

CHECKLIST OF REQUIREMENTS FOR USING THE SEM UNSUPERVISED

User: _____ Date: _____ Examiner: _____

Users must score 100% to use the Phillips 505 Unsupervised.

Users can be checked out any number of times until her/his score is 100%.

Scope must be used at least once a semester to maintain unsupervised status.

PRESTART CONDITIONS:

- Power ON
- Vacuum ON and Ready (V1 & V3 illuminated)
- KeV set and OFF
- Filament at 0
- Compensation at X
- Spot size at 500
- CAL fully CCW
- Mag at
- Zoom OFF
- Left & Right Image at Video 1
- Display OUT
- Rotation OFF
- DET 1 selected
- Scan mode on Line (—)
- Right display CRT on Y-mode
- Gain at 90
- Black Level adjusted on screen

SPECIMEN INSERTION AND REMOVAL

- Tilt Unlocked
- Tilt at 15°
- Low WD
- High WD
- Specimen position Focus set
- Room lights out
- Chamber vented
- Gloves used
- specimen Z-height set
- Specimen stub set screw tightened
- Chamber door closed securely
- Chamber pumped out

FILAMENT SATURATION

Filament correctly saturated
Scan mode set to square (□)
Gun Tilt centered
Gun Shift centered
Compensator on 2

OPERATION

Focus
Magnification
Final lens stigmatism corrected
Photographic contrast and brightness set
Photographic information controls set

BACKSCATTER ELECTRON IMAGING

CATHODOLUMINESCENCE IMAGING

- | | YES | NO |
|---|--------------------------|--------------------------|
| 1. Does user know all steps, in order for turning microscope ON? | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Does user know all steps, in order for turning microscope OFF? | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Does user know correct use of Haskeris water cooling system? | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Can user locate, center and saturate filament correctly?
(Not Under- or Over-saturated) | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Can user recognize condenser aperture alignment, locate and center aperture? | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Can user recognize objective aperture alignment, locate and center aperture? | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. Can user correctly insert and remove specimens?
- X/Y translates at 500/500
- Specimen cartridge inserted & under vacuum | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Can user change film in the prescribed sequence (correct loading of film cassette)? | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Does the user pump down film desiccator properly? | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Does user know the emergency procedures? | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. 10 hours of beam time is required. | | |

Date	Beam Time
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____