

Annex C-1 Medichem Projects

	4000 Litre Reaction Vessel	kilo-Lab	Pre-fabricated Mobile Lab
Justification	The installation of a 4000 litre glass-lined reaction vessel was intended to give more flexibility to our current setup so as to be able to perform processes in a more efficient manner. It also serves as a backup in case the only other glass-lined reaction vessel develops a technical fault. The addition of this reaction vessel has also permitted us to recover more spent solvents (in 2012, 50% of the solvent consumed was recovered).	A GMP compliant laboratory was required in order to be able to prepare pilot batches of material at small scale (typically 0.5kg to 1kg or less, hence the name).	The laboratory shall be used for research and development activities related to the design of chemical processes for the preparation of potent compounds. Due to the nature of these products, GMP regulations state that these cannot be produced in the facilities already present on site due to the risks of cross-contamination.
Technical Description	4000 litre, glass-lined reaction vessel of 1800mm internal diameter, with bottom valve and supported on bracketed ring and two parts divided ring. Supporting peripherals include a distillation vessel and an addition vessel.	The kilo-Lab comprises small trial/manufacturing equipment for developing products/processes or manufacturing at small scale. The main reaction vessel has a nominal volume of 25Litres and is controlled by a dedicated electronic oil cooler/heater. The kilo-Lab is supported by a mains water supply, nitrogen, vacuum, chilled water loop, an acid/base cabinet and cupboards for glassware/parts. The floor is epoxy coated. A closed soffit isolates the room.	The installation will consist of five pre-fabricated, mobile, modular units with a total area of 75 m ² . The installation shall comprise: <ul style="list-style-type: none"> - Technical Area - R&D Laboratory - Air Locks - Locker Rooms - Kilo Lab - Solid Handling Area
Supplier/s	De Dietrich	Afora Yu Hua Instruments JP Selecta	Telstar Projects, S.A.U.
Installation start	August 2011	April 2012	Planned around June/July 2013
Installation end	October 2011	July 2012	Planned around Sept/Oct 2013
Variation	None required	None required	Addition of new emission point to air (HVAC unit exhaust)