



Checklist to a successful CINC pilot scale test

1	Read the manual	Follow all safety instructions especially when you work with organic solvents.
2	Explosion risk	Please refer to the manual
3	Safety	For your own protection: <ul style="list-style-type: none"> <li>• work with the centrifuges in a vented cabinet</li> <li>• wear eye protection</li> <li>• wear gloves and your safety clothes.</li> </ul>
4	Take a sample of the light and the heavy phase and shake it in test tube	You will see the characteristics of the liquids (Separation time; Emulsification; colour change; pH change; solubility; third phase; precipitation; gas development; etc)
5	Determine the specific densities of the liquids after mixing	Important spec. Density after mixing of the liquids
6	Calculate the required weir	Enable the options on the weir calculation programm
7	Define flow rates required	check flows of the pumps / vertical feed
8	Start centrifuges at medium speed 25 - 70 Hz.	If liquids emulsify start with 25 Hz. For extractions start with 40 Hz. If liquids separate easily start with 66 Hz.
9	Feed all centrifuges with the heavy phase until the heavy phase exits	Once the heavy phase exits the centrifuge start the light phase feed. Feed rate 30 ml/min for both phases.
10	Monitor for ideal separation (if phases are contaminated correct)	Heavy phase showing light phase reduce the RPM by 10 Hz. If not sufficient correct weir to smaller size.
11	Monitor for ideal separation (if phases are contaminated correct)	Light phase showing heavy phase increase the RPM by 10 Hz. If not sufficient correct weir to bigger size.
12	Take samples earliest after the installed volume has been exchanged	Holdup volume CS 50 / V02 is 150 ml
13	Increase flow rates to achieve max flow rate with required separation quality	The max flow rate possible is essential for the scale up.
14	Take additional samples minimum one in the middle and one before the end	Better three samples after achieving equilibrium
15	Stop the pumps / gravity feed	Until all liquids run out of the centrifuges.
16	Stop the centrifuges / disconnect the electrical power	Safety precaution
17	Drain the centrifuges	determine the individual holdup volumes, this will indicate sedimentation insider the rotor.
18	Take the centrifuges apart and clean them.	ideal setup for the next trial
19	Grease the rotor shaft and the screws before you rebuild the centrifuges	This will keep everything in an easy way to work with