light greenish	Blackish colour	- +
$FeCl_3$ solution	yellowish	_	+ + +

Table S3. Experimental results of phytochemical screening test of *Mentha piperita* leaf extract

S. No	Phytochemical Compound	Aqueous Extract Result
1	Alkaloids	Present
2	Saponins	Absent
3	Flavonoids	Present
4	Tannins	Present
5	Terpenoids	Present
6	Phlobatannin	Absent
7	Phenol	Present
8	Cardial glycoside	Present
9	Oil	Present
10	Protein	Absent
11	Carbohydrates	Absent