

# [CHE]

## Department of Chemistry

<b>1. Oil-free diaphragm pump rotary evaporator</b>	
Type	Mini Oil free PTFE
Ultimate vacuum	2mbar
Power supply	230 V
Single phase	
Built in vapour trap	
Warranty	3 years

<b>2. Precision Balance</b>	
Type	Digital
Capacity	200 gm
Readability	0.001 gm
Warranty	3 years

<b>3. Deep Freezer</b>	
Type	Vertical
Temperature range	Up to -40 °C
Operation Voltage	220 V
Capacity	300 liters
CFC free compressor	
Chemical resistant internal surface	
Digital temperature control with LED display	
Voltage stabilizer	
Warranty	3 years

<b>4. Ultrasonic Interferometer</b>	
Type	Single frequency 2 MHz, Accuracy 0.03 %
Ultrasonic generator	
Liquid cell (stainless steel)	
Top reflector assembly	
Digital micrometer	L.C. 0.001 mm
Base and RF cable	
<b>Constant temperature water bath</b>	RT to 85 °C
Doubled walled, with stainless steel inside and top	
Circulation by F.H.P. motor with regulator	
Digital temperature controller	

Thermal stability	±5 °C
Warranty	3 years
<b>5. Quartz Double Distillation Assembly</b>	
Type	Built in triple fail safe features
Low Temperature distillate	
Replaceable silica heater	
Quartz Teflon screw cork for easy cleaning of boiler	
Quartz threaded connector for easy assembly	
Distillate quality	Pyrogen free
Organic matter	Nil
Specific conductivity	0.1-0.5 µS/cm
RH/pH	6.9-7.0
Output capacity	2 litre/hour
Free from heavy metals	
Yeast and mould	zero
Total plate count	zero
Standard plate count	zero
KMnO <sub>4</sub> colour retention	60 min
Warranty	3 years

<b>6. Density Meter Digital</b>	
Type	3.5 digit
Measuring method	Resonant frequency oscillation
Measurement	Liquid samples
Measuring range	0.0000 to 2.0000 g/cm <sup>3</sup>
Resolution	0.0001 g/cm <sup>3</sup>
Accuracy	± 0.001 g/cm <sup>3</sup>
Temperature range	0 to 40 °C ± 0.1
Temperature compensation	Up to 10 coefficients for temp
Auto calibration	Density of water calibration at each temperature
Sampling	Syringe type hand pump
Data storage	Up to 1,100 samples
Warranty	3 years

<b>7. Ultrasonic Probe</b>	
Type	Microprocessor based, programmable sonicator minimum 700 watts
Frequency	20 kHz, auto tuning
Processing capability	10 mL to 1000 mL
Probes	13 mm solid probe and 25 mm for large volume applications
Diameter	13 mm
Length with adaptor	254 mm
Glass reaction vessel for sonochemical applications	250 mL
Energy monitor	
Watt meter	
Automatic tuning and frequency control	
Microprocessor based and programmable	
Automatic amplitude compensation	
Real time display	
Variable power output control	
Ten hour process timer	
Elapsed time indicator	
Independent on/off pulser	
Warranty	3 years

<b>8. UV-Visible Spectrophotometer</b>	
Type	Double beam with software
Wavelength range	190 - 1100 nm
Readability	0.1 nm
Bandwidth	1.0 nm
Accuracy	$\pm 0.2$ nm and $\pm 0.002$ Abs
Repeatability	$< 0.1$ nm and $\pm 0.001$ Abs
Scan speed	10-8000 nm/min
One pair of quartz cuvette free	
Warranty	3 years