Electrophoretic separation of environmentally important phenolic compounds using montmorillonite-coated fused-silica capillaries
Electrophoretic Separation of Environmentally Important Phenolic Compounds Using Montomorillonite-Coated Fused Silica Capillaries

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SUPPLEMENTARY INFORMATION

In order to avoid precipitation, a simple way to stir the clay suspension was designed using a modified cordless drill (Dremel 4.8V MiniMite Cordless Kit, Model 750-02; Racine, WI), and two magnetic bars. One of the magnetic bars was attached to a drill bit (as shown in Figure 1) while the second bar was placed inside the vial containing the clay.

Figure 1: Photography of the stirrer used to maintain the clays in suspension.

This particular drill was selected because it is small enough to be placed inside the CE instrument and mounted on one of the sample trays. In order to allow constant operation at a controlled speed, the battery was removed and a connection to an external transformer (110 – 6V) was performed. A 5K-Ohm linear taper potentiometer was connected in series with the transformer in order to control the speed of the stirrer. Although the stirrer could be potentially controlled using the external relays of the CE instrument, a standard timer (programmable on/off) was used in order to simplify the
setup. As can be also observed in the picture, the vial containing the clay was placed in the right tray. Therefore, all the flushing steps involving this vial were performed by applying pressure (backwards) from this vial to a waste reservoir (in the left tray).

This stirrer allows the CE instrument to perform all the required conditioning experiments without the intervention of an operator.