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Drawing from over 30 years of industrial experience in the chromatography field, JD Chrom develops lab automation products designed to increase efficiency, boost productivity, and promote convenience in the art of separation. Best exemplified by the Automated Column Screening Package below, JD Chrom products will save you time and money while delivering unmatched efficiency and ease-of-use.

MCCPS System

Multiple Column Cleaning & Pre-Conditioning and Screening

An accessory system enabling a unique 2-Phase Method Development Process, capitalizing on task specialization and its high 10 column capacity column selector, to make your method development over 200% faster!

MCCP Program

Multiple Column Cleaning & Pre-Conditioning

Essential in Phase-1: Cleaning & Pre-Conditioning, the MCCP Program cycles through selected columns as mobile phase is passed to flush and equilibrate up to 10 columns in a single easy-to-configure process.

MCS Program

Multiple Column Screening

Essential in Phase-2: Screening, the MCS Program coordinates column selection with injections from your system to screen up to 10 columns in a single easy-to-configure process.

Chromatogram Stacking Program

Instantly load an entire subdirectory of chromatograms to view and compare in a scrollable Display Window easily fitting up to 8 chromatograms on-screen. Options to save and print are available for data sharing.

Sequence Builder

Easily build intricately detailed sequence tables while only defining sequence table parameters (e.g. sample location, method, column choice) once. Save and import directly into ChemStation and run immediately.

ACS Package

Automated Column Screening

Save on revolutionizing your method development by purchasing this product bundle! Includes the MCCPS System, Chromatogram Stacking Program, and Sequence Builder.

Chiral Technologies – Chiral Stationary Phases

The Chromatography of chiral molecules is a simple and elegant technique for rapid isolation of enantiomers of high purity. The chromatography of enantiomers relies on the availability of chiral stationary phases specifically designed to separate chiral molecules.

SIELC Technologies – Mixed Mode Stationary Phases

Primesep Columns, with innovative mixed-mode and SWITCH Phase(R) Technology, are highly versatile and can separate a tremendous range of compounds.

REFERENCE SITE 1: AMGEN

1 Amgen Center Dr.
Thousand Oaks, CA 91320
United States of America

REFERENCE SITE 2: CTI USA

800 North Five Points Road
West Chester, PA 19380
United States of America

REFERENCE SITE 3: CTI INDIA

Lab No. 4A, Phase III, IKP Knowledge Park
Genome Valley, Turkapally, Shameerpet, Ranga
Reddy District
Hyderabad-500 078, Telangana

JD Chrom: A Solution for Rapid Method Development

(1) Streamlined Sequence Table Construction

Define Sequence Parameters (Sample, Method, Column, etc.) Once * Build Entire Sequence Tables with a Single Click * Adaptive Modes of Input * Import Directly into ChemStation

(2) Specialized Column Cleaning & Pre-Conditioning

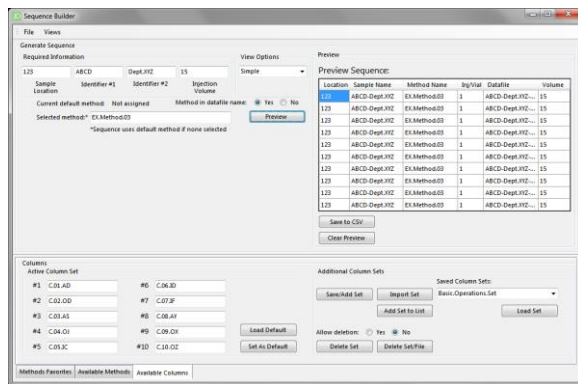
Prepare Up to 10 Columns for Injection in a Single Process * Automated Column Cycling * Efficiency from Batch Processing

(3) Specialized Column Screening

Inject Sample Into Up to 10 Columns for Analysis in a Single Process * Automated Column Cycling * Synchronized with Sample Injection * Efficiency from Batch Processing

(4) Instant Chromatogram Viewing

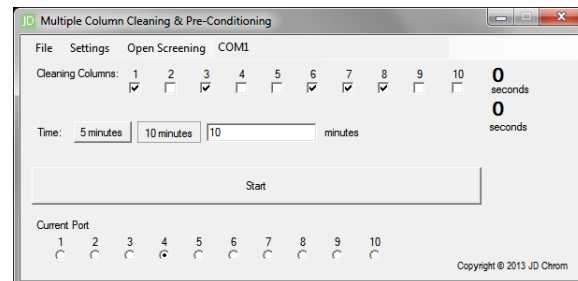
One-Click Directory Loading * Alphanumerical Ordering * Easily View 10+ Chromatograms at Once * Print/Save in One of Two Available Options to Share with Others



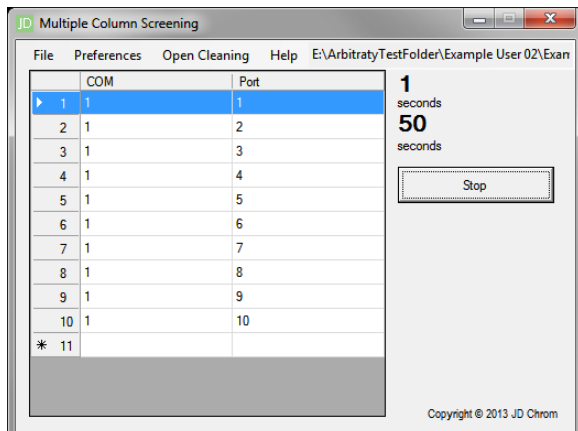
Sequence Builder

Line	Vial	Sample Name	Method Name	Inj/Vial	Datefile	Inj Volume
1	Vial 123	ABCD-Dept.XYZ	EX.Method.03	1	ABCD-Dept.XYZ-EX.Method.03-C.01-AD-01	15
2	Vial 123	ABCD-Dept.XYZ	EX.Method.03	1	ABCD-Dept.XYZ-EX.Method.03-C.02-DB-01	15
3	Vial 123	ABCD-Dept.XYZ	EX.Method.03	1	ABCD-Dept.XYZ-EX.Method.03-C.03-AS-01	15
4	Vial 123	ABCD-Dept.XYZ	EX.Method.03	1	ABCD-Dept.XYZ-EX.Method.03-C.04-OJ-01	15
5	Vial 123	ABCD-Dept.XYZ	EX.Method.03	1	ABCD-Dept.XYZ-EX.Method.03-C.05-IC-01	15
6	Vial 123	ABCD-Dept.XYZ	EX.Method.03	1	ABCD-Dept.XYZ-EX.Method.03-C.06-ID-01	15
7	Vial 123	ABCD-Dept.XYZ	EX.Method.03	1	ABCD-Dept.XYZ-EX.Method.03-C.07-IF-01	15
8	Vial 123	ABCD-Dept.XYZ	EX.Method.03	1	ABCD-Dept.XYZ-EX.Method.03-C.08-AT-01	15
9	Vial 123	ABCD-Dept.XYZ	EX.Method.03	1	ABCD-Dept.XYZ-EX.Method.03-C.09-OK-01	15
10	Vial 123	ABCD-Dept.XYZ	EX.Method.03	1	ABCD-Dept.XYZ-EX.Method.03-C.10-OZ-01	15

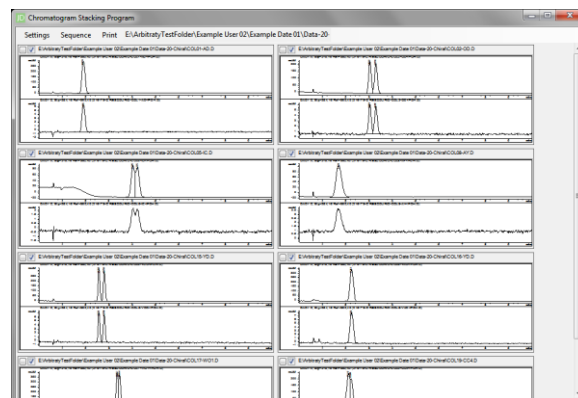
Imported Sequence Table



Multiple Column Cleaning & Pre-Conditioning Program



Multiple Column Screening Program

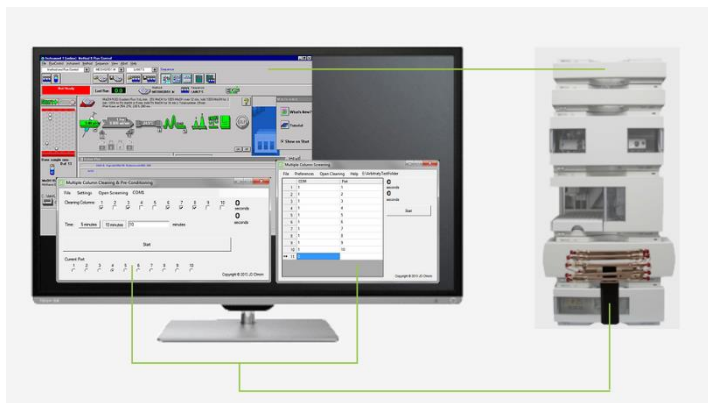


Chromatogram Stacking Program



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ITEM DESCRIPTION

10-Column Capacity Column Selector* integrated with proprietary software that introduces a specialized 2-Phase Method Development Process. Use the MCCP Program to first rapidly clean & pre-condition upwards of 10 columns in a single process. Then use the MCS Program to sequentially screen upwards of 10 columns in a single process.

*tubing, fittings, and ferrules included

KEY FEATURES

- Automated Column Cycling/Selection
- Resource Savings via Specialization
 - Time, Samples, Solvents
- Minimal Lab Footprint (~1ft³)
- Column Position Display
- Simple & Intuitive User Interface

BENEFITS OF SPECIALIZED 2-PHASE METHOD DEVELOPMENT PROCESS

To illustrate, let us assume the following in this example: 10 unique columns; 5min/column Cleaning & Pre-Conditioning Method; 20min/column Screening Method (injection); Let D = Distraction Cost (for user to put down everything & return to the HPLC System). Also note a common practice of injecting a sample 3x to achieve: (1) column equilibration (2) sample injection (3) injection confirmation.

Conventional Method Development

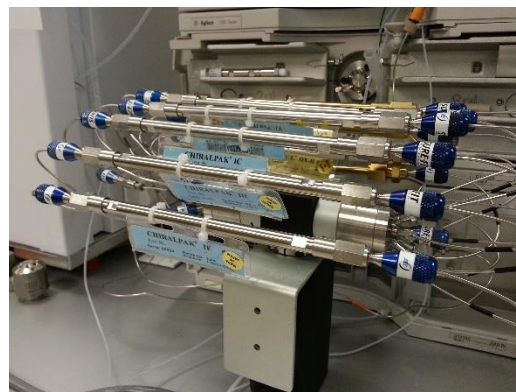
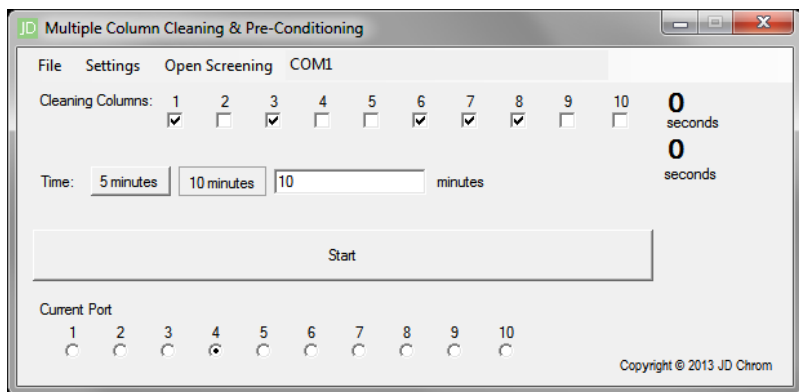
Time	Task
2	Column Setup
63	Sample Analysis
	1 Configure Method
	2 System Startup (reaching method parameters)
	20 Injection - C&P
	20 Injection - Analysis
	20 Injection - Analysis Confirmation
1	Column Removal
D	Distraction Cost
66+D	Column Total
	x(10)
	FINAL TOTAL
	660min+10D = 11hrs + 10(Distraction Cost)

MCCPS System Method Development

Time	Task
20	Column Setup
	2min x 10columns
53+D	Column Cleaning & Pre-Conditioning
	1 Configure C&P Run
	2 System Startup
	50 Specialized C&P (5min x 10columns)
	D Distraction Cost
203+D	Column Screening
	1 Configure Screening Run
	2 System Startup
	200 Specialized Screening (20min x 10columns)
	D Distraction Cost
276+2D	Total
	FINAL TOTAL
	276min+2D = 4hrs 36min + 2(Distraction Cost)

Total Time Saved: 6 hours and 24 minutes & 5 times fewer Distraction Costs

MCCP Program (Multiple Column Cleaning & Pre-Conditioning) Copyright 2013



ITEM DESCRIPTION

Included in the MCCPS System, the MCCP Program is integral to Phase 1 (Cleaning & Pre-Conditioning) of the MCCPS System's specialized 2-Phase Method Development Process. The streamlined user interface provides a fast, easy, and intuitive way to set up a cleaning & pre-conditioning process for upwards of 10 columns.

KEY FEATURES

- Automated Column Cycling/Selection
- Resource Savings via Specialization
 - Time, Samples, Solvents
- Simple & Intuitive User Interface
- Easy Column Selection via MCCP Program UI
- Time Display
 - Current Column & Total Run Time

MCCP PROGRAM'S ROLE IN SPECIALIZED 2-PHASE METHOD DEVELOPMENT

To illustrate, let us assume the following in this example: 10 unique columns; 5min/column Cleaning & Pre-Conditioning Method; 20min/column Screening Method (injection); Let D = Distraction Cost (for user to put down everything & return to the HPLC System). Also note a common practice of injecting a sample 3x to achieve: (1) column equilibration (2) sample injection (3) injection confirmation.

Conventional Method Development

Time	Task
2	Column Setup
63	Sample Analysis
	1 Configure Method
	2 System Startup (reaching method parameters)
	20 Injection - C&P
	20 Injection - Analysis
	20 Injection - Analysis Confirmation
1	Column Removal
D	Distraction Cost
66+D	Column Total
	x(10)
	FINAL TOTAL
	660min+10D = 11hrs + 10(Distraction Cost)

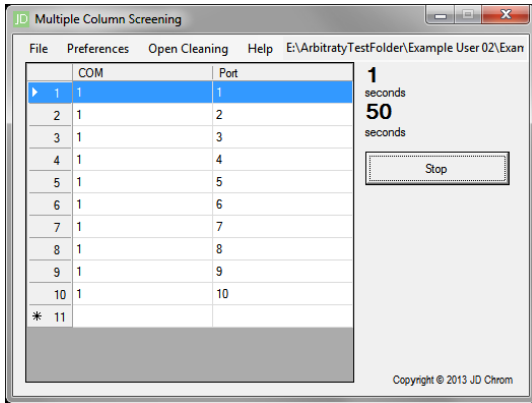
MCCPS System Method Development

Time	Task
20	Column Setup
	2min x 10columns
53+D	Column Cleaning & Pre-Conditioning
	1 Configure C&P Run
	2 System Startup
	50 Specialized C&P (5min x 10columns)
	D Distraction Cost
203+D	Column Screening
	1 Configure Screening Run
	2 System Startup
	200 Specialized Screening (20min x 10columns)
	D Distraction Cost
276+2D	Total
	FINAL TOTAL
	276min+2D = 4hrs 36min + 2(Distraction Cost)

Total Time Saved in PHASE-1: 3 hours and 27 minutes & 10 times fewer Distraction Costs

260 minutes & 10 Distraction Costs VS 53 minutes & 1 Distraction Cost

MCS Program (Multiple Column Screening) Copyright 2013



ITEM DESCRIPTION

Included in the MCCPS System, the MCS Program is integral to Phase 2 (Screening) of the MCCPS System's specialized 2-Phase Method Development Process. The streamlined user interface provides a fast, easy, and intuitive way to set up a screening process for upwards of 10 columns.

KEY FEATURES

- Automated Column Cycling/Selection
- Resource Savings via Specialization
 - Time, Samples, Solvents
- Simple & Intuitive User Interface
- Time Display
 - Current Injection & Total Run Time

MCS PROGRAM'S ROLE IN SPECIALIZED 2-PHASE METHOD DEVELOPMENT

To illustrate, let us assume the following in this example: 10 unique columns; 5min/column Cleaning & Pre-Conditioning Method; 20min/column Screening Method (injection); Let D = Distraction Cost (for user to put down everything & return to the HPLC System). Also note a common practice of injecting a sample 3x to achieve: (1) column equilibration (2) sample injection (3) injection confirmation.

Conventional Method Development

Time	Task
2	Column Setup
63	Sample Analysis
	1 Configure Method
	2 System Startup (reaching method parameters)
	20 Injection - C&P
	20 Injection - Analysis
	20 Injection - Analysis Confirmation
1	Column Removal
D	Distraction Cost
66+D	Column Total
	x(10)
	FINAL TOTAL
	660min+10D = 11hrs + 10(Distraction Cost)

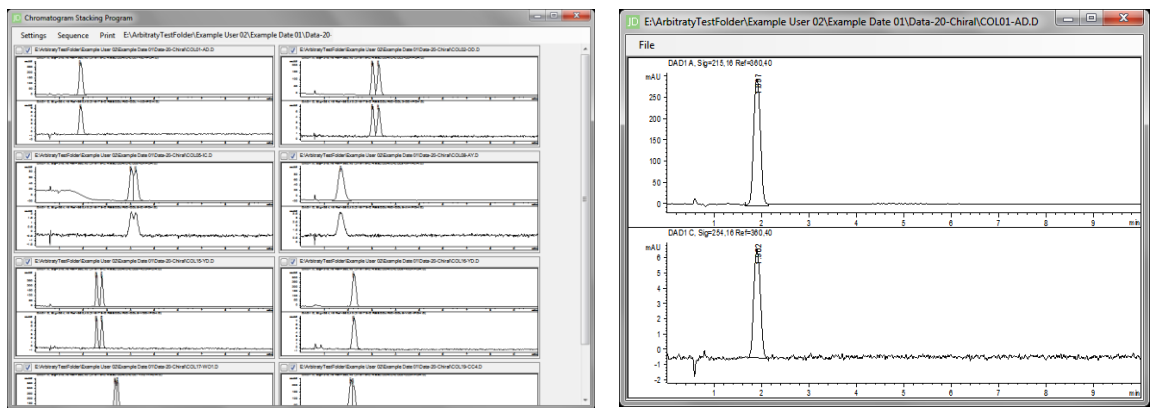
MCCPS System Method Development

Time	Task
20	Column Setup
	2min x 10columns
53+D	Column Cleaning & Pre-Conditioning
	1 Configure C&P Run
	2 System Startup
	50 Specialized C&P (5min x 10columns)
	D Distraction Cost
203+D	Column Screening
	1 Configure Screening Run
	2 System Startup
	200 Specialized Screening (20min x 10columns)
	D Distraction Cost
276+2D	Total
	FINAL TOTAL
	276min+2D = 4hrs 36min + 2(Distraction Cost)

Total Time Saved in PHASE-2: 4 hours and 17 minutes & 10 times fewer Distraction Costs

460 minutes & 10 Distraction Costs VS 203 minutes & 1 Distraction Cost

Chromatogram Stacking Program Copyright 2013



ITEM DESCRIPTION

The Chromatogram Stacking Program boasts a streamlined interface designed to provide an easy way to quickly view, compare, and share chromatograms in the method development process. Compare an entire directory of chromatograms and print/save in one of two available options.

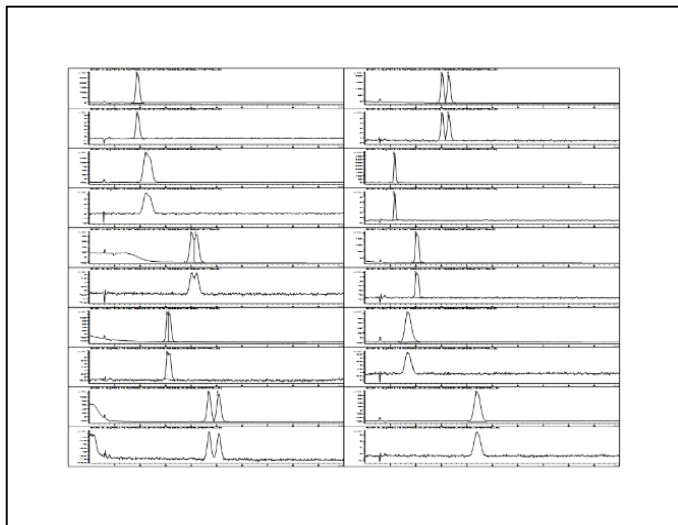
KEY FEATURES

- Instant Loading of All Chromatograms in a Given Directory
- Alphanumerical Ordering
- Hide/Remove Chromatograms
- Two Options to Print Chromatograms Present in the Display Window
- Double-Click a Chromatogram to View Full Size in a Pop-Out Window

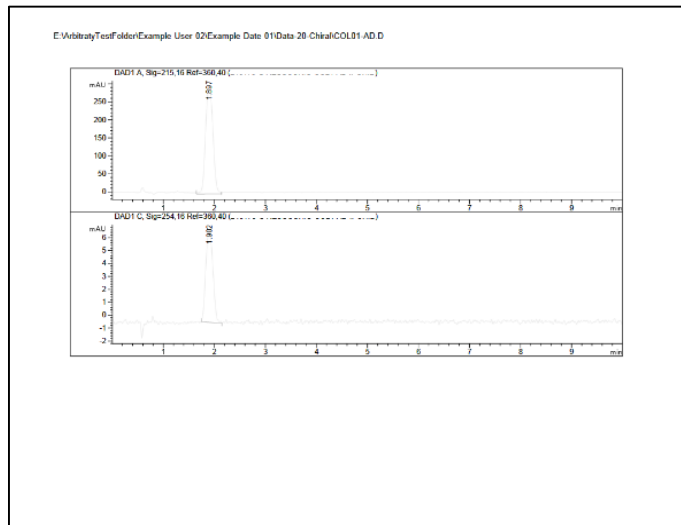
EXAMPLE PRINTOUTS

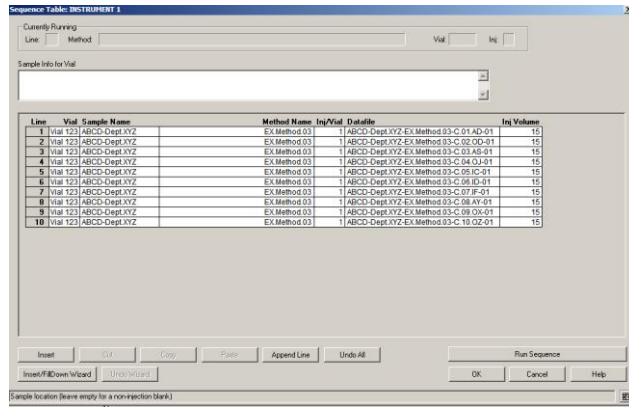
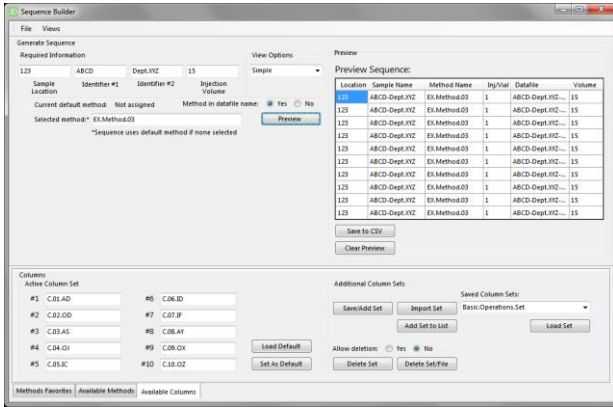
When printing, the CS Program will print only those currently present in the Display Window. The two available options for printing chromatograms are displayed below. Note: in the 1-Per-Page Printout, the chromatogram's filepath is also displayed for easy data retrieval.

10-Per-Page Printout



1-Per-Page Printout





ITEM DESCRIPTION

The Sequence Builder is an easy-to-use and streamlined program that drastically simplifies the sequence building process. Define sequence parameters (sample location, injection volume, methods, column sets) only once and build a detailed sequence table which can be imported directly into ChemStation.

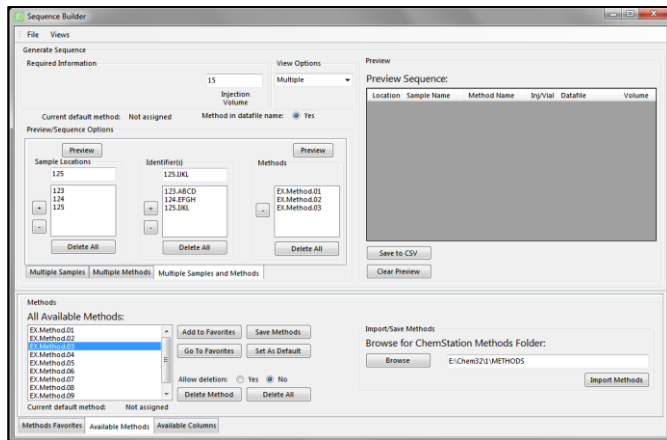
KEY FEATURES

- Adaptive User Interface
- Define Sequence Parameters Once
- Save Methods, Method Favorites, Column Sets
- Import Entire Methods Directory (Every Defined Method) From ChemStation

ADAPTIVE USER INTERFACE

The Sequence Builder has several modes of operation: Simple, Simple + Add Single, and Multiple. These modes are specialized for sequence table creation depending on the different combinations of how many samples you wish to screen, how many columns you have, and how many methods you plan to use.

Sequence Builder Multiple Samples & Methods Interface



Constructed Sequence Table

	A	B	C	D	E	F
1	Location	Sample Name	Method Name	Inj/Vial	Datafile	Volume
2	123	123.ABCD	EX.Method.01.M	1	123.ABCD-EX.Method.01-Column.01-01	15
3	123	123.ABCD	EX.Method.01.M	1	123.ABCD-EX.Method.01-Column.02-01	15
4	123	123.ABCD	EX.Method.01.M	1	123.ABCD-EX.Method.01-Column.03-01	15
5	123	123.ABCD	EX.Method.01.M	1	123.ABCD-EX.Method.01-Column.04-01	15
6	123	123.ABCD	EX.Method.01.M	1	123.ABCD-EX.Method.01-Column.05-01	15
7	124	124.EFGH	EX.Method.01.M	1	124.EFGH-EX.Method.01-Column.01-01	15
8	124	124.EFGH	EX.Method.01.M	1	124.EFGH-EX.Method.01-Column.02-01	15
9	124	124.EFGH	EX.Method.01.M	1	124.EFGH-EX.Method.01-Column.03-01	15
10	124	124.EFGH	EX.Method.01.M	1	124.EFGH-EX.Method.01-Column.04-01	15
11	124	124.EFGH	EX.Method.01.M	1	124.EFGH-EX.Method.01-Column.05-01	15
12	125	125.IJKL	EX.Method.01.M	1	125.IJKL-EX.Method.01-Column.01-01	15
13	125	125.IJKL	EX.Method.01.M	1	125.IJKL-EX.Method.01-Column.02-01	15
14	125	125.IJKL	EX.Method.01.M	1	125.IJKL-EX.Method.01-Column.03-01	15
15	125	125.IJKL	EX.Method.01.M	1	125.IJKL-EX.Method.01-Column.04-01	15
16	125	125.IJKL	EX.Method.01.M	1	125.IJKL-EX.Method.01-Column.05-01	15
17	123	123.ABCD	EX.Method.02.M	1	123.ABCD-EX.Method.02-Column.01-01	15
18	123	123.ABCD	EX.Method.02.M	1	123.ABCD-EX.Method.02-Column.02-01	15
19	123	123.ABCD	EX.Method.02.M	1	123.ABCD-EX.Method.02-Column.03-01	15
20	123	123.ABCD	EX.Method.02.M	1	123.ABCD-EX.Method.02-Column.04-01	15

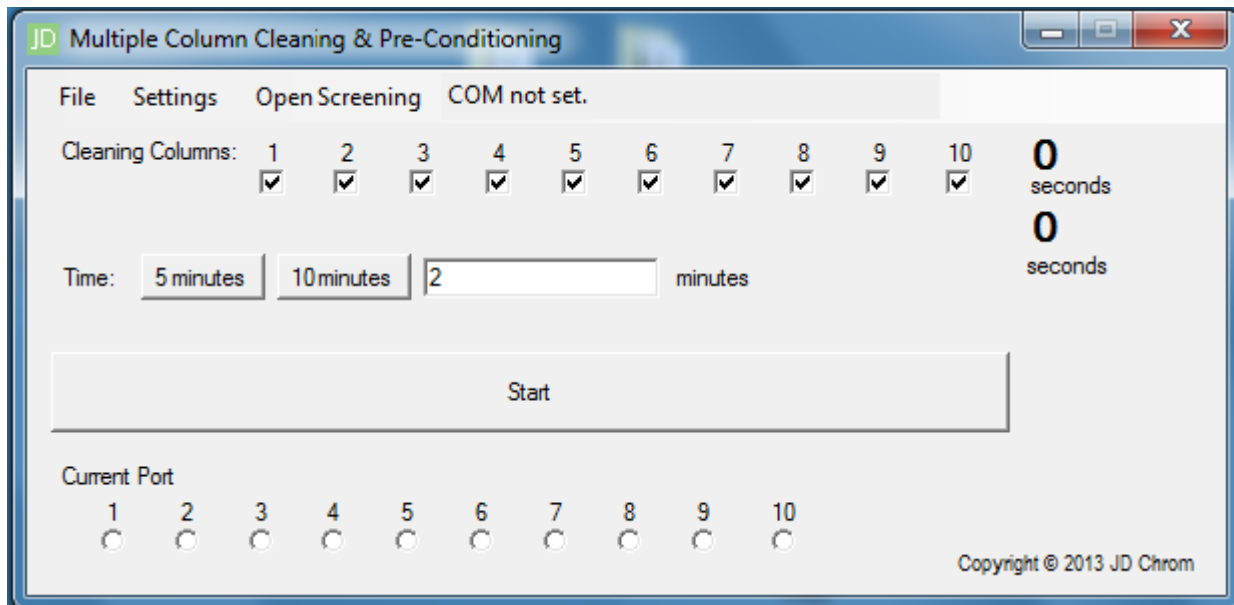


Application Example 1: Multiple Column Cleaning Operation

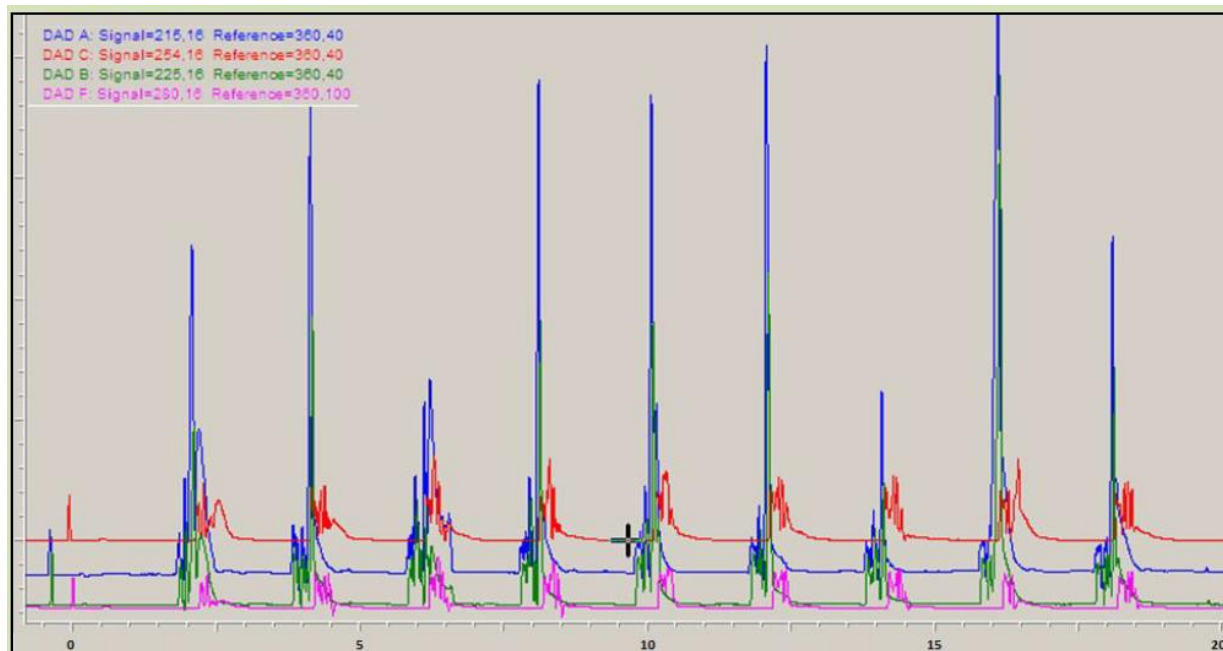
Operation Detail: A set of 10 columns spent 2 min. each in the cleaning process. Each peak represents the residual compounds from the column. These cleaned columns are now ready for the pre-conditioning phase.

Cleaning conditions: Flow rate =4.0 mL/min. Mobile phase: A/B (50/50) A: Methanol, B: Liquid CO₂.

Multiple Column Cleaning & Pre-Conditioning Settings



Resultant Chromatogram



Application Example 2: Ten Column Screening of a Racemate using Supercritical Fluid Chromatography

Experimental Condition:

Instrument: Agilent Aurora-SFC-MSD system

All chiral columns are from Chiral Technologies, and column dimensions are 2.1 mm x 100 mm, 3 μ m.

Flow Rate: 1.0 mL/min, gradient: Mobile Phase A: Liquid CO₂, B: Organic Solvent

Time =0 min, A/B 10/90, T=3 30/70, T=3.5 30/70, T=3.9 90/10, T=4.0 90/10

Column Arrangement:

Columns

Active Column Set

#1	AD-H	#6	IF
#2	OD-H	#7	AY
#3	AS-H	#8	AZ
#4	OJ-H	#9	OZ
#5	IC	#10	OX

Additional Column Sets

Save/Add Set Import Set Add Set to List Load Set

Saved Column Sets: Tier-1 10 CSPs

Allow deletion: Yes No

Delete Set Delete Set/File

Methods Favorites Available Methods Available Columns

Multiple Column Screening Setup

Multiple Column Screening

File Preferences Open Cleaning Help

	COM	Port
▶ 1	5	1
2	5	2
3	5	3
4	5	4
5	5	5
6	5	6
7	5	7
8	5	8
9	5	9
10	5	10
* 11		

0 seconds
0 seconds

Start

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Sequence Setting

Generate Sequence

Required Information

12 Name Sample-1 15

Sample Location Identifier #1 Identifier #2 Injection Volume

Current default method: Not assigned Method in datafile name: Yes No

Selected method: Generic Gradient 10-70.M *Sequence uses default method if none selected

View Options: Simple

Preview Sequence:

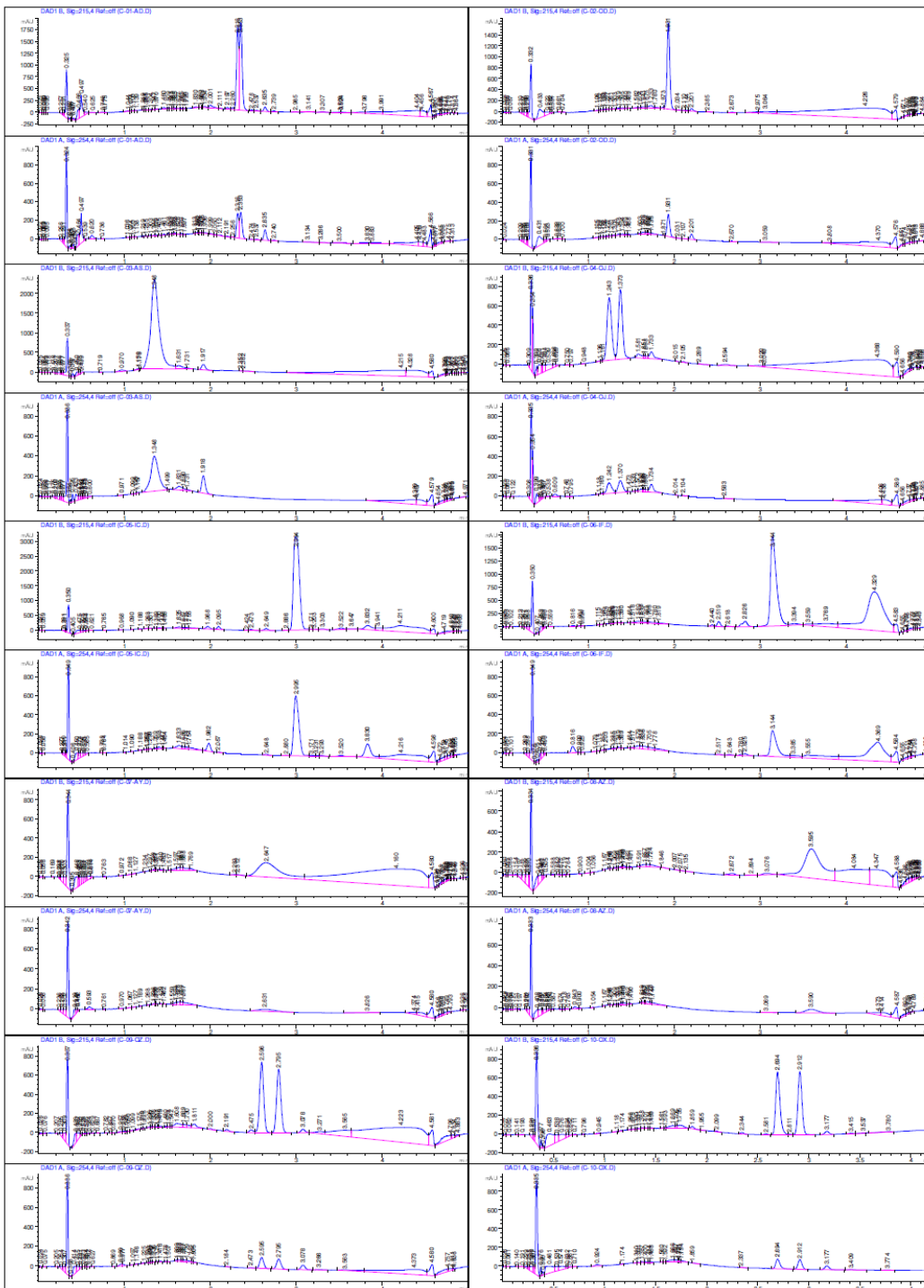
Local	Sample Name	Method Name	Inj/Vol	Datafile	Vol
12	Name-Sample-1	Generic Gradient 10...	1	Name-Sample-1-Generi...	15
12	Name-Sample-1	Generic Gradient 10...	1	Name-Sample-1-Generi...	15
12	Name-Sample-1	Generic Gradient 10...	1	Name-Sample-1-Generi...	15
12	Name-Sample-1	Generic Gradient 10...	1	Name-Sample-1-Generi...	15
12	Name-Sample-1	Generic Gradient 10...	1	Name-Sample-1-Generi...	15
12	Name-Sample-1	Generic Gradient 10...	1	Name-Sample-1-Generi...	15
12	Name-Sample-1	Generic Gradient 10...	1	Name-Sample-1-Generi...	15
12	Name-Sample-1	Generic Gradient 10...	1	Name-Sample-1-Generi...	15
12	Name-Sample-1	Generic Gradient 10...	1	Name-Sample-1-Generi...	15
12	Name-Sample-1	Generic Gradient 10...	1	Name-Sample-1-Generi...	15
12	Name-Sample-1	Generic Gradient 10...	1	Name-Sample-1-Generi...	15
12	Name-Sample-1	Generic Gradient 10...	1	Name-Sample-1-Generi...	15

Save to CSV Clear Preview



Printout of Screening Results using JD Chrom's Proprietary Chromatogram Stacking Program

1 minute is sufficient to display & print all chromatograms here.

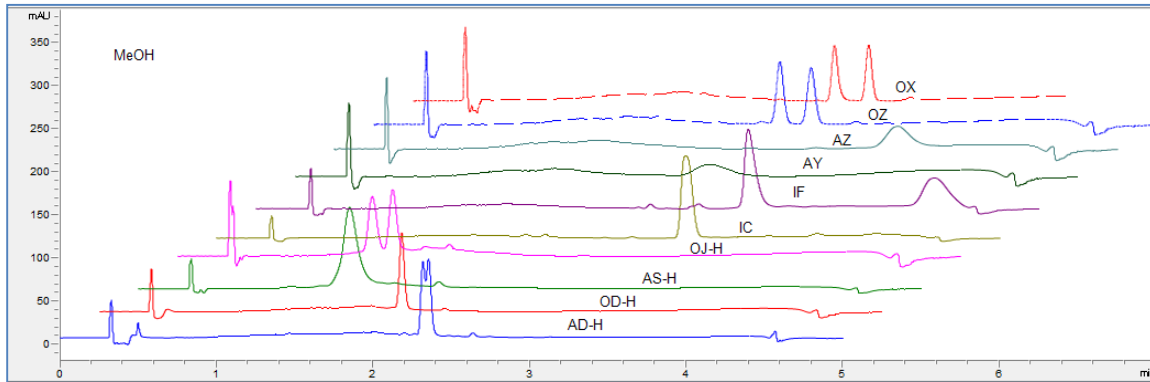


*Chromatograms were drawn at both 215 and 254 nm for each column screening.



Stacked Chromatograms using Agilent ChemStation Software

30 minutes is the approximate length of time required to display all chromatograms as below.



*Chromatograms were drawn at 215 nm.

Application Example 3: Ten Column Screening of a Racemate using Supercritical Fluid Chromatography

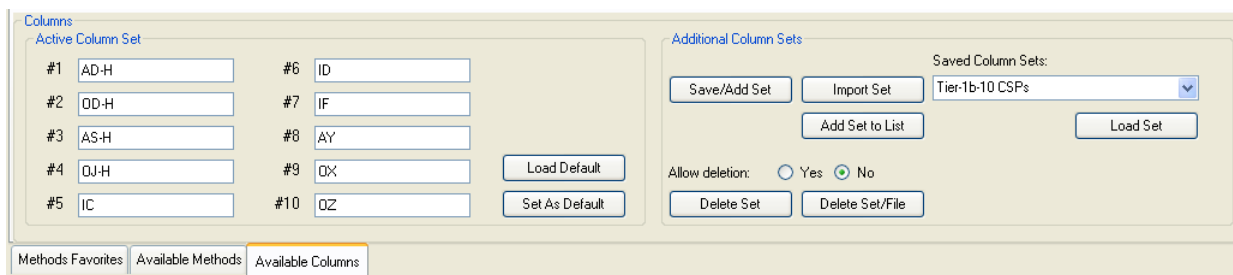
Experiment Condition:

Instrument: Agilent Aurora-SFC-UV system.

All chiral columns are from Chiral Technologies, and column dimensions are 4.6 mm x 150 mm, 5 µm.

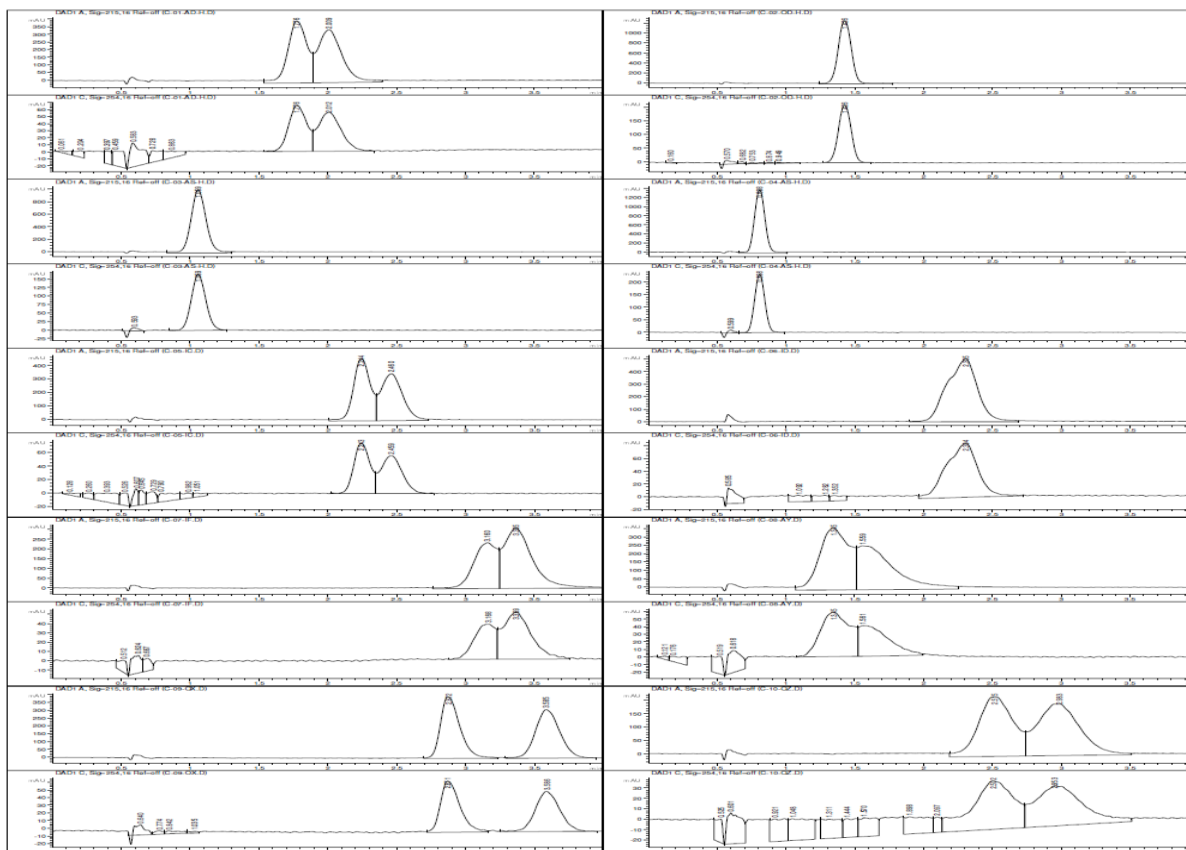
Flow Rate: 4.0 mL/min, 10% Ethanol and 90% Liquid CO₂

Column Arrangement:



Printout of Screening Results using JD Chrom’s Proprietary Chromatogram Stacking Program

1 minute is sufficient to display & print all chromatograms here.



Application Example 4: Twenty Column Screening of a Racemate using Supercritical Fluid Chromatography

Experiment Condition:

Instrument: Agilent Aurora-SFC-UV system

Column dimensions: 4.6 mm x 150 mm, 5 µm

Flow Rate: 4.0 mL/min, 20% Isopropanol and 80% Liquid CO₂

Column Arrangement:

Columns

Active Column Set

#1	AD-H	#6	ID
#2	OD-H	#7	IF
#3	AS-H	#8	AY
#4	OJ-H	#9	OX
#5	IC	#10	OZ

Load Default
Set As Default

Additional Column Sets

Save/Add Set Import Set Add Set to List Load Set

Saved Column Sets:
Tier-1b-10 CSPs

Allow deletion: Yes No
Delete Set Delete Set/File

Methods Favorites Available Methods Available Columns

Columns

Active Column Set

#1	IA	#6	YDD-CC
#2	IB	#7	W0-1
#3	IE	#8	W0-2
#4	AZ	#9	CC-4
#5	YAD-AC	#10	CC-2

Load Default
Set As Default

Additional Column Sets

Save/Add Set Import Set Add Set to List Load Set

Saved Column Sets:
Tier-2 10 CSPs

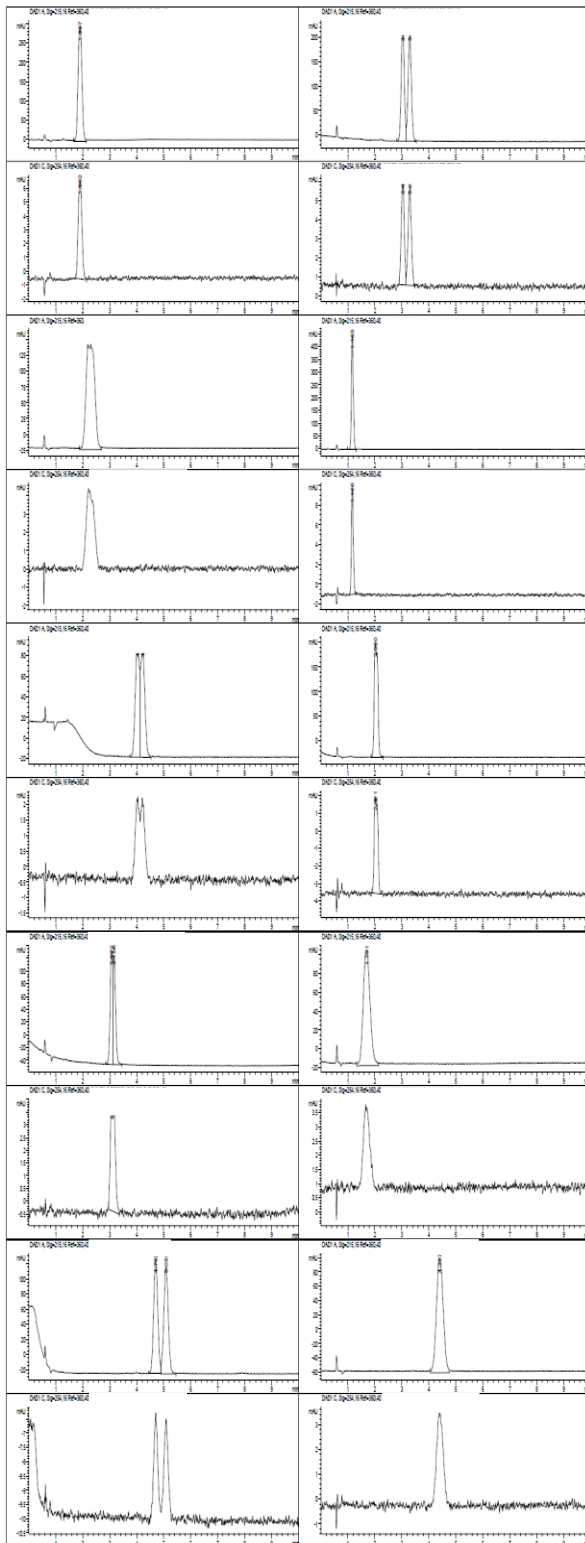
Allow deletion: Yes No
Delete Set Delete Set/File

Methods Favorites Available Methods Available Columns

Printout of Screening Results using JD Chrom's Proprietary Chromatogram Stacking Program

1 minute is sufficient to display & print all chromatograms at 215 & 254 nm.

Tier 1b – 10 CSPs



Tier 2 – 10 CSPs

