

Introduction to LIMS and Quality manual

The screenshot shows the myfab LIMS interface. On the left, there are navigation tabs for 'Home', 'Related', and 'Favorites'. The main content area is titled 'Important information about the lab' and features a prominent 'Electrum Laboratory LIMS' section with a link to the Quality Manual (QM) portal. Below this, there are sections for 'Booked tools' (with 'My bookings' and 'Logs without booking' filters), 'Project leader bookings', and 'My licenced tools' (listing various tools like 'FH wet chemistry-1' through 'LIMS (5061)' and 'Testtool (28099417)' with 'Book', 'View', and 'Log' actions).

The screenshot shows the myfab LIMS interface with the 'Electrum Laboratory Quality Manual' section expanded. It features a flowchart illustrating the quality management process. The flow starts with 'Preparation' (Lab introduction, Cleanroom education, Customer relations, Planning of experiments) leading to 'Processing' (Experimental work, Incident report, LIMS, Tools, Software instruction, Manual processing, Invoices). This is followed by 'Feedback' (User feedback, Problem reporting, Presentation materials). A separate 'Support' section includes 'Process monitoring (SPC)', 'Calibration', 'Preventive maintenance', 'Tool management', 'Process recipes', and 'General resources'. The 'Infrastructure' section lists 'Responsibilities in the lab', 'Cleanroom specifications', and 'Facility'. The 'Administration' section lists 'Management', 'Quality system', 'Work environment', and 'LIMS administration'. The date '2012-04-19 Per Wehlin' is visible at the bottom.

LIMS is a software which helps you with:

- Getting access to the lab resources (tools licences, tools booking)
- Running the tools (instructions, recipes, SPC)
- Archiving the experimental results (logs, batch register)

- LIMS is also used for administration of laboratory (managing of users, tools, licenses, runs, economy, processes ...).

To be able to book/run a tool you need

A LIMS account

Including

1) Where you are working

University/Company, example KTH

Department, example ICT

Laboratory/Group, example HMA (Semiconductor materials)

2) Supervisor

3) Practical coach (for cleanroom)

The practical coach should be an experienced colleague from your group that you can get help from.

To be able to book/run a tool you need

Be a member of a project in LIMS (given by a project manager)

The project is internal for LIMS but can be called after existing projects
example

Project Id	Project name
20080827	SPC runs Elab

A license for the tool you will use

You get a license from the tool responsible after training.

The screenshot shows the user home page of the Electrum Laboratory LIMS system. The page is divided into several sections:

- Related:** A sidebar on the left with a 'Favorites' section containing a link to 'All tools'.
- Important information about the lab:** A central header area.
- Electrum Laboratory LIMS:** The main title and a link to the 'Quality Manual (QM) on portal'.
- Booked tools:** A section titled 'My bookings' showing a table of booked tools. One entry is highlighted with a red circle: 'Booking without log' for 'Testtool' on '01 aug 11:30 - 14:30'. A red arrow points to this section with the text 'List of booked tools'.
- My licenced tools:** A section titled 'My licenced tools' showing a table of available tools. A red circle highlights this section, with a red arrow pointing to it from the text 'List of licenced tools'.
- Quality Manual:** A section with a link to the 'Quality Manual'.
- Failure Report:** A section with a link to the 'Failure Report'.

User Home page

(the page after login)

- List of booked tools

- Links to Quality Manual

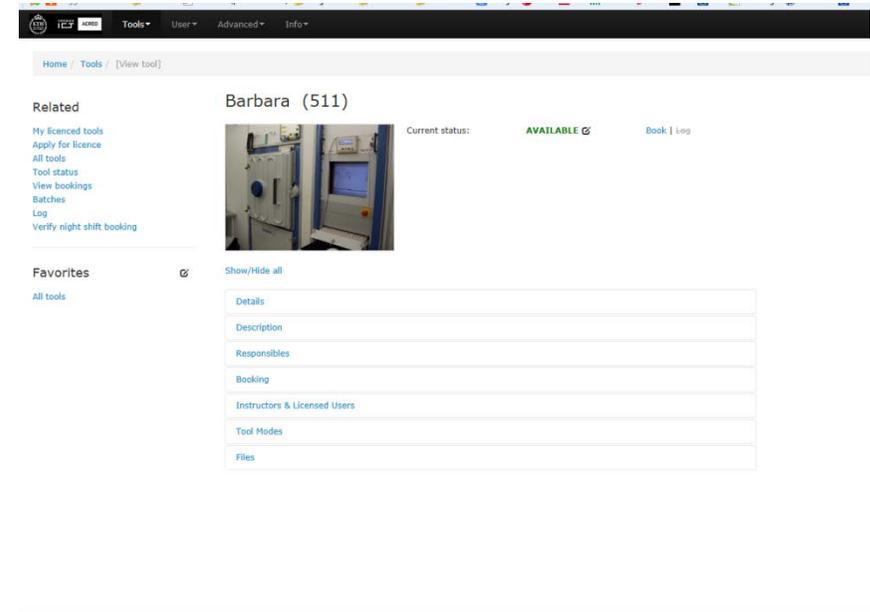
- List of licenced tools

- Favourites (“saved” LIMS pages)

Booking in LIMS

You MUST book tools BEFORE they are used if they are marked as “Booking Compulsory”
 on tool label or on tool view page

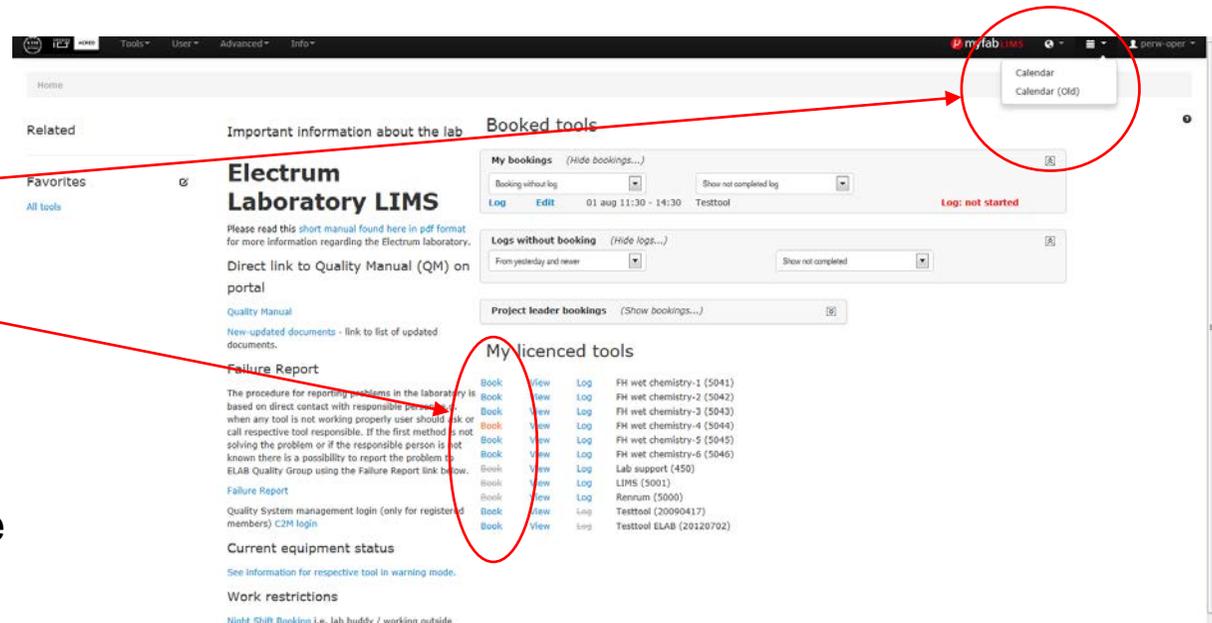
OK	Tool:			
	Emma			
	Responsible department:	Responsible person:	Phone number:	
	Acreo	Magnus Lindberg	632 78 22	
	Full tool name:		Tool ID:	Room:
	Mask aligner MA6/BA6 Karl Suss		524	Gul 3
General purpose: Mask aligner, principally for backside alignment.				
Instructors:	Dept.:	Email:	Phone number:	
Cecilia Aronsson	Replisaurus	cecilia@replisaurus.com	070-287 71 01	
Helena Strömberg	Acreo	helena.stromberg@acreo.se	632 77 26	
Olof Öberg	Acreo	olof.oberg@acreo.se	632 78 19	
Magnus Lindberg	Acreo	magnus.lindberg@acreo.se	632 78 22	
Restrictions/safety/environment:				
LIMS Info				
		Booking Compulsory	Logging Compulsory	
2010-01-08/Per Wehlin Electrum Laboratory				



Booking in LIMS

You can access the booking calendar

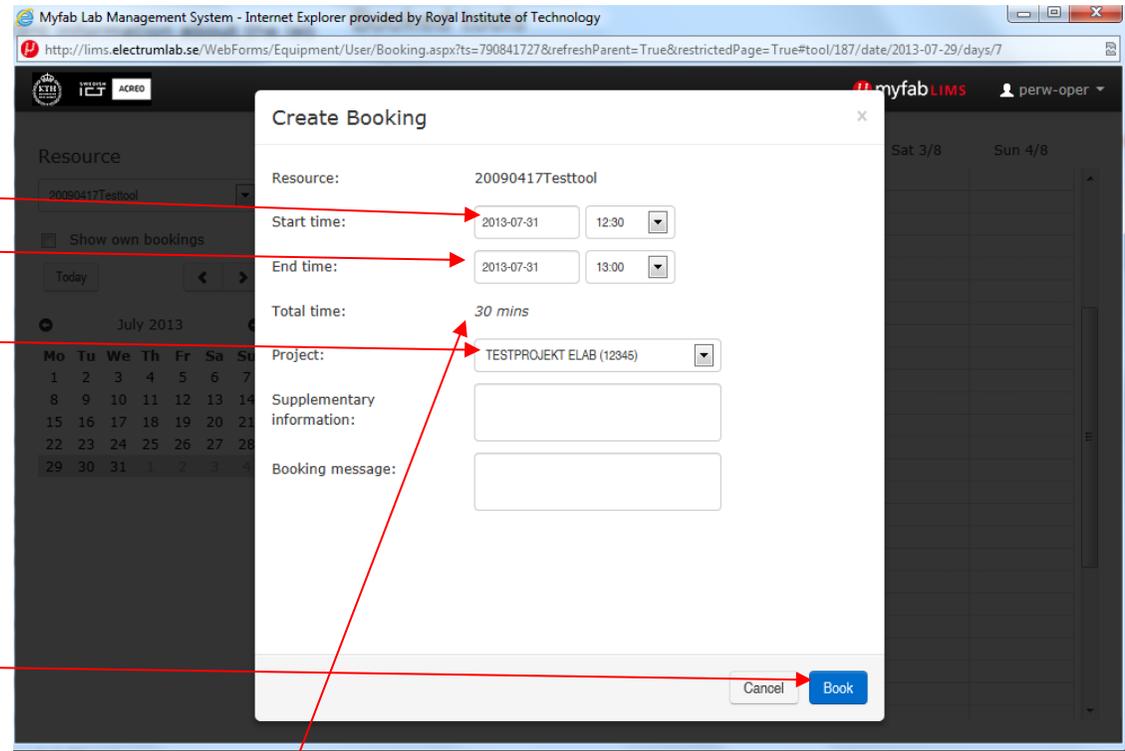
- At the menu (**Calendar**)
- At the tool list
- Overview of documents



It is also possible to access the old type of booking calendar (**Calendar (old)**)

Both **Calendar** and **Calendar (old)** access the same booking data.

Booking in LIMS



Fill in

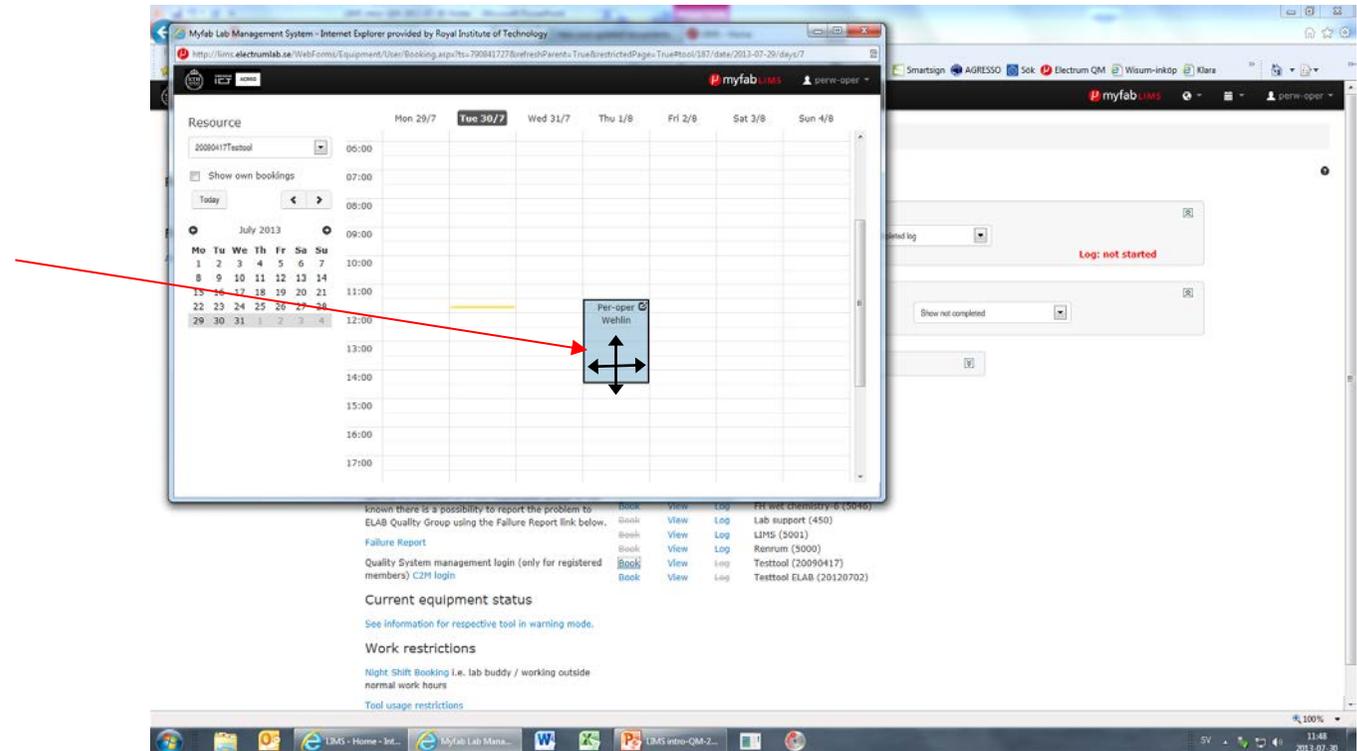
- Start time
- End time
- Project

Click then on Book.

The total time depends of the start and end time and will change depending on these times. Default is 30 min.

Booking in LIMS

- You can move the booking to the desired time.
- You can also change the booking time by making the box shorter/longer.
- By double clicking on the box you open the edit menu.



Booking in LIMS

You can change

- Start time
- End time
- Project

webforms/equipment/user/booking.aspx?is=797439510&refreshParent=true&restrictClearPage=true&007/107/date/2013

myfa

Sat

Edit Booking

Resource: 20090417Testtool

Start time: 2013-08-01 11:30

End time: 2013-08-01 14:30

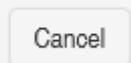
Total time: 3 hours

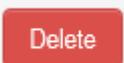
Project: ELAB License (20110915)

Supplementary information:

Booking message:

Cancel Delete Book

 Cancel – Exit without change

 Delete – Remove booking

 Book – Save changed booking

Not used booking

To leave not used bookings is a bad policy because all “forgotten” bookings will be charged as the tool usage at the end of the month.

- Remove booking immediately when you know that you can not use the tool. Attention! Only future booking can be removed by user.
- Shorten your booking as much as possible if the start time is already passed.
- Contact the tool responsible to explain situation and ask for help with your past booking.

What is a log in LIMS

The log is an information regarding the history of respective tool usage.

This information is very important for the next user because the condition of the tool often depends on the previously run process.

Logs give also hints for users regarding parameters of standard and/or often used processes.

The tool usage history is a base for planning and doing service and preventive maintenance, i.e. no logs = no service!

Logs are also used for charging the projects for laboratory usage.

From these reasons it is extremely important to create a log **DIRECTLY** after you finished working with the tool. The system will prevent new booking when user has not logged bookings **older than 7 days!**

Logging in LIMS

To create the log just click on **Log** link present on the **Booked tools** list ...

The screenshot shows the 'Booked tools' section of the LIMS interface. It features a table with columns for 'Booking without log', 'Log', 'Edit', 'Time', and 'Tool'. A red starburst graphic with the text 'Click!' points to the 'Log' link in the first row of the 'My bookings' table. Below this table is another section for 'Logs without booking' and a 'My licenced tools' table with columns for 'Book', 'View', and 'Log'.

Booking without log	Log	Edit	Time	Tool
Booking without log	Log	Edit	01 aug 11:30 - 14:30	Testtool

Book	View	Log	Tool
Book	View	Log	FH wet chemistry-1 (5041)
Book	View	Log	FH wet chemistry-2 (5042)
Book	View	Log	FH wet chemistry-3 (5043)
Book	View	Log	FH wet chemistry-4 (5044)
Book	View	Log	FH wet chemistry-5 (5045)
Book	View	Log	FH wet chemistry-6 (5046)
Book	View	Log	Lab support (450)
Book	View	Log	LIMS (5001)
Book	View	Log	Radium (5000)
Book	View	Log	Testtool (20090417)
Book	View	Log	Testtool ELAB (20120702)

Hint: Logged booking “disappears” from your **Booked tool** list (if “Logs=Show not completed”), so try to keep your list as short as possible.

Logging in LIMS

fill in form which opens and accept it by clicking button “Save as Completed”.

Home / Tools / Log / [Log for booked tools]

Related
[Log status](#)
[Log history by tool](#)
[Log history by batch](#)

Favorites
[All tools](#)

Log for booked tools

Testtool (20090417)

Booked time: 01 aug 11:30 - 14:30
 Project: ELAB License

Batch No: Verify

Log start time: 2013-08-01 11:30

Log end time: 2013-08-01 14:30

Problems during run
(If checked, supplying supplementary info about what went wrong is required. Also, any required log fields are changed to optional)

Conf. (log):

Supplementary Information:

- Change status or message for this tool (current status: Available)

Save as 'Started' Save as 'Completed'

Log start time

Log end time

Save as Completed

Hint: Logged booking “disappears” from your **Booked tool** list (if “Logs=Show not completed”), so try to keep your list as short as possible.

Virtual tool 450_Lab support

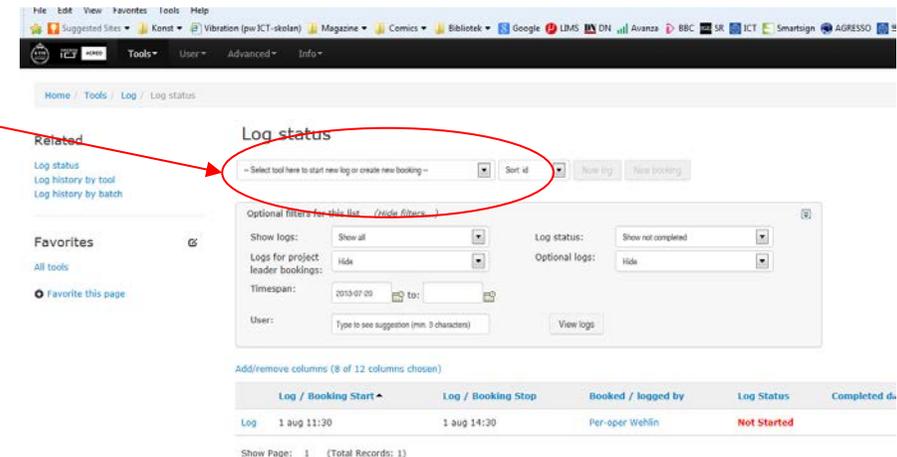
When somebody helps you in the lab (e.g. with training for the tool licence) you will be asked to create a log for this service in tool 450_Lab support.

To do so, go to the **Log status** page, select 450_Lab support and click “New log” button ...

... which opens **Log without booking** page.

Fill in

- Project
- Log start/end time to cover the period agreed with the instructor
- Instructor name and group
- , and describe type of help (e.g. licence for tool ...)



Log status

Optional filters for this list (hide filters)

Show logs: Show all

Logs for project: Hide

Timespan: 2013-07-20 to: []

User: Type to see suggestion (min. 3 characters)

Log status: Show not completed

Optional logs: Hide

Add/remove columns (8 of 12 columns chosen)

Log / Booking Start	Log / Booking Stop	Booked / logged by	Log Status	Completed
Log 1 aug 11:30	1 aug 14:30	Per-oper Wehlin	Not Started	

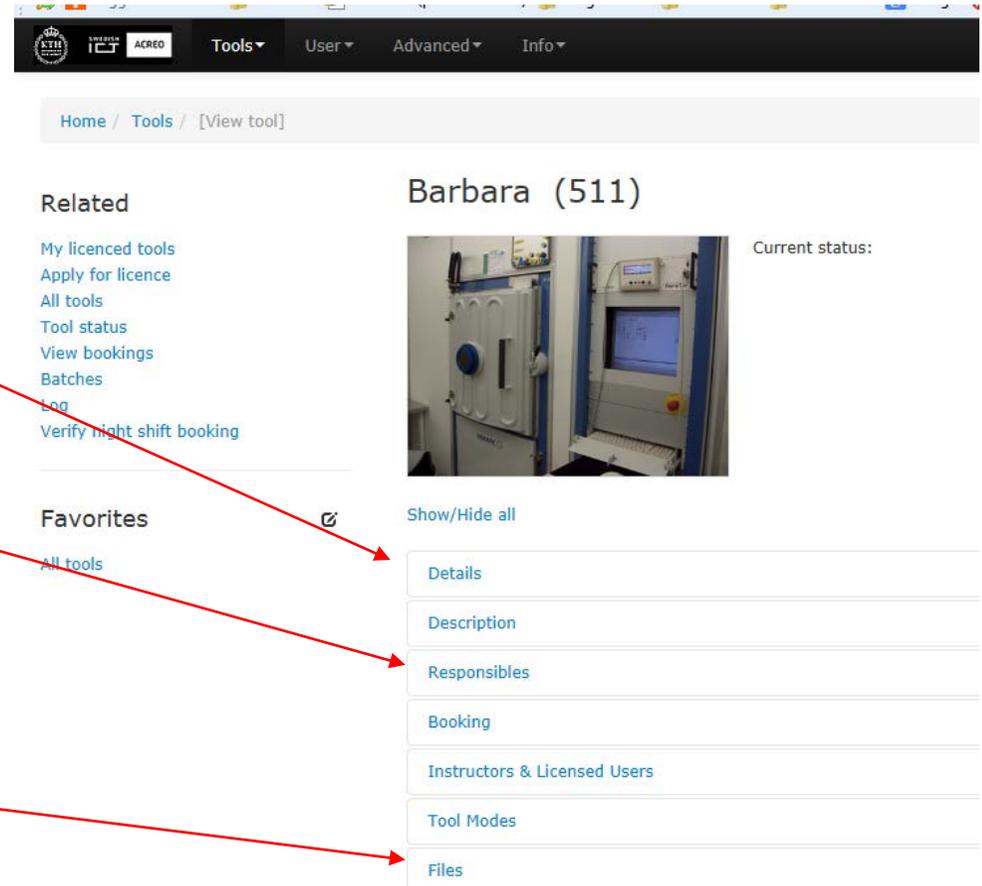
Show Page: 1 (Total Records: 1)

Click on “Save as Completed” to register the log.

Help when running the process

Information on [View tool](#) page:

Information about the tool can be accessed by clicking **View** link in the Tool list.



Technical description of the tool

People to contact if help is needed

Tool files: instruction, recipes, SPC

View tools - Details

Home / Tools / [View tool]

Barbara (511) Current status: **AVAILABLE** [Book](#) | [Log](#)

Related

- [My licenced tools](#)
- [Apply for licence](#)
- [All tools](#)
- [Tool status](#)
- [View bookings](#)
- [Batches](#)
- [Log](#)
- [Verify night shift booking](#)

Favorites [Show/Hide all](#)

All tools

Details

Tool name:	Barbara	Manufacturer:	Provac
Tool ID:	511	Model:	PAK 600 Coating System
Area/room:	C-Metal-III/V	Installation date:	
Category:	Thin film deposition	Tool rate:	D

Description

Responsibles

Booking

Instructors & Licensed Users

Tool Modes

Files

- By clicking on the desired menu you access the data.

View tools - Example

Barbara (511)

Current status:

Description

Responsibles

Files (documents)

Description

Technical description
Full equipment name: Provac PAK 600 Coating System
General purpose: Metal evaporation
Technical data:

- Several standard processes for deposition of AuGe, Au, Ni, Ir, Pd, Pt, Ti, Cr, Ge, Ag, Mo, W, Al, Pd, Sn
- Evaporation of other metals and dielectrics is possible.
- Wafer holder for multi-substrates up to 6" size.
- Possibility to deposit up to 6 different metals during one run

Responsibles

1st Responsible:	Reza Nikpars	Process:	
2nd Responsible:		Group:	Nano-QLA

Files

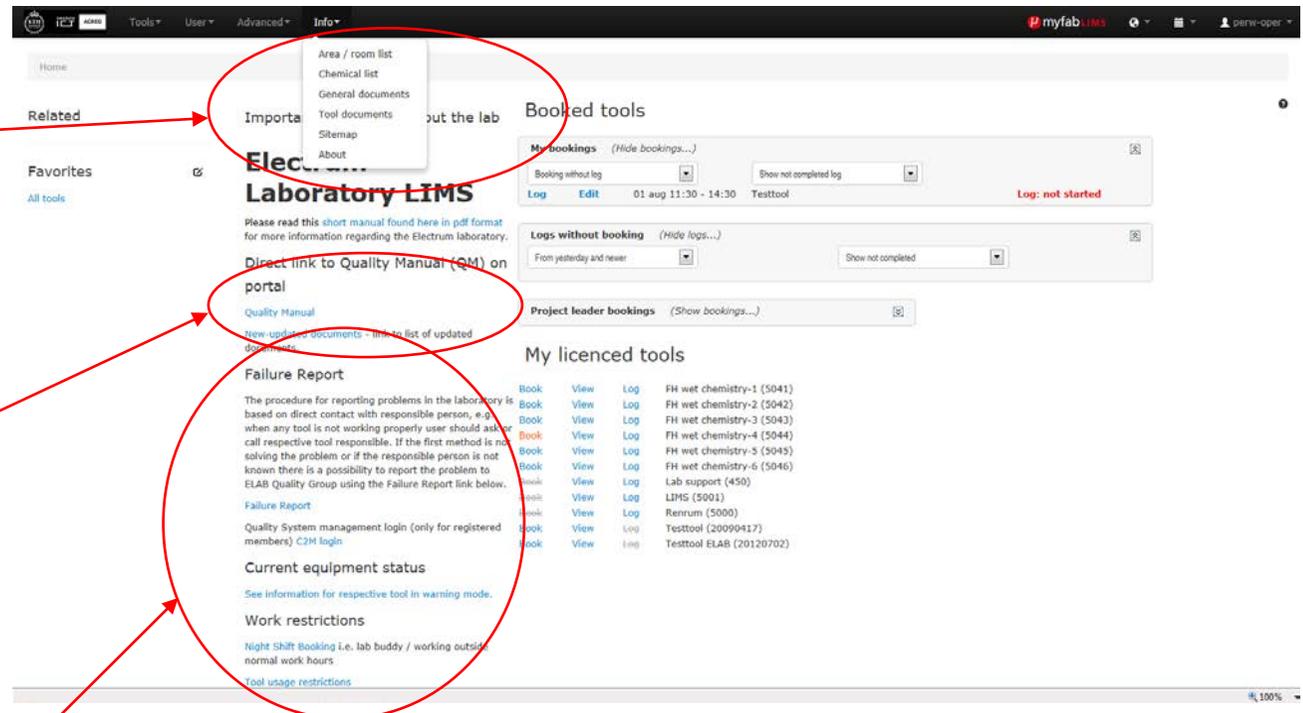
Control Specification	SPC_Barbara.xls
Service Instructions	Barbara service
User Instructions	Operating instruction

More information in LIMS

Drop down menu Info provides access to information pages:

- List of rooms in the lab
- Chemical list - Database of chemicals with links to MSDS (**M**aterial **S**afety **D**ata **S**heet)

Direct link to Quality Manual



General information about lab

Tool info

- Choose tool categories

- List of tools

Optional filters for this list (Hide filters...)

Tool Id: Tool name:

Category: Process line:

Apply filters

	Tool Id	Category	1st responsible	Area name	Status
View	492	Metrology	Stefano Bonetti	Y-yttrelab	Available
View	5601	Metrology	Arman Silkiric	C-Anneal	Available
View	A1-NHTSIDE	Thin film deposition	Timo Söderqvist	C-Furnace Room	Down
View	A2-LTO-IDP	Thin film deposition	Timo Söderqvist	C-Furnace Room	Available
View	A3-TEOS	Thin film deposition	Timo Söderqvist	C-Furnace Room	Down
View	Activator	Thermal processes	Arman Silkiric	C-Anneal	Available
View	AFM Acreo	Metrology	Reza Nikpars	N-Measurement	Available
View	AFM/SSRM	Metrology	Anders Hallén	Y-Hall rum	Available
View	AGM	Metrology	Seyed Majid Mohseni Armaki	Y-yttrelab	Available
View	AJA Sputter	Thin film deposition	Seyed Majid Mohseni Armaki	Y-Synth labs	Available
View	AJA Sputter Albanova	Thin film deposition	Anders Liljeborg	Albanova E1:1017A	Available
View	Albanova SPM/AFM FastScan	Metrology	Anders Liljeborg	Albanova E1:1019A	Available
View	AID	Thin film deposition	Yoon-Rin Wann	C-Anneal	Available

User info

Home / User / User list

Related

- [My profile](#)
- [Cleanroom entries](#)
- [My statistics](#)
- [Send message](#)
- [User list](#)
- [My user lists](#)

Favorites

- [All tools](#)
- [Favorite this page](#)

User list

Optional filters for this list (Hide filters...)

First name: Last name:

User category: -- All categories -- User role: -- All active users of the system --

University/Company: -- All Universities / Companies -- Department: -- All departments --

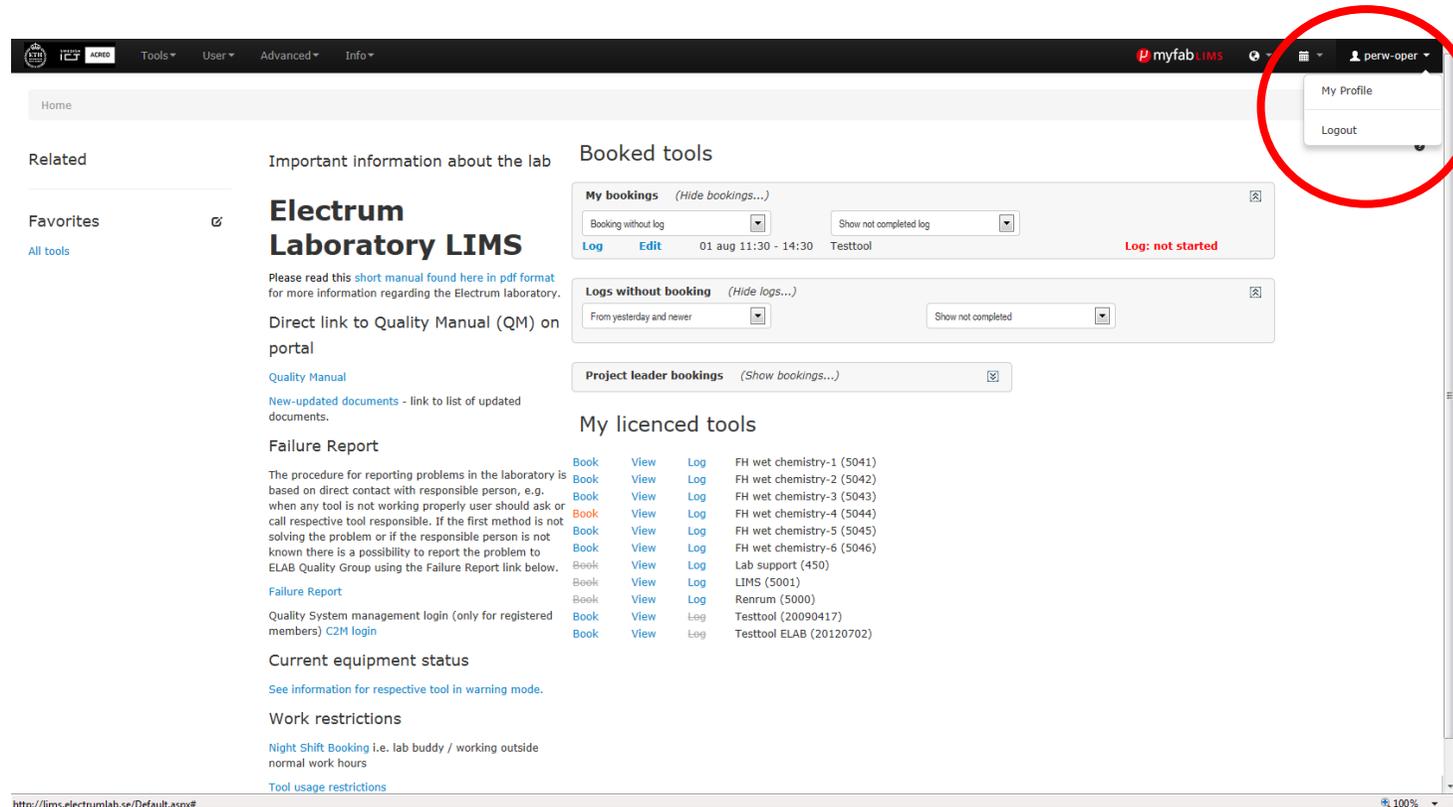
Laboratory Group: -- All Laboratories / Groups --

Add/remove columns (7 of 17 columns chosen)

First name	Last name	Email	Phone, work	Phone, mobile	University / company	Laboratory group
Abdusalam	Uhelda	salam@kth.se	9132	0704476055	Kungliga Tekniska Högskolan	FNM
Abhilash	Sugunan	abhilash@kth.se	+46 8 790 81 57	0707869403	Kungliga Tekniska Högskolan	FNM
Acreeo	Service	qla@lms.acreeo.se			Acreeo	Nano-QLA
Adolf	Schöner	adolf.schoner@lms.acreeo.se	+46 8 632 78 09		Acreeo	Nanoelectronics
Adrine	Malek Khachatourian	adrine@kth.se		0729147511	Kungliga Tekniska Högskolan	FNM
Ahmad	Abedin	aabedin@kth.se		0723117855	Kungliga Tekniska Högskolan	EKT
Ahmed	Farghali	farghall@kth.se		0720285351	Kungliga Tekniska Högskolan	FNM
Alan	Cheshire	cheshire.alan@yahoo.com	+44 776 7787493		Kungliga Tekniska Högskolan	EKT
Albanova	TestStudent	andill@kth.se	0855378139	0737871411	Kungliga Tekniska Högskolan	Nanostructure Physics
Aleksandar	Radojic	alerad@kth.se	+ 46 8 790 4393		Kungliga Tekniska Högskolan	ELAB

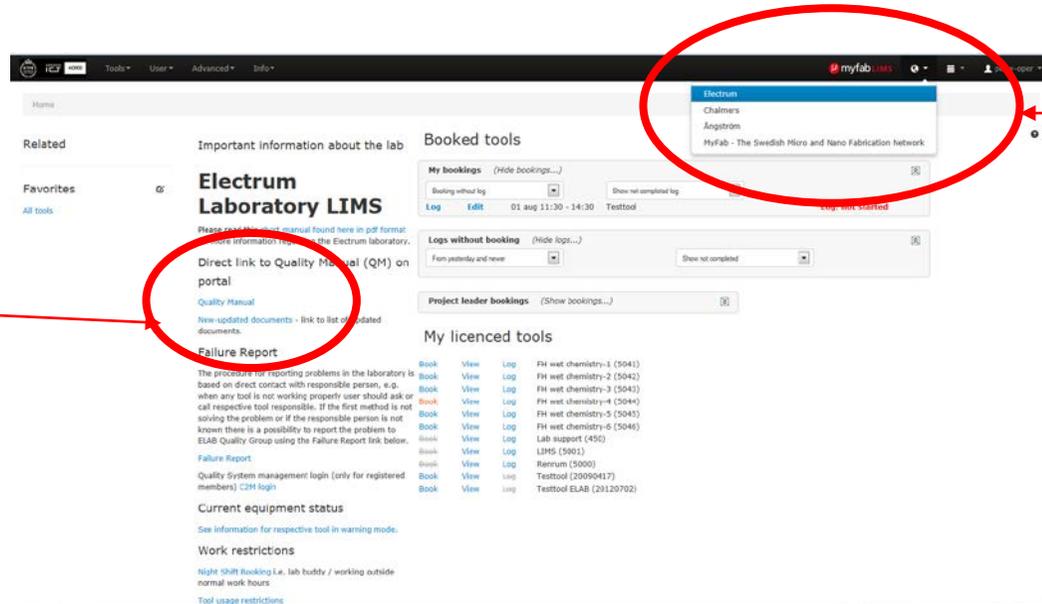
- List of LIMS users
- email addresses
- telephone numbers

Log out of LIMS.



By clicking on your name at the top right corner you find the logout button.

Quality Manual on the web



Direct link from LIMS

Siblings
Links to
- Electrum
- Chalmers
- Ångström
- **Myfab**
(Quality manual)

With the **Myfab** link you will be transferred to the portal (www.myfab.se).

Then go to **KTH/Acreo – User information** to come to the link to the **Quality Manual**.

You can also use the direct web-address www.myfab.se.
Login with the same account and password as in LIMS.

Quality Manual on the web

- Make it easy to find documents and processes for the Electrum laboratory
- Make standardize instructions how to do things
- Inform about what is happening

<http://www.electrumlab.se>

Quality Manual on the web

The screenshot shows the myfab website interface. At the top, there's a navigation bar with 'Myfab', 'News', 'Services', 'Chalmers', 'KTH/Acreo', 'Uppsala University', 'Contact', 'Tests', 'MSL_test', 'Admin', and 'Logout'. Below this is a search bar and the 'ELECTRUM LAB' logo. The main content area is titled 'Electrum Quality Manual' and contains a flowchart for the 'Electrum Laboratory Quality Manual'. The flowchart is organized into three main columns: Preparation, Processing, and Feedback. Under Preparation, there are sub-sections: Lab introduction, Cleanroom education, Customer relations, and Planning of experiments. Under Processing, there are: Experimental work, Incident report, LIMS, Tools (operating instruction, maint. instruction), and Material processing technologies. Under Feedback, there are: User feedback, Problem reporting, Presentation materials, and Invoices. Below the flowchart, there are three additional sections: Infrastructure (Responsibilities in the lab, Cleanroom specifications, Facility, Operation (drift)), Administration (Management, Quality system, Work environment, LIMS administration), and Support (Process monitoring, Calibration, Preventive maintenance, Tool management, Process recipes, General resources). A left sidebar contains a 'Quick links' section with a search bar and a list of links categorized by Preparation, Processing, Feedback, and Infrastructure.

Quick links

- Infrastructure
- Administration
- Support

Preparation → Processing → Feedback

Virtual cleanroom

 **myfab** Realize your nano vision

[Myfab LIMS Chalmers](#) 

[Myfab LIMS KTH/Acreo](#) 

[Myfab LIMS Uppsala University](#) 

Myfab
News
Services
Chalmers
KTH/Acreo
Uppsala University
Contact
Tests
MSL_test
Admin
Logout

Search

[KTH/Acreo // User Information // Virtual-Clean-Room-Tour // Facility // Service and media](#)



Support

Service and media



In the basement a lot of different support to the clean room exists.



Ultrapure (DI) water is generated (left) and acid-containing drain is neutralized (right).



All pictures can be viewed in larger format, just click on them.

[Return to start of Virtual Clean Room Lab Tour](#)

Electrum Quality Manual

Virtual Cleanroom

1. Corridor
2. Gowning room
3. APL Centura
4. Gul 3
5. Q-etch
6. Wet chemistry
7. Epi III/V
8. Mozart
9. Disco saw
10. APL-gul
11. APL-analys
12. APL-SiC
13. Hybridisering
14. ATP
15. Plasma III/V
16. Metal III/V
17. Gul 1
18. Anneal
19. Furnace
20. Furnace service
21. Si-met
- 22

Quality manual on the web

Views, wishes and feedback to Per Wehlin
pgiwe@kth.se

Phone: 08-790 43 89

LIMS:
<http://lims.electrumlab.se/Default.aspx>

Quality manual:
<http://www.electrumlab.se/KTHAcreo/UserInformation/ElectrumQualityManual.aspx>