

Methods, IOCBC, Bannwarth

scCO₂-Reactor -supercritical CO₂-	Model: Autoclave Engineers Unit and Room: Org./Bioorg. Chemistry, 2nd floor, R.323F Responsible: Prof. W. Bannwarth Further information:
Short Description: High-pressure stainless-steel reactor equipped with a mechanical stirrer, a thermocouple, an internal manometer, and a sapphire window. The reactor possesses an inlet valve fitted with a 6-port HPLC valve for the addition of liquid substrates and an outlet valve for CO₂.	Picture of the Equipment 
Available Experiments/Techniques: Solvent properties can be varied via pressure and cosolvents to have a detailed influence on the speed and selectivity of catalytic reactions. Simple work up, nearly solvent-free products, especially useful for thermic instable compounds or pharmaceuticals.	
Special Equipment: Pickel's Original Supercritical Fluid Chromatography	
Measurements on the equipment are currently done by:	☐ Students ☐ Students after Introduction ☒ Students after extensive training ☐ Trained scientific service personal
Recent Publications, where this instrument was important (optional): Give citation	C.C. Tzschucke, C. Markert, W. Bannwarth, S. Roller, A. Hebel, R. Haag; <i>Angew. Chem.</i> 2002, 114, 4136-4173 N. Bruns, W. Bannwarth, J. C. Tiller, <i>Biotechnology and Bioengineering</i>, 2008, 101, 19 - 26
Typical problems that may be solved with this instrument:	-extraction of natural products -can be used as an environment-friendly and nontoxic medium -high solubility of organic fluoruous compounds in scCO₂