Unistat® petite fleur®

T_{min} in a 0.3-litre Buchi Glas Uster «picoclave»

Requirement
This case study examines the lowest achievable process temperature that the Petite Fleur can take the contents of a 0.3-litre un-insulated reactor.

Method
The Petite Fleur (Baby Tango) was connected to the reactor via two 1-metre insulated metal hose. The reactor was filled with 0.2 litre Ethanol. A set-point of -40 °C was entered and the system left to run to its lowest achievable temperature.

Results
The Baby Tango shows that it is very efficient at transferring thermal energy and cools the process to -31 °C. The heat-up curve also demonstrates the power-transfer capabilities and results tight process control.

Setup details
Petite Fleur® & «picoclave»

Temperature range:	-40...200 °C
Cooling power:	0.48 kW @ 200…0 °C
	0.27 kW @ -20 °C
Heating power:	1.5 kW
Hoses:	2x1 m; M16x1 (#9608)
HTF:	DW-Therm (#6479)
Reactor:	0.3-litre un-insulated glass pressure reactor
Reactor content:	200 ml Ethanol
Stirrer speed:	900 rpm
Control:	process