Array Track

Tutorial 13:
Simple Tox Format

SimpleTox for Toxicogenomics Study

- Used directly for data uploading for toxicogenomics experiment (non-clinical data and clinical data)

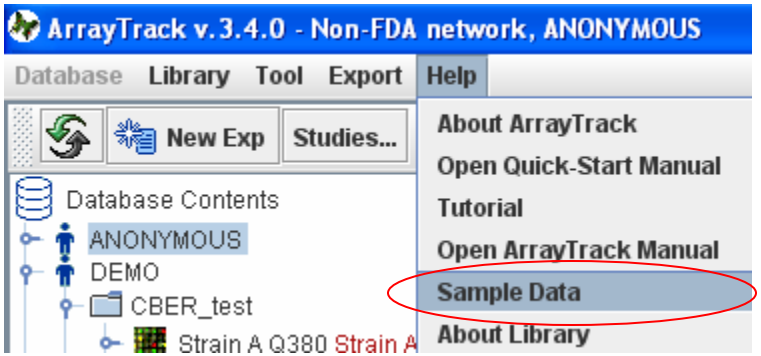
  http://www.cdisc.org/models/send/v1.4/index.html
- Rationale behind SimpleTox
  - To capture essential information related to microarray and toxicity study to attain sufficient information for cross-study analysis
  - To mimic the way of biologists managing/organizing data
  - To be compliant with MIAME and SEND
- Format
  - Excel spreadsheet format
  - Contains required and optional fields
  - Customization: Users be able to add new fields
  - Searchable

Batch Import – Simple Tox Format

This is an example of hybridization table file (which can be downloaded from ArrayTrack help pull-down menu.). User can use this as a template to make his own hybridization file. Just make sure that your column titles are exactly same as this template. You are allowed to add new columns, however formatted columns Designed for toxicogenomics study will benefit for future across study analysis.

SimpleTox_Hamner_NoArraydata

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Array_ID	SubjectID	Institution	StudyTitle	StudyType	CompoundClass	ClassReference	Compound	CAS	Control	Treatmen	Dose	DoseUnit	HybName	SampleName
2	792	1-22	Hamner	Hamner Mice Lu	Repeat Dose			Corn Oil		Y	C	0	mg/kg	RT_0_13_22	RT_0_13_22_Lung_CornOil
3	793	1-24	Hamner	Hamner Mice Lu	Repeat Dose			Corn Oil		Y	C	0	mg/kg	RT_0_13_24	RT_0_13_24_Lung_CornOil
4	794	1-25	Hamner	Hamner Mice Lu	Repeat Dose			Corn Oil		Y	C	0	mg/kg	RT_0_13_25	RT_0_13_25_Lung_CornOil
5	795	1-27	Hamner	Hamner Mice Lu	Repeat Dose			Rodent Chow		Y	C	0	ppm	RT_0_13_27	RT_0_13_27_Lung_RodentCho
6	796	1-28	Hamner	Hamner Mice Lu	Repeat Dose			Rodent Chow		Y	C	0	ppm	RT_0_13_28	RT_0_13_28_Lung_RodentCho
7	797	1-29	Hamner	Hamner Mice Lu	Repeat Dose			Rodent Chow		Y	C	0	ppm	RT_0_13_29	RT_0_13_29_Lung_RodentCho
8	798	1-12	Hamner	Hamner Mice Lu	Repeat Dose	Non-lungtumorigen	NTP_No168	N-(1-naphthyl)et	1465-25-4	N	NLT	2000	ppm	RT_2000_13	RT_2000_13_12_Lung_ethylen
9	799	1-14	Hamner	Hamner Mice Lu	Repeat Dose	Non-lungtumorigen	NTP_No168	N-(1-naphthyl)et	1465-25-4	N	NLT	2000	ppm	RT_2000_13	RT_2000_13_14_Lung_ethylen
10	800	1-15	Hamner	Hamner Mice Lu	Repeat Dose	Non-lungtumorigen	NTP_No168	N-(1-naphthyl)et	1465-25-4	N	NLT	2000	ppm	RT_2000_13	RT_2000_13_15_Lung_ethylen
11	801	1-2	Hamner	Hamner Mice Lu	Repeat Dose	lung tumorigen	NTP_No143	1,5-Naphthalene	2243-62-1	N	LT	2000	ppm	RT_2000_13	RT_2000_13_2_Lung_Naphthal



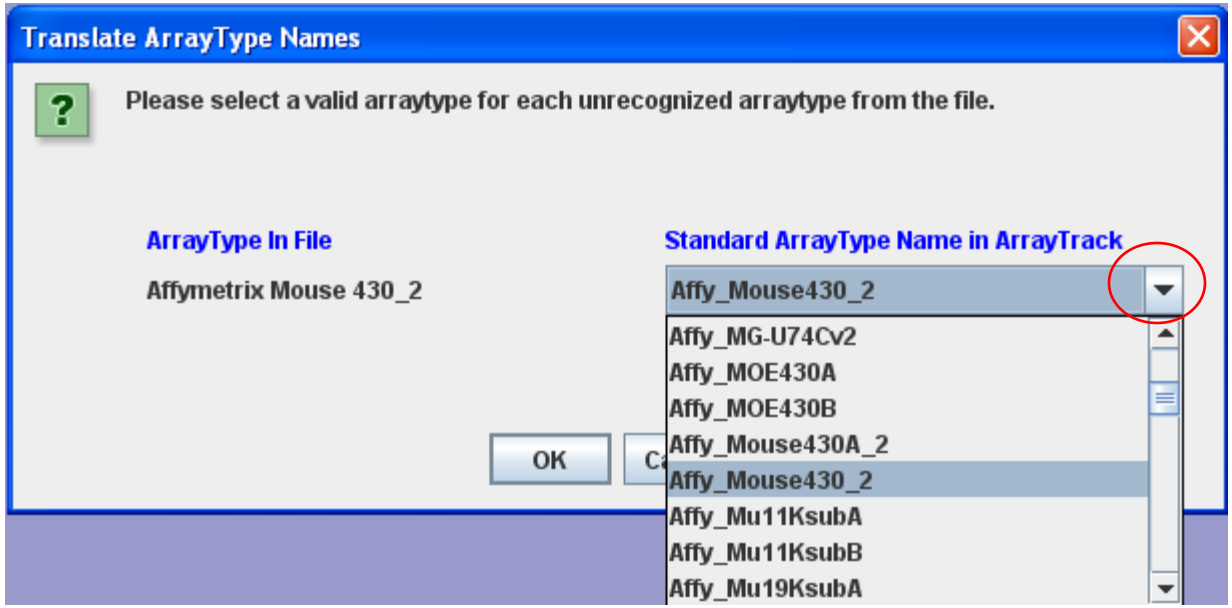
The next slide shows a table that explains the meaning of the column heads. The order for each column doesn't matter.

SimpleTox

SimpleTox Column Head	Description	Example
Institution	Laboratory or institution name	NCTR/FDA, EPA
DataFile	Microarray data file	GSM142129.CEL
HybName	User specified identifier for a hybridization name	APAP_D100_T6_Jun04; APAP_D0_T6_Jun04
SampleName	Sample name	APAP_Dose100_Time6; APAP_Dose0_Time6
Array_ID	User-specified identifier for a hybridization	1,2,3 … or p1002356
Label	RNA label reagent	Biotin; Cy3
ArrayType	Array type	Affymetrix Mouse 430_2
Subjiect_ID	Subject identifier	
StudyTitle	Study title	6 days repeating toxicity study
Tech_Rep	Technical replicates; microarray specific	A, B or C; 1,2, or 3
Bio_Rep	Biological replicates	A, B or C; 1,2, or 3
HybDate	Hybridization date	2/25/2007
StudyType	Study type	Single Dose Toxicity or Repeat Dose Toxicity
Compound	Compond name	Carbon Tetrachloride; Acetaminophen
……..	**……..**	**……..**

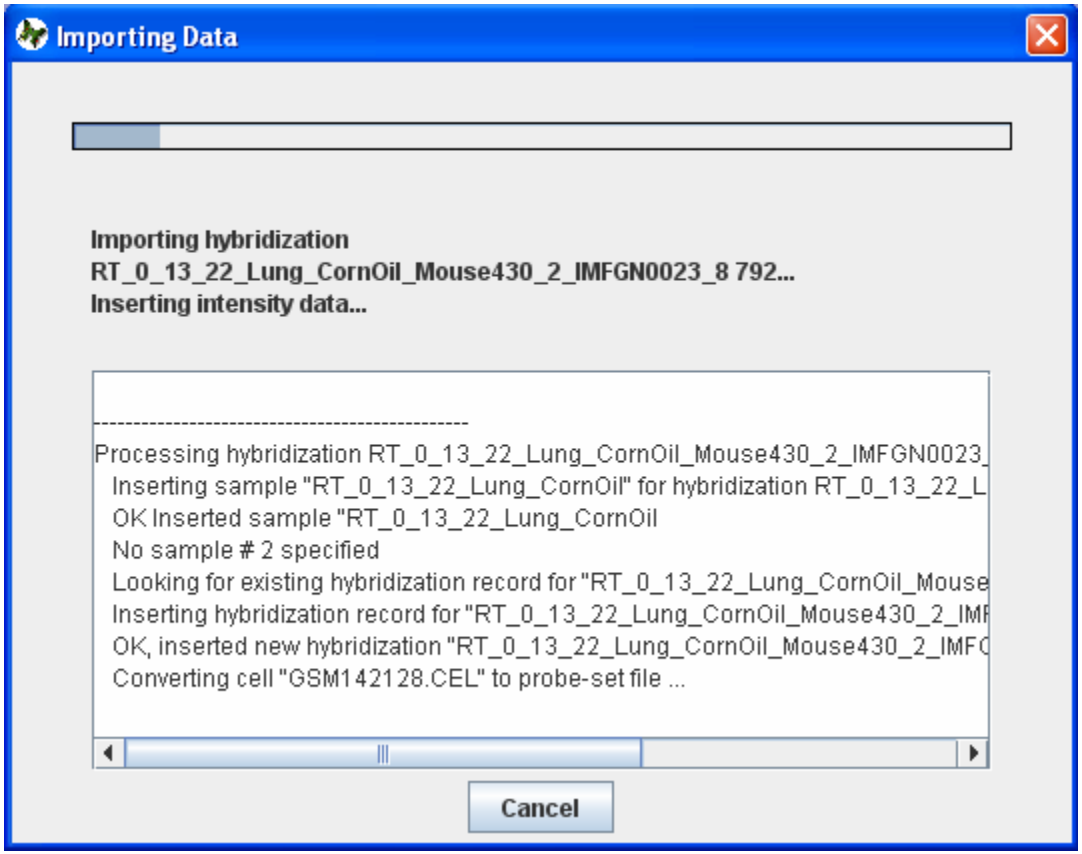
The red-colored part are required fields, while black-colored are optional fields. If you don't have Array_ID, you can use subject_ID as Array_ID.

Batch Import – Simple Tox Format

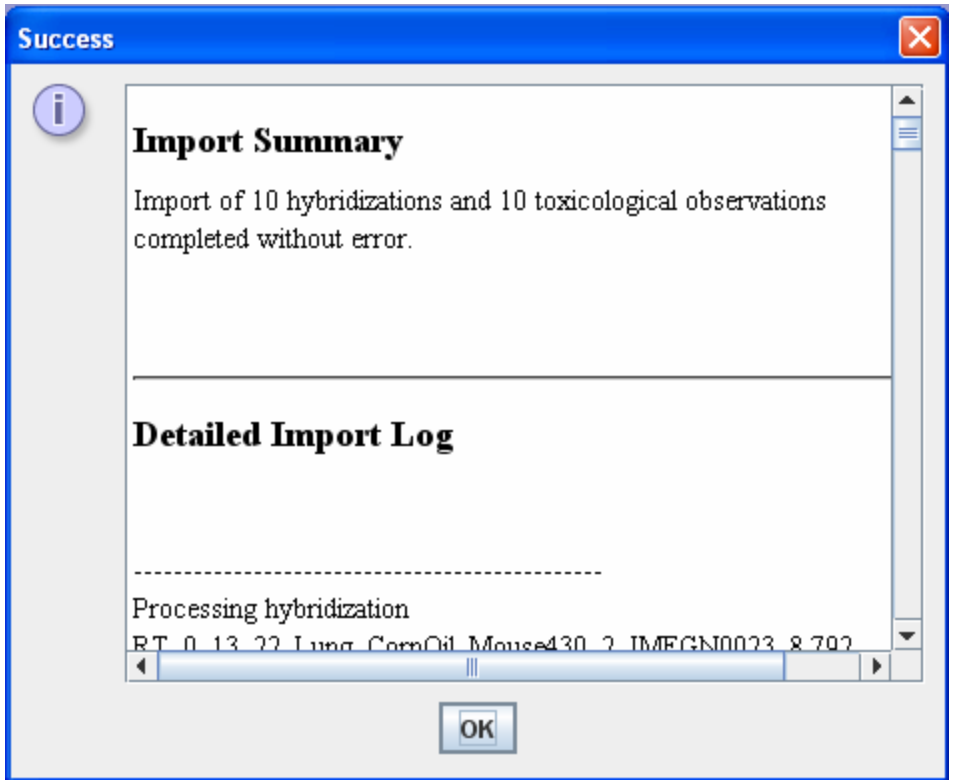


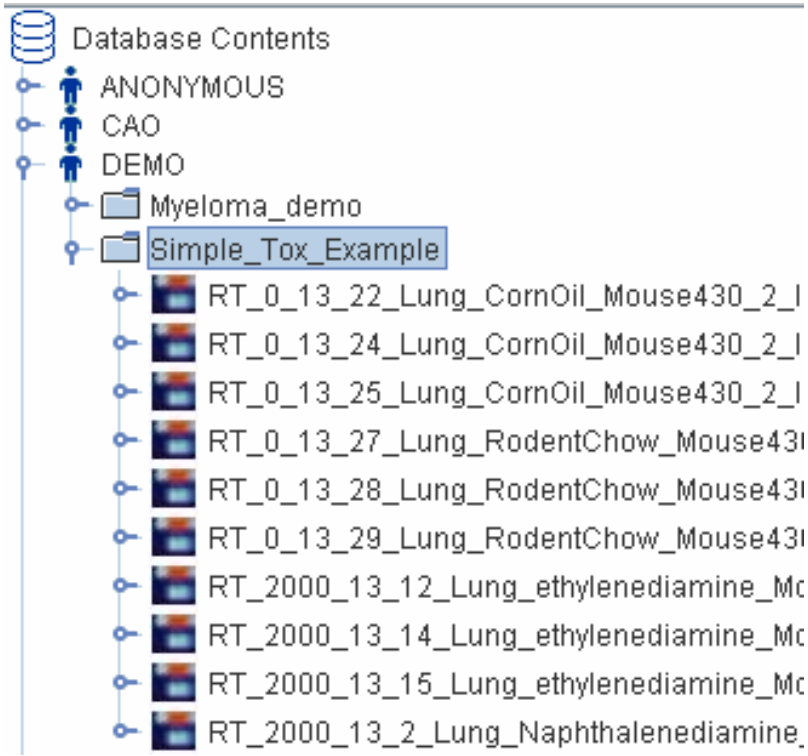
Select the right array type.

Batch Import – Simple Tox Format



Batch Import – Simple Tox Format





Batch import is successfully finished.