

EPFL

LIMS & ELN for Laboratory work user guide



SUMMARY

✓ Start your ELN	P.3
✓ Notes in experiments	P.10
✓ Samples	P.15
✓ SOP's	P.20
✓ Trash an experiment	P.26
✓ Complete your work	P.28

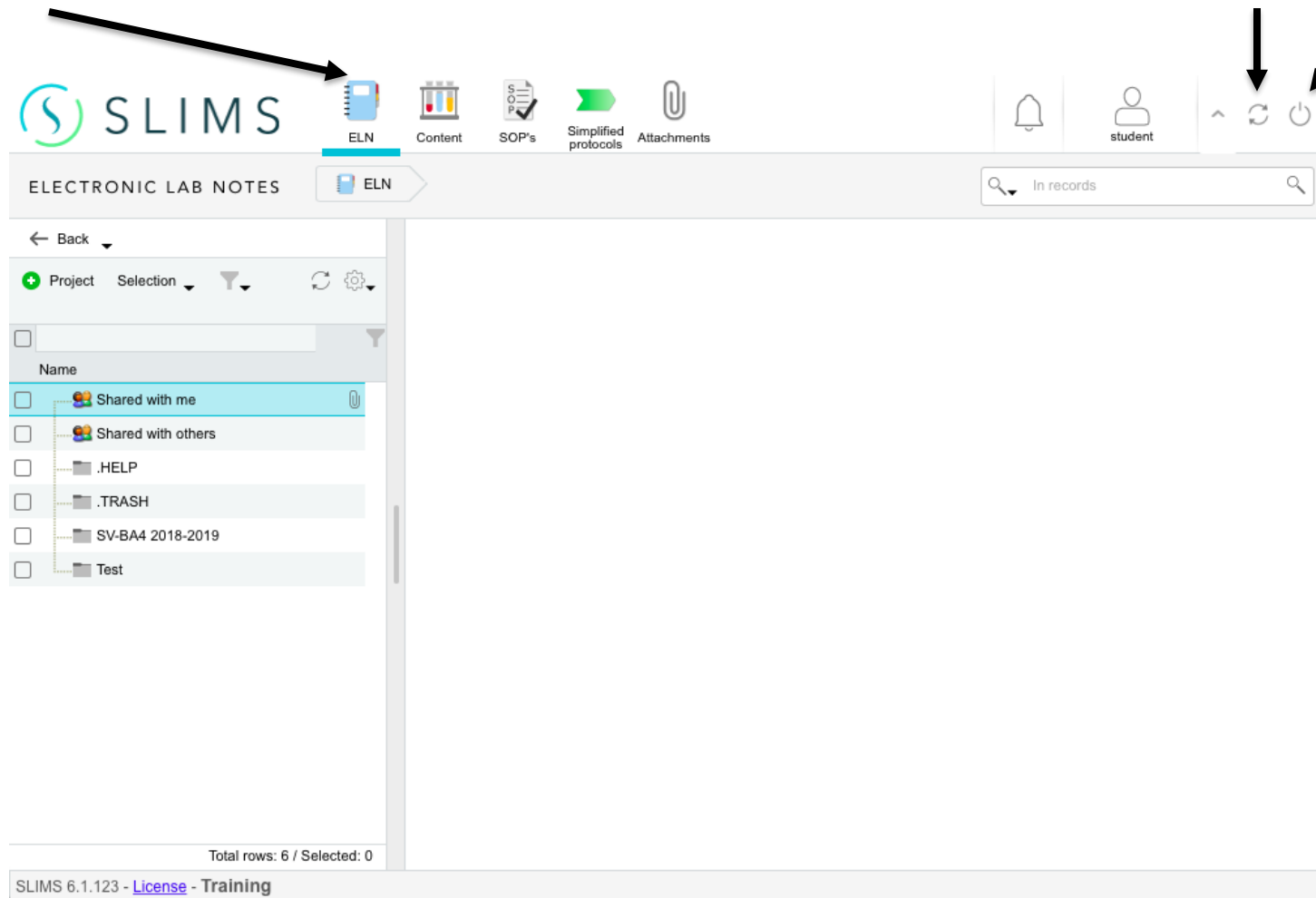
Log in to the ELN/LIMS system

- ✓ Open a web browser (Chrome is recommended)
- ✓ Go to slims.epfl.ch/training
- ✓ Log in with your EPFL credentials

Find the different modules

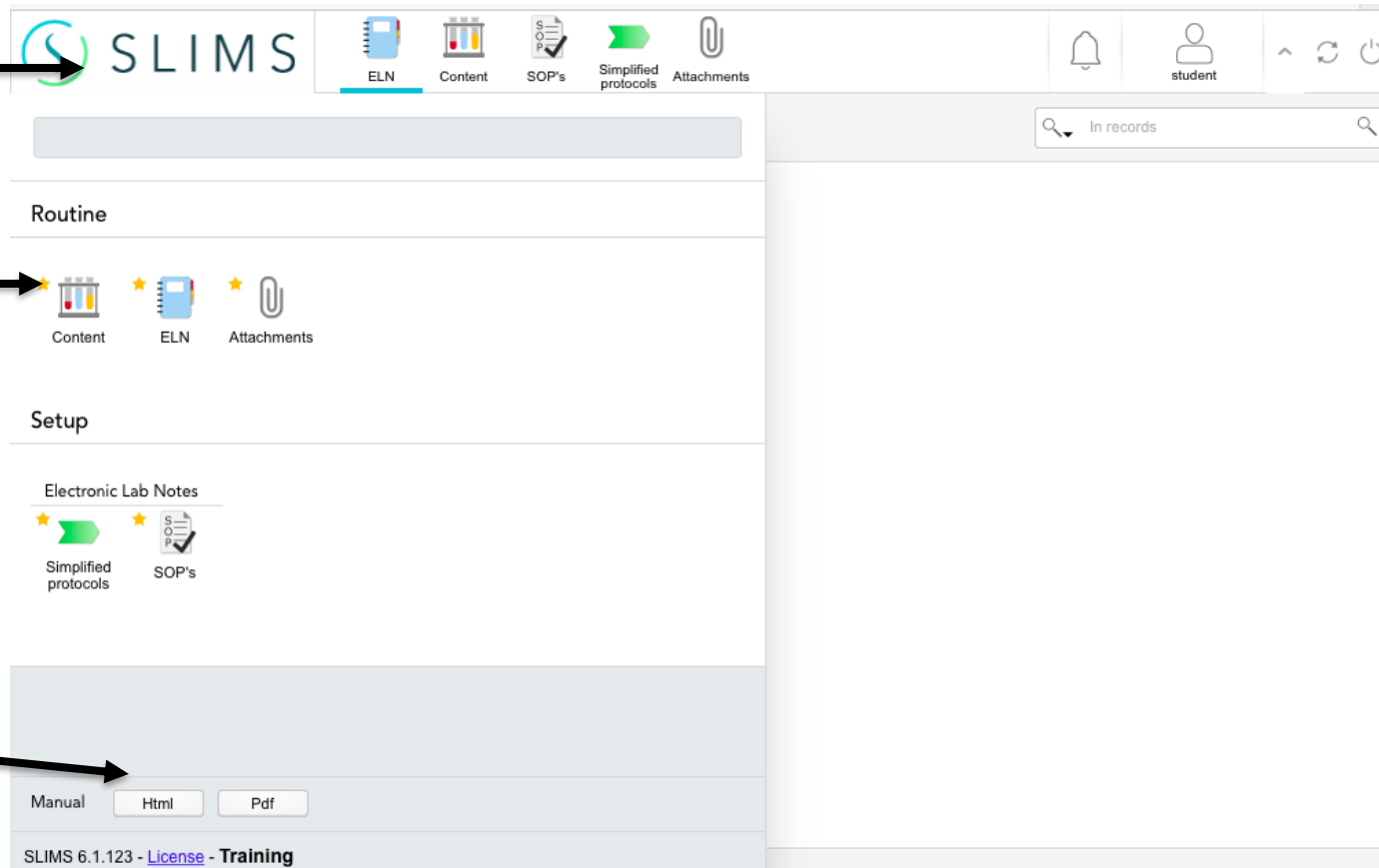
✓ Navigate through the different modules in quick access here

✓ Refresh and quit



Find the different modules

- ✓ Find back the module here
- ✓ Click on the yellow star to add/remove them to/from the shortcut bar
- ✓ Find the complete slims user guide here



Start a new Laboratory Work

- ✓ Go in the ELN module
- ✓ Enter the folder of your section (by clicking on the folder name)

The screenshot displays the SLIMS (Electronic Lab Notes) web application interface. The top navigation bar includes the SLIMS logo, a menu with 'ELN', 'Content', 'SOP's', 'Simplified protocols', and 'Attachments', and user controls for notifications, a 'student' profile, and system icons. Below the navigation bar, the main header shows 'ELECTRONIC LAB NOTES' and a search bar labeled 'In records'. The left sidebar contains a 'Back' button, a '+ Project' button, and a list of folders. The folders listed are 'Shared with me', 'Shared with others', '.HELP', '.TRASH', 'SV-BA4 2018-2019', and 'Test'. A black arrow points to the 'SV-BA4 2018-2019' folder. The bottom status bar indicates 'Total rows: 6 / Selected: 0' and 'SLIMS 6.1.123 - License - Training'.

Start a new Laboratory Work

- ✓ Enter the appropriate Laboratory Project
- ✓ See your current folder and navigate via the breadcrumb bar

The screenshot displays the SLIMS (Electronic Lab Notes) web application interface. At the top, the SLIMS logo is visible alongside navigation icons for ELN, Content, SOP's, Simplified protocols, and Attachments. A user profile icon labeled 'student' and a notification bell are also present. The main header area includes the text 'ELECTRONIC LAB NOTES' and a breadcrumb navigation bar showing 'ELN' > 'SV-BA4 2018-2019'. A search bar on the right contains the text 'In records'.

The left sidebar features a 'Back' button and a list of project categories: Project, Note, and Experiment. Below this, a list of laboratory folders is shown, with 'Laboratory 07' selected and highlighted in blue. Other folders listed include Laboratory 08, Laboratory 09, Laboratory 10, Laboratory 11, and Laboratory 12.

The main content area is titled 'Project' and displays the configuration for 'Laboratory 07'. The configuration includes the following fields:

- Name : Laboratory 07
- Created by : argento
- Created on : 14/01/2019 14:12
- Last Modified by : argento
- Last Modified on : 23/01/2019 19:13

At the bottom of the interface, there are buttons for 'Save', 'Reset', and a status indicator '(0)'. The footer of the application shows the version 'SLIMS 6.1.123 - License - Training'.

Start a new Laboratory Work

1. Click on +Project to create your own Laboratory project
2. Fill the form
3. Click on create

The screenshot displays the SLIMS (Electronic Lab Notes) interface. A modal dialog titled 'Add Project' is open, overlaying the main content. The dialog contains the following fields:

- TP group : (dropdown menu)
- Lab session aim : (text area with placeholder 'Insert here the TP aim')
- Teaching Assistant : (dropdown menu)

At the bottom of the dialog are two buttons: 'Create' (with a blue folder icon) and 'Cancel' (with a red X icon). Three numbered arrows point to the following elements:

1. Points to the '+ Project' button in the left sidebar.
2. Points to the 'Lab session aim' text area.
3. Points to the 'Create' button.

The background interface shows the 'ELECTRONIC LAB NOTES' header, navigation tabs (ELN, Content, SOP's, Simplified protocols, Attachments), and a search bar. The bottom status bar indicates 'Total rows: 1 / Selected: 0' and 'SLIMS 6.1.123 - License - Training'.

Start a new experiment

✓ Get in the project

1. Click on +Experiment to create an experiment
2. Choose the appropriate protocol (you may sort by TP number by clicking on “TP number” column header

NB: One laboratory work can be divided in multiple experiment. Start with Part 1. Create a new experiment for 2, etc.

3. Click on create

The screenshot shows the SLIMS interface with the 'Add Experiment' dialog box open. The dialog box has fields for 'Type' (Default/Simplified), 'Protocol' (empty page (v. 1)), and 'Name'. A dropdown menu is open for the 'Protocol' field, showing a table of protocols. The table has columns for 'Section', 'TP number', 'Part', and 'TP name'. The 'Create' button is highlighted with a red arrow.

Section	TP number	Part	TP name
SV-BA2	7	1	Digestion
SV-BA4	8	1	Transient transfection / Ma...
SV-BA3	7	2	Analysis of restriction digests
SV-BA3	7	3	Sequence analysis of plas...
SV-BA4	8	3	Exercices



NOTES

Edit notes

1. Click in the text note
2. Explore and use the note toolbar here
3. Fill up the underline spaces

The screenshot shows the SLIMS Electronic Lab Notes interface. The top navigation bar includes icons for ELN, Content, SOPs, Simplified protocols, and Attachments. The main content area is titled '1-Digestion' and contains a text note with the following sections:

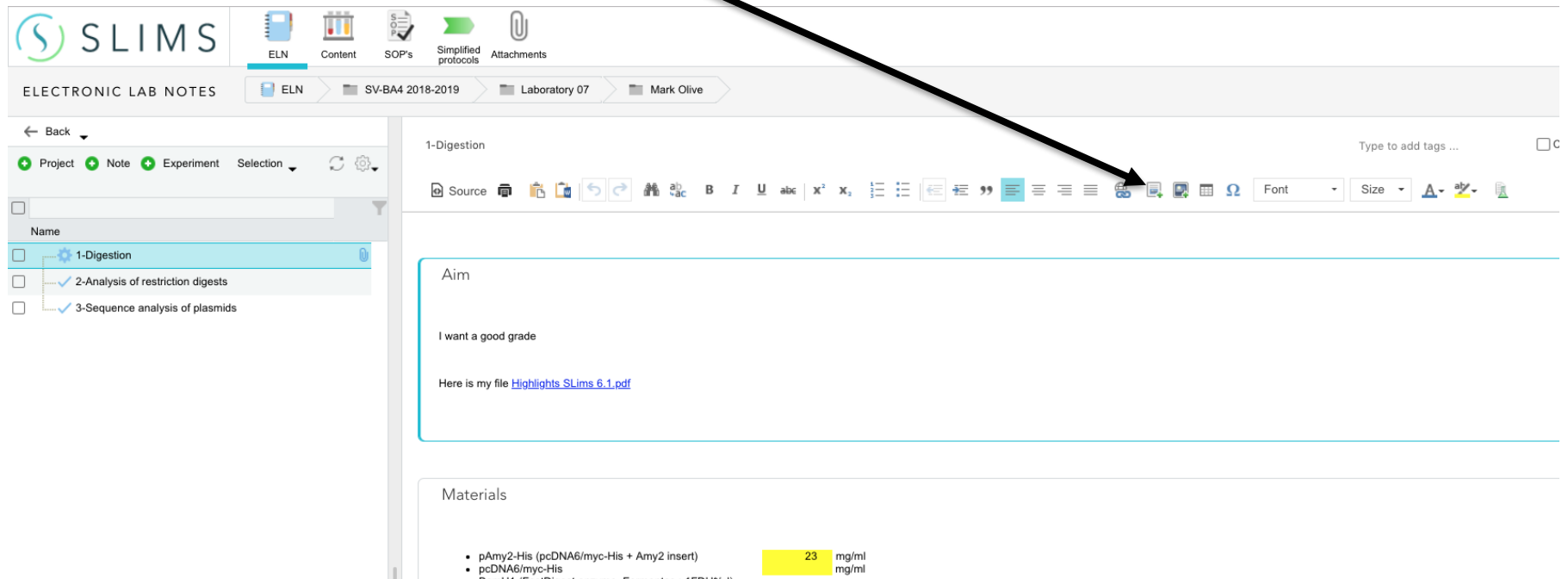
- Aim:** I want a good grade
- Materials:** pcDNA6/Myc-His 8, BamHI (FastDigest enzyme, Fermentas: 1FDU/μl), XbaI (FastDigest enzyme, Fermentas: 1FDU/μl), EcoRI (FastDigest enzyme, Fermentas: 1FDU/μl), 10X Fast digest green buffer (Fermentas), Molecular biology-grade water, DNA ladder (see datasheet on Moodle). The quantity '23 mg/ml' is highlighted in yellow.
- Link to material:** A table with columns Type, Id, Name, Comment, and Location. The table contains one row: Type: Plasmid, Id: SVTPp00002, Name: pcDNA6/Myc-His 8, Comment: , Location: Main lab.
- Diagrams of experimental setups and design:** (Empty section)

Annotations on the left side of the image point to specific elements:

1. Points to the '1-Digestion' note title.
2. Points to the 'I want a good grade' text in the Aim section.
3. Points to the '23 mg/ml' text in the Materials section.

Attach file in notes

- ✓ In the text box, place your cursor where you want to put the file
- Attach the file by :
- ✓ Drag and drop the file in the text box
- ✓ Use the "Attach file button" in the toolbar



The screenshot displays the SLIMS (Electronic Lab Notes) interface. The top navigation bar includes icons for ELN, Content, SOPs, Simplified protocols, and Attachments. Below this, the breadcrumb trail shows 'ELECTRONIC LAB NOTES' > 'ELN' > 'SV-BA4 2018-2019' > 'Laboratory 07' > 'Mark Olive'. The left sidebar lists the note hierarchy: '1-Digestion' (selected), '2-Analysis of restriction digests', and '3-Sequence analysis of plasmids'. The main content area shows the '1-Digestion' note with a text box containing the text: 'Aim', 'I want a good grade', and 'Here is my file [Highlights SLims 6.1.pdf](#)'. A black arrow points from the 'Attach file button' in the toolbar to the text box. The toolbar includes various editing tools and a file attachment icon. The bottom section shows the 'Materials' list with two items: 'pAmy2-His (pcDNA6/myc-His + Amy2 insert)' and 'pcDNA6/myc-His', both with a quantity of 23 mg/ml.

SLIMS

ELECTRONIC LAB NOTES

ELN SV-BA4 2018-2019 Laboratory 07 Mark Olive

Back

Project Note Experiment Selection

Name

- 1-Digestion
- 2-Analysis of restriction digests
- 3-Sequence analysis of plasmids

1-Digestion

Type to add tags ...

Source

Aim

I want a good grade

Here is my file [Highlights SLims 6.1.pdf](#)

Materials

- pAmy2-His (pcDNA6/myc-His + Amy2 insert) 23 mg/ml
- pcDNA6/myc-His 23 mg/ml

Attach file with picture preview in a note

- ✓ In the text box, place your cursor where you want to put the file
- Attach the file by :
- ✓ Drag and drop the file in the text box
- ✓ Use the "Attach file image" in the toolbar
- ✓ Answer "Yes" in dialog window

The screenshot displays the SLIMS (Electronic Lab Notes) interface. The top navigation bar includes icons for ELN, Content, SOPs, Simplified protocols, and Attachments. The main content area shows a note titled "1-Digestion" with a toolbar for text formatting and a "Link to material" section. A dialog box titled "Question" is open, asking "Do you want to include the preview(s)?" with a question mark icon. The dialog lists supported formats: jpg, jpeg, png, gif, bmp, pdf, docx, pptx, tif, tiff. Below the list are "Yes" and "No" buttons. A large image of a galaxy is visible in the background of the note.

SLIMS
ELECTRONIC LAB NOTES

ELN Content SOPs Simplified protocols Attachments

SV-BA4 2018-2019 Laboratory 07 Mark Olive

1-Digestion

Type to add tags ... ☐ Completed ☐ Show removed

Link to material 22/01/2019 09:52

Type	Id	Name	Comment	Location
<input type="checkbox"/> Plasmid	SVTPp00002	pcDNA6/Myc-His B		Main lab

Diagrams of experimental setups and design 07/02/2019 12:09

Question

Do you want to include the preview(s)?

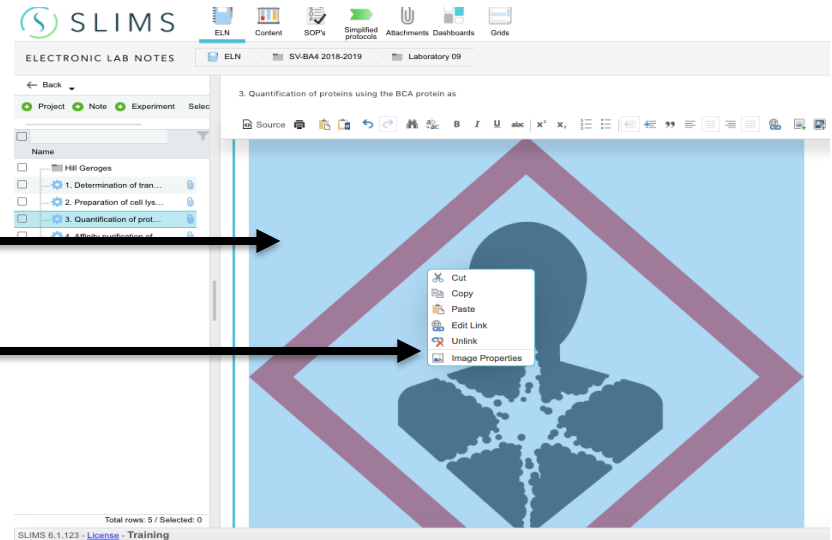
Supported formats are: jpg, jpeg, png, gif, bmp, pdf, docx, pptx, tif, tiff

Yes No

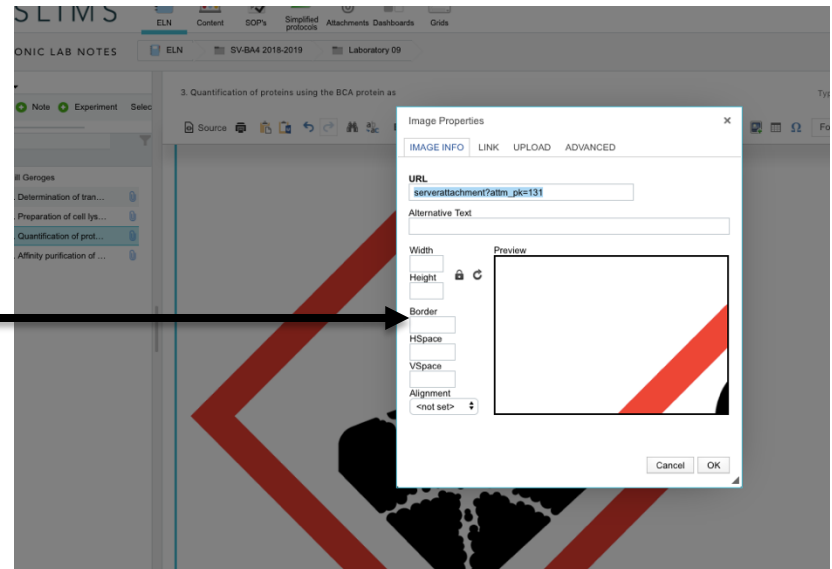
Procedure 22/01/2019 09:52

Adjust image size

- ✓ Right click on the image
- ✓ Click on image properties



- ✓ Adjust width and height

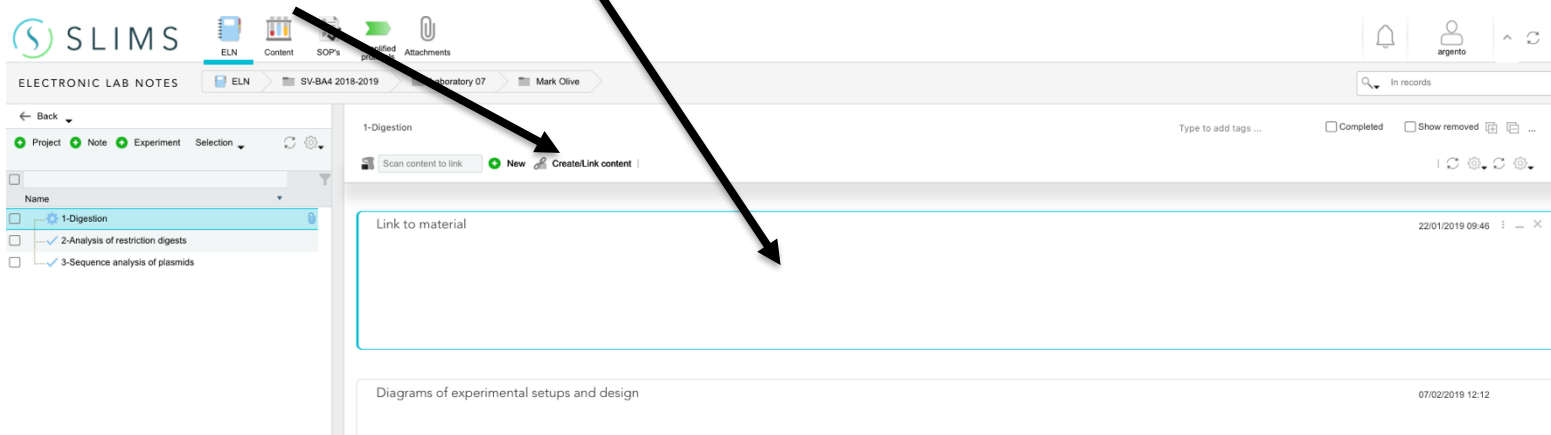




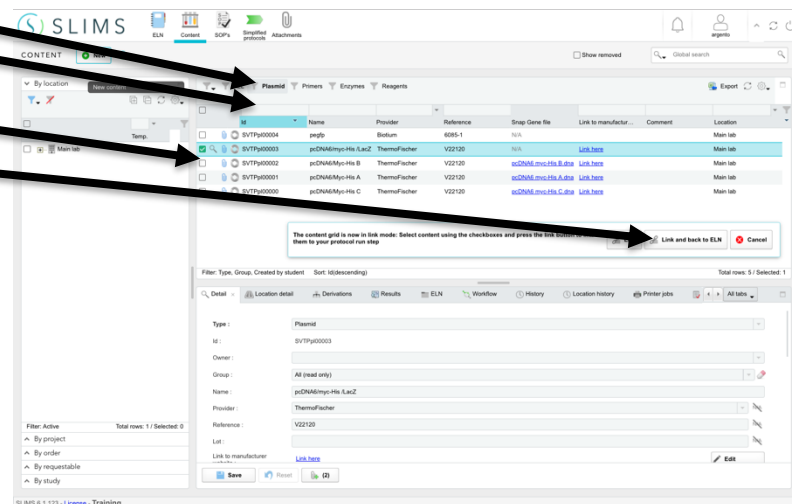
SAMPLES

Attach samples from the content database

1. Click in the “Link to material block”
2. Click on Create/Link content



3. Find the samples with filter and search bars
4. Select the sample(s) to link
5. Click on “Link and back to ELN”



Create a new sample

1. Click in the “Link to material block”
2. Fill the form. You don't need to change amount and location
3. Click on create

1.
2.
3.

The screenshot shows the SLIMS ELN interface. The main window displays the '1-Digestion' experiment page. A 'New content' dialog box is open, allowing the user to create a new sample. The dialog has the following fields and options:

- Amount:** A text input field with the value '1'.
- Address:** A text input field.
- Location:** A dropdown menu with 'Choose a value' selected.
- or scan location barcode:** A text input field with a note 'scan barcode OR type barcode and press Enter'.
- Fill method:** A dropdown menu with 'Row wise' selected.
- Options:** Radio buttons for 'First empty', 'First empty row', and 'Start from position'. A checkbox for 'Also search in sublocations'.
- Content detail:** A section with a dropdown menu for 'Type' (currently showing 'Enzyme') and a table for 'Id' and 'Owner'.
- Comment:** A large text area for entering a comment.
- Status:** A dropdown menu with 'Pending' selected.
- Buttons:** 'Create' and 'Cancel' buttons at the bottom right.

The background page shows the '1-Digestion' experiment with a 'Link to material' button, a 'Diagrams of experimental setup' section, and a 'Procedure' section. The 'Link to material' button is highlighted with a red arrow from the first step of the list. The 'New content' dialog is highlighted with a red arrow from the second step. The 'Create' button is highlighted with a red arrow from the third step.

Read/Edit sample

1. Click on the magnificent lens
2. Edit the sample form
3. Click on “Save and close”

1.

2.

3.

The screenshot displays the SLIMS (Electronic Lab Notes) application. A 'Detail' dialog box is open, showing the following fields:

- Type: Plasmid
- Id: SVTPPl00004
- Owner: 4
- Group: All (read only)
- Name: pegfp
- Provider: Biotium
- Reference: 6085-1
- Lot: N/A
- Link to manufacturer: [Link icon]
- Vector map: [pegfpn1-1.pdf](#)
- Polylinker: N/A
- Restriction: N/A
- Snap Gene file: N/A
- Sequence: N/A

The 'Save & close' button is highlighted with a red arrow. A magnifying glass icon is visible in the top right corner of the interface.

Remove and unlink sample

1. Click the bin icon to remove the sample

Warning : a removed sample is still linked to your ELN. Remove here means “not anymore in the laboratory”

2. To unlink a sample click on the fist icon

2. 1.

The screenshot displays the SLIMS (Electronic Lab Notes) interface. A 'Detail' dialog box is open, showing the following information for a sample:

- Type: Plasmid
- Id: SVTPPl00004
- Owner: 4
- Group: All (read only)
- Name: pegfp
- Provider: Biotium
- Reference: 6085-1
- Lot: N/A
- Link to manufacturer website: [Edit]
- Vector map: [pegfpn1-1.pdf](#) [Edit]
- Polylinker: N/A
- Restriction: N/A
- Snap Gene file: N/A
- Sequence: N/A

At the bottom of the dialog are buttons for 'Save & close', 'Reset', '(1)', and 'Cancel'.

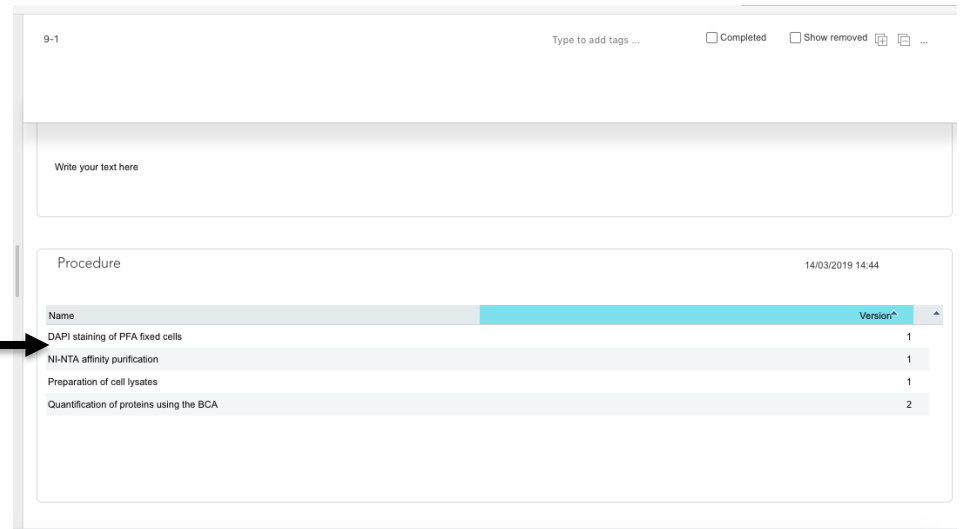
In the background, a table of records is visible. Two arrows point to the first column of the table, labeled '2.' and '1.'. The table has columns for 'Location' and 'Date'. The first row shows 'Main lab' and '07/02/2019 13:05'. The second row shows 'Main lab' and '07/02/2019 12:12'. The first column of the table contains icons for unlinking (a red 'X') and removing (a trash bin).



SOP's

Use an SOP in a predefined block

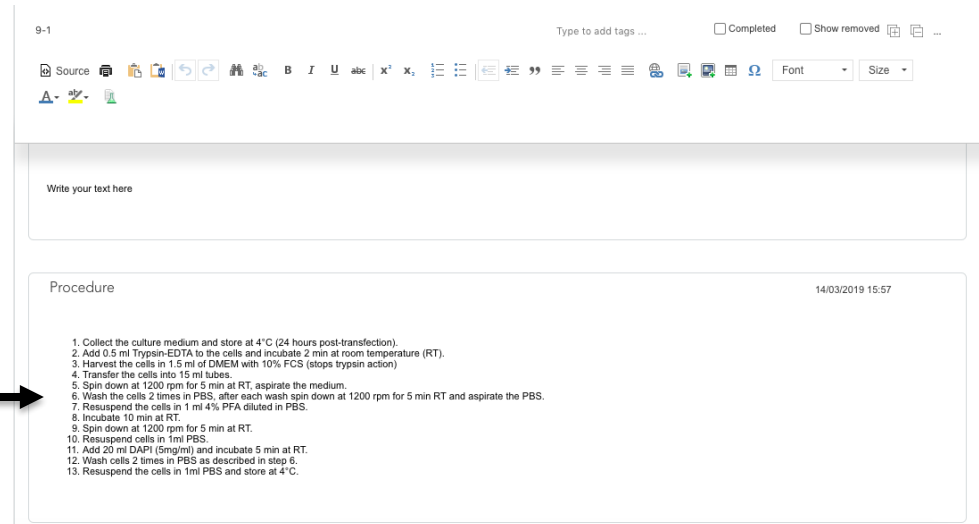
1. Simply click on the SOP name you want to select



The screenshot shows a web interface with a header bar containing the text '9-1' and 'Type to add tags ...'. Below the header is a text input field with the placeholder 'Write your text here'. The main content area is titled 'Procedure' and shows a table of SOPs. The table has two columns: 'Name' and 'Version*'. The SOPs listed are:

Name	Version*
DAPI staining of PFA fixed cells	1
NI-NTA affinity purification	1
Preparation of cell lysates	1
Quantification of proteins using the BCA	2

- ✓ The SOP appear in the block. You may edit it if needed



The screenshot shows a web interface with a header bar containing the text '9-1' and 'Type to add tags ...'. Below the header is a text input field with the placeholder 'Write your text here'. The main content area is titled 'Procedure' and shows the content of a selected SOP. The content is a list of 13 steps:

1. Collect the culture medium and store at 4°C (24 hours post-transfection).
2. Add 0.5 ml Trypsin-EDTA to the cells and incubate 2 min at room temperature (RT).
3. Harvest the cells in 1.5 ml of DMEM with 10% FCS (stops trypsin action).
4. Transfer the cells into 15 ml tubes.
5. Spin down at 1200 rpm for 5 min at RT, aspirate the medium.
6. Wash the cells 2 times in PBS, after each wash spin down at 1200 rpm for 5 min RT and aspirate the PBS.
7. Resuspend the cells in 1 ml 4% PFA diluted in PBS.
8. Incubate 10 min at RT.
9. Spin down at 1200 rpm for 5 min at RT.
10. Resuspend cells in 1ml PBS.
11. Add 20 ml DAPI (5mg/ml) and incubate 5 min at RT.
12. Wash cells 2 times in PBS as described in step 6.
13. Resuspend the cells in 1ml PBS and store at 4°C.

If you selected the wrong SOP

1. Remove the block here
2. Create a new block by clicking on “New block”. It appears if you mouse between 2 blocks.
3. Select use an SOP

The screenshot shows a software interface with a list of SOPs on the right and a 'New block' dialog at the bottom. The SOP list includes:


- 1. Collect the culture medium and store at 4°C (24 hours post-transfection).
- 2. Add 0.5 ml Trypsin-EDTA to the cells and incubate 2 min at room temperature (RT).
- 4. Transfer the cells into 15 ml tubes.
- 5. Spin down at 1200 rpm for 5 min at RT, aspirate the medium.
- 6. Wash the cells 2 times in PBS, after each wash spin down at 1200 rpm for 5 min RT and aspirate the PBS.
- 7. Resuspend the cells in 1 ml 4% PFA diluted in PBS.
- 8. Incubate 10 min at RT.
- 9. Spin down at 1200 rpm for 5 min at RT.
- 10. Resuspend cells in 1ml PBS.
- 11. Add 20 ml DAPI (5mg/ml) and incubate 5 min at RT.
- 12. Wash cells 2 times in PBS as described in step 6.
- 13. Resuspend the cells in 1ml PBS and store at 4°C.



The 'New block' dialog at the bottom has a text input field labeled 'New block' and several buttons: 'Write some notes', 'Attach a file', 'Link some content', 'Use an SOP', 'Use a timer', 'Link reagents', and 'Cancel'. Arrows from the numbered list point to these elements: arrow 2 points to the 'New block' button, arrow 1 points to the SOP list, and arrow 3 points to the 'Use an SOP' button.

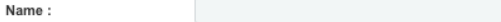
Create your own SOP's (1/3)

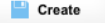

1. Go in the SOP's module
2. Click on new
3. Enter a name
4. Create

The screenshot illustrates the process of creating a new Standard Operating Procedure (SOP) within the SLIMS system. The interface features a top navigation bar with icons for ELN, Content, and SOP's. The SOP's module is selected, and the 'New' button is clicked. A modal window titled 'Add new SOP' appears, allowing the user to enter a name and activate the SOP. The 'Create' button is then clicked to finalize the creation.

1.  ELN Content **SOP's**

2.  

3. 

4.  

No items to show.

Create your own SOP's (2/3)

1. Make sure your are in the Students SOP view
2. You are editing the draft. Only draft can be edited. Draft cannot be used in the ELN
3. Edit the SOP here and Save all your changes

1. →

2. →

3. →

SLIMS

ELN Content SOP's

SOP'S New

ALL Students' S Versions

Name Active

Cell culture

Version Version comments

Draft

Warning

The current draft has been edited since the last version was made. This means the changes that have been done to it will not yet be available in ELN.

Version

Name :

SOP :

Cell culture

Source Font Size

Culture of HELA

Media:

- 500 ml MEM
- 10% FCS : 50 ml
- L-Glu: 2 mM final concentration, Stock 200mM : 5ml
- Non Essential Amino Acid: 1X : 5 ml
- Streptavidin 1X: 5ml

Click anywhere outside this field to save changes and exit edit mode.

Save Reset (0) Version

Filter: Created by student Total rows: 1

SLIMS 6.1.123 - License - Training

Create your own SOP's (3/3)

1. Once the SOP is ready. You have to create a first version by clicking on Version. You have to add a comment. Now you can use this SOP version in the ELN.
 - ✓ Version cannot be changed anymore
2. To create a new version. Edit the draft and click on version again. The new version is now available in the ELN.

The screenshot displays the SLIMS web application interface. At the top, there are navigation tabs for ELN, Content, and SOP's. The SOP's tab is active, showing a list of SOPs. A table with columns 'Name', 'Active', 'Version', and 'Version comments' is visible. The 'Cell culture' SOP is highlighted in blue, and its 'Draft' status is shown. A yellow vertical bar highlights the 'Version' column. A black arrow points from the 'Version' button in the table to a 'Warning' box on the right. The 'Warning' box states 'The SOP is currently inactive' and has a 'Version' button. Below the table, the details of the 'Cell culture' SOP are shown, including its name, ATCC number (CCL-2), organism (Homo sapiens), organ (cervix), disease (adenocarcinoma), cell type (epithelial), and media (500 ml MEM, 10% FCS, L-Glu, Non Essential Amino Acid, Streptavidin). The 'Sub-culturing of the cell' section is also visible, showing instructions for splitting and growing the cells. At the bottom, there are buttons for 'Save', 'Reset', and 'Version'.

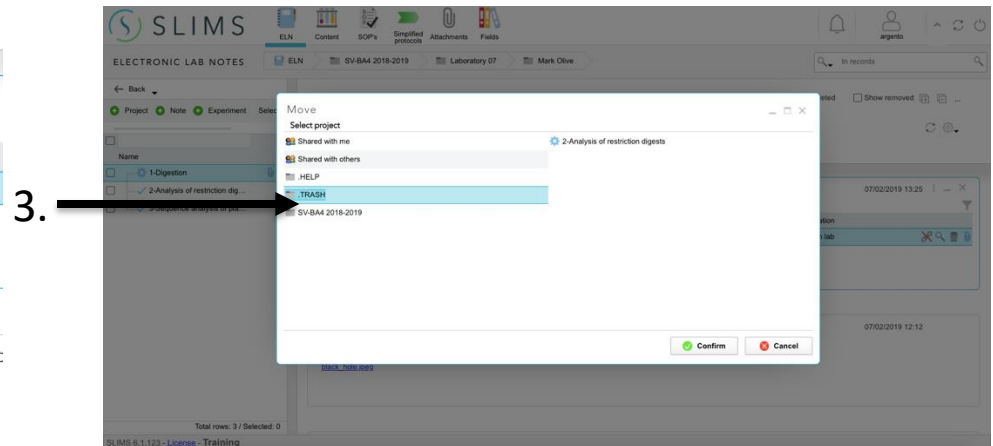
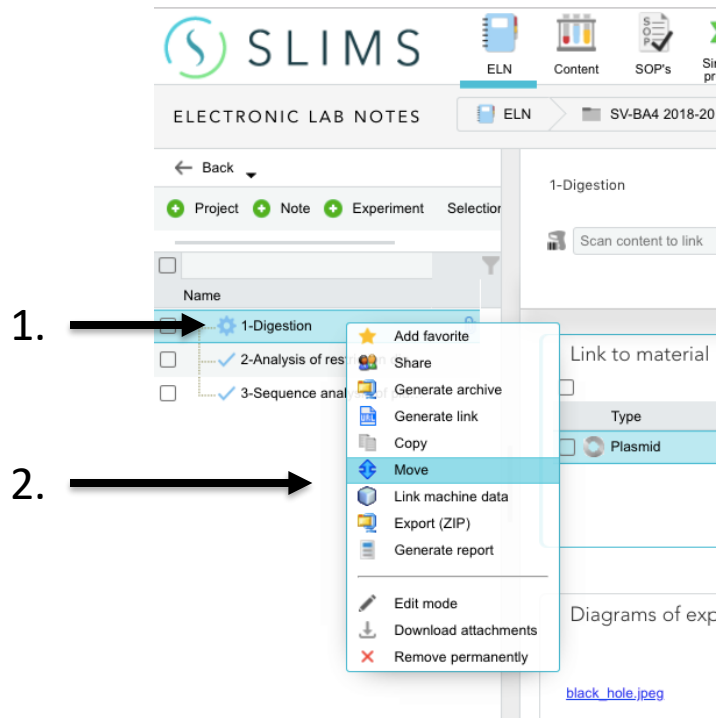
1. [Arrow pointing to the 'Version' button in the table]

2. [Arrow pointing to the 'Version' button in the warning box]

TRASH AN EXPERIMENT

Trash an experiment

1. Right-click on the experiment
2. Click on move
3. Select the .TRASH folder



COMPLETE YOUR WORK

Complete your work



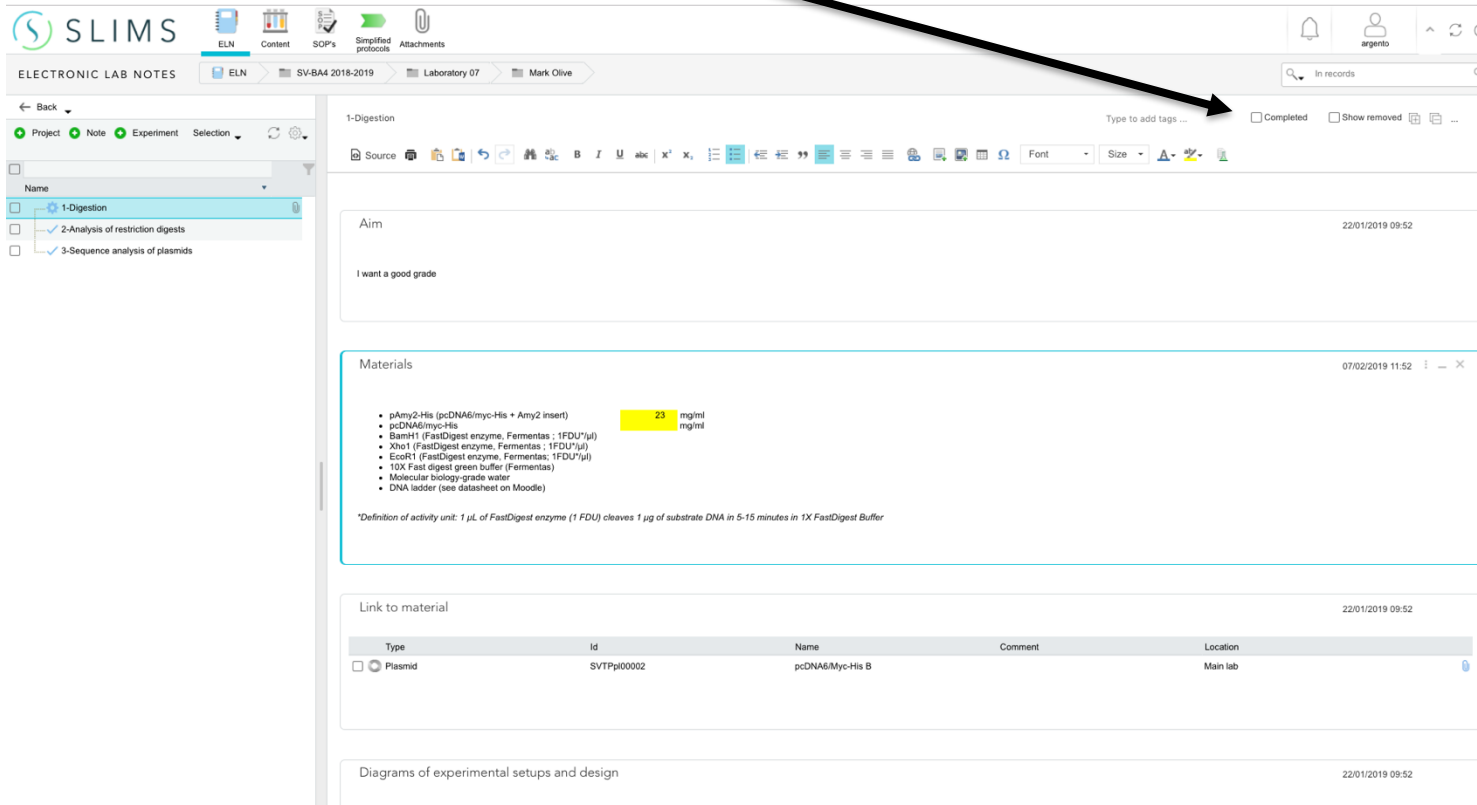
A completed experiment cannot be uncompleted !

**Nothing can be modified after you checked completed
The laboratory work is considered as done as soon as all
the experiment are completed.**

Complete all your experiment before the deadline!

Complete your work

✓ Check completed



The screenshot shows the SLIMS (Electronic Lab Notes) interface. The top navigation bar includes icons for ELN, Content, SOPs, Simplified protocols, and Attachments. The main header displays 'ELECTRONIC LAB NOTES' and a breadcrumb trail: 'ELN > SV-B44 2018-2019 > Laboratory 07 > Mark Olive'. A search bar on the right shows 'In records'. The left sidebar contains a 'Back' button and a 'Selection' dropdown. Below it, a list of items is shown: '1-Digestion' (selected), '2-Analysis of restriction digests', and '3-Sequence analysis of plasmids'. The main content area is titled '1-Digestion' and has a 'Type to add tags ...' input field. It contains several sections: 'Aim' (with the text 'I want a good grade'), 'Materials' (with a list of reagents and a definition of activity unit), 'Link to material' (with a table of materials), and 'Diagrams of experimental setups and design'. The 'Completed' checkbox is located in the top right corner of the document editor.

SLIMS

ELECTRONIC LAB NOTES

ELN > SV-B44 2018-2019 > Laboratory 07 > Mark Olive

1-Digestion

Type to add tags ...

Completed Show removed

Aim

I want a good grade

Materials

- pAmy2-His (pcDNA6/myc-His + Amy2 insert)
- pcDNA6/myc-His
- BamHI (FastDigest enzyme, Fermentas; 1FDU/μl)
- XhoI (FastDigest enzyme, Fermentas; 1FDU/μl)
- EcoRI (FastDigest enzyme, Fermentas; 1FDU/μl)
- 10X Fast digest green buffer (Fermentas)
- Molecular biology-grade water
- DNA ladder (see datasheet on Moodle)

*Definition of activity unit: 1 μL of FastDigest enzyme (1 FDU) cleaves 1 μg of substrate DNA in 5-15 minutes in 1X FastDigest Buffer

Link to material

Type	Id	Name	Comment	Location
<input type="checkbox"/> Plasmid	SVTPp000002	pcDNA6/Myc-His B		Main lab

Diagrams of experimental setups and design