

**MICROMERITICS
OPERATOR TRAINING CHECKLIST
for the ASAP 2050 Extended Pressure Adsorption Analyzer**

This Operator Training Checklist was reviewed and approved by:

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Overview

This document contains a checklist to be used for training ASAP 2050 Extended Adsorption Analyzer operators. These instructions reference the **ASAP 2050 Extended Adsorption Analyzer Operator's Manual**, Part number: 205-42801-00, current version.

Orientation

1. Online manual shown and discussed. _____
2. **Table of Contents** and **Appendices** shown and discussed. _____
3. Equipment description shown and discussed. _____
4. Power up and power down sequence shown and discussed. _____
5. Cable connections shown and discussed. _____
6. Front panel components shown and discussed. _____
7. Side panel components shown and discussed. _____
8. Vacuum pump compartment shown and discussed. _____
9. Menu structure shown and discussed. _____
10. Software usage topics in the **User Interface** chapter shown and discussed. _____
11. Trainee allowed time to become familiar with software operation. _____

Sample and Parameter File Creation

1. **File** menu and sample information file structure shown and discussed. _____
2. Sample information file creation shown and discussed. _____
3. Sample tube file creation shown and discussed. _____
4. Degas file creation shown and discussed. _____
5. Analysis conditions file creation shown and discussed. _____
6. Report options file creation shown and discussed. _____

Sample Preparation

1. Sample tube cleaning, handling, and assembly shown and discussed. _____
2. Trainee prepared sample tube. _____

Sample Degas

1. Filling cold trap Dewar shown and discussed. _____
2. Loading samples onto degas system shown and discussed. _____
3. Trainee loaded sample onto degas system. _____
4. Starting and viewing the degas operation shown and discussed. _____

Sample Analysis

1. Indicators, prompts and valves shown and discussed. _____
2. Degassed sample unloading shown and discussed. _____
3. Trainee loaded sample onto analysis system. _____
4. Dewar filling shown and discussed. _____
5. Starting and viewing analysis shown and discussed. _____
6. Effect of alternative analysis conditions discussed. _____
7. Adsorption dosing and equilibration discussed. _____
8. Screen reporting of analysis in progress shown and discussed. _____

Analysis Reports

1. Starting default reports shown and discussed. _____
2. Changing sample file report options shown and discussed. _____
3. Heat of Adsorption report shown and discussed. _____
4. Screen reports shown and discussed. _____
5. Report Subsystem controls shown and discussed. _____
6. Printed reports shown and discussed. _____

- 7. Overlays shown and discussed. _____
- 8. Calculations included in **Appendix C** shown and discussed. _____

Troubleshooting and Operator Maintenance

- 1. Troubleshooting and Error message sections of manual shown and discussed. _____
- 2. Operator Preventive Maintenance shown and discussed. _____
- 3. Elevator screw lubrication discussed. _____
- 4. Dewar examination discussed. _____
- 5. Sample tube O-rings replacement shown and discussed. _____
- 6. Analysis and degas port filter replacement shown and discussed. _____
- 7. Vacuum pump exhaust filter replacement discussed. _____
- 8. Vacuum pump fluid inspection and replacement shown and discussed. _____
- 9. Vapor trap alumina replacement discussed. _____
- 10. Cold trap cleaning discussed. _____
- 11. Instrument calibrations discussed. _____
- 12. Instrument cleaning discussed. _____
- 13. Leak testing discussed. _____
- 14. Reference material analysis details and analysis frequency discussed. _____

Manual Control

- 1. Instrument Schematic shown and discussed. _____
- 2. Manual Control shown and discussed. _____
- 3. Status Display shown and discussed. _____
- 4. Degas Control shown and discussed. _____

Options Menu

- 1. Options Menu shown and discussed. _____
- 2. Option presentation shown and discussed. _____
- 3. Sample Defaults programming shown and discussed. _____

