



# SynthesisCell™

## Bulk Cell for mg Quantities

- **Rapid electro-synthesis of mg quantities of difficult to synthesize compounds**
- **Complete electrolysis of electroactive species in solution**
- **Large surface-area carbon working electrode**
- **Use for small-scale electro-synthesis studies (up to 75 mL)**

The SynthesisCell is designed for small-scale electro-synthesis 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 carbon working electrode and active stirring of the bulk solution assures for complete electrolysis of any electroactive compound and the generation of Redox products in approximately 1 hour.

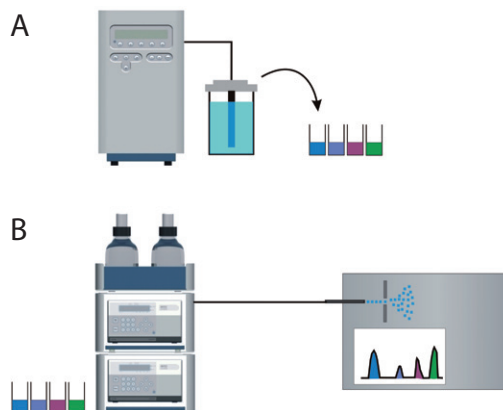
The cell is controlled via the ROXY Potentiostat. The progress of the reaction and as well as the concentration of synthesis products can be monitored by taking aliquots over time and analyzing them by flow injection MS or LC/MS.



### Schematics Synthesis and Reaction Monitoring

ROXY Potentiostat with SynthesisCell (A).  
Manual collection of 500  $\mu$ L 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	75 mL of sample solution in beaker glass Optional: water-jacketed beaker glass
Working electrodes	Reticulated Vitreous Carbon (RVC) Optional: platinum gauze electrode
Reference electrode	Ag/AgCl reference electrode
Auxiliary electrode	Coiled platinum wire within a fritted glass isolation chamber
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
206.0035	Complete SynthesisCell, consisting of 75 mL beaker glass with Teflon cap, WE (Reticulated Vitreous carbon), RE and AUX electrodes, stir bar, electrode cables, etc., all parts included for immediate use
<b>Optional</b>	
206.0300	Water-jacketed beaker glass
206.0322	Platinum gauze working electrode (call for pricing)
<b>Spare Parts</b>	
206.0304	Reticulated Vitreous Carbon (RVC) electrode
206.0310	Auxiliary electrode chamber (glass)
206.0314	Ag/AgCl reference electrode

Antec (USA)  
info@myantec.com  
phone (888) 572-0012  
(toll free)

Antec (worldwide)  
info@myantec.com  
phone +31 71 5813333

