**TABLE I** Comparison of the efficiency of some modified electrodes used in the determination of MFA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Electrode | Detection technique | Detection limit, M | Linear range, M | Ref. |
| CPE/Magnetic molecularly imprinted polymer nanoparticles (MMIPNPs | DPV | 1.2×10 −9 | 2.0×10 −9–1.0 × 10 −6 | 38 |
| Nickel hydroxide modified nickel (NHMNi) electrode | Amperometry | 4.96×10 −6 | 2.5×10−5–4.76 ×10 −4 | 39 |
| Ion-pair Brilliant Green mefenamate | potentiometric | 4.5×10 −5 | 9.0×10−5–1.0× 10−2 | 41 |
| CPE/Fe (III) schiff base (Fe (III)-SBMCP) | DPV | 2.0×10 −8 | 2.0×10−7–1.5 × 10−5 | 42 |
| Pt/Hg/Hg2(MF)2/Graphite | potentiometric | 6.2×10 −7 | 1.0× 10−6–1.0 × 10−2 | 43 |
| MWCNT/Gr/GCE | DPV | 6.6×10 −7 | 2.0× 10−6–1.0 × 10−4 | This work |

**TABLE II** Determination of MFA in the MFA capsule using MWCNT/Gr/GCE sensor at the confidence limit of 95% (n=5).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| tcri | texp | RSD, % | Found MFA value, µM | MFA value in capsule, µM | Sample number |
| 2.78 | 2.66 | 4.20 | 28.40 | 30 | 1 |
| 2.78 | 2.30 | 2.52 | 51.50 | 50 | 2 |
| 2.78 | 2.40 | 3.10 | 78.20 | 80 | 3 |

**TABLE III** Determination of MFA concentration in the serum solutions by using MWCNT/Gr/GCE sensor (n=3)

|  |  |  |  |
| --- | --- | --- | --- |
| Serum solution | Spiking value, µM | Assayed value, µM | Recovery value, % |
| 1 | 20 | 21 (±0.5) | 105.0 |
| 2 | 40 | 38 (±0.4) | 95.0 |
| 3 | 60 | 58 (±0.6) | 96.6 |