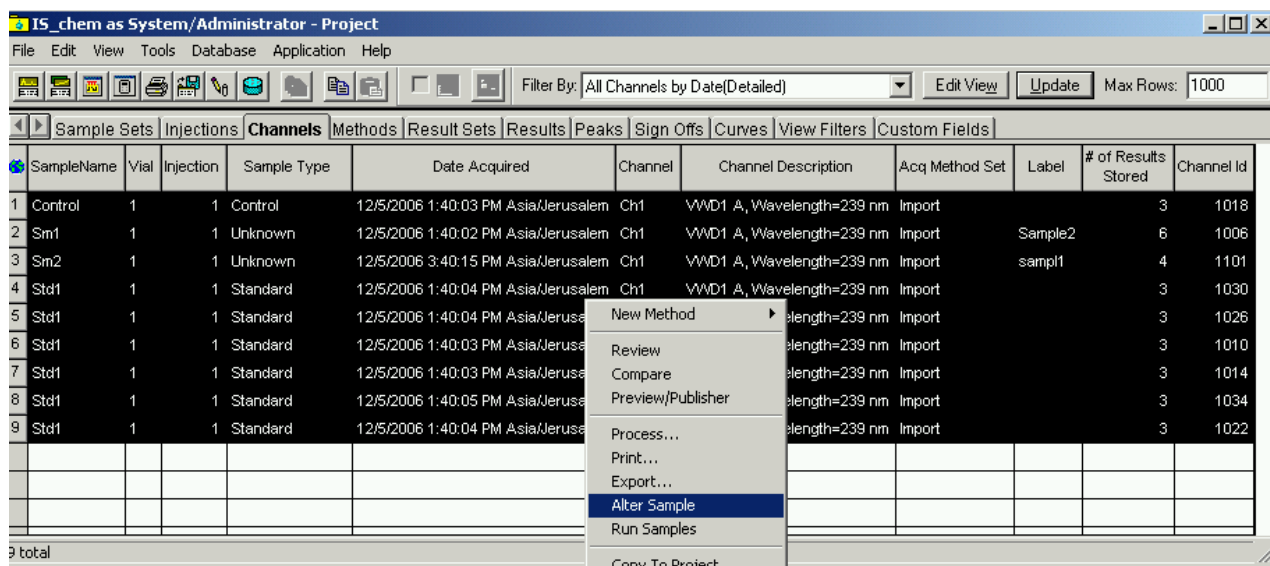


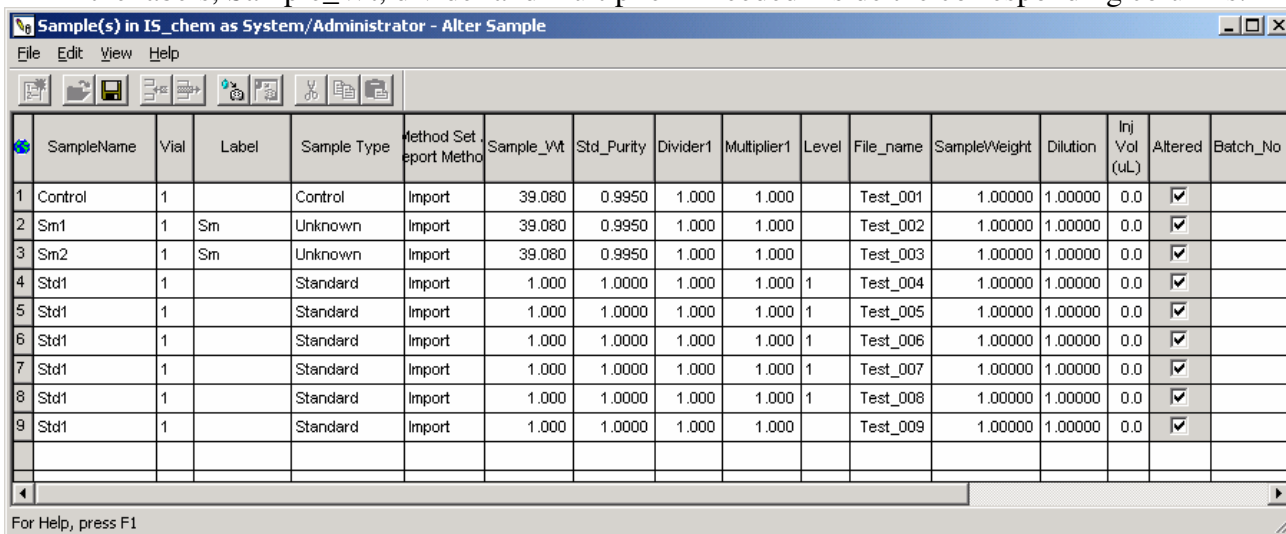
## Instructions for processing of Internal Standards in Empower

### 1. Enter Samples Information

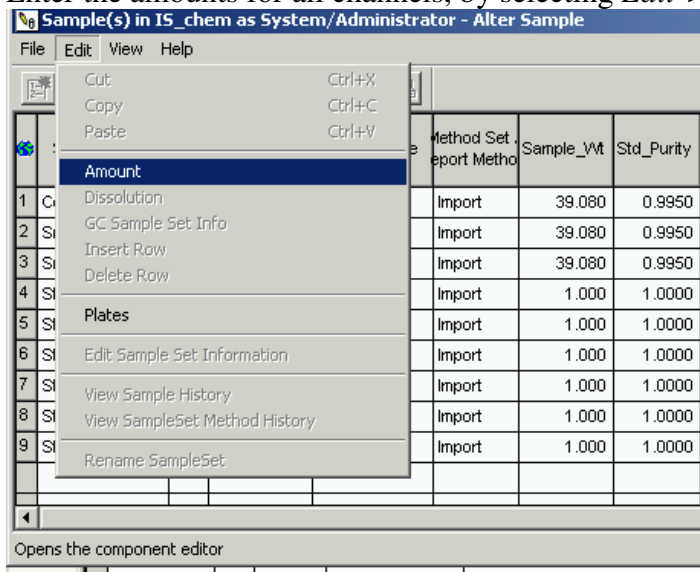
Go to the channels View and select all the channels, where the amounts and other values need to be filled in, Tools (or right click) -> *Alter Sample*:



Fill in the labels, Sample\_Wt, divider and multiplier if needed inside the corresponding columns:



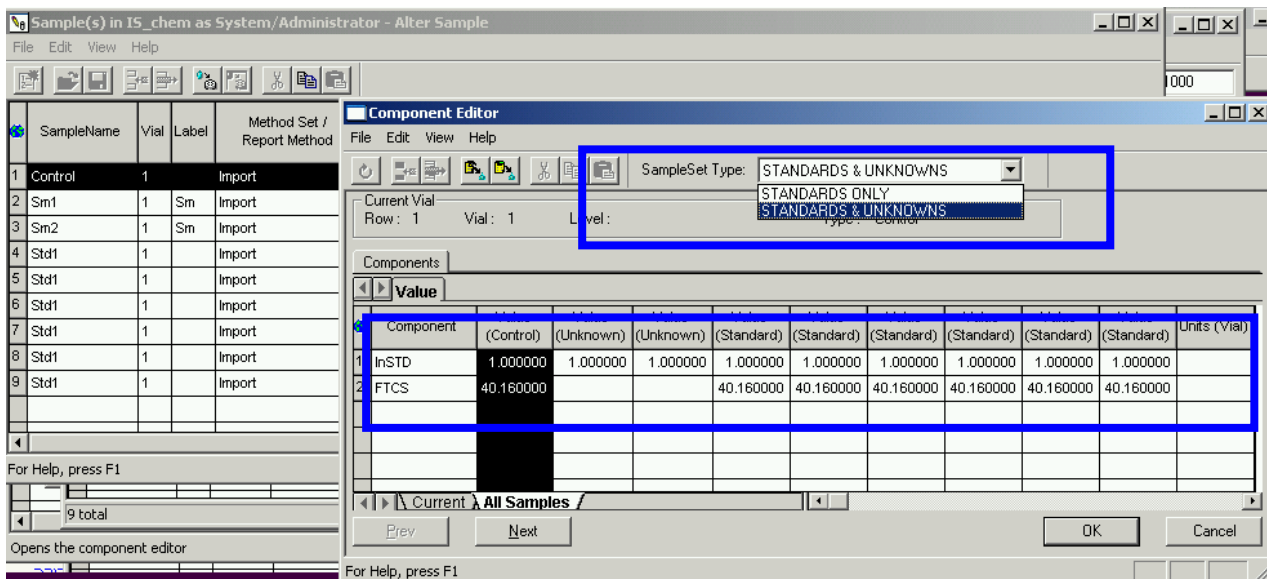
Enter the amounts for all channels, by selecting *Edit->Amount*



In the "Component Editor" screen that follows select in the *SampleSet Type*: "STANDARDS AND UNKNOWNNS".

Select: *Edit->Copy from Process Method*

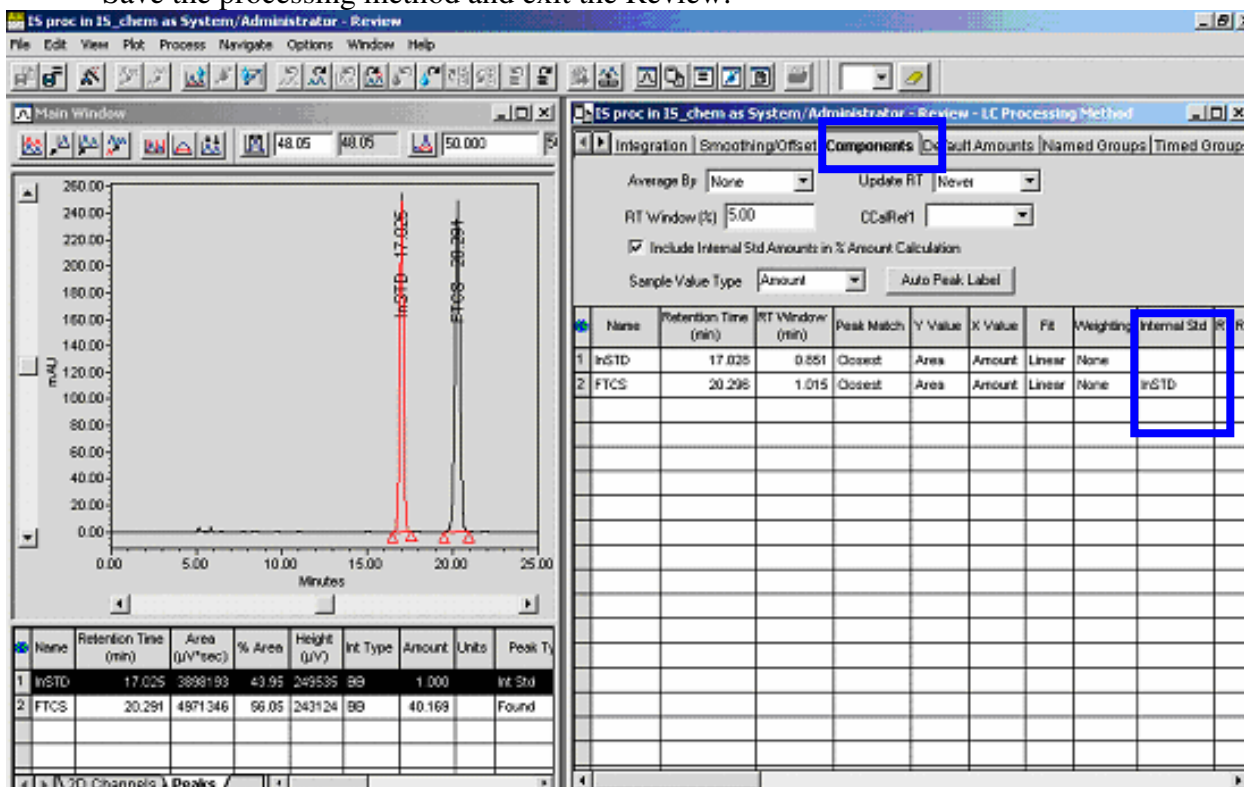
1. Fill the amounts for the component for the standards and the control
2. fill in the amount of the Internal Standard in all standards, controls and samples. Note that you can use the value **1** if the amount of internal standard in the standards, controls and samples is identical.



Click *OK* to finalize and then *File->Save* when leaving the *Alter-Sample* screen.

## 2. Setting the Processing Method

- Browse Project->Channels View
- Select all the channels and Tools->Review.
- Open the method-set with the processing method in it. Set the integration events properly as always.
- Go to the Component screen of the Processing method. Select the internal standard name in the Internal Std column.
- Save the processing method and exit the Review.

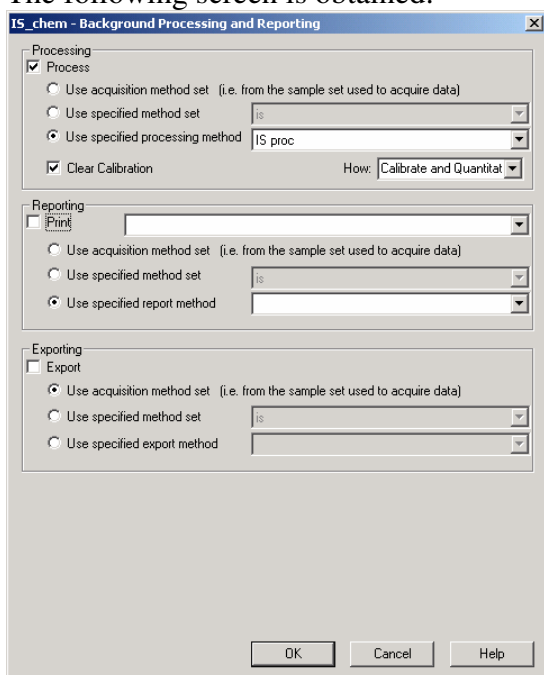


## 3. Processing

Go to Channels View; select the channels, then Tools-Process:

SampleName	Date Acquired	Channel	Channel Description	Acq Method Set	Label	# of Results Stored	Channel Id
Control	12/5/2006 1:40:03 PM Asia/Jerusalem	Ch1	VWD1 A, Wavelength=239 nm	Import		3	1018
Sm1	12/5/2006 1:40:02 PM Asia/Jerusalem	Ch1	VWD1 A, Wavelength=239 nm	Import	Sample2	6	1006
Sm2	12/5/2006 3:40:15 PM Asia/Jerusalem	Ch1	VWD1 A, Wavelength=239 nm	Import	sample1	4	1101
Std1	12/5/2006 1:40:04 PM Asia/Jerusalem	Ch1	VWD1 A, Wavelength=239 nm	Import		3	1030
Std1	12/5/2006 1:40:04 PM Asia/Jerusalem	Ch1	VWD1 A, Wavelength=239 nm	Import		3	1026
Std1	12/5/2006 1:40:03 PM Asia/Jerusalem	Ch1	VWD1 A, Wavelength=239 nm	Import		3	1010
Std1	12/5/2006 1:40:03 PM Asia/Jerusalem	Ch1	VWD1 A, Wavelength=239 nm	Import		3	1014
Std1	12/5/2006 1:40:05 PM Asia/Jerusalem	Ch1	VWD1 A, Wavelength=239 nm	Import		3	1034
Std1	12/5/2006 1:40:04 PM Asia/Jerusalem	Ch1	VWD1 A, Wavelength=239 nm	Import		3	1022

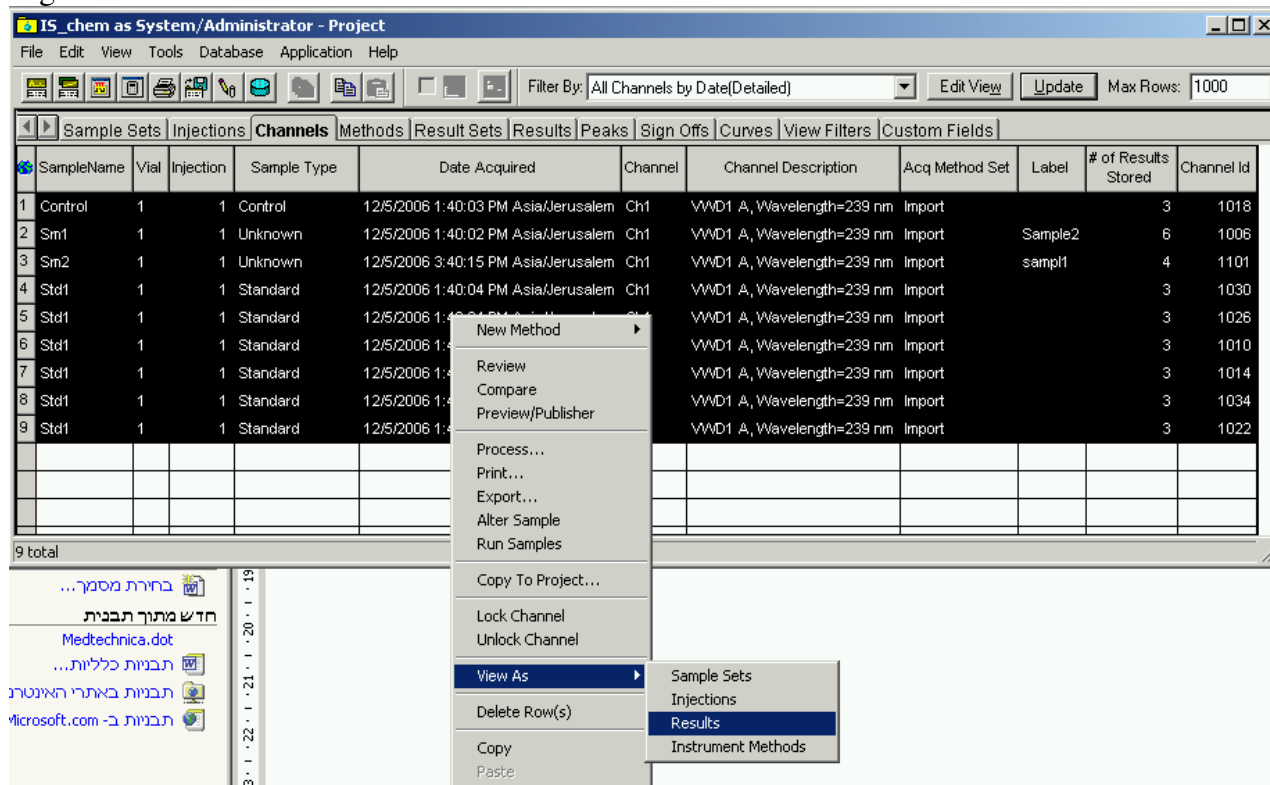
The following screen is obtained:



Fill in either the *Method Set's* name in the "Use Specified Method Set" (usually in PDA work) or the *Processing Method* in the "Use Specified Processing Method" (usually in LC work), and click *OK*.

## 4. Reporting

Right Click "View as"-> Results

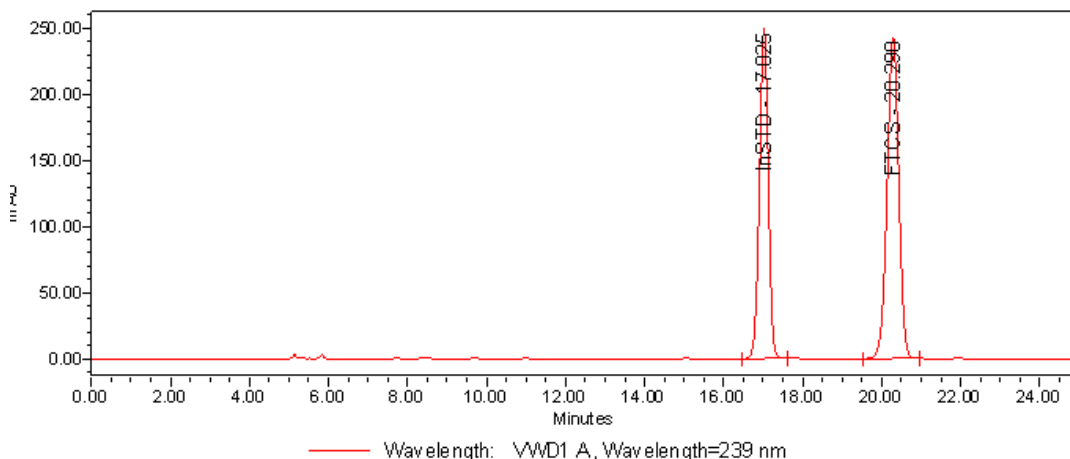


Select all the results to print the individual report method: "Assay Sample IS" where in the *Peaks Results Table* the column "Response" is added to show the ratio of component/Int Std areas

**Peak Results**

	Mobile_Phase	ColumnType	Remark	Dilution	Sample_Wt mg
1				1.00000	1.000

**Auto-Scaled Chromatogram**



**Peak Results**

	Name	Peak Type	RT	Area	Response	Amount mg	Amount_Area	Area_Amount	Amount %	Calibration Id	Amount % Corr
1	InSTD	Int Std	17.025	3899868	3899867.949	1.000	0.000256	3899868	100.000	1224	100.00
2	FTCS	Found	20.290	4971871	1.275	40.160	0.008077	123802	4016.000	1224	4016.00

Select the standards and controls results, then *Tools->Print* and select "Use Specified Report Method" The following report is obtained:

**Empower** System Name: Assay\_Sum\_Stds\_Cont\_IS  
 SYSTEM ID: 308  
 Reported by User: System Project Name: IS\_chem

**Summary of Standards**  
Vial: 1

	SampleName	File_name	Date Acquired	\Val	Inj	Name	RT	Area	Std Purity	Response	Amount /Area	Area /Amount	Dilution	Level
1	Std1	Test_006	12/5/2006 1:40:03 PM Asia/Jerusalem	1	1	FTCS	20.292	4970477	1.00000	1.275	0.008080	123767	1.00000	1
2	Std1	Test_007	12/5/2006 1:40:03 PM Asia/Jerusalem	1	1	FTCS	20.290	4971871	1.00000	1.275	0.008077	123802	1.00000	1
3	Std1	Test_004	12/5/2006 1:40:04 PM Asia/Jerusalem	1	1	FTCS	20.291	4971329	1.00000	1.274	0.008078	123788	1.00000	1
4	Std1	Test_009	12/5/2006 1:40:04 PM Asia/Jerusalem	1	1	FTCS	20.289	4971614	1.00000	1.275	0.008078	123795	1.00000	
5	Std1	Test_005	12/5/2006 1:40:04 PM Asia/Jerusalem	1	1	FTCS	20.294	4971877	1.00000	1.275	0.008077	123802	1.00000	1
6	Std1	Test_008	12/5/2006 1:40:05 PM Asia/Jerusalem	1	1	FTCS	20.296	4973556	1.00000	1.276	0.008075	123844	1.00000	1
	Mean						20.292	4971787		1.275	0.008078	123799		
	% RSD						0.01	0.02		0.04	0.02			

**Control Runs**  
Name: FTCS

	SampleName	File_name	Date Acquired	\Val	Inj	Name	RT	Area	Response	Std Purity	Amount /Area	Area /Amount	Dilution	Control %
1	Control	Test_001	12/5/2006 1:40:03 PM Asia/Jerusalem	1	1	FTCS	20.291	4971346	1.275	1.00000	0.008079	123772	1.00000	100.013

For the unknowns, select the method "Assay\_Sum\_Smpls\_IS":



System Name  
SYSTEM ID: 308

Assay\_Sum\_Smpls\_IS

Reported by User: System

Project Name: IS\_chem

**Results of Samples**  
Name: FTCS

	SampleName	Label	File_name	Val	Inj	Name	RT	Area	Response	Std Purity	Sample_wt mg	Amount /Area	Area /Amount	Dilution	Multipler1	Divider1	Amount %	Amount % Corr	Diff %	Ave %	Max %
1	Sm1	Sm	Test_002	1	1	FTCS	20.299	5064432	1.29	0.9950	39.080	0.008052	124195	1.00000	1.000	1.000	104.3	103.82			
2	Sm2	Sm	Test_003	1	1	FTCS	20.299	4917901	1.26	0.9950	39.080	0.008084	123697	1.00000	1.000	1.000	101.7	101.23			
Mean																	103.04	102.5			

**Results of Samples**  
Name: FTCS

	Min %
1	
2	
Mean	

Note:

To use *Inter-sample Calculations* (such as Diff%, Ave%, Min% and Max%) it is necessary to use the Alter Sample and the process on the entire sample set, and add the "Summarize Custom Fields" at the end, instead of the separate channels.