

Supplementary Information

Combination of on-chip electromembrane extraction with solid phase microextraction for determination of non-steroidal anti-inflammatory drugs from biological fluids using poly(methacrylic acid-ethylene glycol dimethacrylate) / Cu-Cr layered double hydroxide composite as a sorbent

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Figure Legends

Fig. S1. The structure and polymerization reaction of poly(MAA-EGDM).

Fig. S2. Effect of Cu/Cr LDH dosage on the extraction efficiency of NSAIDs using the poly(MAA-EGDMA)–Cu/Cr LDH composite. Extractions were performed under optimized condition.

Fig. S3. EDX analysis of poly(MAA-EGDMA) / Cu-Cr LDH composite.

Fig. S4. Elemental mapping images of poly(MAA-EGDMA) / Cu-Cr LDH composite.

Fig. S5. XRD patterns of Cu-Cr LDH and poly(MAA-EGDMA) / Cu-Cr LDH composite.

Fig. S6. Reusability of solid phase employed in EME-SPME technique; fluctuation of the analytes peak area by consecutive extraction cycles on poly(MAA-EGDMA)–Cu/Cr LDH composite. Extractions were performed under optimized condition.

Fig. S7. The concentration-time curve of founded naproxen in urine samples taken at different hours after consumption.

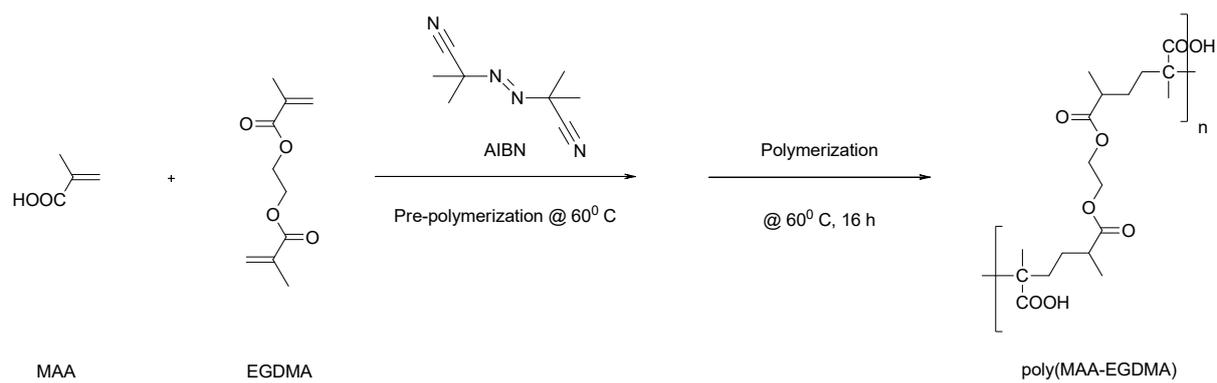


Fig. S1. The structure and polymerization reaction of poly(MAA-EGDM).

Effect of the Composite Composition on Extraction

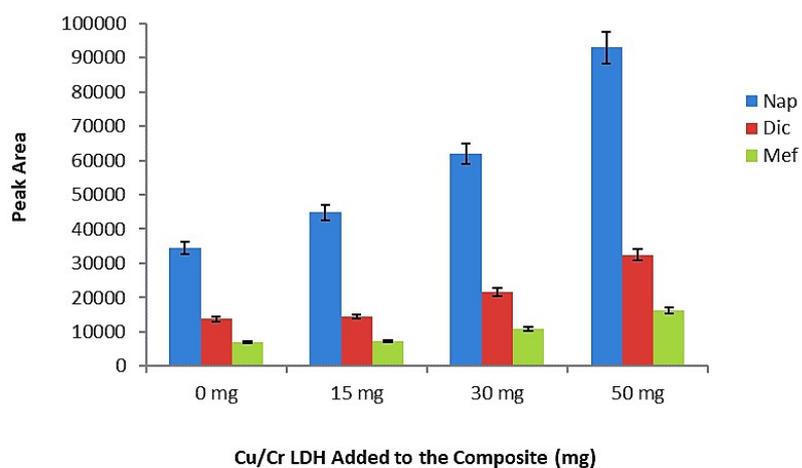


Fig. S2. Effect of Cu/Cr LDH dosage on the extraction efficiency of NSAIDs using the poly(MAA-EGDMA)-Cu/Cr LDH composite. Extractions were performed under optimized condition.

Fig. S3

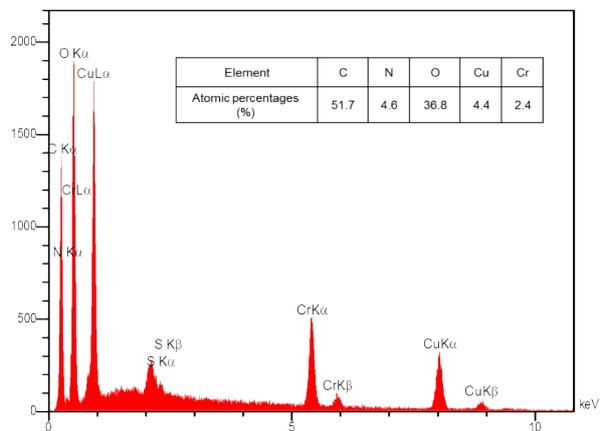


Fig. S3. EDX analysis of poly(MAA-EGDMA) / Cu-Cr LDH composite.

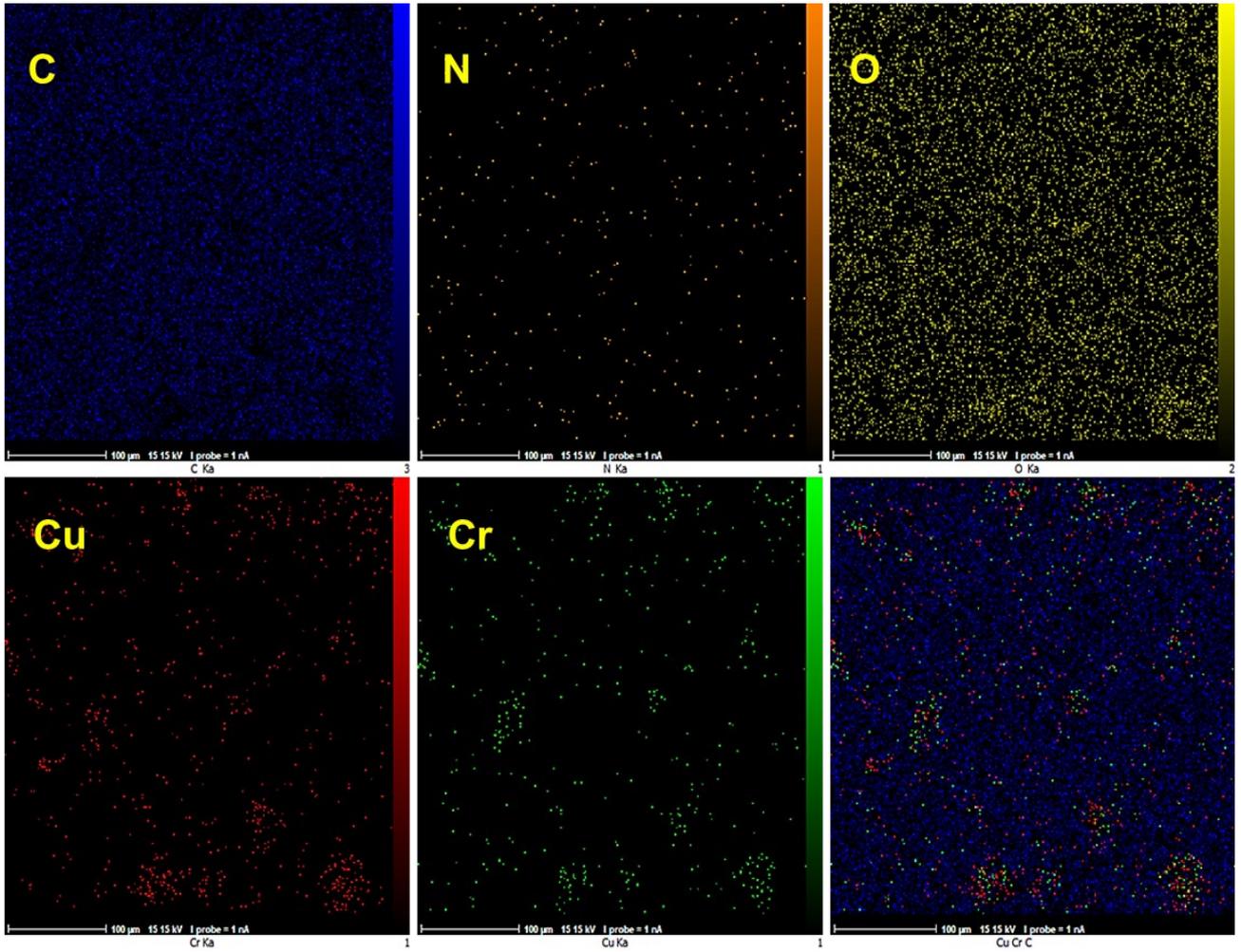
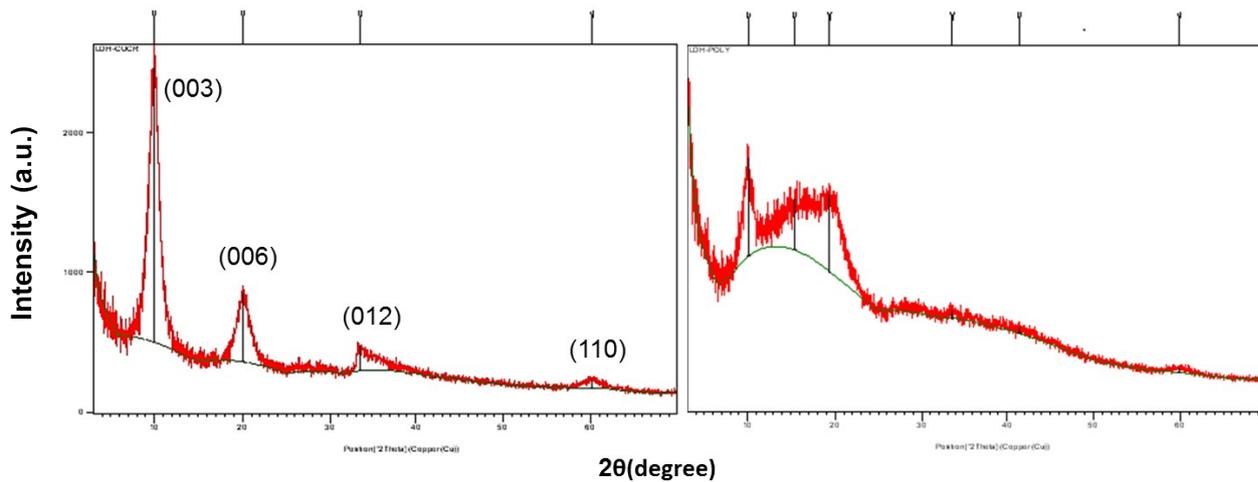


Fig. S4. Elemental mapping images of poly(MAA-EGDMA) / Cu-Cr LDH composite.



A: Cu/Cr LDH

B: poly(MAA-EGDMA) / Cu-Cr LDH

Fig. S5. XRD patterns of Cu-Cr LDH and poly(MAA-EGDMA) / Cu-Cr LDH composite.

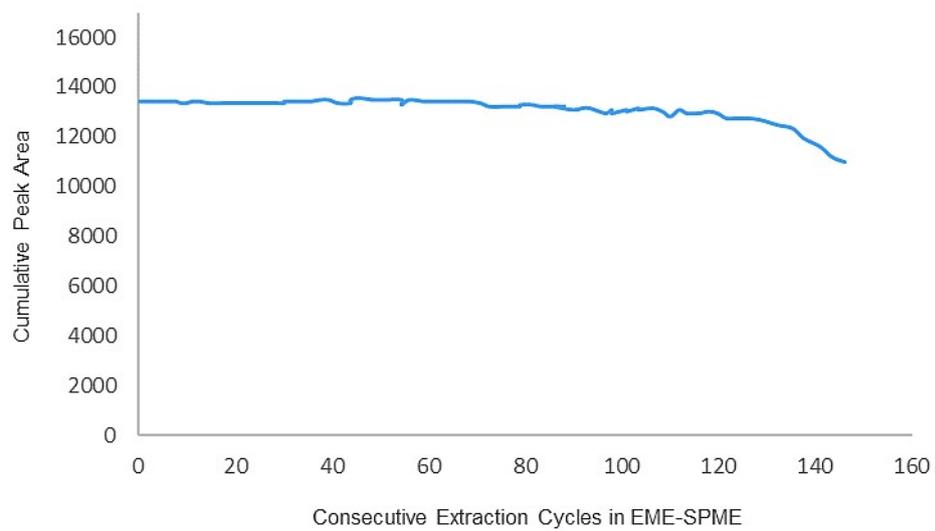


Fig. S6. Reusability of solid phase employed in EME-SPME technique; fluctuation of the analytes peak area by consecutive extraction cycles on poly(MAA-EGDMA)-Cu/Cr LDH composite. Extractions were performed under optimized condition.

Fig. S7

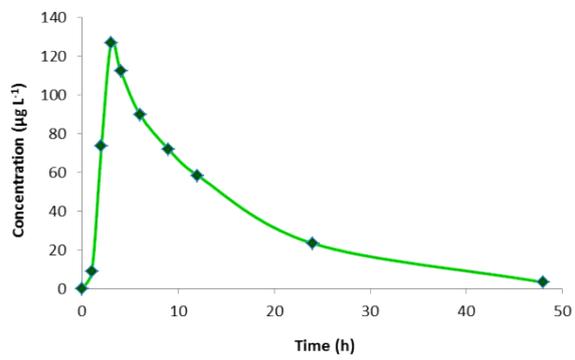


Fig. S7. The concentration-time curve of founded naproxen in urine samples taken at different hours after consumption.