



datainnovations.com

RRE

Rapid Results Entry and Policy Definition

Carol R Lee

Implementation Consultant

Data Innovations, LLC

Copyright 2016 – All rights reserved



RRE Session Objectives

- **At the completion of this session you should be able to:**
 - Explain the concept of RRE
 - Locate and use example resources in your copy of EP Evaluator to
 - Copy and paste data from excel into
 - Single experiments
 - Multiple experiments
 - Create a policy definition and make it your Master project.

EP Evaluator Concepts

- **Project** – – a special database folder to contain a collection of Experiments for one or more Statistical Modules
- **Statistical Module** – Does calculations and report for a specific type of experiment - Like method comparison.
- **Experiment** – one set of data collected for a specific purpose for one analyte
- **Instrument = method** (think outside the box!)
- **(RRE) Rapid Results Entry** – mechanisms to efficiently enter data into EE
- **Policy Definitions** – A MASTER template of parameters used in RRE.

RRE Techniques

“Rapid Results Entry”

- Pasting results from Excel into existing experiment
 - Pasteextdetail.xls
- Paste with Policies into the Overview screen
 - Paste with policies table
 - Paste with Policies list
- Efficient keyboard entry of results using printouts for multiple analytes
 - RRE\create experiments \ Keyboard
- Instrument Interface: data capture directly from instruments, or from an instrument export file for Vendors only
- ODBC Data Acquisition from Instrument Manager - the Best way
- EE Users Guide Chapters 35, 36, 37
- Help Topics are available for most all of the setup screens

Which statistical modules use RRE?

- RRE does not apply to modules where experimental results aren't input
 - Cost per Test, Incident Tracking, Inventory, Performance Standards, Six Sigma Metrics
- A few modules use RRE techniques that are a bit “different”
 - Hematology Method Comparison, ROC, Establish Reference Interval, Average of Normals (**advanced techniques**)
- **Everything else**
 - Simple Precision, Alternate Method Comparison, Two Instrument Comparison, Linearity, Complex Precision, etc.
 - RRE is very similar - though not exactly alike

Data Entry Type	Considerations	Product code	Grade
Manual Entry	Slow Speed of entry, typos, one analyte at a time	All	Good
Rapid Keyboard entry from Instrument printouts using a panel defined worksheet	RRE wizard walks through the process, but still subject to typos and speed of entry	Standard	Good
Copy and paste from Microsoft Excel	RRE Wizard for Multiple analytes, multiple instruments – but still need to put the data into the worksheet.	Standard	Better
Instrument Data Capture – RRE Wizard	Cable hookup, or instrument generated file <i>Drivers for IVD Manufacturers Only</i>	Data Capture	Better
Data Capture from Instrument Manager	RRE - Simple Data query for thousands of results	Data Capture	Best 6

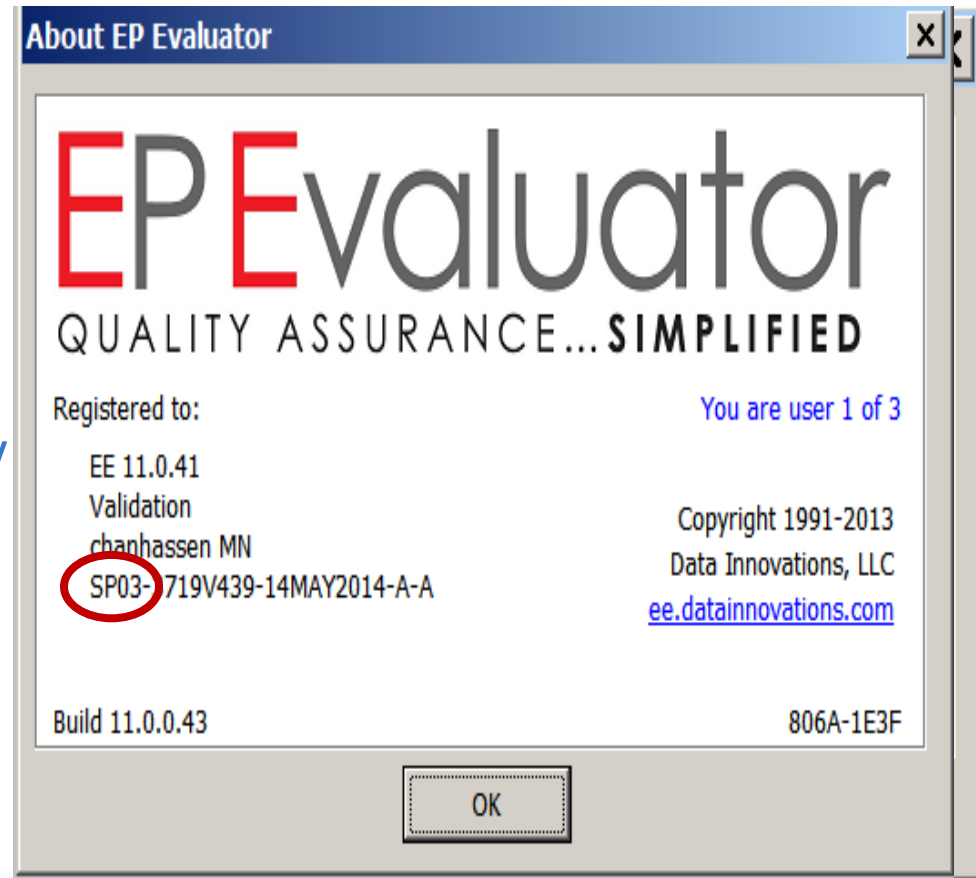
EP Evaluator[®] and Instrument Manager[®]

- **Data stored within the Instrument Manager's Cache database can be easily transferred to EE9 or EE10 or EE11 via Data Capture.**
- **Requirements**
 - IM version 8.08 or greater
 - Specimen Management licensed
 - ODBC driver licensed
 - Minimum: Standard version with Data capture license (unlock code 2nd letter is Q, V, or P)

EP Evaluator

Data Capture Versions

- Standard (Q)
 - 30 Stat and 4 Lab Management Modules
 - Data Capture
- Professional Version (P)
 - Everything plus User security and audit trail
- Available as single user, or upgrade to multiple user networks
- Part # EE-D-xxxx



ODBC Demo

The screenshot displays the ODBC Data Acquisition software interface. The main window has a menu bar (File, Edit, Module, Experiment, RRE, ERI View, Utilities, Tools, Help) and a toolbar. Below the toolbar is a table with columns: X Method, Analyte, N, Slope, Intercept, and Corr Coef (R). The main area is titled "AMC" and contains a "Y Method" dropdown menu. A secondary window, "ODBC Data Acquisition", is open, showing a "Global Filters" section with the instruction "Select a range of Observation Times". This section includes "Observation Date Range" with "Starting at" (11/24/2012 10:11:47) and "Ending at" (2/2/2016 19:00:00) fields. To the right, "Other Global Filters" includes three checkboxes: "Only Released Results", "Only Results With No Error Flags", and "Only QC Results". The "ODBC Data Acquisition" window also features a "Run Query Wizard" button and "Select Complete MC SpecIDs" and "Send to AMC" buttons. A "Legend" box at the bottom left shows a diamond icon for "Not Calculated".

File Edit Module Experiment RRE ERI View Utilities Tools Help

Project- AACCC/Demo

AMC

Y Method

ODBC Data Acquisition

Edit Help Quit

Select a source application Select an ODBC Connection Select Database

IM-TestInst EE to IM DSN Live Data Run Query Wizard Select Complete MC SpecIDs Send to AMC

ODBC Data Acquisition Query Wizard

Global Filters
Select a range of Observation Times

Observation Date Range

Starting at 11/24/2012 10:11:47

Ending at 2/2/2016 19:00:00

Other Global Filters

- Only Released Results
- Only Results With No Error Flags
- Only QC Results

Connected

Available Methods

Legend

- Not Calculated

ODBC Query from Instrument Manager

4 Filters

- **Date / time range**
- **Instrument ID**
- **Test codes**
- **Specimen ID**

In this session, we will use:

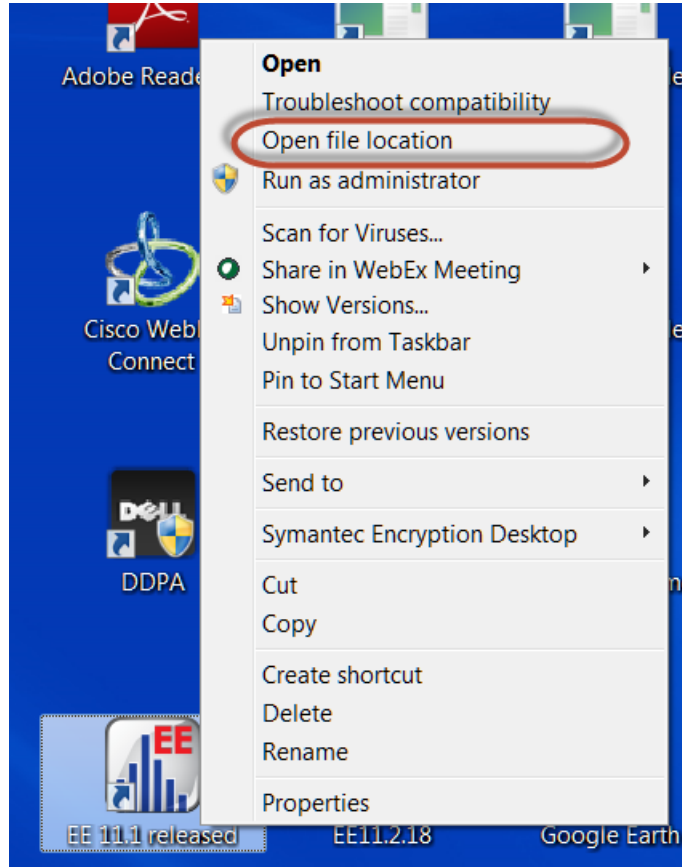
- Project “Example Policies”
 - Restore using Utilities \ file Manager if you don’t see it in your open project menu
- Spreadsheets in the Resources folder
 - Pasting results from Excel into existing experiment
 - Pasteextdetail.xls
 - Paste with Policies into the Overview screen
 - Paste with policies table
 - Paste with Policies list
- Technique
 - Efficient keyboard entry of results on printouts for multiple analytes
 - RRE \ create experiments \ Keyboard

RRE Techniques

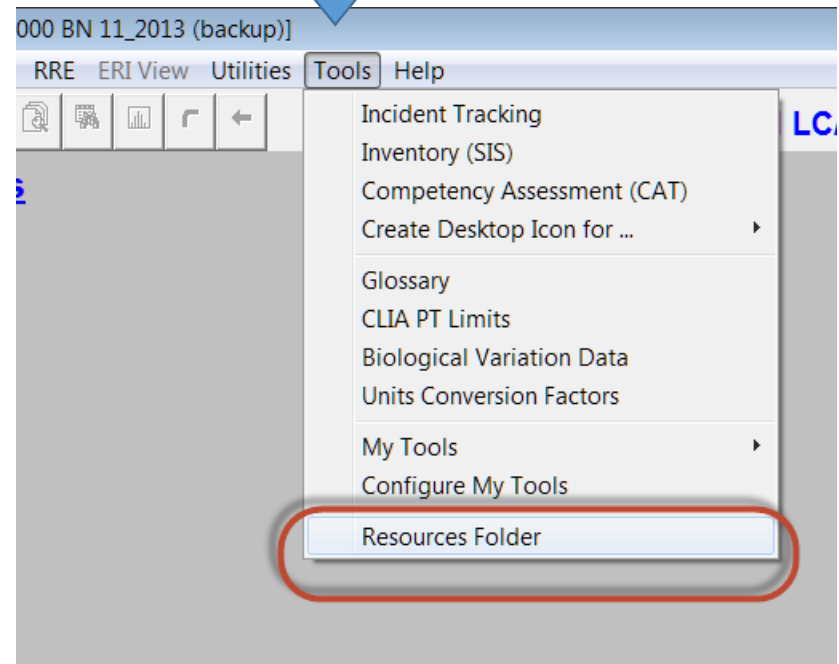
“Rapid Results Entry”

- Pasting results from Excel into existing experiment
 - Pasteextdetail.xls
- Paste with Policies
 - Paste with policies table
 - Paste with Policies list
- Efficient keyboard entry of results on printouts for multiple analytes
 - RRE\create experiments \ Keyboard
- Instrument Interface: data capture directly from instruments, or from an instrument export file for Vendors only
- ODBC Data Acquisition from Instrument Manager - the Best way
- EE Users Guide Chapters 35, 36, 37
- Help Topics are available for most all of the setup screens

Find your Resource folder

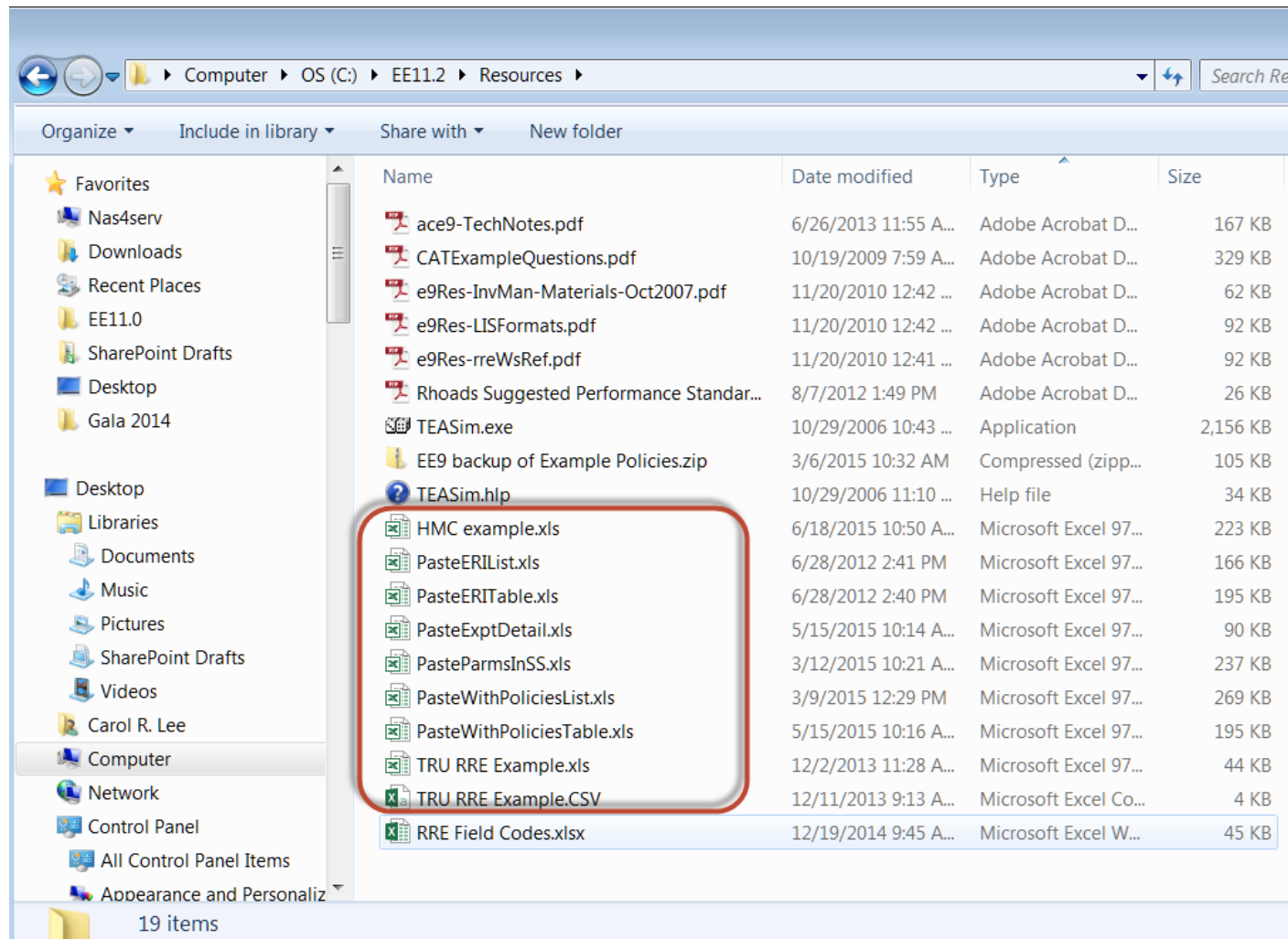


In EE 11.2



Resources in EE11

Annotated examples for RRE techniques are available in your EE\Resources folder. Use with the project ExamplePolicies



The easiest RRE Technique ...

Paste into Experiment Detail Screen

- Paste results into an experiment instead of typing them
- One experiment at a time
- Policy Definition not required

Applicable Statistical Modules:

- | | | |
|--|--|---|
| <input checked="" type="checkbox"/> Simple Precision | <input checked="" type="checkbox"/> MIC | <input type="checkbox"/> EP10 |
| <input type="checkbox"/> Complex Precision | <input checked="" type="checkbox"/> Glucose POC | <input type="checkbox"/> Carryover |
| <input checked="" type="checkbox"/> Linearity | <input type="checkbox"/> Hematology MC | <input type="checkbox"/> 6 Sigma Metrics |
| <input checked="" type="checkbox"/> AMC | <input type="checkbox"/> Sensitivity-LOB | <input type="checkbox"/> Performance Standards |
| <input checked="" type="checkbox"/> EP9 MC | <input type="checkbox"/> Sensitivity-LOQ | <input type="checkbox"/> Interference |
| <input checked="" type="checkbox"/> QMC | <input checked="" type="checkbox"/> VRI | <input type="checkbox"/> Cost per Test |
| <input checked="" type="checkbox"/> 2IC | <input type="checkbox"/> ERI/ROC | <input type="checkbox"/> AON |
| <input checked="" type="checkbox"/> INR Geo Mean | <input checked="" type="checkbox"/> INR Meth Comp | <input checked="" type="checkbox"/> INR Check |
| <input checked="" type="checkbox"/> Factor Sensitivity | <input checked="" type="checkbox"/> SA Simple Accuracy | <input checked="" type="checkbox"/> HIS Histogram |
| <input checked="" type="checkbox"/> STB Stability | <input checked="" type="checkbox"/> TRU Trueness | |

Available in CLIA version? Yes

Paste into Experiment Detail Screen

- **Create an experiment as if you were going to type the results ...**
 - Experiment – New
 - Experiment – New from Policies
- **Then paste the results instead of typing them**
- **Paste just the numbers – not column headings or Sample IDs.**
- **Note: This technique doesn't work for all statistical modules**

Exercise:

Simple Precision detail screen

- Open project **ExamplePolicies** –
(you might need to restore it in Utilities / File Manger / restore backups)

- Open spreadsheet **pasteExptDetail.xls**.
– Go to the SP tab

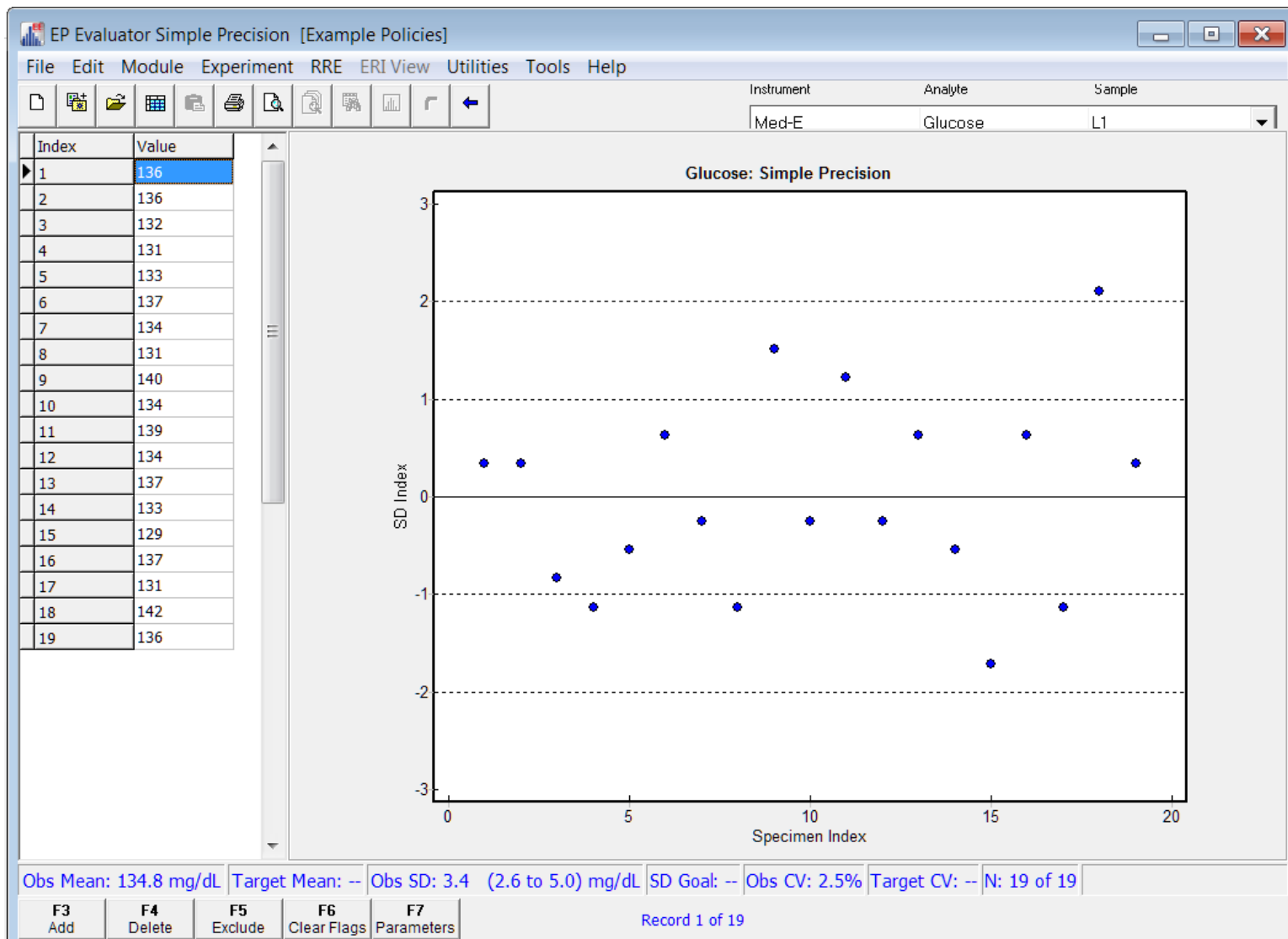
- In EE, Create a new Simple Precision experiment

Instrument: MED-E
Sample: L1

Analyte: Glucose
Units: mg/dL

- At the point where you would normally type results:
 - Switch to Excel. Select and copy **just the results**
 - Switch back to EE and do **Edit/Paste**

Outcome of the Simple Precision Experiment



Exercise: Alternate Method Comparison

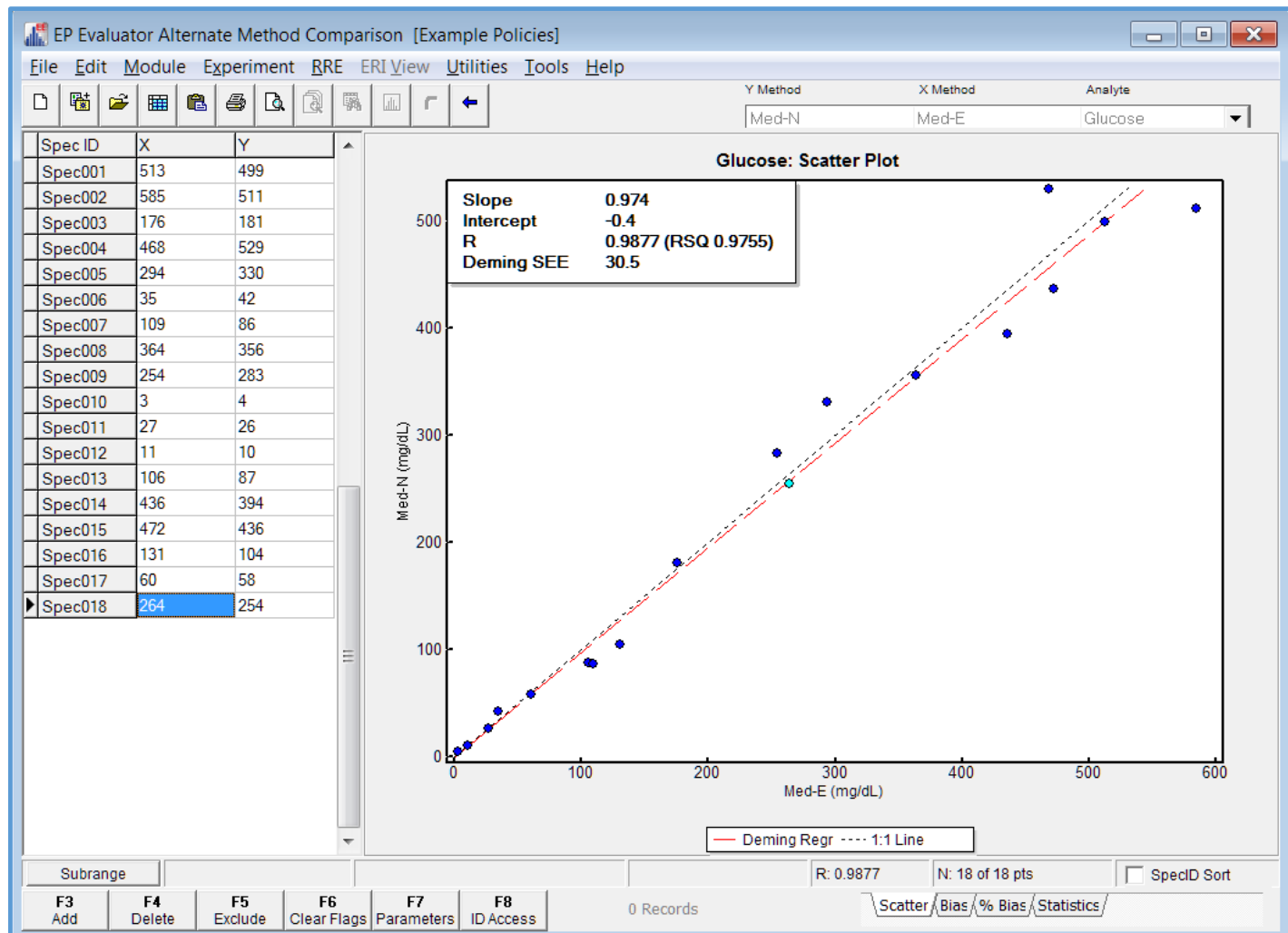
- Open spreadsheet **PasteExptdetail.xls**.
- Go to the AMC module overview screen
- Create a new AMC experiment for **Glucose**:

X Method: MED-E
Analyte: Glucose

Y Method: MED-N
Units: g/dL

- **When you would normally type results:**
 - Switch to Excel. Select and copy the three columns of **specIDs and X and Y results**. Do not copy column headings.
 - Switch back to EE and do **Edit/Paste**

Outcome of the AMC Experiment



Specimen IDs

- **Very important for RRE**
- **Method Comparison SPECID used to link the data pairs**
- **Linearity SPEC IDS needed for each level of “standards” LIN-01, LIN-02, LIN-03,**
- **SPECID is alphanumeric**
- **SPECID sort is alphanumeric, not numeric. 1, 10, 2, 20, 3, 30,**
- **Default SPECIDs for EE follow the format S00001**
- **Pasting from spreadsheets requires SPECID as a Header name for spreadsheets**

Exercise: Linearity

- **Create a new experiment in the EE Linearity Module**

Instrument: Eximer

Units: mg/dL

TEa: 1.0 (mg/dL)

Reportable Range: 0 - 20

Analyte: Calcium

Confirm Lin, Acc, RR

Systematic Error Pct: 50%

Prox. Limits: 50% low, 10% high

- **Click the yellow Edit button to enter Assigned Values**

- Type L1, L2, ..., L5 in the Spec ID Column

- Type your assigned values in the assigned value column.

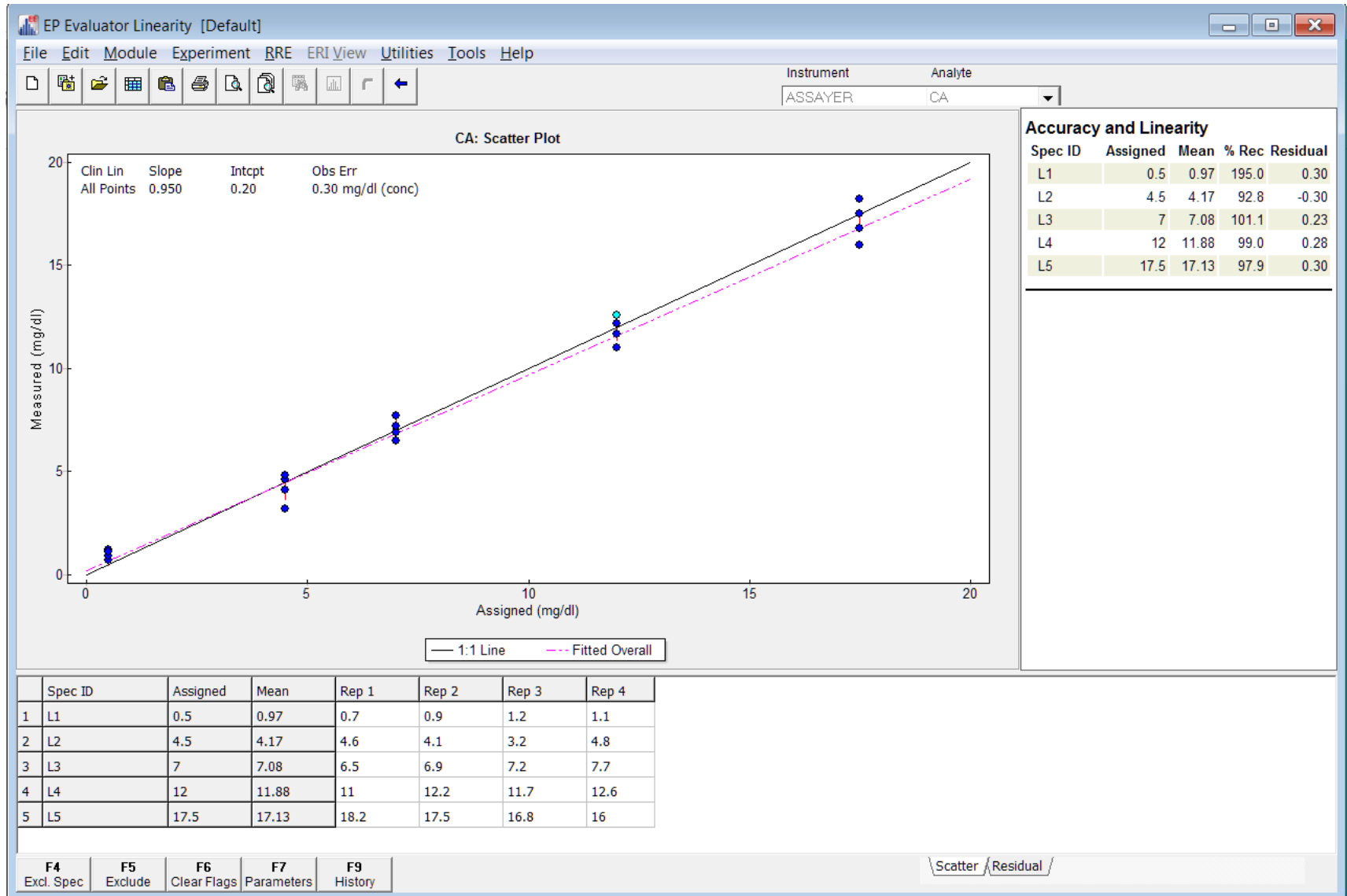
- TIP: if you have your assigned values in excel, you can copy the grid with the specIDs and assigned values to the clipboard
- In EE, right-click the cell for the L1 value and select Paste from the popup menu

L1	1
L2	4
L3	7
L4	11
L5	17.5

Linearity Exercise (continued)

- Select **OK** to close the Parameters Screen and get to the Experiment Detail Screen
- Go to the Linearity tab of the pasteExptDetail spreadsheet
- In Excel, copy just the measured results from the spreadsheet.
 - Note that the results are laid out in a square in Excel, similar to how they look in EP Evaluator
- Switch to EE and do **Edit/Paste** to enter the results

Outcome of the Linearity Experiment



There is an easier way ...

- First, go back to the Linearity Module Overview Screen and delete the experiment you just created.
- Then select **Experiment / New from Policies**

Instrument: Med-E

Analyte: Glucose

Specimen Kit: PreAsgKit PRK

- Note that there are **no yellow fields** on the Parameters Screen
- The reason is **Policy Definition**

Policy Definition will auto-fill the yellow fields in all the Parameter Screens

Without Policy Definition

Linearity Parameters

General Parameters | Instrument **Med-E**
Analyte **Calcium**

Units: [Yellow] | Analyst: cri | Date: 25 Feb 2016

Max Decimal Places: Auto | Max # Replicates: 3 | Clear Lot Info

	Lot	Source	Expiration Date
Control	[Yellow]	[Yellow]	[Yellow]
Reagent	[Yellow]	[Yellow]	[Yellow]
Calibrators	[Yellow]	[Yellow]	[Yellow]

Specimens and Assigned Values

Mode: Pre-Assigned **Edit**

Report Options

Confirm Linearity Calibration Verification Confirm Accuracy Calculate Probability of PT Failure Confirm Reportable Range Confirm Precision

Comment

Allowable Error Criteria	Conc		Pct
	Conc	Pct	
Allowable Total Error (TEa)	[Yellow]	[Yellow]	[Yellow]
% for Systematic Error	[Yellow]	[Yellow]	[Yellow]

Reportable Range	Concentration		Proximity Limits	
	Conc	Pct	Conc	Pct
Low Limit	[Yellow]	[Yellow]	[Yellow]	[Yellow]
High Limit	[Yellow]	[Yellow]	[Yellow]	[Yellow]

Fields highlighted in yellow are required

OK Cancel Help

With Policy Definition

Linearity Parameters

General Parameters | Instrument **Med-E**
Analyte **Calcium**

Units: mg/dL | Analyst: cri | Date: 25 Feb 2016

Max Decimal Places: 1 | Max # Replicates: 4 | Clear Lot Info

	Lot	Source	Expiration Date
Control	[Yellow]	[Yellow]	[Yellow]
Reagent	[Yellow]	[Yellow]	[Yellow]
Calibrators	[Yellow]	[Yellow]	[Yellow]

Specimens and Assigned Values

PreAsgKit-01	0
PreAsgKit-02	3.6
PreAsgKit-03	7.3
PreAsgKit-04	13.0
PreAsgKit-05	20.0

Mode: Pre-Assigned **Edit**

Report Options

Confirm Linearity Calibration Verification Confirm Accuracy Calculate Probability of PT Failure Confirm Reportable Range Confirm Precision

Comment

Allowable Error Criteria	Conc		Pct
	Conc	Pct	
Allowable Total Error (TEa)	1.0		
% for Systematic Error	25		

Reportable Range	Concentration		Proximity Limits	
	Conc	Pct	Conc	Pct
Low Limit	0	5	10	
High Limit	20			10

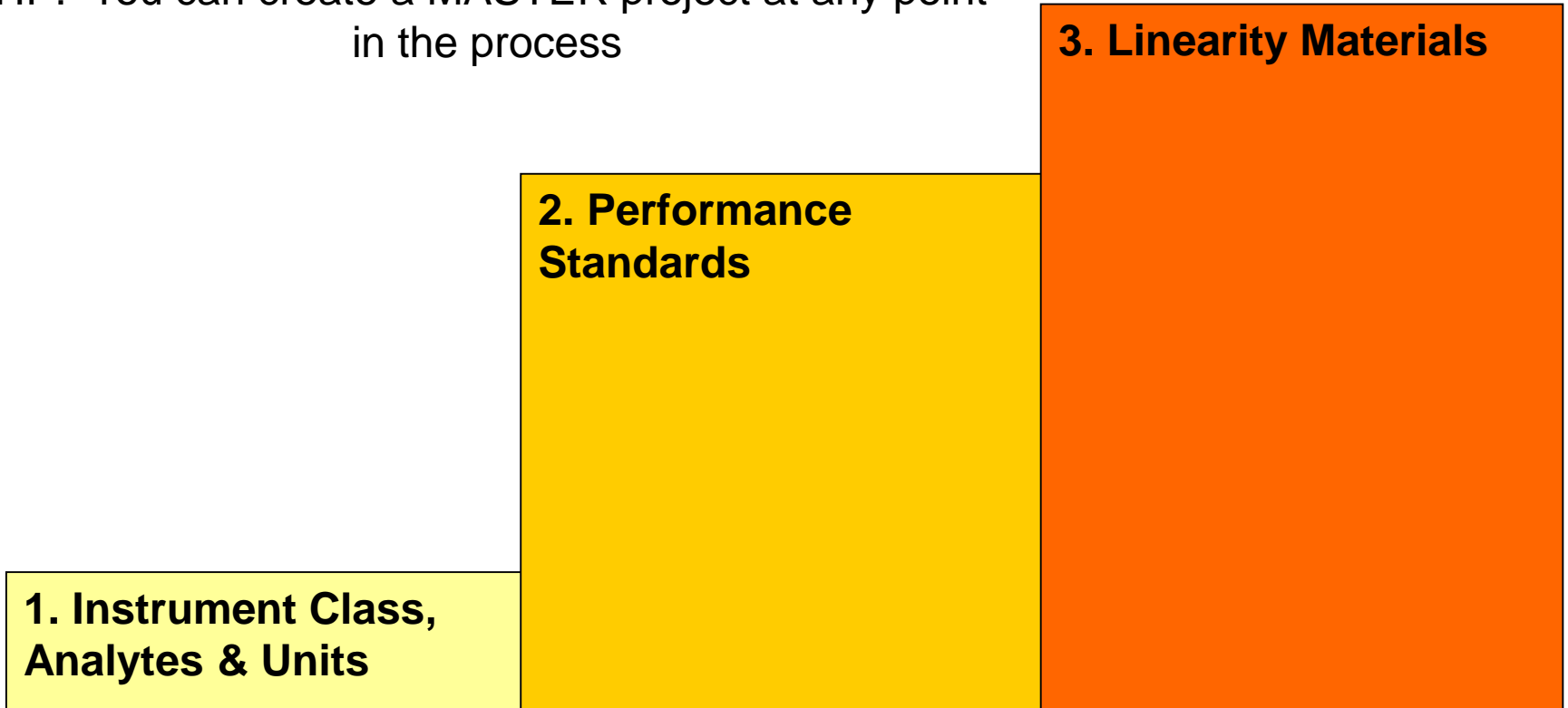
OK Cancel Help

With defined Policies

- **You can paste data to create multiple experiments**
 - Multiple analytes
 - Multiple Instruments
 - Multiple specimens
- **The Parameters screen for each experiment is automatically filled in**
- **Immediately calculate and review results**

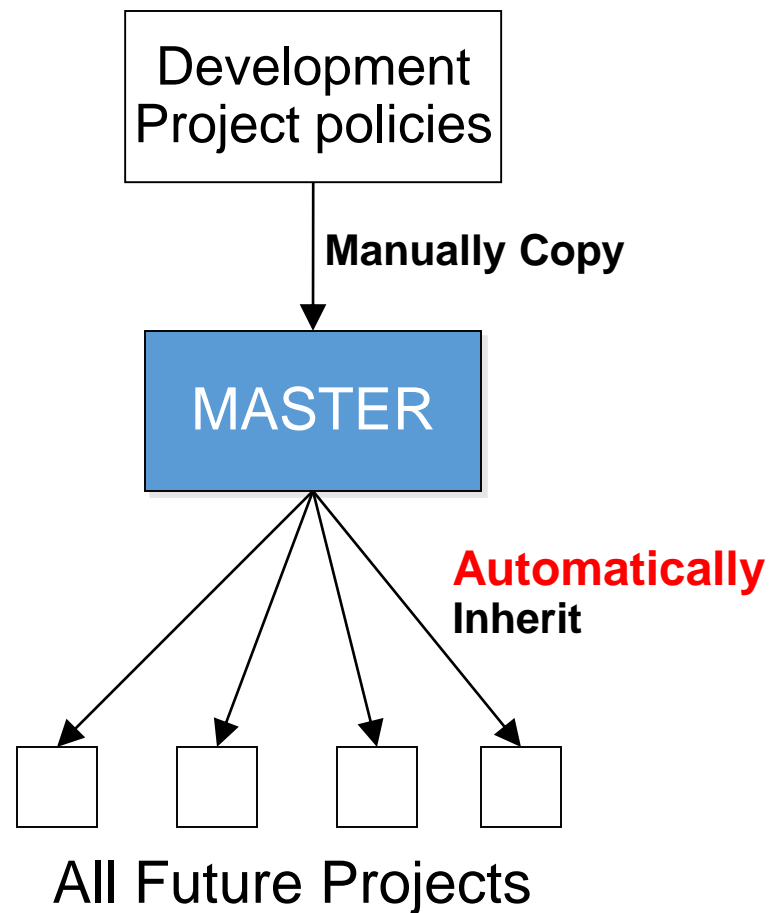
Step-by-step Approach to Policy Definition

TIP: You can create a MASTER project at any point in the process



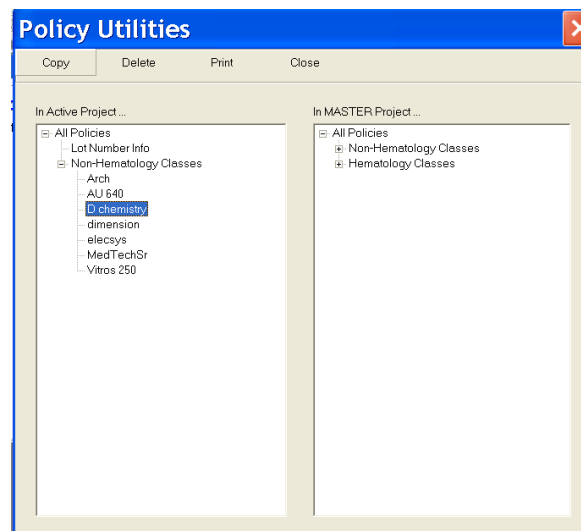
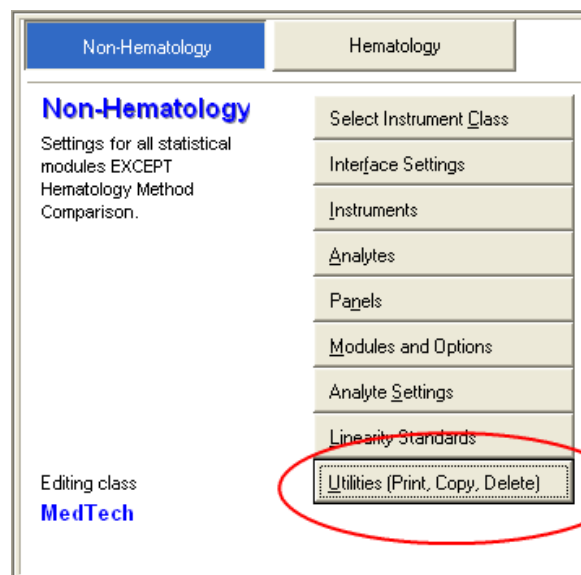
Use the MASTER Project to propagate your Policies to your future Projects

- When policy definition is complete, use RRE\define Policies**Utilities** to create a MASTER Project
- The MASTER project template contains only Policies (no experiments).
- You cannot open, delete or rename your master project.
- You can only modify the policies within it, plus backup and restore)
- When you create a new project, that new project is initialized to contain whatever Policies are in MASTER.



How to copy policies to the MASTER project

- Menu command RRE / Define Policies
- Select the Utilities button
- Policy Utilities shows
 - Left: active current project
 - Right: Master project contents
- On your active project policies, highlight the policy you wish to copy
- Select the Copy button
- The policy is copied to the Master project.
 - Same name classes get replaced
 - New classes get added



Step 1 – Instrument Class, Analytes, and Units

- Go to **Statistical Modules Screen**
- Select **RRE / Define Policies** from the menu; select the **Non-Hematology Tab**

The screenshot shows a software interface with two tabs: "Non-Hematology" (selected) and "Hematology". The "Non-Hematology" tab contains the following text: "Non-Hematology Settings for all statistical modules EXCEPT Hematology Method Comparison." Below this, it says "Editing class Eximer". To the right is a vertical menu with the following items: "Select Instrument Class" (highlighted with a red border), "Interface Settings", "Instruments", "Analytes" (highlighted with a red background), "Panels", "Modules and Options", "Analyte Settings", "Linearity Standards", and "Utilities (Print, Copy, Delete)".

Instrument Class

- **Instrument Class** – contains policy definitions for instruments having the same analytical properties – like a peer group
- Policy Definition always starts by adding or Selecting an Instrument Class.
 - All the other buttons apply changes to the selected class
- When you “add” an instrument class, EE automatically puts one instrument, with same name as the class, in the new class.
- Add additional instruments, either
 - in policy definition or
 - while creating experiments

Add an instrument class

- F3 adds a new instrument class
- Right click (clone) duplicates an existing instrument class with the same instruments, analytes and parameters that you can modify.
- Add a new instrument class called EXAMPLE
- Enter new analytes and their units
 - Albumin
 - T Bili
 - D Bili

RRE Policy Definitions

EP Evaluator Linearity [Example Policies]

File Edit Module Experiment RRE ERI View Utilities Tools Help

Project- Example Policies

Non-Hematology Hematology

Non-Hematology

Settings for all statistical modules EXCEPT Hematology Method Comparison.

- Select Instrument Class
- Interface Settings
- Instruments
- Analytes
- Panels
- Modules a
- Analyte Se
- Target Ran
- Linearity St
- Factor Sen
- Utilities (Print, C

Editing class
Sample-US

Select Instrument Class

MedTech
MedTechSr V
Sample-SI
Sample-US

OK
Cancel
Help
F3 Add Class
Show/Hide Preview Panel

Preview

Instruments
Sample-US

Analytes
Acetaminophen
ALT
APTT
AST
Beta HCG
Calcium
Carbamazepine
Glucose
INR
pCO2
Phenobarbitol

Right click to delete, rename, or clone an existing class.

Policy Definition Analytes

Non-Hematology
Hematology

Non-Hematology

Settings for all statistical modules EXCEPT Hematology Method Comparison.

Editing class **Sample-US**

Analytes

Edit

Analyte	Units	Max Decimal Places	Coag Flag*	For Inst Capture Only	
				InstCode	Factor
Acetaminophen	ug/mL	Auto		800	1.0
ALT	IU/L	Auto		801	1.0
APTT	sec	Auto		802	1.0
AST				803	1.0
Beta HCG				BCHG	1.0
Calcium				CA	1.0
Carbamazapine				Carbamazapine	1.0
Glucose	mg/dL	Auto		GLU	
INR	none	Auto	N	INR	
pCO2	mm Hg	Auto		pCO2	
Phenobarbitol	ug/mL	Auto		Phenobarbitol	1.0
Phenytoin	ug/mL	Auto		Phenytoin	1.0
pO2	mm Hg	Auto		pO2	1.0
Potassium	mmol/L	Auto		Potassium	1.0
Protime	sec	Auto	P	Protime	1.0
RBC	M/uL	Auto		RBC	1.0

*Coag Flag (for Coag modules): P=Protime, N=INR, A=aPTT

F3 Add
F4 Delete
OK
Help

Names > 16 ch get TRUNCATED

Either IM test codes or common name labels of <=16 ch

Inst or IM test codes

The edit copy/paste feature updates the policy screens

The screenshot shows a software interface with a 'Non-Hematology' tab selected. The 'Analytes' menu is open, showing options: 'Edit', 'Copy' (Ctrl+C), 'Paste' (Ctrl+V), and 'Delete all analytes'. A callout box points to the 'Copy' option with the text: 'Edit\Copy will copy the headers. Paste to an excel spreadsheet, make the changes, and copy/paste the changes back into this EE screen'. Below the menu, a table is visible with columns: 'Coag Flag*', 'For Inst Capture Only' (subdivided into 'InstCode' and 'Factor').

Coag Flag*	For Inst Capture Only	
	InstCode	Factor

Edit \ copy will copy the headers. Paste into an Excel spreadsheet, make the changes and copy \ paste back into this EE screen

Instrument settings

- Add all instruments you will use here
- Instrument name must be unique
- Serial numbers must be unique,
- Within an instrument, a S/N can be the same as it's name.
- MIC abbrev ≤ 10 characters (must have if using MIC)

Name	Model	Serial No.	MIC Abbrev
cobas 6000	Generic	Generic	
Cobas 6000 - a	Cobas 6000	12345	
Dinosaur 1	DINA	D8950	

unique

unique

right click to paste into the grid cells

Cut
Copy
Paste
Clear
Fill Down

F3 Add F4 Delete OK Cancel Help

Paste with policies Table – applicable modules

Applicable Statistical Modules:

- | | | |
|--|---|--|
| <input checked="" type="checkbox"/> Simple Precision | <input checked="" type="checkbox"/> MIC | <input checked="" type="checkbox"/> EP10 |
| <input checked="" type="checkbox"/> Complex Precision | <input checked="" type="checkbox"/> Glucose POC | <input checked="" type="checkbox"/> Carryover |
| <input checked="" type="checkbox"/> Linearity | <input type="checkbox"/> Hematology MC | <input type="checkbox"/> 6 Sigma Metrics |
| <input checked="" type="checkbox"/> AMC | <input checked="" type="checkbox"/> Sensitivity-LOB | <input type="checkbox"/> Performance Standards |
| <input checked="" type="checkbox"/> EP9 MC | <input checked="" type="checkbox"/> Sensitivity-LOQ | <input checked="" type="checkbox"/> Interference |
| <input checked="" type="checkbox"/> QMC | <input checked="" type="checkbox"/> VRI | <input type="checkbox"/> Cost per Test |
| <input checked="" type="checkbox"/> 2IC | <input type="checkbox"/> ERI/ROC | <input type="checkbox"/> AON |
| <input checked="" type="checkbox"/> INR Geo Mean | <input checked="" type="checkbox"/> INR Meth Comp | <input type="checkbox"/> INR Check |
| <input checked="" type="checkbox"/> Factor Sensitivity | <input checked="" type="checkbox"/> STB | <input checked="" type="checkbox"/> Simple Acc |
| <input checked="" type="checkbox"/> Histogram | | |

Available in CLIA version? Yes - BUT

but while the data can be pasted, the parameters screen needs to be filled in manually

Exercise: Paste with Policies into Simple Precision

(this technique works great for a spreadsheet with multiple analytes)

- Use the EE Project “Example Policies”
- In Excel, open spreadsheet [PastePoliciesTable.xls](#)
- Select the entire SP tab sheet and copy it to the clipboard
 - For Paste with Policies, we *DO* want to copy the column headings and Spec IDs
- Switch to EP Evaluator and open the [Simple Precision](#) module, but do not create an experiment
 - Paste with Policies starts from the Module Overview Screen, not the Experiment Detail Screen
- Select [Edit / Paste with Policies / Data in Table Format](#) from the menu. Instrument [Example](#).
- Do [Module / Recalc All](#)

Screen after Pasting

File Edit Module Experiment RRE ERI View Utilities Tools Help

Project- Example Policies

Simple Precision

Instrument

Med-E

	Analyte	Sample	N	Mean	SD	CV
▶ ●	Calcium	Level 1	19 of 19	5.02 / 4	0.30 / 0.3	5.9% / 6.0
▶ ●	Glucose	Level 1	19 of 19	134.8 / 130	3.4 / 4	2.5% / 3.0
▶ ●	Sodium	Level 1	19 of 19	87.9 / 90	1.0 / 1.1	1.1% / 1.3

Exercise: Paste with Policies into AMC

- In Excel, open spreadsheet [pastepoliciesTable.xls](#)
- Go to the **AMC** Tab Sheet in the spreadsheet.
 - Note that the sheet is organized with X values and Y values in separate arrays.
 - The headers must include “SpecID” and Analyte Names.
 - the Analyte Names must be spelled *exactly* as in the policy definition.
- Copy the X values, spec Ids and include the headers.
- Switch to EP Evaluator and open the **AMC** module
- Select **Edit / Paste with Policies / Data in Table Format** from the menu. Select “New instrument and call it “senior”
- When asked if you want to link, answer **No**.

Paste Data from Spreadsheets – into the Overview screen

- Spreadsheet Data looks like “paste with policies table”.
EE\Resources\PastePoliciesTable.xls
- SPECID required
- Results in columns with analyte names as headers
 - **Spelled the same as in your Policy definition class**

<u>InstSerNo</u>	<u>SpecID</u>	<u>Calcium</u>	<u>Glucose</u>	<u>Sodium</u>
AAA-1001	S001	3.4	170	187
AAA-1001	S002	17.4	500	81
AAA-1001	S003	19.7	541	92
AAA-1001	S004	6.9	463	172
AAA-1001	S005	16.3	290	180
AAA-1001	S006	5	410	56
AAA-1001	S007	19.3	36	162
AAA-1001	S008	2.6	488	156
AAA-1001	S009	11.9	535	85
AAA-1002	S001	8	177	189
AAA-1002	S002	17.2	487	82
AAA-1002	S003	14.3	542	90
AAA-1002	S004	8	519	171
AAA-1002	S005	15.5	292	185
AAA-1002	S006	11.9	402	55
AAA-1002	S007	22.5	32	164
AAA-1002	S008	6.7	511	157
AAA-1002	S009	8.1	463	82

Screen after Pasting X Method

The screenshot shows the EP Evaluator software interface. The main window title is "EP Evaluator Alternate Method Comparison [Example Policies]". The menu bar includes "File", "Edit", "Module", "Experiment", "RRE", "ERI View", "Utilities", "Tools", and "Help". The toolbar contains various icons for file operations and navigation. The main area displays a table with columns: "X Method", "Analyte", "N", "Slope", "Intercept", and "Corr Coef (R)".

A "Confirm" dialog box is open, asking: "The new experiments will not show up on the overview screen until you link the X and Y methods. Do you want to do that now?". The dialog has "Yes" and "No" buttons. A yellow callout bubble points to the "No" button with the text: "click No if you only have one method".

At the bottom, the "Available Methods" section shows a search box containing "Senior". Below it, the "Analytes for MED-E" section shows a table with columns "Calcium", "Glucose", and "Sodium". A yellow callout bubble points to this table with the text: "Method and analyte show which results were pasted into the Database".

On the left side, there is a "Legend" section with the following items:

- Not Calculated (diamond icon)
- Insufficient Data (circle icon)
- Sufficient data (circle icon)
- Fail (red circle icon)
- Pass (green circle icon)
- May need review (yellow circle icon)

Exercise: Paste Second Method and Calculate (All)

- Repeat the Paste with Policies for the Y-Method area the spreadsheet.
 - Remember you need to include the headers for the analyte and SPECID. In Excel, you can right click the group of rows for the X values and hide them from being copied.
- Differences:
 - Select instrument Med-N instead of adding a new instrument
 - When asked if you want to link, answer Yes.
 - X method is “Senior”, Y method is “Med-N”.
 - After linking, do [Module Recalc All](#)

Screen after Pasting Y Method

The screenshot displays the 'EP Evaluator Alternate Method Comparison' window. The title bar indicates the project is 'Example Policies'. The menu bar includes File, Edit, Module, Experiment, RRE, ERI View, Utilities, Tools, and Help. The toolbar contains various icons for file operations and data management. The main window is titled 'Project- Example Policies' and shows a comparison between 'Senior' (X Method) and 'Med-N' (Y Method) for three analytes: Calcium, Glucose, and Sodium. A table displays the statistical results for each comparison, including the number of samples (N), Slope, Intercept, and Correlation Coefficient (R).

X Method	Analyte	N	Slope	Intercept	Corr Coef (R)
Senior	Calcium	9/9	0.718	4.29	0.8194
Senior	Glucose	9/9	0.995	1.2	0.9819
Senior	Sodium	9/9	1.032	-3.7	0.9994

Below the table, there is a 'Legend' section with the following items:

- Not Calculated
- Insufficient Data
- Sufficient data
- Fail
- Pass
- May need review

The 'Available Methods' section shows 'MED-N' and 'SENIOR' selected. Below this, the 'Analytes for MED-N' section lists 'Calcium', 'Glucose', and 'Sodium'.

Paste with policies into Module Overview Screen - Summary

- This method will paste
 - Multiple analytes
 - One instrument or 2 (or more) instruments
- In EE, Open the module and remain in the Module Overview Screen. AMC in this example.
- Switch to your excel spreadsheet formatted for each method like so:
 - **Analyte Results are in columns with header names spelled exactly the same for both methods,.**
 - a **SpecID** column is required as the first column.
- For the X method, Highlight the Analyte names and results, but NOT the method name From the Excel menu, select Edit/Copy.
- Switch to EE. From the Module Overview Screen, select **Edit/Paste with policies table** from the EE menu. When EE asks whether you want to link the methods, answer No. because you only have one set of data.
- Switch back to Excel, and repeat the steps for the Y method. This time, when EE asks whether you want to link, answer Yes.

X Method			
SpecID	Calcium	Glucose	Sodium
ABC123	10.5	513	164
AQQ344	11.5	585	123
QBZ555	8.8	176	192
AOQ123	20.3	468	83

Y Method			
SpecID	Calcium	Glucose	Sodium
ABC123	10	500	159
AQQ344	11.5	600	123
QBZ555	8.9	182	189
AOQ123	20.1	467	87

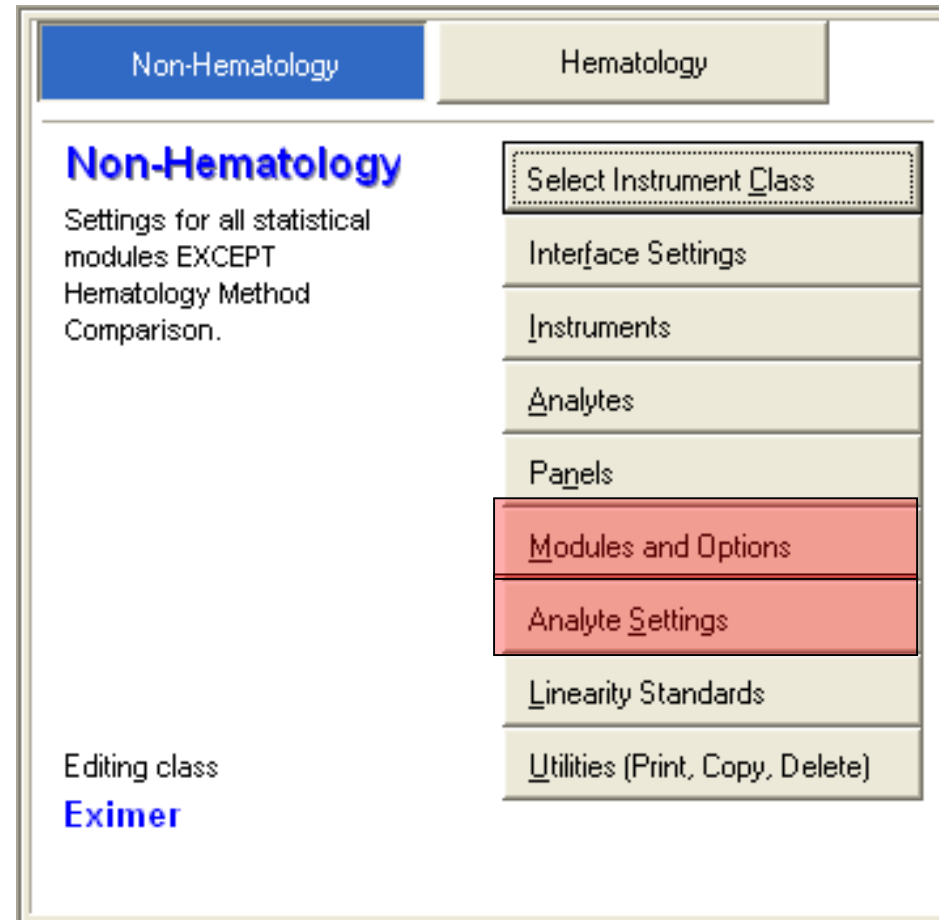
EE\resources\PasteWithPoliciesTable.xls

Linking and Unlinking

- Each data set is a separate data file within the EE database.
- Scatter plots for two methods are created by linking matching specIDs
- To link the scatter plots:
 - Say “Yes” to the prompt when using “Paste with Policies” if you have two methods.
 - You can link any two methods at any time with the Experiment \ “Link X/Y methods” command.
- To unlink a scatter plot:
 - Right click on the specific experiment in the Overview screen and choose “unlink”

RRE Step 2 – Performance Standards

- We have just done a lot of Rapid Results Entry
- We created many experiments at once
- We calculated instantly
- But we have no Performance Standards



Modules and options

Statistical Modules and Analysis Options

Module/Analysis Options	Description	Value
<input checked="" type="checkbox"/> Simple Precision		
<input type="checkbox"/> VerifySPClaim	Compare measured SD to Target SD (0=none, 1=TEA, 2=Vendor) [0/1/2]	1
<input type="checkbox"/> ShowHistogram	Show SP Histogram? [Y/N]	N
<input type="checkbox"/> ShowTargetRange	Show SP Histogram Target SD Range? [Y/N]	N
<input type="checkbox"/> TargetRange	SP Histogram Target Range (0="2", 1="2.5", 2="3", 3="3.5") [0/1/2/3]	2
<input checked="" type="checkbox"/> Complex Precision		
<input checked="" type="checkbox"/> Linearity		
<input checked="" type="checkbox"/> Simple Accuracy		
<input checked="" type="checkbox"/> EP6 Linearity		
<input checked="" type="checkbox"/> AMC/EP9		
<input type="checkbox"/> OutlierChkAMC?	Check for outliers? [Y/N]	Y
<input type="checkbox"/> UseMDPs?	Evaluate bias at MDPs? [Y/N]	Y
<input type="checkbox"/> UseRepSDs?	Enter specific representative SDs? [Y/N]	N
<input type="checkbox"/> UseBins?	Results range analysis? [Y/N]	N
<input type="checkbox"/> CIType	Scatter Plt Bnds (0=none, 1=Allow Err, 2=Conf Lim, 3=Cell Ct) [0/1/2/3]	1
<input type="checkbox"/> CIProb	Bounds Probability (0=95%, 1=99%) [0/1]	0
<input type="checkbox"/> UseCellCts?	Enter differential cell counts? [Y/N]	N
<input type="checkbox"/> NeedEP9?	Will you run EP9? [Y/N]	N
<input checked="" type="checkbox"/> QMC		
<input checked="" type="checkbox"/> MIC		
<input checked="" type="checkbox"/> POC/Glucose Analysis		
<input checked="" type="checkbox"/> Sensitivity-LOB		
<input checked="" type="checkbox"/> Sensitivity-LOQ		
<input checked="" type="checkbox"/> VRI		
<input checked="" type="checkbox"/> EP10 Prelim Eval		
<input checked="" type="checkbox"/> ERI/ROC		
<input checked="" type="checkbox"/> Carryover		
<input checked="" type="checkbox"/> Interference		
<input checked="" type="checkbox"/> Performance Standards		

These settings control the defaults in the parameters screen

Check All Check None Check Defaults OK Cancel Help

The tabs and input columns appearing in Analyte settings depend on selections in Modules / Options

- Minimal

Non-Hematology Hematology

Non-Hematology Analyte Parameters - Key Edit

Settings for all status modules EXCEPT Hematology Method Comparison.

Editing class Architect

Analyte	Medical Decision Points				
	1	2	3	4	5
%A1c	4	6			
A-1-AGP	50	120			
A1-AT	84	200			
Acet	10	30			
ACP	0	6			
AlbG	3.5	5			
AlbP	3.5	5			
AlkP	40	150			
ALT	0	55			
Amikacin	5	25			
Ammonia	18	72			
AmpQ		1000			
AmpSQ		1000			
Amy	25	125			
Amy-U	1	17			
Anti-CCP		5.0			
Anti-HCV		0.8			
Anti-TG	0	4.11			
Anti-TPO	0	5.61			
ApoA	95	223			
ApoB	49	182			

Key SP

- Most pass/fail options selected

Non-Hematology Hematology

Non-Hematology Analyte Parameters - Key Edit

Settings for all status modules EXCEPT Hematology Method Comparison.

Editing class Architect

Analyte	Allowable Total Error		Err	Reportable	Low Proximity Limit		High Proximity Limit		Normal Range		Medical Decision Points			
	Conc	Pct			Conc	Pct	Conc	Pct	Low	High	1	2	3	4
%A1c	1.0	25	50		50	10	4	6	4	6				
A-1-AGP		16.2	50		50	10	50	120	50	120				
A1-AT		20	50		50	10	84	200	84	200				
Acet		25	50	25	3	377	50	10	10	30	10	30		
ACP		10.3	50	25	0.8	87.9	50	10	0	6	0	6		
AlbG		10	50	25	0.4	10.5	50	10	3.5	5	3.5	5		
AlbP		10	50	25	0.4	11.0	50	10	3.5	5	3.5	5		
AlkP		30	50	25	5	4555	50	10	40	150	40	150		
ALT		20	50	25	6	4113	50	10	0	55	0	55		
Amikacin		14	50	25	1.0	50.0	50	10	5	25	5	25		
Ammonia	3	10	50	25	4.70	997.90	50	10	18	72	18	72		
AmpQ		30	50	25			50	10					1000	
AmpSQ		30	50	25			50	10					1000	

optional, depend on modules and options selected

Exercise

- Do **RRE/Define Policies**, and select the Sample-US class.
- Select **Modules and Options**. Check the five standard modules: Simple Precision, Linearity, AMC, VRI, and 2IC
- Select **Analyte Settings**. Define the settings for your analytes.
- Go to the Linearity Module and do **Experiment / New from Policies** for your analyte. Are all the yellow fields filled in?

Step 3 – Linearity Materials

- Go to RRE / Define Policies
- Select Instrument Class Example
- Select the **Linearity Standards** button

The screenshot shows a software interface with two tabs: 'Non-Hematology' (active) and 'Hematology'. The 'Non-Hematology' tab contains the following text: 'Non-Hematology Settings for all statistical modules EXCEPT Hematology Method Comparison.' Below this, there is a list of menu items: 'Select Instrument Class', 'Interface Settings', 'Instruments', 'Analytes', 'Panels', 'Modules and Options', 'Analyte Settings', 'Linearity Standards' (highlighted in red), and 'Utilities (Print, Copy, Delete)'. At the bottom left, it says 'Editing class Eximer'.

Exercise

- **Add a Linearity Kit**
 - Value Mode: Pre-Assigned
 - Kit Name: Juicy
 - Number of Specimens: 5
 - Instrument Code: J
- **Set Assigned Values for the Kit as defined on the following Slide**

Juicy Linearity Kit Package Insert

Lot Number: A2345B

Expiration Date: 03/31/2009

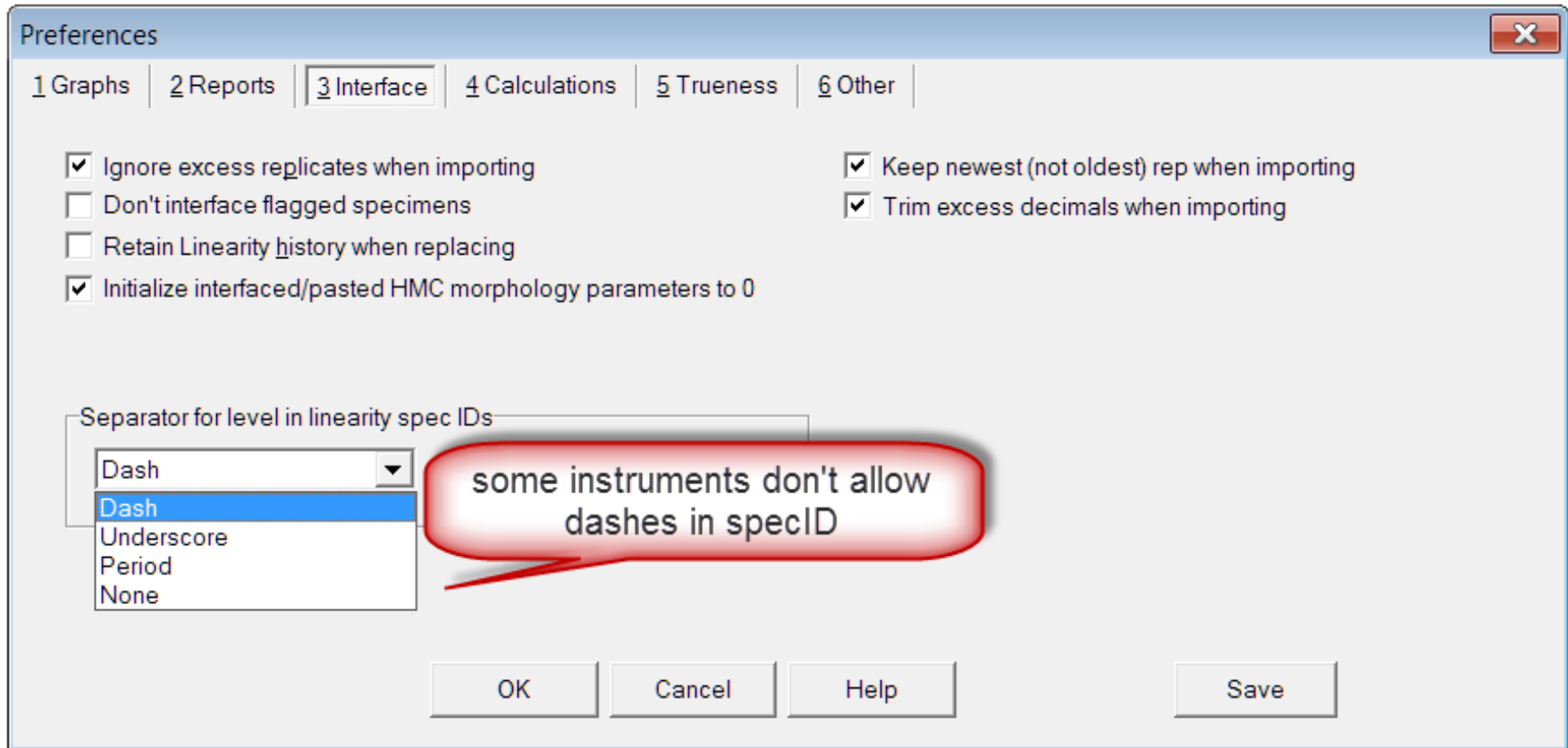
Calibrated using National Reference Method Values

	Level 1	Level 2	Level 3	Level 4	Level 5
Glucose	25	200	375	550	725
Sodium	110	130	150	170	190
Asparagu s	2	25	60	95	110


Exercise: Pasting Linearity Results with Policies

- **Go to the Linearity tab in the RRE-Examples spreadsheet and correct the spec IDs**
 - If the Kit's Instrument code is "J", then J-01, J-02, etc must be the specIDs of the specimens
 - when run on the instrument
 - the specID of the specimens in the paste file
 - **Select the entire tab page and import it to the Linearity module using Paste with Policies / Data in Table Format**

Preferences – Interface Tab



4 ways to create a new experiment using manual or copy/paste techniques

- **1. Experiment / New experiment**
 - Must enter instrument, analyte names, units, TEa, everything!
 - 1st Icon does the same thing. 
- **2. Experiment / New from Policies**
 - if policy definitions are set up, no need to re-enter analyte parameters
- **3. Copy and paste from spreadsheet to automatically create new experiments**
 - In Module Overview Screen, paste data copied from spreadsheet.
 - Can paste multiple analytes from multiple instruments with spec IDs.
 - With or without policy definitions set up.
 - If you don't have policy definitions established, then you will need to enter the values for required fields in the parameter screen.

- **Example spreadsheets in EE/resources folder**

4. Keyboard entry from Printouts

Best way to transcribe data from printed reports

1. **RRE \ Create experiment**
 1. Must have some policies defined
 2. Must have panels defined in printout order
 3. Entry of spec IDs is recommended to ensure correct linking of data.
2. **Select keyboard entry and follow the prompts**
 1. Can enter a new instrument
 2. Can create new panels
3. **A worksheet appears for you enter data.**
4. **Press F9 to send data to the experiment**
 1. For method comparison, Answer No to “Link X and Y”
5. **Repeat for second instruments data**
 1. Answer YES to “Link X and Y”

Keyboard entry from Printouts

- RRE Create Experiments
- Keyboard Entry

The screenshot shows the EP Evaluator software interface. The main window title is "EP Evaluator Release 9 Simple Precision [ExamplePolicies]". The menu bar includes "File", "Edit", "Module", "Experiment", "RRE", "ERI View", "Utilities", "Tools", and "Help". The toolbar contains various icons for file operations and navigation. The main workspace displays a table with columns: Analyte, Sample, N, Mean, SD, and CV. A sidebar on the left is titled "Simple Precision" and contains an "Instrument" dropdown menu.

An "RRE Wizard" dialog box is open, titled "RRE Wizard" with a close button (X). The dialog asks "What do you want to do?" and has two main options: "1. Instrument Interface" and "2. Keyboard Entry". Under "1. Instrument Interface", there is a sub-section "Instrument Serial Numbers" with three radio buttons: "Ignore" (selected), "Capture One", and "Capture All". A checkbox "Re-use results from last download" is also present. Below these options, there is a note: "Have you defined your policies? If not, you will have to click down into each experiment to supply missing parameters before you can calculate." and a link "Go to Define Policies Now". At the bottom of the dialog are buttons for "Prev", "Cancel", "Help", and "Next".

RRE \ Create experiment

RRE Wizard [Close]

What do you want to do?

1. Instrument Interface

Instrument Serial Numbers

Ignore Capture One Capture All

Re-use results from last download

2. Keyboard Entry

Have you defined your policies? If not, you will have to click down into each experiment to supply missing parameters before you can calculate.

[Go to Define Policies Now](#)

Prev Cancel Help Next ▶

RRE Wizard [Close]

Use an instrument already in policies or create a new one that will stay in policies for this project

Instrument

Manual (in class Class Manual) [Dropdown] New Instrument

Class: Manual
Model: Generic
Serial No: Generic
MIC Abbrev:

Force Spec ID Length

Length: 3 [Spinner] Trim: Right [Dropdown] Pad Left

◀ Prev Cancel Help Next ▶

Use an instrument already in policies or create a new one that will stay in policies for this project

Force SpecID length lets you use the last few unique characters of a bar code ID instead of having to type all 16

RRE Worksheet

- Enter data from printouts in specified panel order
- Go to desired module overview screen
- Click RRE create experiments
- Follow prompts to popup RRE worksheet.
- Note that it is automatically named and will be saved in the EE\Data\studies\'project name'\RRE folder
- Manually enter specIDs and data
- Press F9 to send data to new experiment
- You will be prompted to save the RRE worksheet

The screenshot shows a software window titled 'C:\EE7\DATA\STUDIES\lbc\Immunoassay BCI master\RRE\AMC-DXi-000.CSV'. The window contains a spreadsheet with the following data:

	A	B	C	D	E	F	G	H
1	Params (4	SpecID	Total T4	Total T3	Thyroglob	Free T4 m	Free T4	Free T3
2	Analyte	xxxxxxxx	Total T4	Total T3	Thyroglob	Free T4 m	Free T4	Free T3
3	Units	xxxxxxxx	ug/dL	ng/mL	ng/mL	ng/dL	ng/dL	pg/mL
4	InstClass	xxxxxxxx	Immuno	Immuno	Immuno	Immuno	Immuno	Immuno
5	Instrument	xxxxxxxx	DXi	DXi	DXi	DXi	DXi	DXi
6	Analyst	xxxxxxxx	CRL	CRL	CRL	CRL	CRL	CRL
7	Date	xxxxxxxx	17 Oct 200	17 Oct 200	17 Oct 200	17 Oct 200	17 Oct 200	17 Oct 200
8	NDec	xxxxxxxx	-1	-1	-1	-1	-1	-1
9	ATEConc	xxxxxxxx	1					
10	ATEPct	xxxxxxxx	20					
11	RRLO	xxxxxxxx	0.5	0.1	0.1	0.15	0.15	0.88
12	RRHI	xxxxxxxx	30	8	500	6	6	30
13	CIType	xxxxxxxx	0	0	0	0	0	0
14	CIProb	xxxxxxxx	0	0	0	0	0	0
15	OutlierChk	xxxxxxxx	Y	Y	Y	Y	Y	Y
16	AcceptEm	xxxxxxxx	Y	Y	Y	Y	Y	Y
17	KillBlankP	xxxxxxxx	Y	Y	Y	Y	Y	Y
18	Results:							
19								
20								
21								
22								
23								

The status bar at the bottom shows: F1: Help | F5: Exclude | F6: Clear Flags | F9: Send | 8:11:03 AM | 17 Oct 2007

Related documents

When using policies

- [Paste policies /table or list](#)
- [Example policies project](#)
- [RRE worksheet](#)

Without policies

- [PasteParmSS.xls](#) can paste and create experiments in any EE version
- [Paste ParmS SS](#) is very similar to the RRE worksheet
- [RRE field codes.xls](#) provide the correct codes for the required parameters.

What is the File Format?

List Format (One Result per Line)

InstSerNo	SpecID	TestDate	TestTime	Analyte	Result
AAA-1000	SPEC1	7-Apr-08	0:08:00	Calcium	10.1
AAA-1000	SPEC1	7-Apr-08	10:42:00	Glucose	171
AAA-1000	SPEC1	7-Apr-08	13:25:00	Sodium	120
AAA-1000	SPEC2	7-Apr-08	10:32:00	Calcium	10.1
AAA-1000	SPEC2	7-Apr-08	13:18:00	Glucose	81
AAA-1000	SPEC2	7-Apr-08	19:55:00	Sodium	111

Table Format (One Specimen per Line)

InstSerNo	SpecID	TestDate	TestTime	Calcium	Glucose	Sodium
AAA-1000	SPEC1	7-Apr-08	0:08:00	10.1	171	120
AAA-1000	SPEC2	7-Apr-08	10:32:00	10.1	81	111

Optional

Optional in some cases

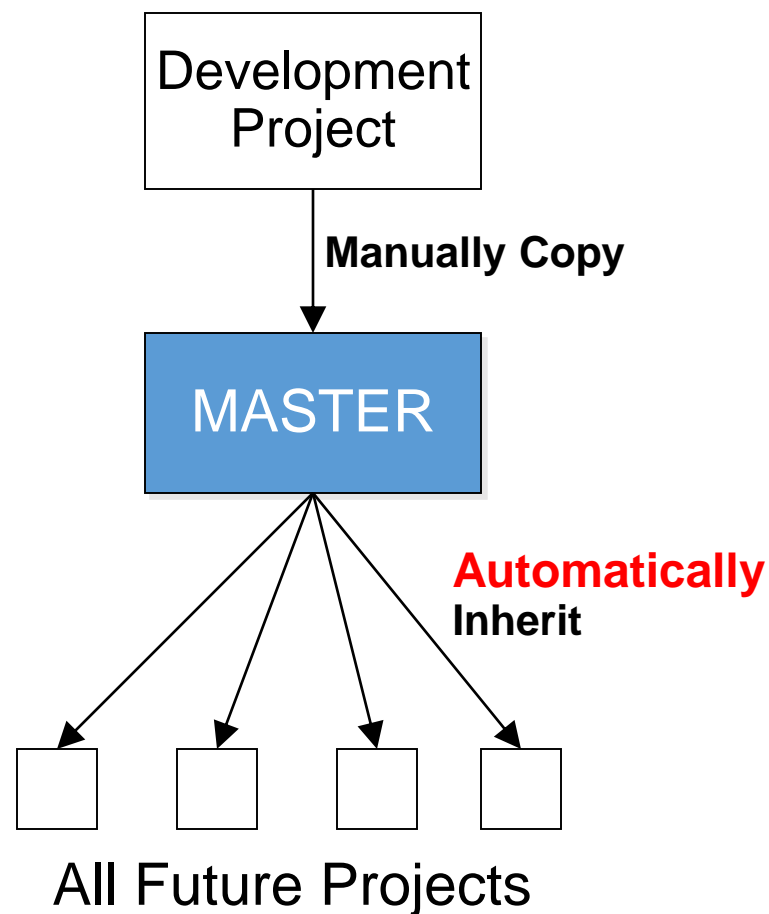
Without Optional Columns ...

List Format (One Result per Line)			
SpecID	Analyte	Result	
SPEC1	Calcium	10.1	
SPEC1	Glucose	171	
SPEC1	Sodium	120	
SPEC2	Calcium	10.1	
SPEC2	Glucose	81	
SPEC2	Sodium	111	

Table Format (One Specimen per Line)			
SpecID	Calcium	Glucose	Sodium
SPEC1	10.1	171	120
SPEC2	10.1	81	111

Using the MASTER Project to propagate your Policies to your future Projects

- MASTER is a project template that contains only Policies (no experiments).
- You cannot open, delete or rename your master project. You can only modify the policies within it (and backup / restore)
- When you create a new project, that new project is initialized to contain whatever Policies are in MASTER.

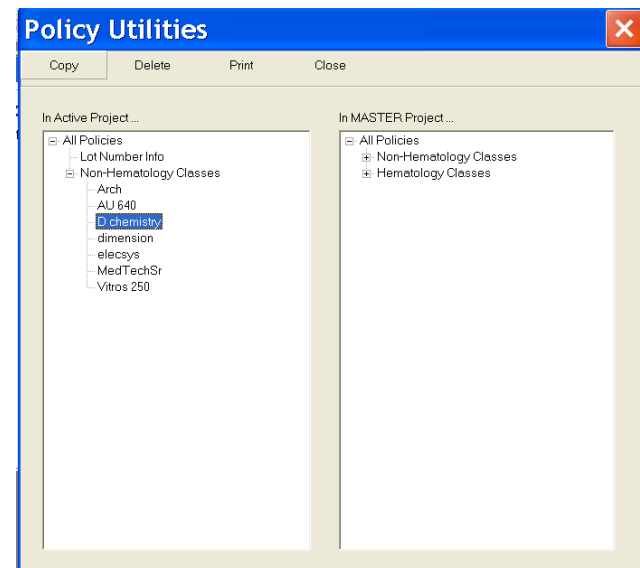
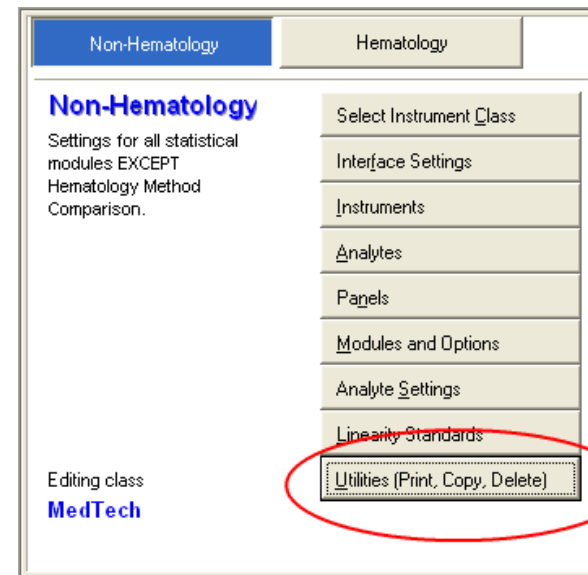


MASTER Project

- Created using Policy Definitions
- Cannot be opened or viewed in the File Open menu
- Cannot be renamed, deleted,
- Contains no inventory
- Can be backed up and restored using the Utilities File Manager.
- New Projects inherit policy definitions from the “Master Project”
- Policy definitions from a current project can be copied to the Master project for future “new projects”

How to copy policies to the MASTER project

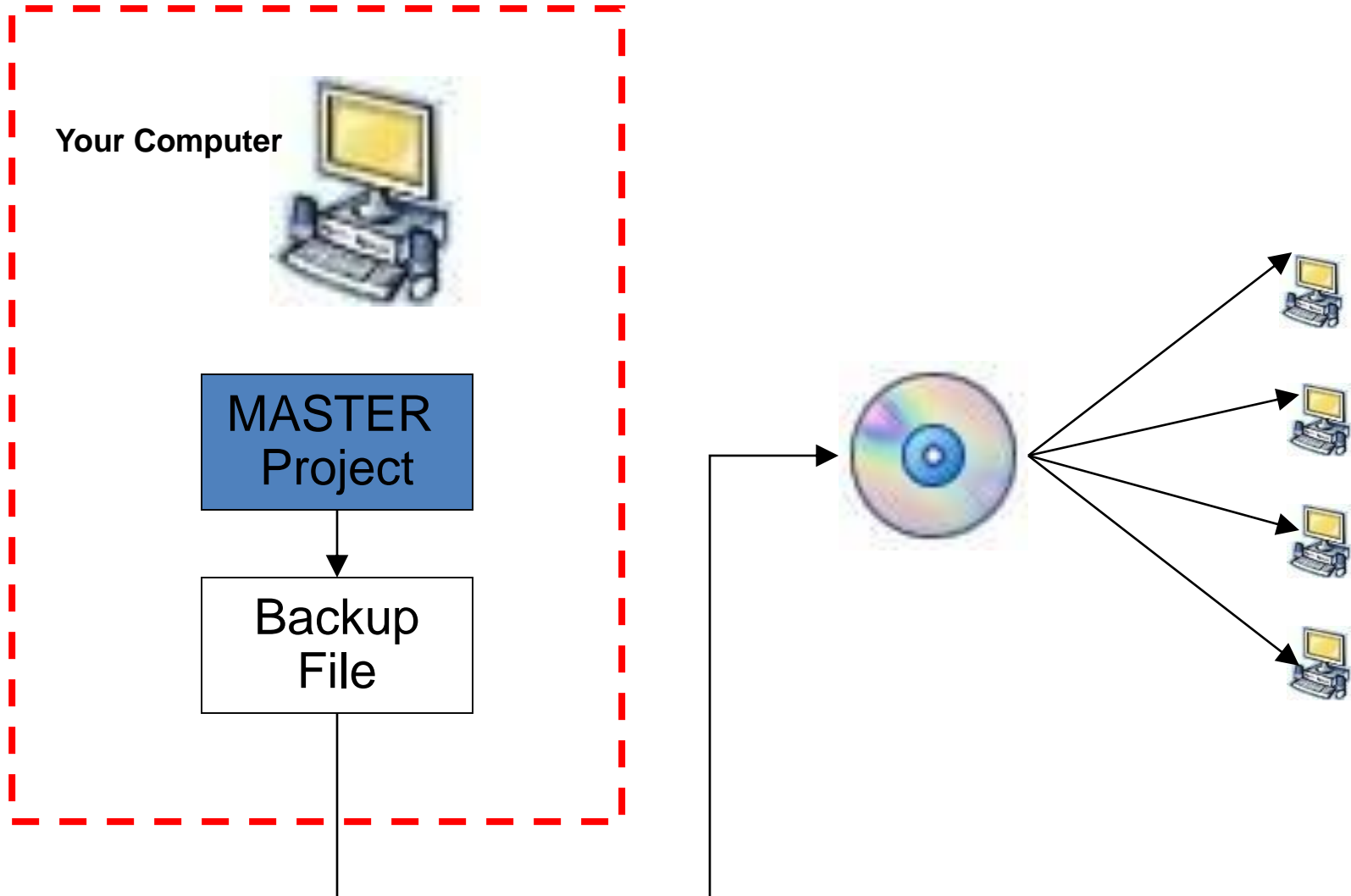
- Menu command RRE / Define Policies
- Select the Utilities button
- Policy Utilities shows
 - Left: active current project
 - Right: Master project contents
- On your active project policies area, highlight the policy you wish to copy
- Select radio button Copy
- The policy is copied to the Master project.
 - Same name classes get replaced
 - New classes get added
 - Existing policies in the master do not get deleted unless you select “delete”



Project Backups: A way to Share Data

- **A EP Evaluator “project” contains all the data, policy definitions, experiments with data, and reports for a specific work assignment.**
- **Projects are portable only by using the backup function.**
- **To create a backup (archive) file for your project:**
 - **From the Main Statistical Module screen**
 - **Open Utilities\file Manager**
 - **Select the Project Name in the top half of the screen**
 - **Click on Backup to create a zipped file archived to date and time.**
 - **Default folder is c:\EE\data\backups**
 - **Can “copy to” any folder or travel drive. Email to your colleagues.**
- **Restore when needed, or in EP Evaluator on another computer.**

Distributing Your Policies to Other EE Users



Exercise

- **Delete all policies from your MASTER**
- **Copy the Example instrument class to MASTER**
- **Create a new project**
- **What policies does the new project have?**

For EE Support

- **North America Telephone Support (802)-658-1955**
– Northamerica-support@datainnovations.com
- **Europe telephone support +32 2 332 24 13**
– Europe-support@datainnovations.com
- **Asia Telephone Support 852-2398-3182**
– asia-support@datainnovations.com
- **Latin America telephone support 55-11-38013283**
– latinamerica-support@datainnovations.com

Additional Training & Services

- **Visit the DI website for information on free training.**
<http://datainnovations.com/services/training/ep-evaluator-training-programs>
 - Overview and Getting Started with EP Evaluator
 - Project Management
 - RRE and Policy Definitions
 - Hematology Method Comparison
 - Determining Performance standards
 - Inventory Management
- **For more in-depth training or consultation**
 - Contact the DI Sales organization for a quote
 - 802-658-2050
 - Northamerica-sales@datainnovations.com



datainnovations.com

Thank You!