DropSens launches Hydroquinone diphosphate (ref. HQDP).

Hydroquinone diphosphate is intended for its use as electrochemical substrate of Alkaline Phosphatase (AP). This reagent generates electrochemically active hydroquinone as the product after its hydrolysis. Voltammetric and amperometric measurements can be easily carried out for the quantification of hydroquinone in affinity assays using the HQDP/AP detection system.

The use of HQDP, instead of other AP substrates, results in lower LODs, wider linear ranges and a simpler methodology for the detection of the enzymatic product. Moreover, the applied potential for oxidation of Hydroquinone is lower than the potential for oxidation of other AP substrates hydrolysis products, which reduces the number of potential interferences able to be oxidised at the electrode surface.
Electrochemical behaviour of Hydroquinone diphosphate in absence and presence of alkaline phosphatase using DRP-110 screen-printed carbon electrodes

Cyclic voltammetry of the hydrolysis product at the surface of screen-printed carbon electrodes shows a well-defined oxidation and reduction peaks at -0.15 V (vs. Ag-pseudoreference electrode).

Cyclic voltammogram of 3 mM HQDP (—) and 3 mM HQDP + Alkaline phosphatase (—) in 0.1 M Tris-HNO₃, 20 mM Mg(NO₃)₂, pH 9.8 electrolyte solution at 50 mV/s.

HQDP should be stored at 4 ºC, under a N₂ atmosphere and kept away from light.

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