Antec
Proven Performance!

SynthesisCell – Synthesis of mg Quantities

SynthesisCell™
Bulk Cell for mg Quantities

- **Rapid electrosynthesis of mg quantities of difficult to synthesize compounds**
- **Complete electrolysis of electroactive species in solution**
- **Various large surface carbon working electrodes**
- **Use for small-scale electrosynthesis studies (up to 80 mL)**

The SynthesisCell is designed for small-scale electrosynthesis of mg quantities of compounds that are difficult to synthesize by other methods, e.g., wet chemistry. Typical compounds that can be synthesized are metabolites, intermediates and Redox products.

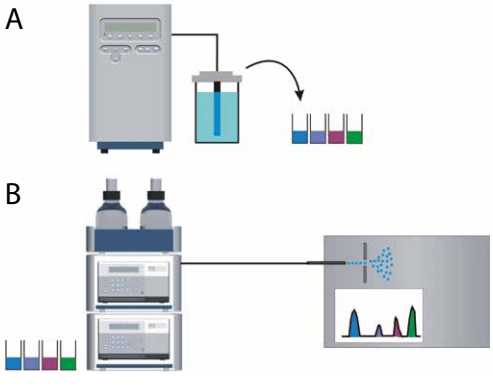
The large surface-area of the working electrode and active stirring of the bulk solution assures for compete electrolysis of any electroactive compound and the generation of Redox products in approximately 1 hour. Various large surface-area working electrodes such as carbon based, or Magic Diamond™ are available for increased selectivity and maximum yield.

The cell is controlled via the ROXY Potentiostat. The progress of the reaction and as well as the concentration of synthesis products can be monitored by taking aliquots over time and analyzing them by flow injection MS or LC/MS.

Schematics Synthesis and Reaction Monitoring

ROXY Potentiostat with SynthesisCell (A).
Manual collection of 500 µL aliquot samples taken in 10 min intervals over 1 hr.

LC/MS analysis of collected aliquots for reaction monitoring and synthesis optimization (B).



ROXY with SynthesisCell™

After optimization of the synthesis parameters such as the initial concentration, solvents, applied potential, synthesis time, pH and electrode material the experiment can be repeated under optimized conditions and the bulk solution can be purified by (semi)-preparative HPLC to isolate the compound(s) of interest.

Specifications SynthesisCell™ (Bulk Cell for mg Quantities)	
Cell type	Three electrode synthesis cell, consisting of working electrode (WE), reference electrode (RE) and auxiliary electrode (AUX)
Cell volume	Up to 80 mL of sample solution in glass reaction vessel **Optional**: Water-jacketed reaction vessel (for cooling exothermic reactions)
Working electrodes (WE)	Tubular Smooth Glassy Carbon (SGC) Flat Smooth Magic Diamond (MD) Tubular Mesh Platinum (PT)
Reference electrode (RE)	Pd/H2 reference electrode, HyREF **Optional**: Ag/AgCl reference electrode
Auxiliary electrode (AUX)	Coiled platinum wire in glass isolation tube
Port plug	Access port for sample collection, dispensing of reagents, or venting of cell
Electric connections	Cell cables for use with ROXY Potentiostat

Part no	Description
206.0037	Complete SynthesisCell, consisting of 80 mL reaction vessel with Tefloncap, WE (Tubular Reticulated Glassy Carbon), RE (HyREF) and AUX electrodes, stir bar, electrode cables, etc., all parts included for immediate use with ROXY Potentiostat.
Optional	
206.0300	Water-jacketed reaction vessel
206.0305	Tubular Smooth Glassy Carbon (SGC) working electrode
206.0306	Flat Smooth Magic Diamond (MD) working electrode
206.0322	Tubular Mesh Pt (PT) working electrode
206.0314	Ag/AgCl reference electrode
Spare Parts	
206.0304	Tubular Reticulated Glassy Carbon (RGC) working electrode
206.0310	Auxiliary Pt electrode in glass tube
206.0900	Glass reaction vessel, 80 mL
206.0340	Glass coated magnet stir bar, length 8mm

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