

Introduction of Helix Electrode Electrolytic Cell (ES – EL30)

The Helix Electrode Electrolytic Cell (electrolysis cell) is to measure the ESR of radical or paramagnetic transition metal ions that arise by electrolytic oxidation or reduction of a sample.

This electrolysis cell has an evacuation port for degassing the solution or for nitrogen gas substitution. The ESR signal of the paramagnetic species which is generated on the surface of the working electrode is measured whilst the oxidation or reduction potential is applied. This electrolysis cell uses a 5mm dedicated quartz tube, and is suitable for use even when organic solvents of high polarity (DMSO or DMF) or water are used.

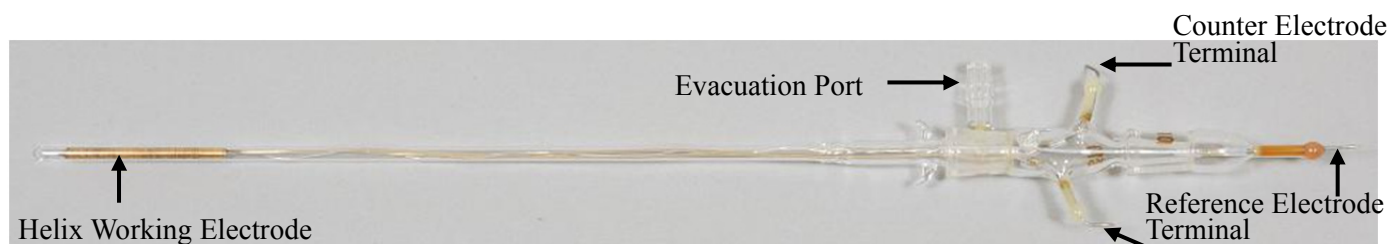


Fig. 1 - Helix Electrode Electrolytic Cell (ES – EL30)

Measurement Example

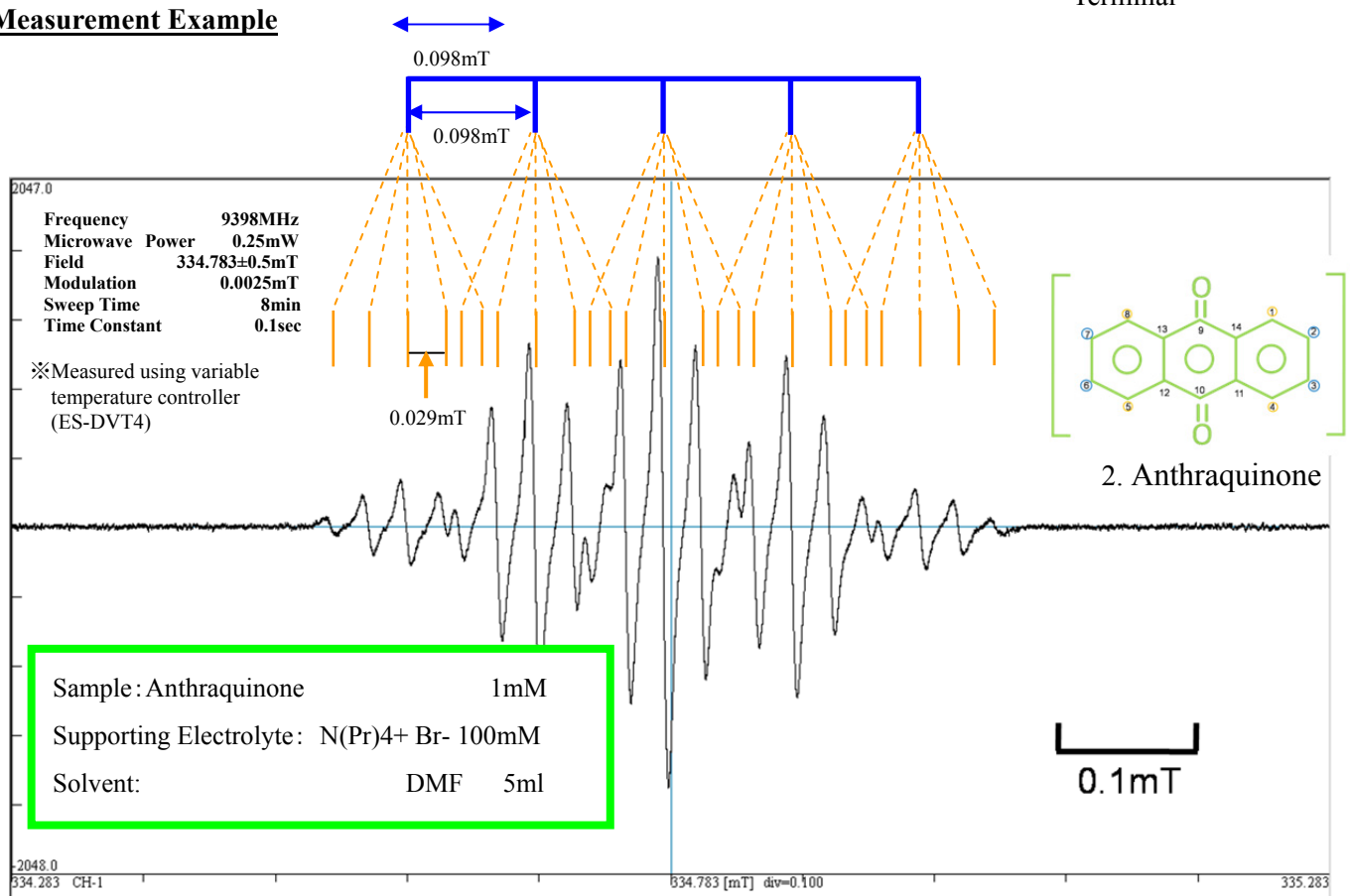


Fig.3. ESR Signal of Anthraquinone Anion Radical

Total No. of Lines : 25, Coupling Constant : $a^{H_{2,3,6,7}}=0.098\text{mT}$; $a^{H_{1,4,5,8}}=0.029\text{mT}$