

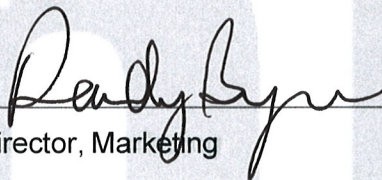
AUTOCHEM[®] HP 2950

AUTOMATED HIGH PRESSURE CATALYST CHARACTERIZATION SYSTEM

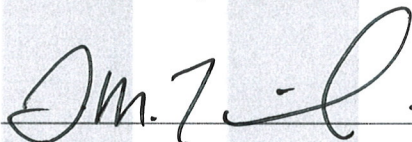
This Operator Training Checklist was reviewed and approved by:



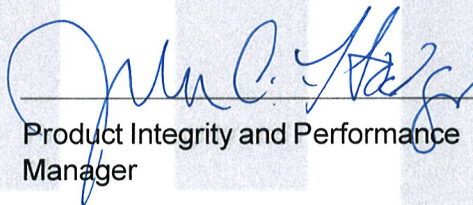
Director, Quality Assurance



Director, Marketing



Service Manager - Americas



Product Integrity and Performance
Manager

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OPERATOR TRAINING CHECKLIST

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(Rev A)

1. OVERVIEW

This document contains a checklist to be used for training of AutoChem HP 2950 system operators. Place a check mark next to the items that were shown and discussed.

2. ORIENTATION

- _____ 1. Table of Contents and Appendices
- _____ 2. Manual organization and conventions
- _____ 3. Equipment description and components discussion
- _____ 4. Proper exhaust techniques
- _____ 5. Power up and power down sequence
- _____ 6. Analyzer and cable connections
- _____ 7. KwikCool, KwikCool Vortex, and CryoCooler options
- _____ 8. Sample tube choice, cleaning, handling, and assembly
- _____ 9. Setup Mass Flow Controller valve for new gasses
- _____ 10. Trainee prepared sample tube
- _____ 11. Trainee allowed to load sample
- _____ 12. Menu structure
- _____ 13. Mouse and keyboard usage
- _____ 14. Trainee allowed time to become familiar with software operation
- _____ 15. Unit Configuration
- _____ 16. *Help* menu
- _____ 17. Libraries

3. HARDWARE INSTALLATION AND USE

- _____ 1. Furnace mounting and removal
- _____ 2. Sample thermocouple position
- _____ 3. Cold trap and delay loop installation
- _____ 4. Septum use
- _____ 5. Cooling options

- _____ 6. Sample tube
- _____ 7. Sample quantity and loading

4. METHODS CREATION

- _____ 1. Methods creation
- _____ 2. Methods used in sample information files

5. SAMPLE FILE CREATION

- _____ 1. File menu and sample information file structure
- _____ 2. Sample information file
- _____ 3. Analysis conditions file
- _____ 4. Adsorptive properties file
- _____ 5. Available reports
- _____ 6. Report options file
- _____ 7. Forms in Operator Manual Appendix discussed

6. SAMPLE ANALYSIS

- _____ 1. Analysis tutorial section in Operator Manual
- _____ 1. Cold trap installation
- _____ 2. Start, suspend, monitor, and cancel analysis
- _____ 3. Indicators, prompts, and valves
- _____ 4. Effect of alternative analysis conditions
- _____ 5. Screen reporting of analysis in progress
- _____ 6. Overlay Experiment View, Stacked Experiment View, and Peak Editor
- _____ 7. Loop calibration
- _____ 8. Auxiliary inputs and outputs

7. ANALYSIS REPORTS

- _____ 1. Interactive reports
- _____ 2. Starting default reports
- _____ 3. Changing sample file report options
- _____ 4. User-defined reports
- _____ 5. Printed reports
- _____ 6. Example reports
- _____ 7. Calculations (internet location)

8. OPTIONS MENU

- _____ 1. *Options* menu
- _____ 2. Presentation display options
- _____ 3. Default method
- _____ 4. Manage libraries
- _____ 5. Active metals
- _____ 6. Signal calibration
- _____ 7. Units of measurement selections
- _____ 8. Environmental defaults
- _____ 9. Graph options
- _____ 10. Service test mode

9. TROUBLESHOOTING AND MAINTENANCE

- _____ 1. Error messages (internet location)
- _____ 2. Preventive maintenance procedures
- _____ 3. Clean the equipment
- _____ 4. Clean or change the cold trap or delay path
- _____ 5. Change the cold trap O-ring
- _____ 6. Clean or change the foam air filter
- _____ 7. Change the sample tube filter
- _____ 8. Change the septum
- _____ 9. Reposition replace, or adjust the sample thermocouple
- _____ 10. Recalibrate the sample thermocouple
- _____ 11. Perform a leak test
- _____ 12. Perform a reference material analysis
- _____ 13. Perform a mass flow controller calibration
- _____ 14. Change gas cylinders
- _____ 15. Vent the gas exhausts
- _____ 16. Purge gas
- _____ 17. Remove or install furnace
- _____ 18. Change the injection loop
- _____ 19. Attach the KwikCool or optional CryoCooler

10. RETURNED GOODS AND PARTS ORDERING

- _____ 1. Returned goods policy
- _____ 2. Parts and accessories ordering (internet location and operator manual location)

11. WARRANTY STATEMENT

- _____ 1. Warranty policy

13. VERIFICATION

_____ All items on the Operator Training Checklist completed? (Enter **Yes** or **No**)

Name of trainer: _____

Date of training: _____

Company address: _____

Analyzer name: _____

Analyzer serial number: _____

The following section is to be completed by the primary operator trained during this session. Please complete to acknowledge that installation training has been carried out to your satisfaction.

Operator verifying completion of training: _____

Date signed: _____

Operator's title: _____

Operator's phone number: _____