Supporting Information

for

Angew. Chem. Int. Ed. Z53832

© Wiley-VCH 2004

69451 Weinheim, Germany
Optimization of the electrical detection and loading of the PS beads.

Figure 1 Comparison of different electrode transducers: stripping potentiograms of 50 ppb guanine in 0.5 M acetate buffer with graphite pencil electrode (A), Carbon–nanotube modified glassy carbon electrode (B) and pyrolytic graphite electrode (C). Accumulation time, 1 min; Accumulation potential, –50mV (A); +200 mV (B); –100 mV (C). Stripping current: 5 µA.
Figure 2 Effect of accumulation potential on PSA signal of 50 ppb guanine in 0.5 M acetate buffer (pH 5.9). Accumulation time, 1 min; stripping current, 5 µA. Working electrode, pyrolytic graphite electrode.

Figure 3 Effect of dG\textsubscript{25} concentration (in the loading solution) on the PSA signal. Amount of polystyrene beads, 5 mg. After 30 min incubation, the sample was digested in the presence of 50 µL 0.05 M NaOH and 10 µL 3 M H\textsubscript{2}SO\textsubscript{4}. PSA detection was performed at 1mL 0.5 M acetate buffer (pH 5.9). Accumulation time, 1 min, accumulation potential, −100mV; stripping current, 5 µA. Working electrode, pyrolytic graphite electrode.
**Figure 4** Effect of anti-IgG concentration in the solution used to ‘load’ the PS beads. dG25 concentration, 56 µg mL\(^{-1}\); incubation time, 30 min. Other conditions, as in Figure 3.

**Figure 5** Effect of the amount of the DNA/anti-IgG functionalized PS beads on the response to 10ppb IgG (A) and 0 ppb IgG (B). Other conditions, same as Figure 3.
Figure 6 Effect of the amount of magnetic beads in the incubation solution upon the response for (A) 10 ppb IgG and (B) 0 ppb IgG (control). Other conditions, same as in Figure 4.