Bika
Laboratory Management System

Lab User Manual

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Contents

1 Bika LIMS 5

Bika LIMS System 5

Bika LIMS User Manual 5

2 Starting Up 5

Bika LIMS System Website 5

Logging on to the system 6

Forgotten Password 7

Personal Preferences 7

General Information 10

3 Clients 13

Creating a client 14

Client Contacts 17

4 Analysis Requests and Samples 19

Analysis Request Registration 20

Jobcards 24

Analysis Request Status Monitoring 26

Analysis Request Result Capturing 26

Manual analysis results capture 26

Foss Instrument interface results capturing 27

Results Verification 28

Verification of analysis requests 28

Verification of individual test results 29

Results Publication 30

Authorising lab clerks to verify and publish results 33

Analysis Request Modifications 33

Analysis Request Query, View, Print and Email 33

5 Price Lists 36

6 Product Ordering 38

Placing an Order 39

Managing Orders 40

Order Query, View, Print and Email 42

7 Statements 44

Statement Query, View, Print and Email 46

8 Management Reports 48

9 Site Setup 50

Analysis Services 51

Bika Settings 52

Client Categories 53

Publication Preferences 54

Statement Preferences 54

Client Status 55

Cultivars 56

Laboratory Information 56

Mail Templates 59

Products 61

Users and Groups Administration 63

- **Users** 63
- **Groups and Roles** 66
- **Adding Users to Groups** 68

1 Bika LIMS

Bika LIMS System

The Bika LIMS System is a laboratory information system built in Open Source technology. It is based on Plone, the globally renowned web content management system, providing global access via the Internet

Bika LIMS delivers analysis results to clients and research staff immediately upon verification, via the web, email, SMS, fax or print. Clients may submit requests for analyses and track their samples on-line

Workflows are customized to the needs and requirements of the laboratory, optimising lab efficiency and enabling productivity tracking. Automated data-capturing and exports to financial software facilitate processing

Client/user management and authorisation profiles for technicians, data clerks, managers and clients enforce reliable security. Audit logging ensures integrity. Security is provided by 128 bit encryption, Secure Socket Layer and Trusted Digital Certification

The Bika LIMS system is modular and scalable, running on all architecture, big or small, on the Internet, Intranet via Wireless, LAN or WAN. The system is platform independent, currently running on BSD, Linux, Solaris, Mac OS X and Windows

Access to the system is via web browsers, resulting in a smooth integration with no disruptive desktop installation or network installation. Only a server is added to host the system

The Plone framework provides laboratories with a groupware tool to further enhance collaboration and document publishing. Plone is designed by usability professionals for flexibility and ease of use. Plone includes a powerful content sensitive search engine which is implemented in the Bika LIMS system

Bika LIMS User Manual

This manual describes the Bika LIMS system in the manner in which it is viewed by the lab personnel. Client contacts have functionality restricted to information pertaining directly to their own companies, and do not see data for other clients or lab data

Differences in the system as they apply to clients are noted in a framed box like this.

Users, groups and roles are discussed fully under Bika LIMS System Setup

2 Starting Up

Bika LIMS System Website

The static display part of the client's web site at e.g. www.vintnerinc.com, will be the entry point to the Bika LIMS system. To facilitate the Bika LIMS on the client's

ADSL connection, it is hosted on its own domain, e.g. www.vintnerinclab.com is integrated seamlessly into the client’s site, maintaining the client’s brand

Clients are led to log onto the Bika LIMS system via the client’s homepage, where they are informed of product and service updates, promotions, industry news and digital resources pertaining to the client's activities

Static display pages and dynamic pages in the Bika LIMS system are hyper linked where appropriate, e.g. Price lists, Analytical Services and Laboratory Products offered are listed from the Bika LIMS system data

References to individual analyses in the Bika LIMS system can be hyper linked to content displaying the analytical method used to make it easier for client contacts when requesting analyses

System users may bookmark pages within the Bika LIMS part of the site – a logon prompt is issued before they are given access

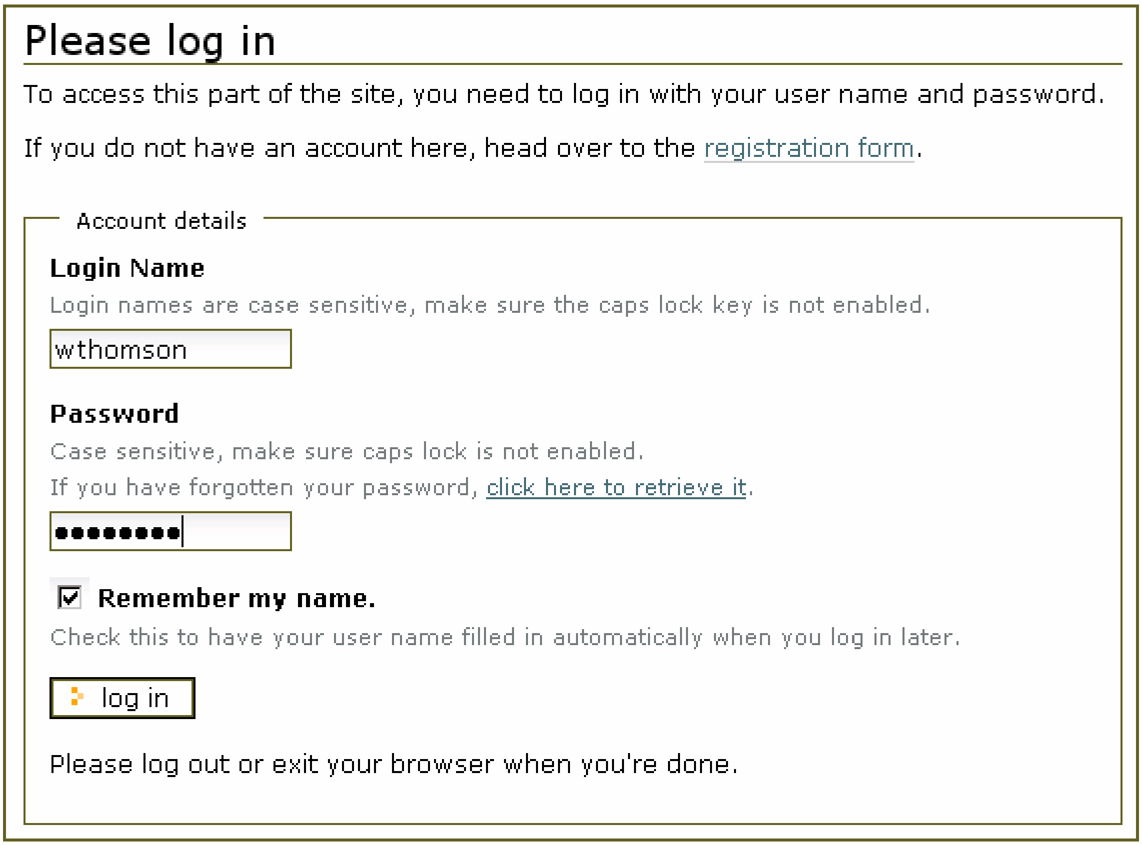
A log-off url is provided on all pages for logging out of the Bika LIMS part of the site. The user is returned to the client’s homepage

As a security measure, the Bika LIMS system can be configured to log any user off after a predetermined period of inactivity

Logging on to the system

The registration of users and assignment of roles and groups is performed by the system administrator. See Bika LIMS System Setup

Once the user has been defined to the system, the login screen is used. The user name and password is case sensitive. The **Remember my name** checkbox may be used to have the system automatically fill in the user name in subsequent sessions



1. Login screen

The home screen is displayed

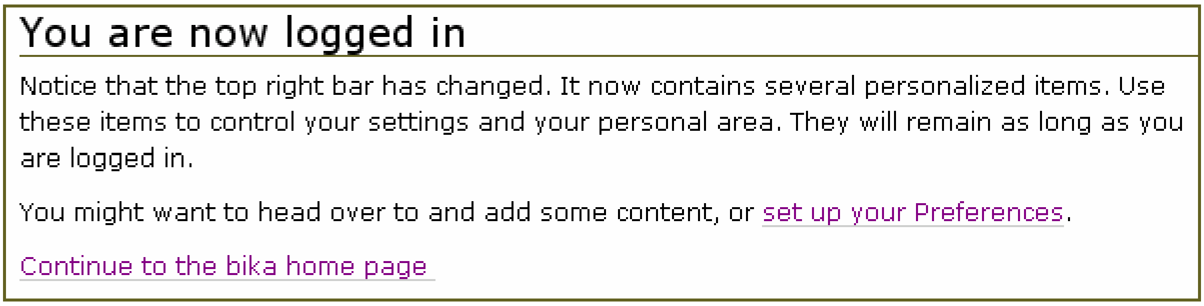
Forgotten Password

An incorrect password will result in the user being offered the option of having the password emailed

2. Lost password

Personal Preferences

The first time you log in, you are invited to setup your preferences. These preferences may also be reached via the link on the menu bar



3. First time login screen

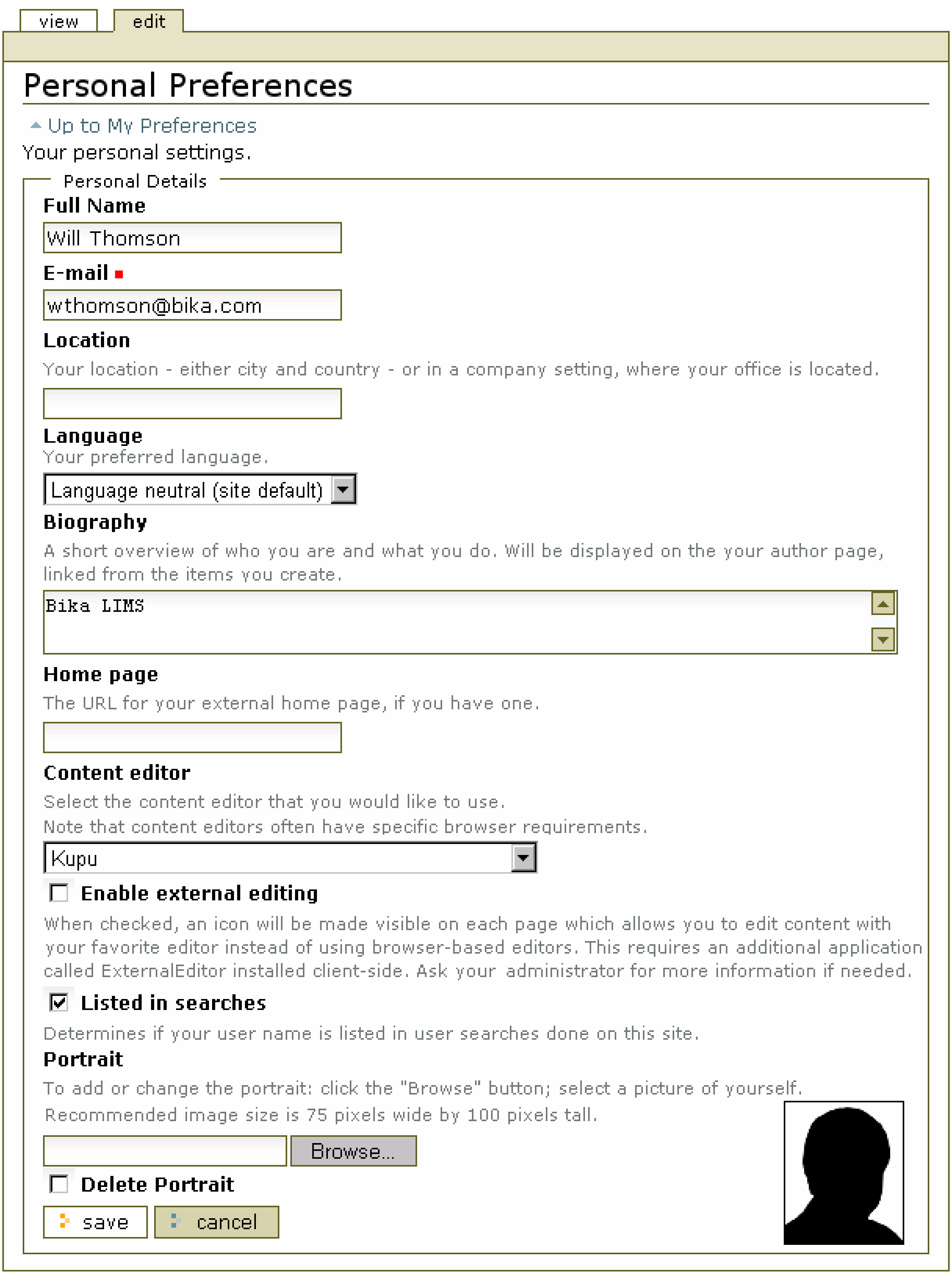
The **My Preferences** area provides the ability to change password and set user preferences

4. User preferences

The **Change Password** hyperlink presents the form for changing the password. The current password must be entered to ensure security

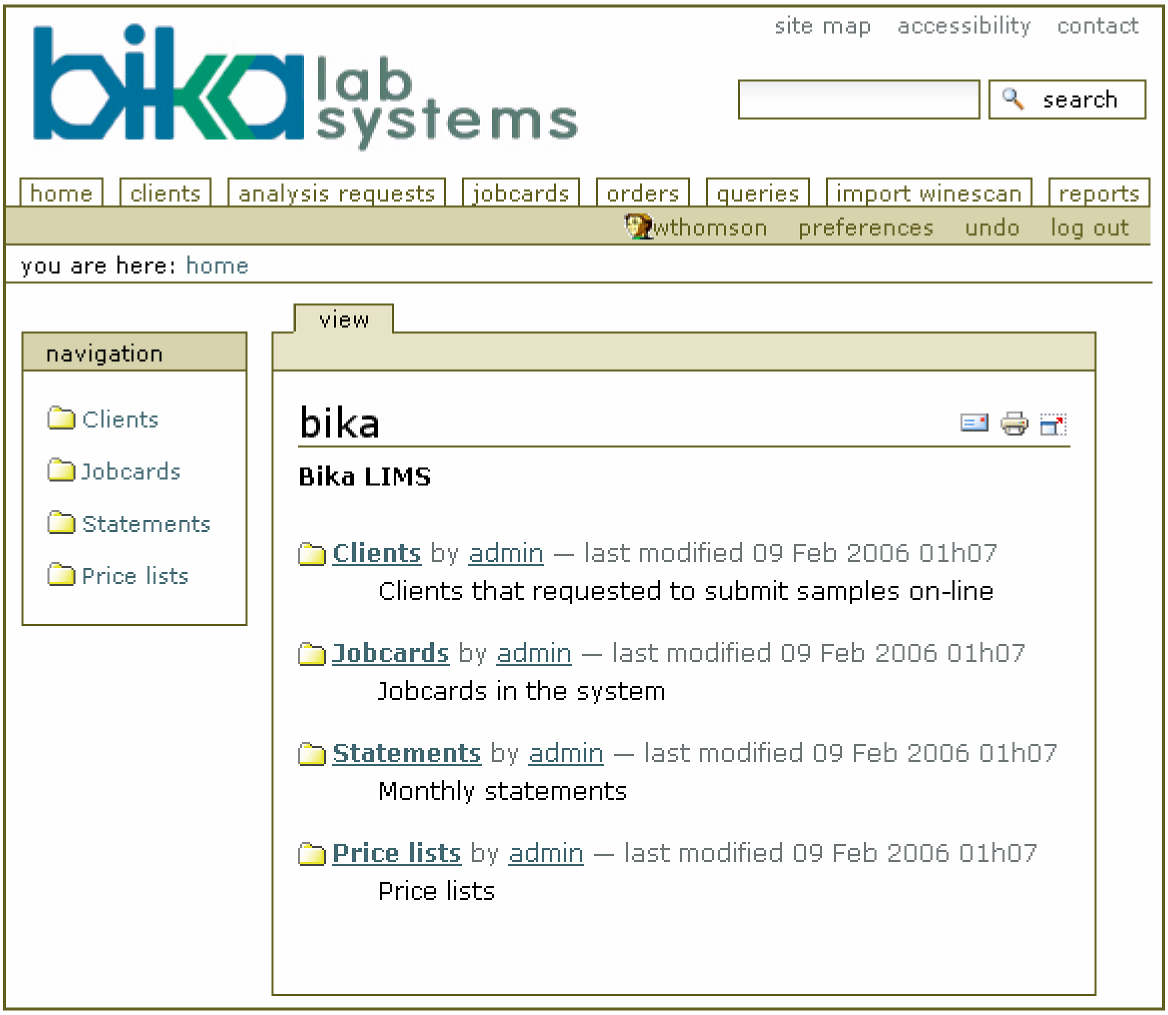
5. Change password

The **Personal Preferences** hyperlink presents the form to change preferences for the logged on user.



6. Personal preferences

The email address is required. Other personal information may optionally be captured. It is possible to add a portrait which will be stored in the Bika LIMS system



7. Home screen for lab personnel

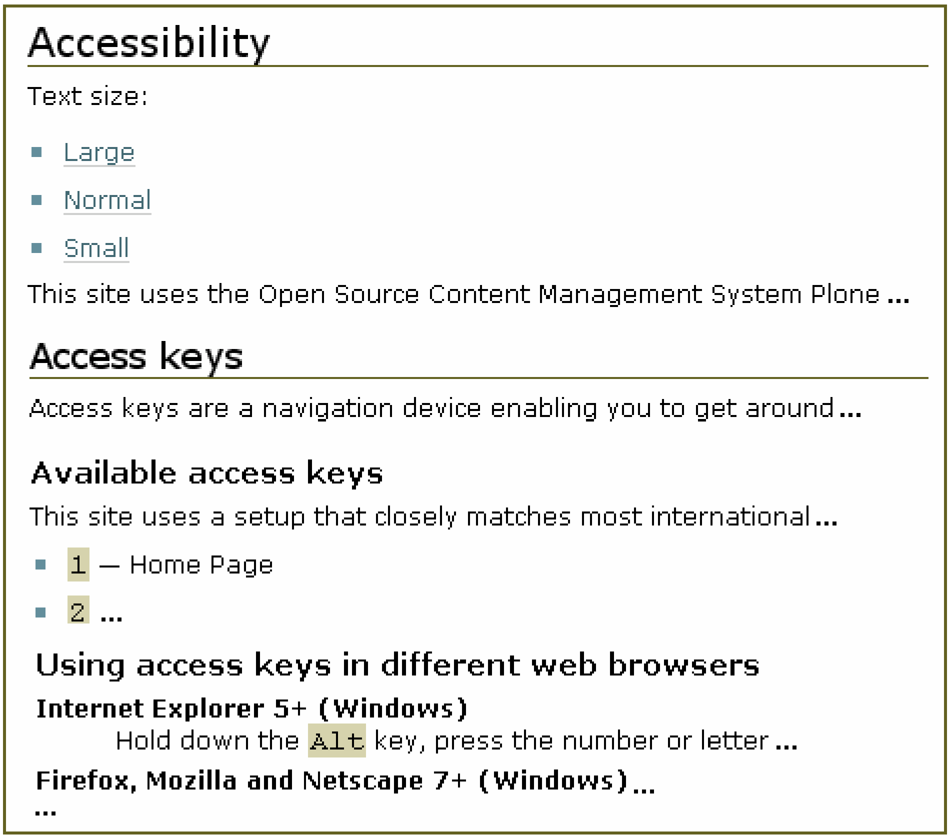
The home screen, and all subsequent screens, provide a number of functions and menu choices

At the top right, a number of links provide quick access to the following functionality:

- site map – an overview of available functionality of the site

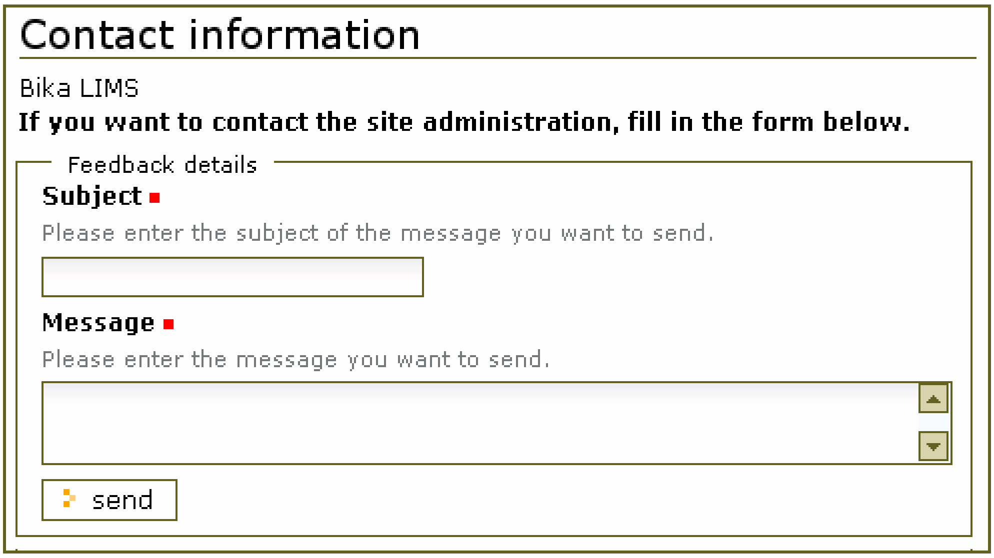
8. Site map

- accessibility – a link to text size selection, access key descriptions and their usage in various browsers



9. Accessibility information

- contact – a link to a form to send feedback to the site administration



10. Contact information

- site setup – for administrators only. A link to the Plone and Bika LIMS setup area

A search area and **|search|** button provide the ability to search for entries in the Bika LIMS database

Tabs accross the top of the screen, and a navigation area to the left, give access to the functional areas of the system

The status bar below the tabs shows

- the current location within the system
- the user currently logged on to the system
- a link to user preferences
- an undo link – lab managers only
- a log out link

Many of the forms have linked icons to the top right, providing functionality specific to the object displayed

 email the current object

 print the current object

 switch to full screen mode

 for analysis request – print sticker

For lab managers, pop-ups on the right of the screen show late analysis requests, analysis requests and jobcards awaiting verification and publication

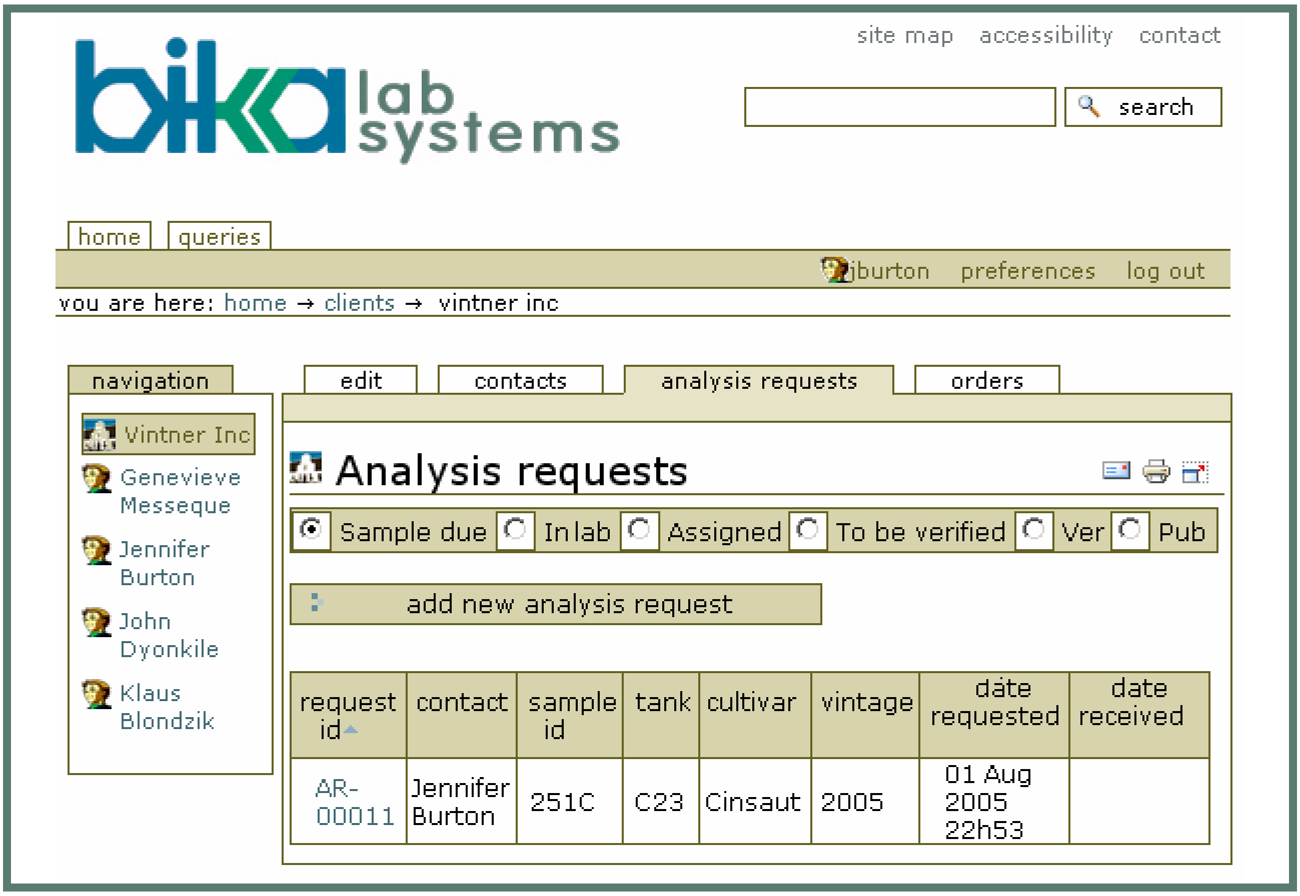
For lab clerks, pop-ups on the right of the screen show late analysis requests, analysis requests for which samples are due, and orders which are pending

For lab technicians, the home page shows the list of current jobcards

Client contacts are able to view data pertaining only to their own company

The home screen for client contacts shows the list of analysis requests which are in ***sample due*** *status*

The client contact may modify client company and client contact information; submit analysis requests and view their progress through the system; submit orders; change their personal preferences

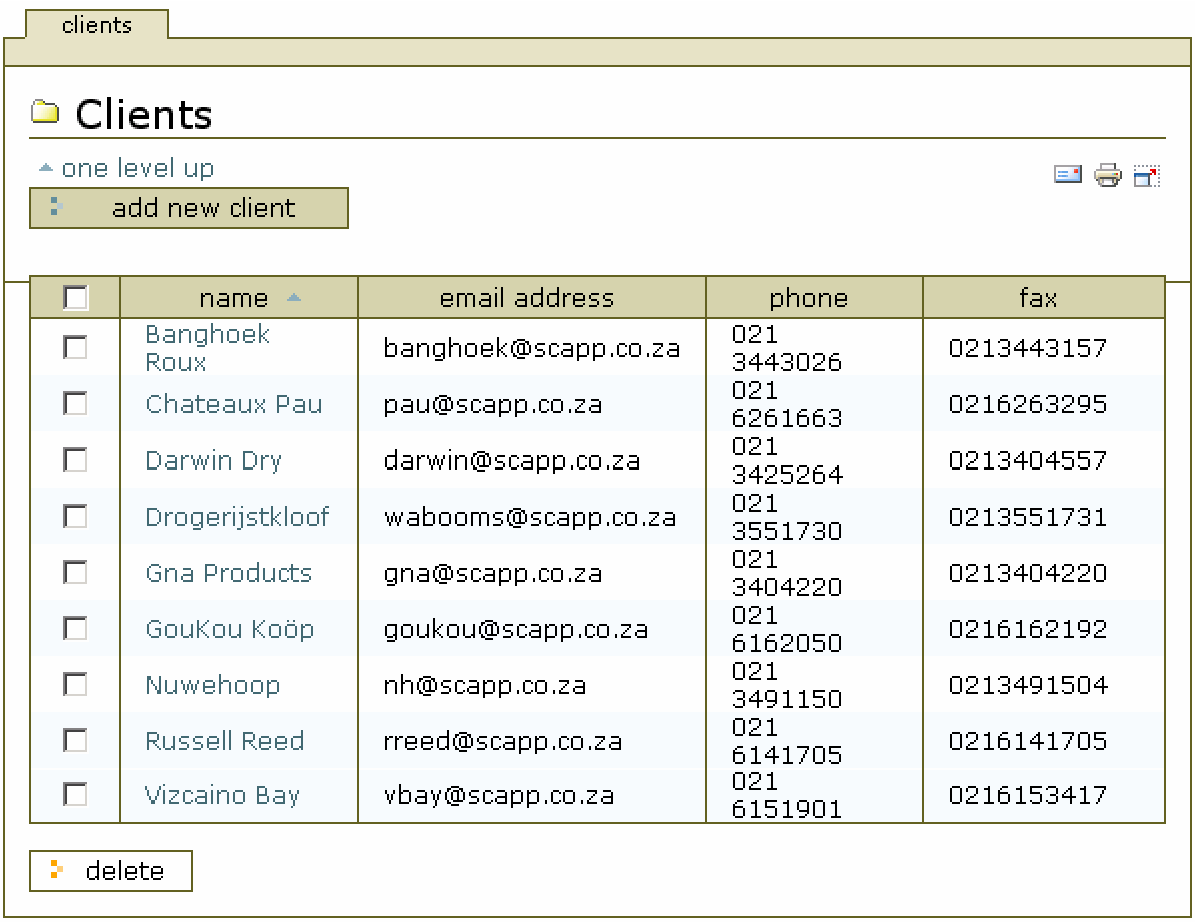


11. Client contact's home screen

3 Clients

Clients must be defined to the system before they can submit an analysis request. The **|clients|** tab or **clients** folder on the navigation bar shows the list of current clients. Clients may be deleted from the system by selecting the checkbox, and clicking on the **[delete]** button

Client contacts do not see the **|clients|** *tab or* **clients** *folder on the navigation bar. Any modifications to the client details are for their own company only*



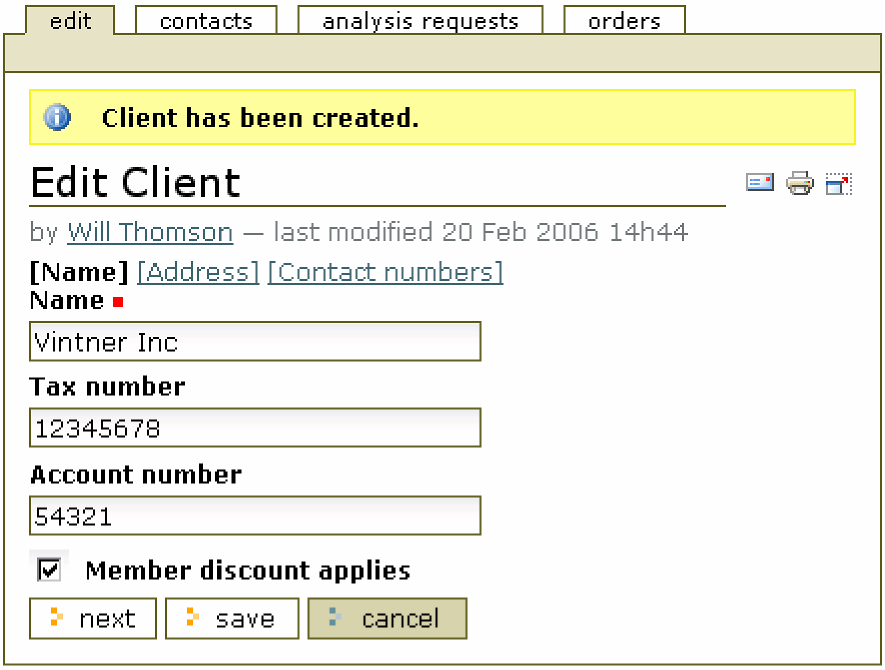
	name	email address	phone	fax
	Banghoek Roux	banghoek@scapp.co.za	021 3443026	0213443157
	Chateaux Pau	pau@scapp.co.za	021 6261663	0216263295
	Darwin Dry	darwin@scapp.co.za	021 3425264	0213404557
	Drogerijstkloof	wabooms@scapp.co.za	021 3551730	0213551731
	Gna Products	gna@scapp.co.za	021 3404220	0213404220
	GouKou Koöp	goukou@scapp.co.za	021 6162050	0216162192
	Nuwehoop	nh@scapp.co.za	021 3491150	0213491504
	Russell Reed	rreed@scapp.co.za	021 6141705	0216141705
	Vizcaino Bay	vbay@scapp.co.za	021 6151901	0216153417

12. Client list

Creating a client

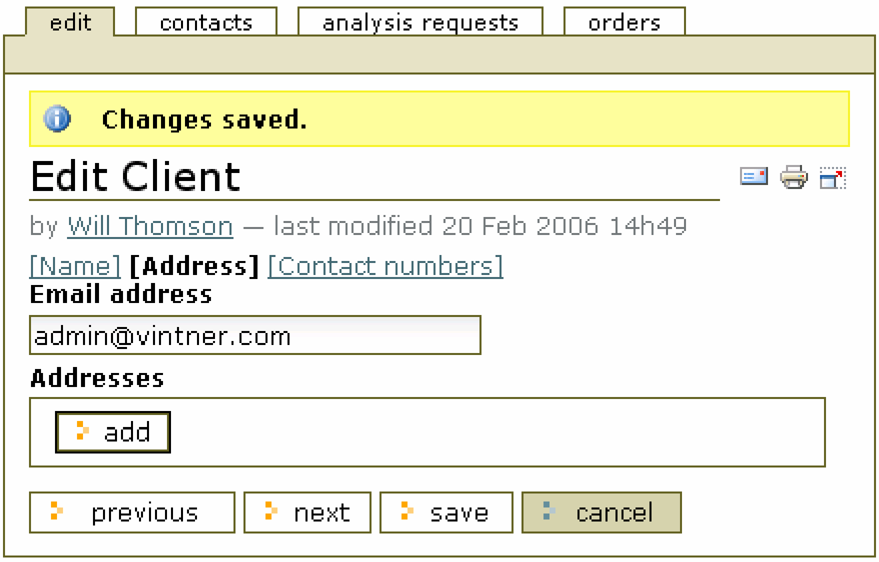
Client contacts may not create new clients. This function is only possible by the lab personnel. However, they are able to change address and contact numbers for their own company once it has been created

A new client is added by clicking on the **[add new client]** button



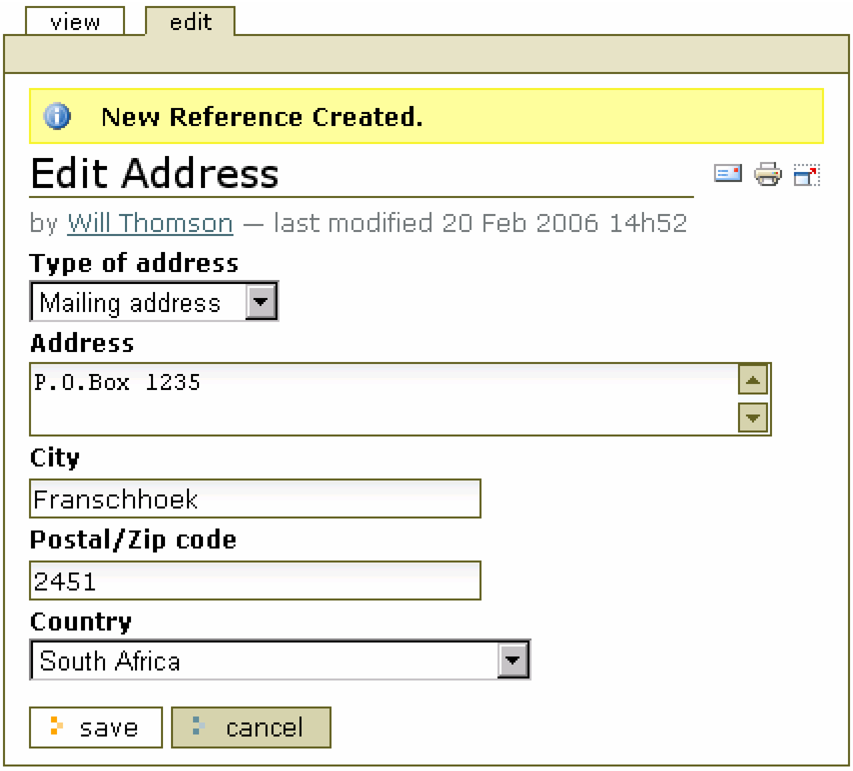
13. Create new client

Click on the **[next]** button to navigate to the address form



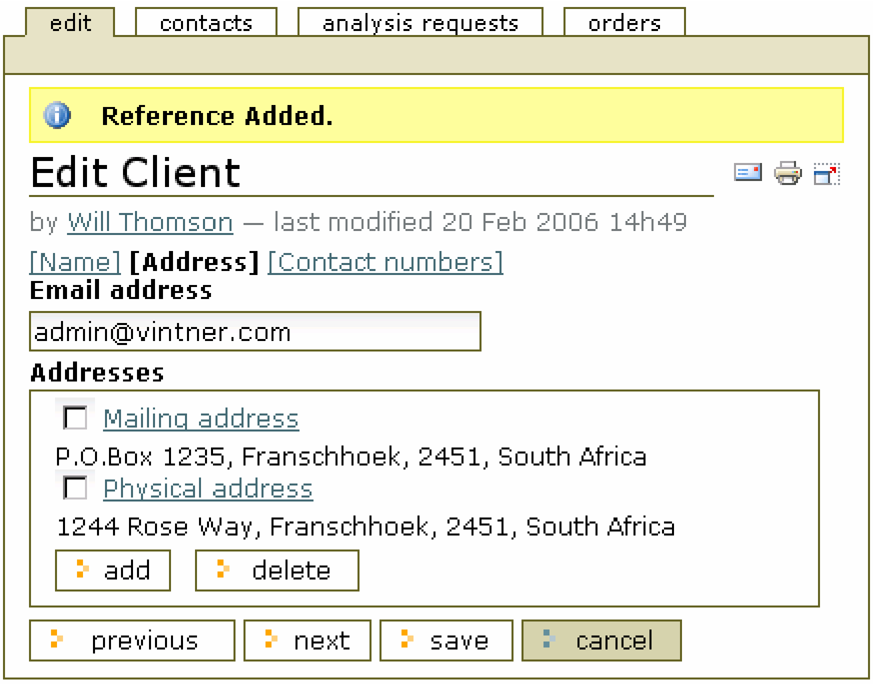
14. Client address

An email address for the client company may be added. Click on the **[add]** button in the **Addresses** area to add up to four different addresses. An address may be added for each of **Physical address, Mailing address, Billing address** and **Shipping address.** Select the type of address from the drop-down, and enter the address details. Repeat the address add procedure to add each type of address



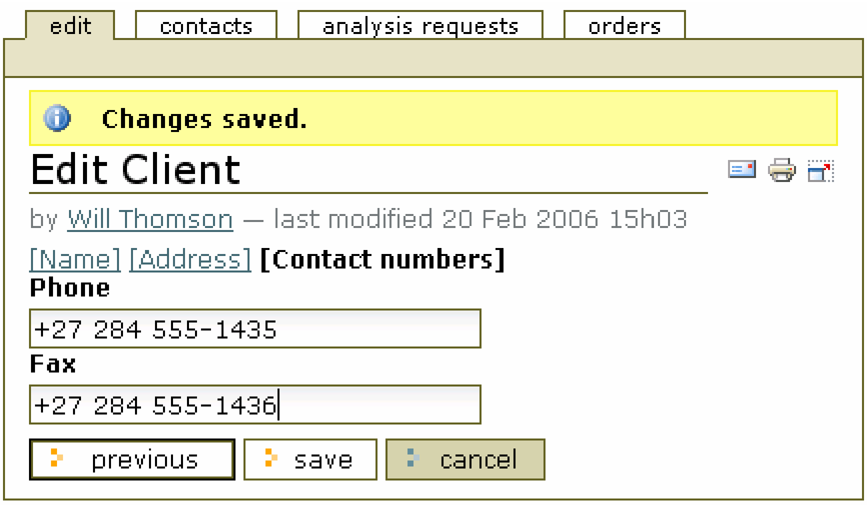
15. Add client address

The added addresses are presented in the client address form, where they may be deleted or edited



16. Client address details

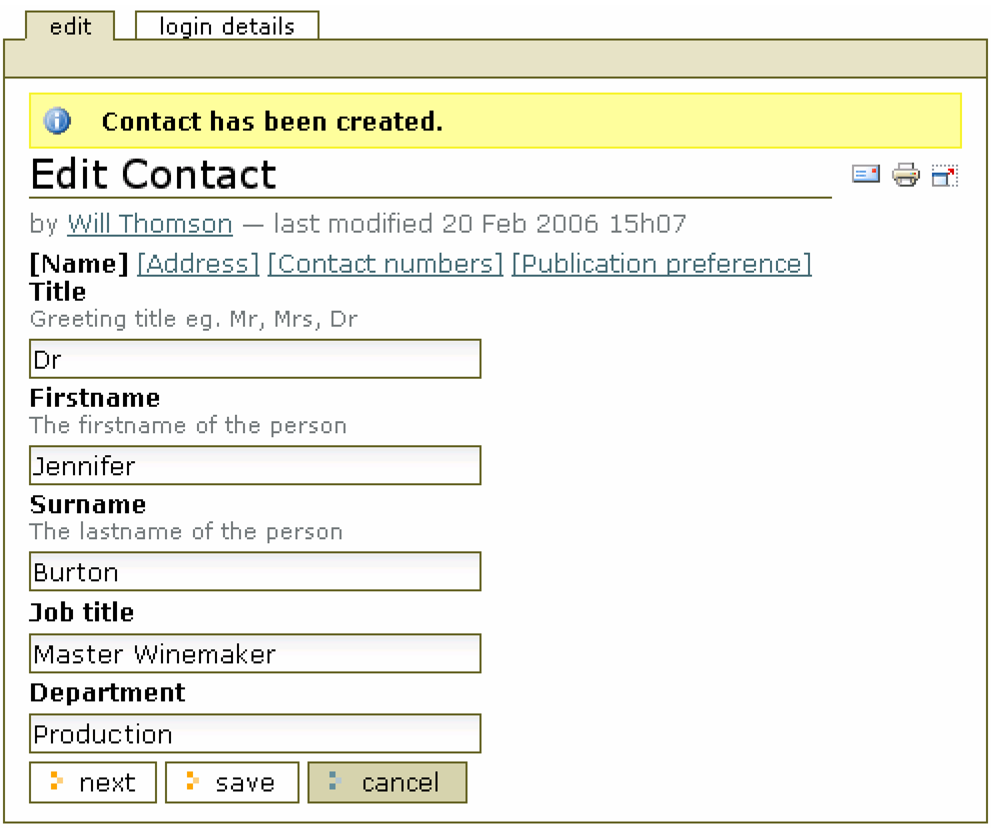
Click on the **[next]** button to enter the client contact numbers



17. Client contact numbers

Client Contacts

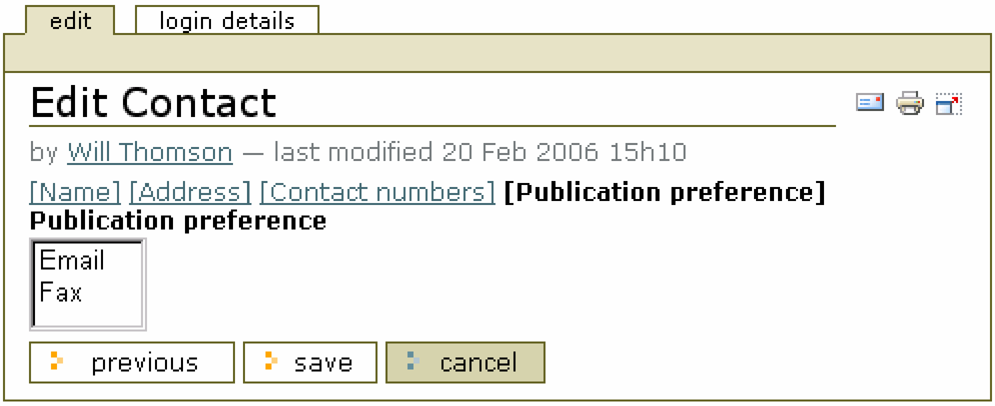
The **|contacts|** subtab shows the current client contact persons, and allows the addition of new contacts with the **[add new contact]** button



18. Client contact person

The client contact person is defined, and using the **[next]** button, the addresses, contact numbers and publication preferences for each contact is defined

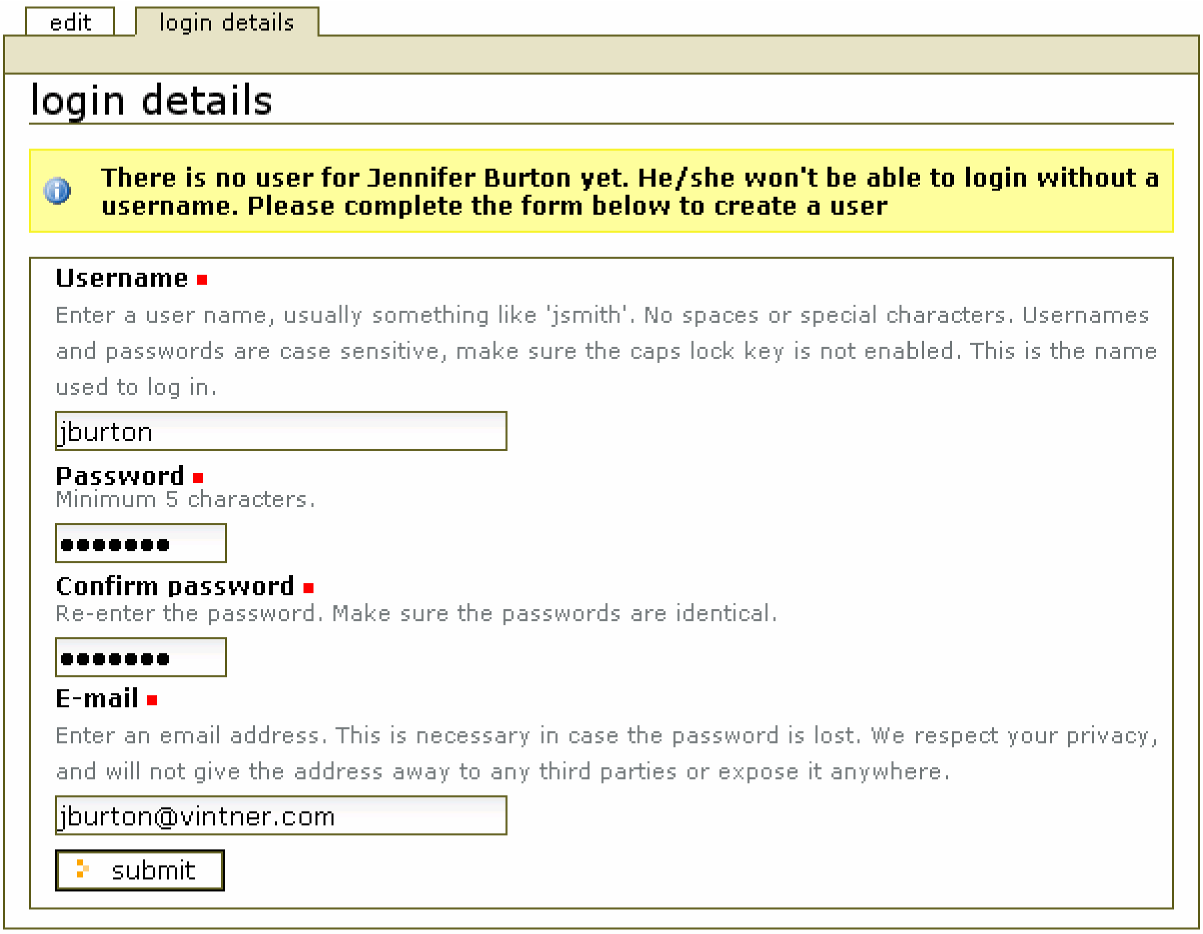
Publication preferences specify the way in which the results of an analysis request submitted by that client contact should be returned. This may be by fax or email



19. Client contact publication preference

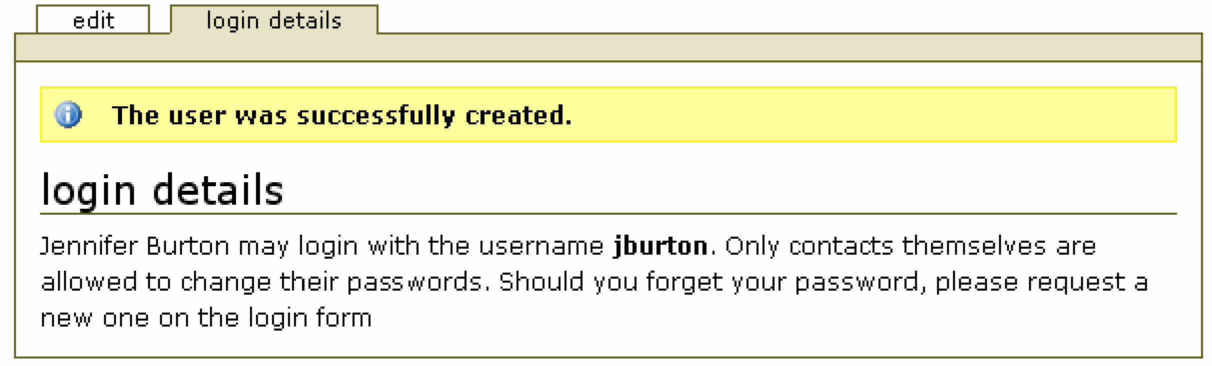
Once the client contact has been defined, it is necessary to define a userid for that person to access the system. This is done using the **|login details|** subtab

Client contacts are able to create new client contacts for their company, but they are not permitted to create login details for that new client contact. This must be requested from the lab personnel



20. Client contact login details

Once the client contact has a login defined, a confirmation message is presented



21. Confirmation of client login definition

The client may now login to the system to submit analysis requests, orders and to view results

4 Analysis Requests and Samples

An analysis request is the service request submitted by the client to the laboratory. It is a request for one or more analyses to be performed on a sample. The entire analysis request and the individual test requests pass through a number of stages

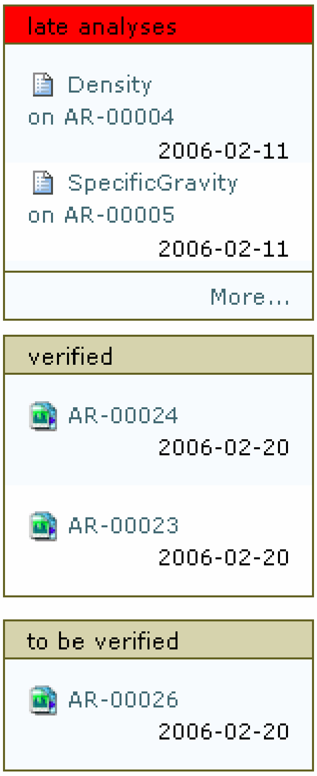
1. **Sample due -** The sample has been shipped to the lab and the request for analysis has been registered on the system by the client
2. **In the lab -** The sample has arrived in the lab, been received by the lab clerk, and a label has been printed and affixed to the sample
3. **Assigned to jobcard –** Applies to individual test requests within the analysis request. Grouping related tests in a jobcard facilitates lab processes
4. **To be verified -** The analysis has been completed and the result entered into the system. The result has yet to be verified by the lab manager. This status is applied to individual test requests on the analysis request, and to the analysis request as a whole once all the component tests are in this status
5. **Verified -** The analysis result has been verified by the lab manager and is ready to be published. This status is applied to individual test requests on the analysis request, and to the analysis request as a whole once all the underlying tests are verified
6. **Published -** The verified result has been published to the client by the method specified for the client contact. This status is applied to individual test requests on the analysis request, and to the analysis request as a whole once all the underlying tests are published

The **|analysis requests|** tab provides the functionality associated with the submission and processing of the analysis requests submitted to the lab

As an analysis request passes through the varius statuses, it appears in the appropriate list selected by the radio button in the **Analysis Request** area

22. Analysis Request list headings

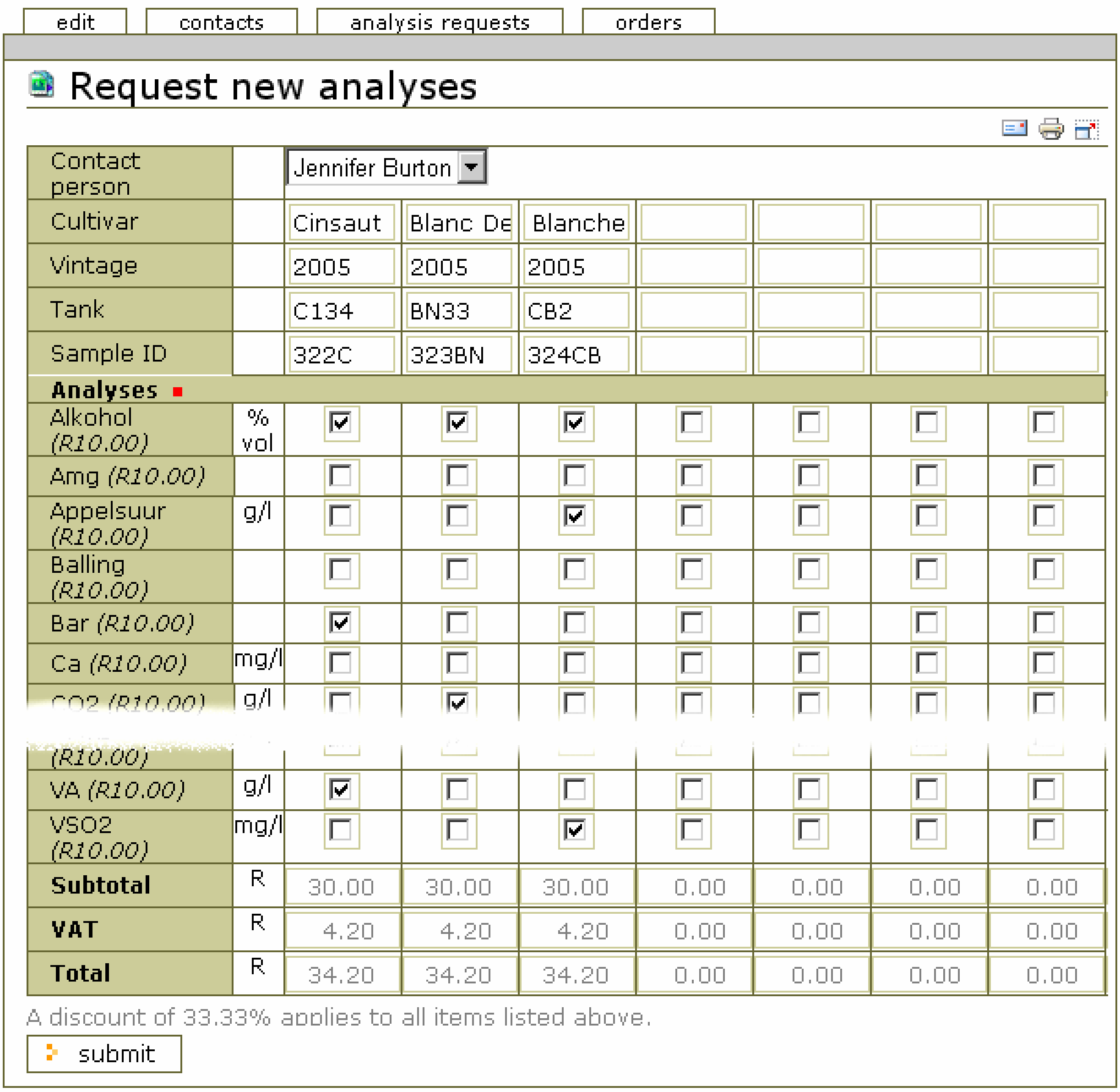
Several pop-ups to the right of the screen also contain links to analysis requests which have exceeded their maximum time period and those which are in **To be verified** or **Verified** status from where they may be accessed directly. These pop-ups are only presented to the lab manager



23. Analysis request links

Analysis Request Registration

A new analysis request is registered by the client, or by the lab clerk on behalf of the client. From the **|clients|** tab, click on the **|analysis requests |** subtab. A list of current analysis requests for the client is shown. Click on the **[add new analysis request]** button for the analysis request form



edit | contacts | analysis requests | orders

Request new analyses

Contact person		Jennifer Burton						
Cultivar		Cinsaut	Blanc De	Blanche				
Vintage		2005	2005	2005				
Tank		C134	BN33	CB2				
Sample ID		322C	323BN	324CB				
Analyses ■								
Alkohol *(R10.00)*	% vol	☑	☑	☑	☐	☐	☐	☐
Amg *(R10.00)*		☐	☐	☐	☐	☐	☐	☐
Appelsuur *(R10.00)*	g/l	☐	☐	☑	☐	☐	☐	☐
Balling *(R10.00)*		☐	☐	☐	☐	☐	☐	☐
Bar *(R10.00)*		☑	☐	☐	☐	☐	☐	☐
Ca *(R10.00)*	mg/l	☐	☐	☐	☐	☐	☐	☐
CO2 *(R10.00)*	g/l	☐	☑	☐	☐	☐	☐	☐
[illegible] *(R10.00)*		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
VA *(R10.00)*	g/l	☑	☐	☐	☐	☐	☐	☐
VSO2 *(R10.00)*	mg/l	☐	☐	☑	☐	☐	☐	☐
Subtotal	R	30.00	30.00	30.00	0.00	0.00	0.00	0.00
VAT	R	4.20	4.20	4.20	0.00	0.00	0.00	0.00
Total	R	34.20	34.20	34.20	0.00	0.00	0.00	0.00

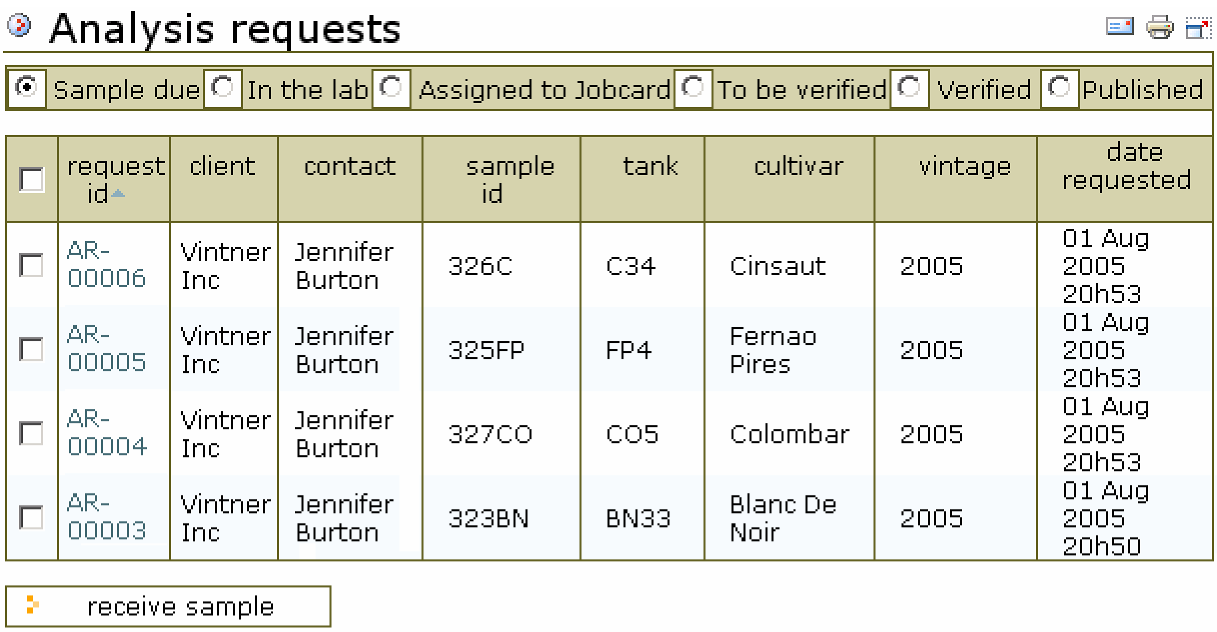
A discount of 33.33% applies to all items listed above.

submit

24. Request new analyses

Up to eight samples may be registered for analyses on the form. The contact person is selected from the drop-down list, and sample identification information is entered. The sample identification information identifies the sample to the client company and does not have any formatting restrictions. The required analyses are checked and the total is calculated as the items are selected. The **[submit]** button will register the analysis request

The analysis request now appears in the **sample due** list. The analysis request may be modified by both the client and the lab staff while it is still in **sample due** status


Analysis requests

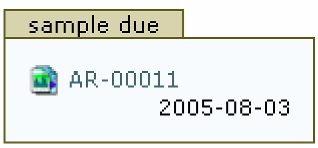
Sample due | In the lab | Assigned to Jobcard | To be verified | Verified | Published

	request id	client	contact	sample id	tank	cultivar	vintage	date requested
	AR-00006	Vintner Inc	Jennifer Burton	326C	C34	Cinsaut	2005	01 Aug 2005 20h53
	AR-00005	Vintner Inc	Jennifer Burton	325FP	FP4	Fernao Pires	2005	01 Aug 2005 20h53
	AR-00004	Vintner Inc	Jennifer Burton	327CO	CO5	Colombar	2005	01 Aug 2005 20h53
	AR-00003	Vintner Inc	Jennifer Burton	323BN	BN33	Blanc De Noir	2005	01 Aug 2005 20h50

receive sample

25. Analysis Requests – Sample due

The analysis requests which are in **sample due** status are presented in a pop-up to members with labclerk role. From here the request id may be clicked on to view the analysis request



26. Analysis Requests – Sample due pop-up.

On receiving the physical sample, the lab clerk checks the analysis request's check box and clicks on the **[receive sample]** button. The analysis request's status is changed to **In the lab** and the sample sticker is shown for printing. More than one sample may be processed in this manner. The **receive sample** functionality is not available to the lab technician

The details of the analysis request may be viewed by clicking on the **request id** in the list view | edit | manage results | results not requested | log

state: sample due

AR-00006

Contact person	Jennifer Burton				
Request ID	AR-00006				
Cultivar	Cinsaut				
Vintage	2005				
Tank	C34				
Sample ID	326C				
Date requested	01 Aug 2005 20h53				
Date received					
Analysis	Status	Job Card	Result	Unit	Price
Alkohol	sample_due			mg/L	30.00
Filter ind	sample_due			% vol	20.00
Subtotal					R 50.00
VAT					R 7.00
Total					R 57.00

A discount of 33.33% applies to all items listed above.

Test results relate only to the items tested. This document shall not be reproduced except in full, without the written approval of Local Demo Lab. Test results are 95% accurate.

Environmental conditions: Ambient, unless stated otherwise under 'Remarks'.

27. Analysis Request details – Sample due

*For client contacts only the **edit** tab is shown. Client contacts are not able to **manage results**, view the **results not requested** or view the **log**. The state drop-down shown above appears as text for the client contact, and may not be changed*

The drop-down at the top right of the form may be used to change the status of the analysis request to **In the lab** and the sample sticker information is shown, ready to be printed

Request		**AR-00006**	
Vintner Inc			
Cinsaut			
Tank	C34	Sample	326C
Received		01 Aug 2005 20h57	
Alkohol		Filter ind	

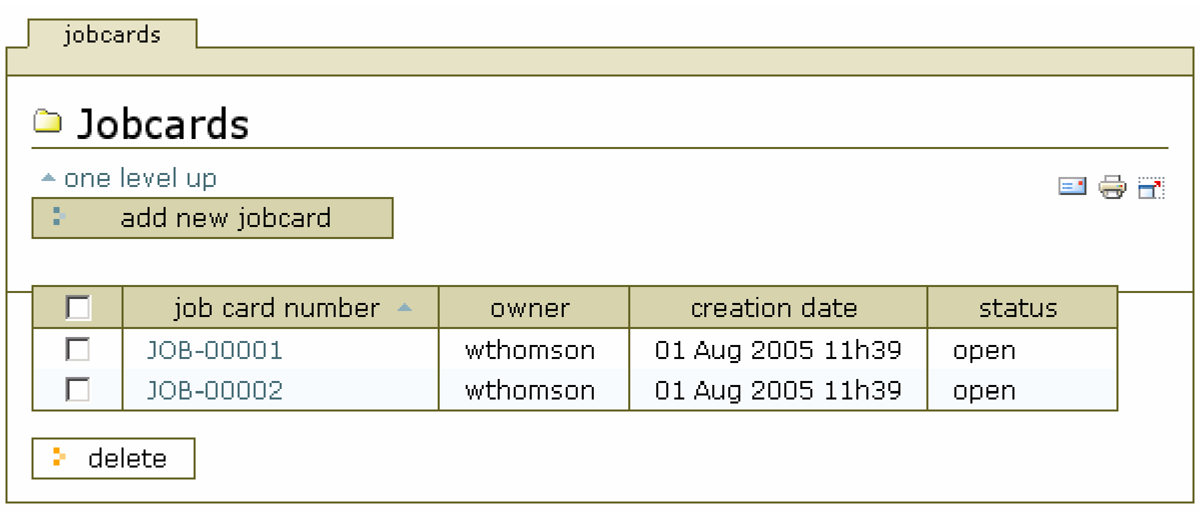
28. Sample sticker

The lab clerk sticks the sticker to the sample container and the sample is ready for processing by the lab technician. The analysis request, and each of its component test requests are all in **In the lab** status

Jobcards

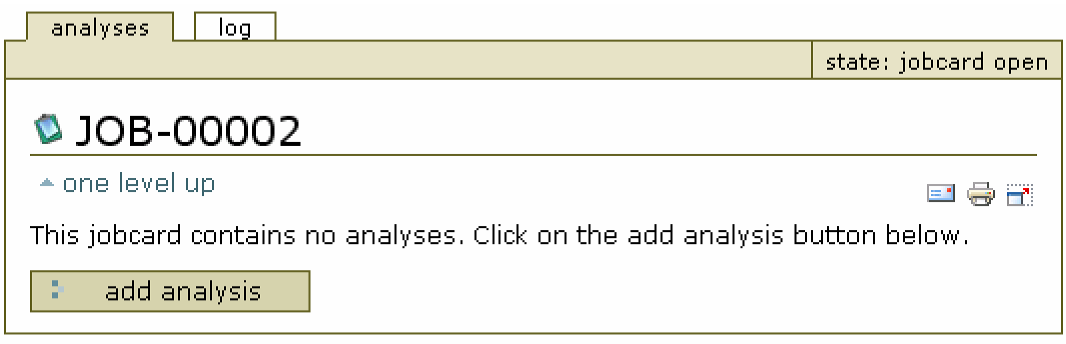
A jobcard is a worksheet for use at a specific test station – a means by which a number of tests, on different samples, may be grouped into a single unit of work. E.g. Several different analysis requests may all require an alcohol content test. The lab clerk may choose to group all these tests onto a single jobcard, so that all the tests may be run at the same time at the alcohol testing workstation. Or a single workstation may perform a number of tests simultaneously. These too would be grouped into a single jobcard. The lab technician prints the worksheet and uses it in the lab to record results. The completed worksheet is eventually returned to the lab clerk for capturing the results into the system

The **|jobcards|** tab provides the functionality associated with jobcards



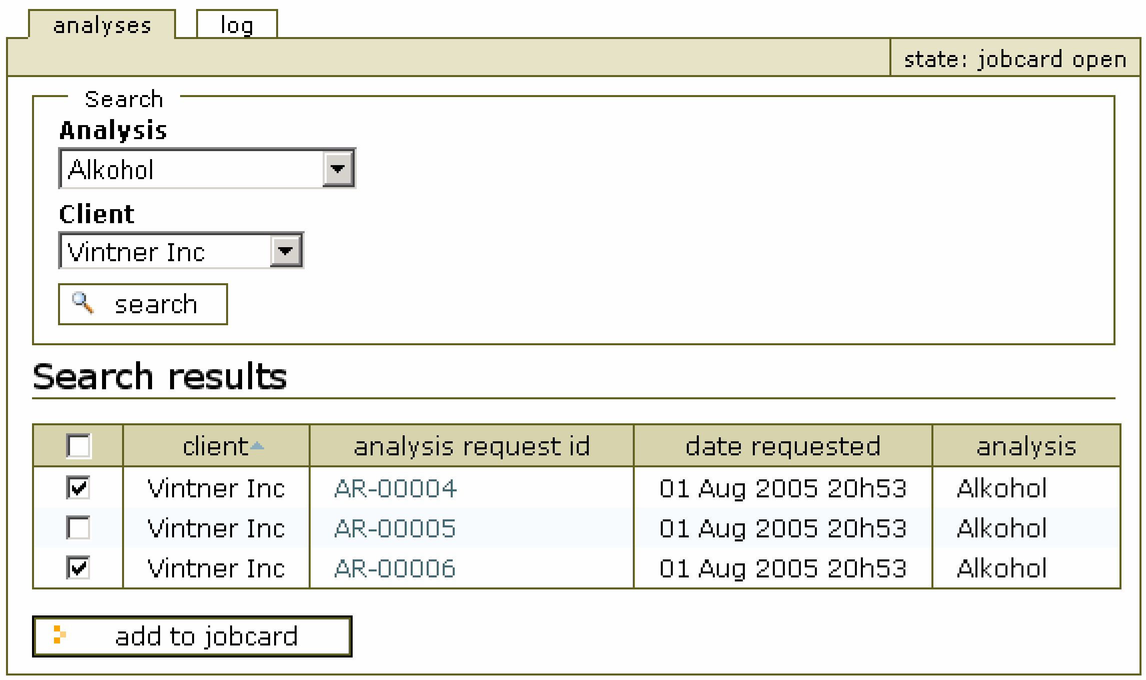
29. List of current jobcards

The lab technician clicks on the **[add new jobcard]** button to create a new jobcard. A unique jobcard number is generated with a blank jobcard, to which analysis requests are to be added, by clicking on the **[add analysis]** button



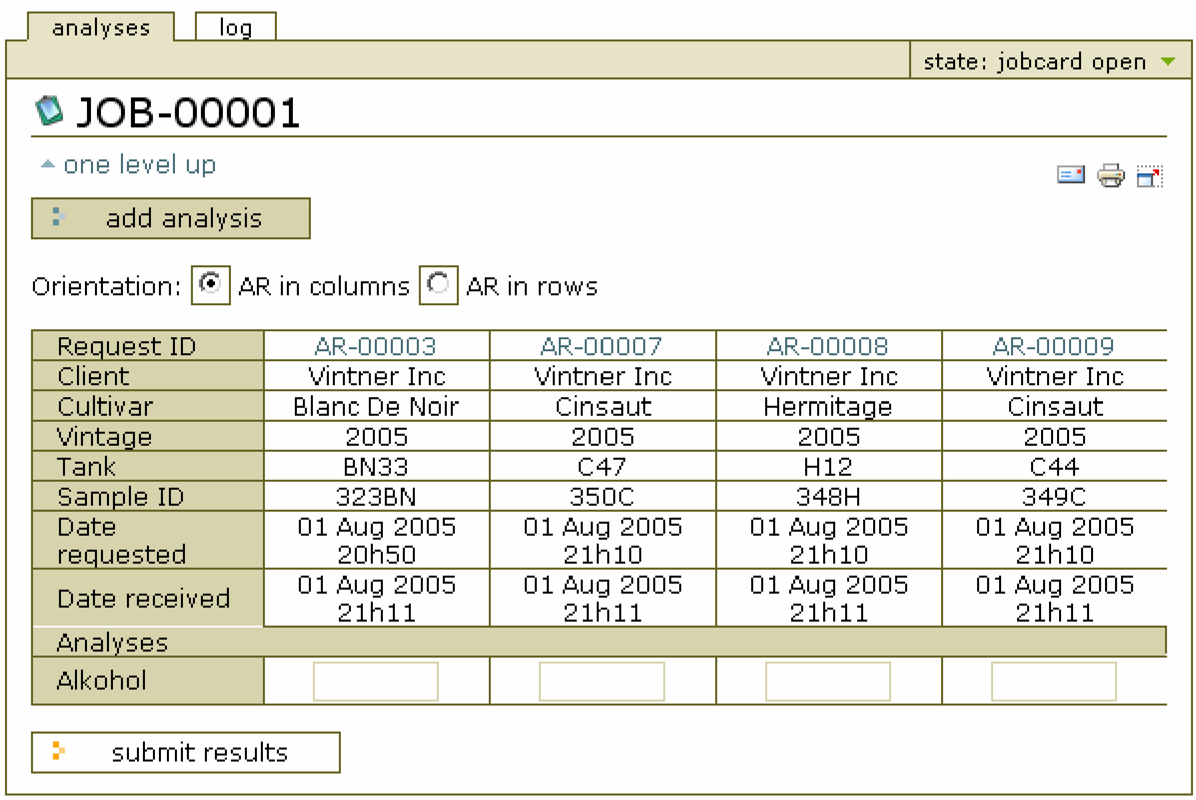
30. Add analysis to new jobcard

The user selects the analysis type and client for which the jobcard is to be created



31. Select analysis requests for jobcard

The search result presents all the analysis requests in the lab which meet the specified criteria. The user then selects analysis requests for inclusion on the jobcard

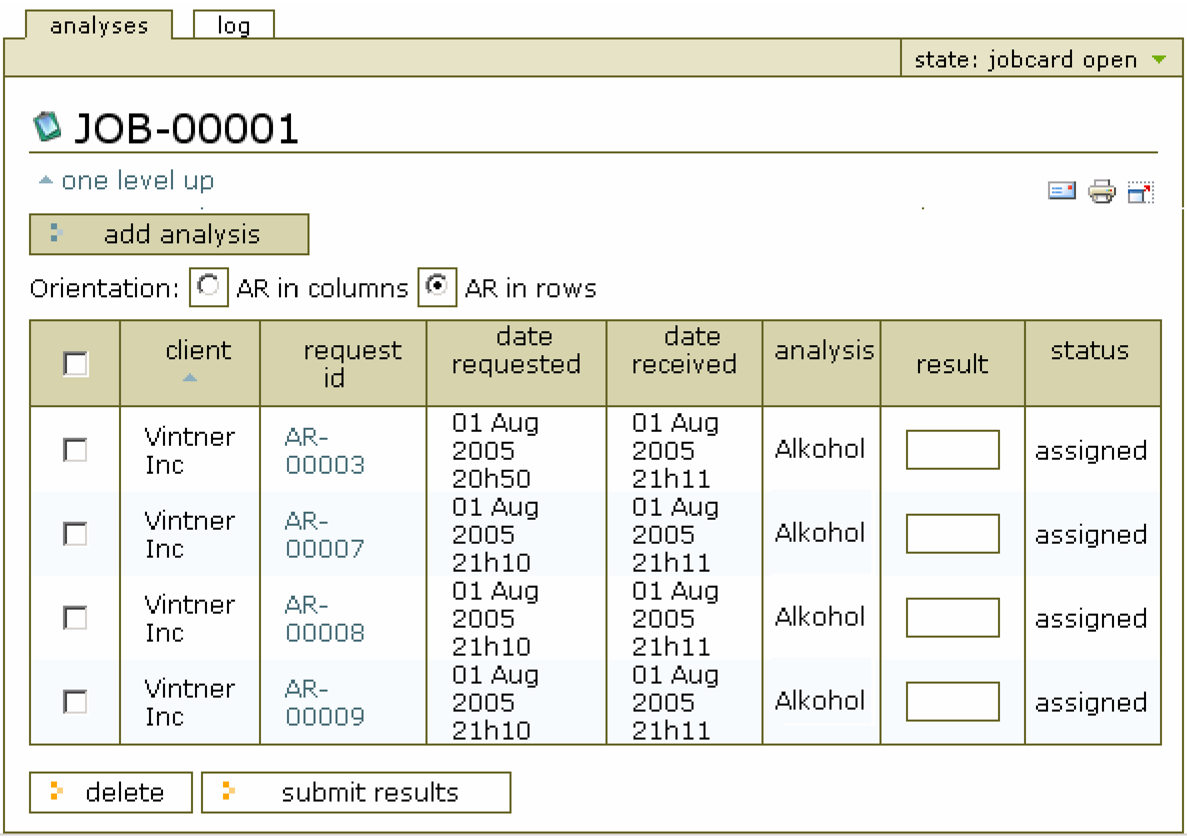


32. Jobcard with analysis requests in columns

These three analysis requests have now been added to the jobcard. They are both **in the lab** and **assigned to jobcard.** The results may be submitted at either point

The analysis request may be edited, at which point specific requests may be added or removed. Deleting an analysis request removes it from the jobcard, it does not delete the request from the system. Once an analysis request has been added to a jobcard, the jobcard is shown as a link in the analysis request

Results may be added as they become available



	client	request id	date requested	date received	analysis	result	status
	Vintner Inc	AR-00003	01 Aug 2005 20h50	01 Aug 2005 21h11	Alkohol		assigned
	Vintner Inc	AR-00007	01 Aug 2005 21h10	01 Aug 2005 21h11	Alkohol		assigned
	Vintner Inc	AR-00008	01 Aug 2005 21h10	01 Aug 2005 21h11	Alkohol		assigned
	Vintner Inc	AR-00009	01 Aug 2005 21h10	01 Aug 2005 21h11	Alkohol		assigned

33. Jobcard with analysis requests in rows

Analysis Request Status Monitoring

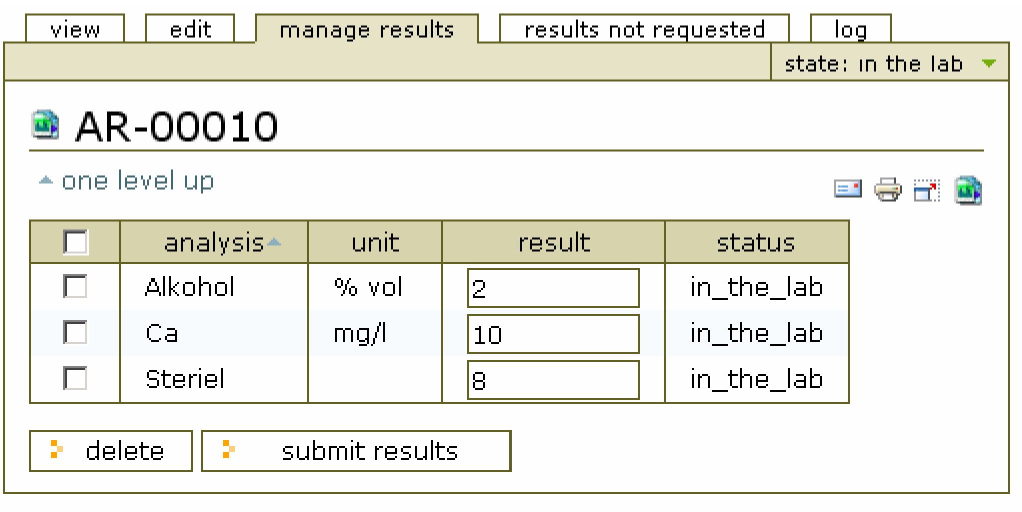
The analysis requests appear in the appropriate status lists. Lab personnel see all results data. The lab manager and any lab personnel with the role of **reviewers** are allowed to edit results

*Client contacts may only view results which have been verified. Although they can see the lists of analysis requests in the various statuses, the results are not visible to them until **verified** or **published***

Analysis Request Result Capturing

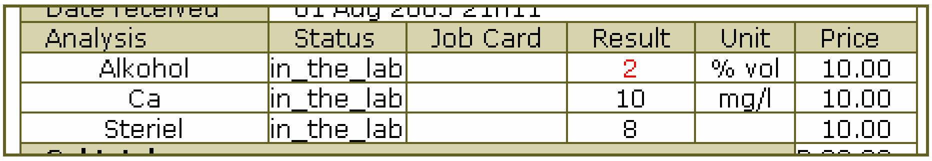
Manual analysis results capture

Once an analysis request is in **in the lab** status, results may be entered. Click on the **|manage results|** subtab. The **[submit results]** button saves the results which have been entered



34. Analysis request manage results

Minimum and maximum values have been set up for each test in the **bika setup -> Analysis Services** area. See Analysis Services section. A result which falls outside of this range is highlighted in red



Analysis	Status	Job Card	Result	Unit	Price
Alkohol	in_the_lab		2	% vol	10.00
Ca	in_the_lab		10	mg/l	10.00
Steriel	in_the_lab		8		10.00

35. Result out of range highlighted

Those analyses for which results have been entered are changed to **To be verified** status, while the analysis request as a whole becomes **To be verified** once results have been submitted for each of its component tests

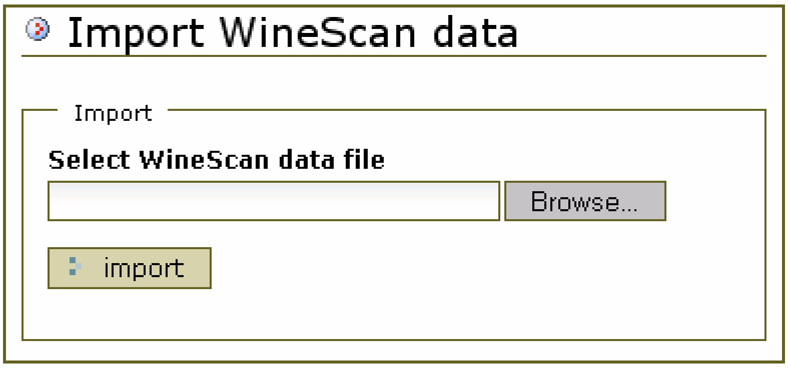
Client contacts may not manage results nor see them until they have been verified

Foss Instrument interface results capturing

Analysis results obtained from the Foss instrument may be imported into the Bika LIMS system

The mean values as recorded by the Foss instrument must be stored on the LIMS server as a comma delimited file (.csv). The name of the services as identified by the Foss instrument must have been added to the Bika LIMS service names. See Analysis Services section

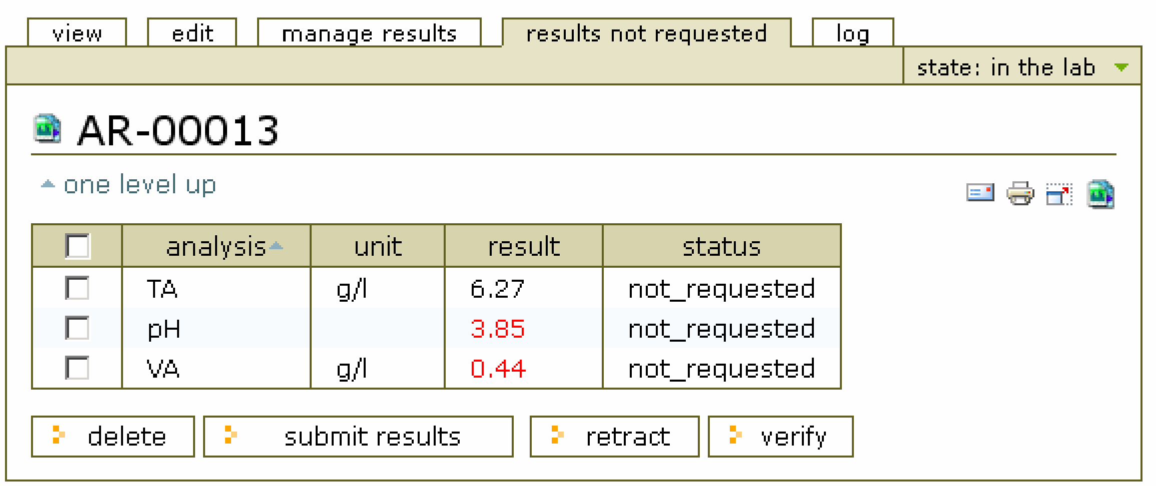
In the Bika LIMS system, the lab personnel clicks on the **|import winescan|** tab where they are prompted to enter the name of the Foss data file, or may browse the computer to locate the file. Click on the **[import]** button to load the results data into the Bika LIMS system



36. Import WineScan data

The request numbers are matched to the analysis requests in the system, in **in the lab** status, and the results are entered into the analysis request in **to be verified** status

The Foss delivers a complete set of analyses for every sample, regardless of whether the client has requested it or not. The values which were not requested are written to the database, but flagged as 'not requested'. These results are not visible to clients or to lab personnel other than the lab manager. The unrequested results are viewed by the lab manager at the **|results not requested|** subtab



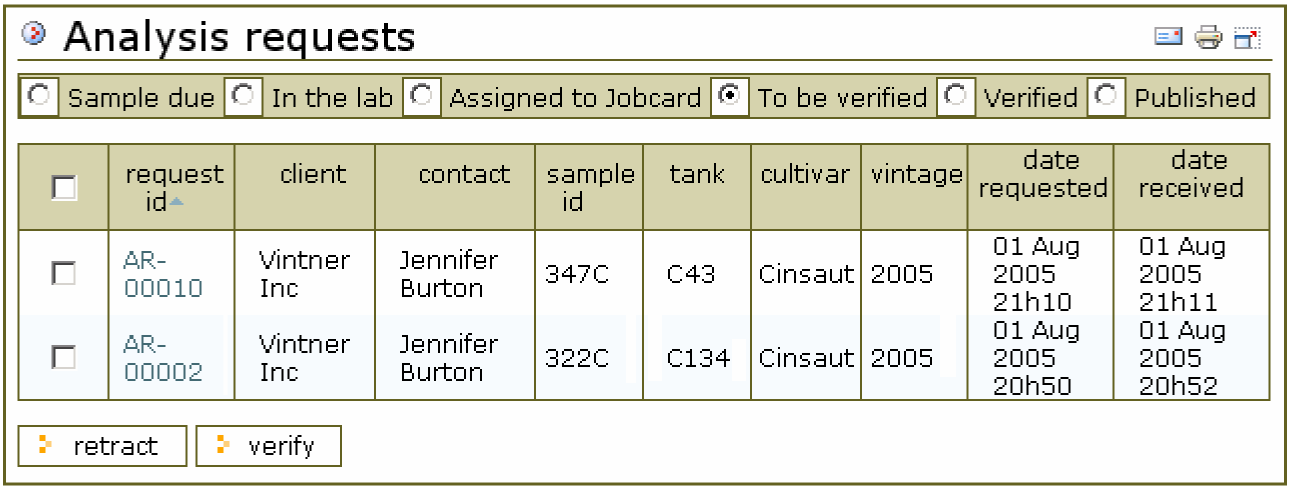
37. Analysis Request – results not requested

The lab manager may release these results should the client request them, by clicking on the **[verify]** button, which moves that test, and its verified result into the requested results area

Results Verification

Verification of analysis requests

The **To be verified** list reflects all analysis requests for which all the results have been submitted



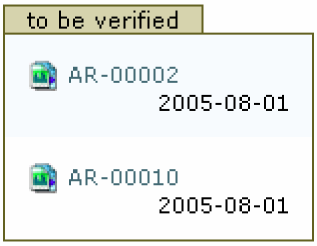
	request id	client	contact	sample id	tank	cultivar	vintage	date requested	date received
	AR-00010	Vintner Inc	Jennifer Burton	347C	C43	Cinsaut	2005	01 Aug 2005 21h10	01 Aug 2005 21h11
	AR-00002	Vintner Inc	Jennifer Burton	322C	C134	Cinsaut	2005	01 Aug 2005 20h50	01 Aug 2005 20h52

38. To be verified list

The results may be verified by selecting the checkbox and clicking on the **[verify]** button. The analysis request is then moved into **Verified** status

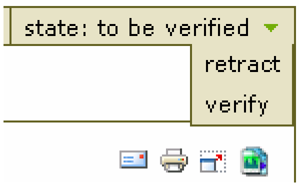
The results may be retracted by selecting the checkbox and clicking on the **[retract]** button. The analysis request is then moved back into **In the lab** status, and the results must be resubmitted to process the request

The lab manager additionally sees these requests in a pop-up on the right of the screen



39. To be verified pop-up

An individual analysis request may be viewed by clicking on the **request id** link, from where the request may be verified or rejected via the **state** drop-down

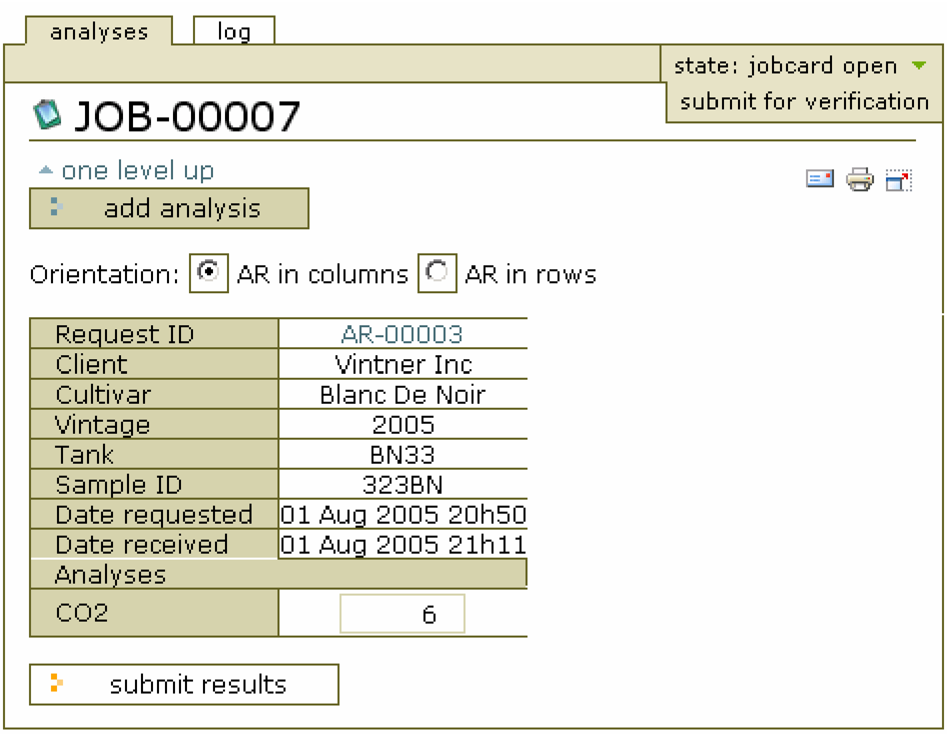


40. State drop-down

Verification of individual test results

Due to the fact that some analysis methods take longer than others, it may be necessary to publish results of some tests before all the tests on the analysis request have been completed. This is made possible by permitting verification of a jobcard

Once the results have been submitted on a jobcard, it is possible to change the status to **to be verified** by selecting **submit for verification** from the drop-down on a jobcard

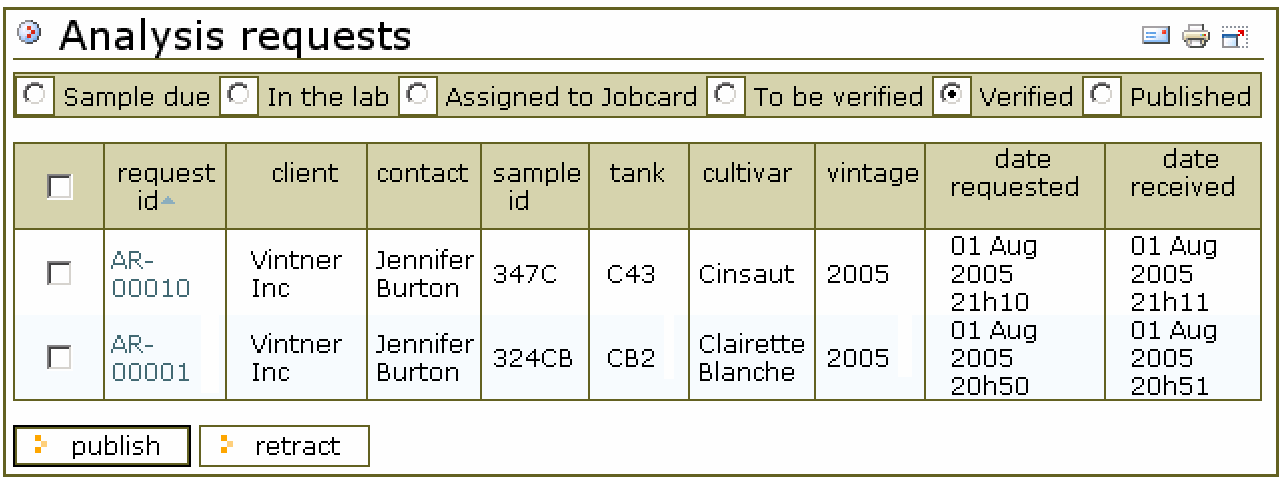


41. Jobcard – submit for verification

The jobcard is then in **to be verified** status, and appears in the lab manager's pop-up of **to be verified** requests. The lab manager selects this jobcard, either from the pop-up or from list of jobcards, and verifies or retracts the results. The individual test results are recorded in the analysis request in the same status as the jobcard

Results Publication

Once an analysis request has been verified, it is ready for publication to the requesting client contact. All the verified requests are viewed by selecting the **verified** radio button in the analysis request area

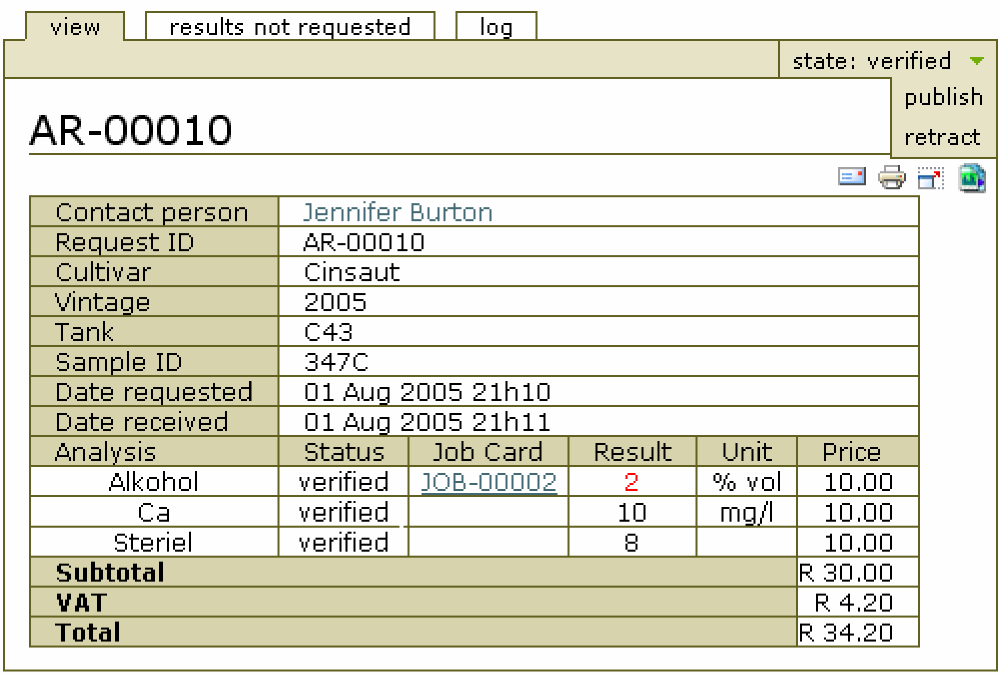


42. Verified analysis requests

The results may be published by selecting the checkbox and clicking on the **[publish]** button. The results may also be retracted, which returns the analysis request and each of the component tests to **in the lab** status

Bulk publication is achieved by selecting the top checkbox in the list, which selects all the checkboxes, and clicking on the **[publish]** button. All the selected analysis requests are published

The analysis request may be viewed by clicking on the request number within the list. The lab manager also has the verified analysis requests presented in the verified pop-up, from which individual requests may be viewed and published

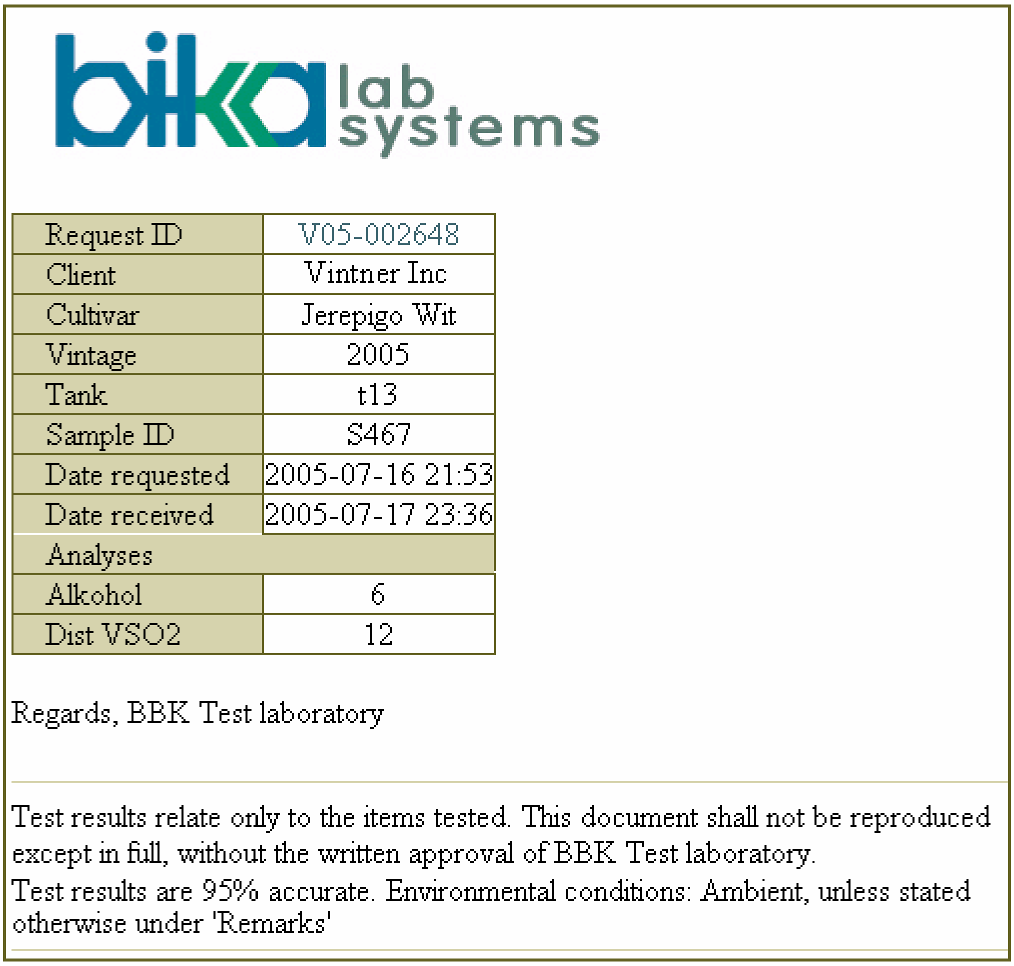


Contact person	Jennifer Burton				
Request ID	AR-00010				
Cultivar	Cinsaut				
Vintage	2005				
Tank	C43				
Sample ID	347C				
Date requested	01 Aug 2005 21h10				
Date received	01 Aug 2005 21h11				
Analysis	Status	Job Card	Result	Unit	Price
Alkohol	verified	JOB-00002	2	% vol	10.00
Ca	verified		10	mg/l	10.00
Steriel	verified		8		10.00
Subtotal					R 30.00
VAT					R 4.20
Total					R 34.20

43. Analysis request verified

On viewing the details of the analysis request, the results may be published or retracted using the drop-down

On publication, the system sends the results to the client via the method selected by the client contact. This is by email, fax or letter



Request ID	V05-002648
Client	Vintner Inc
Cultivar	Jerepigo Wit
Vintage	2005
Tank	t13
Sample ID	S467
Date requested	2005-07-16 21:53
Date received	2005-07-17 23:36
Analyses	
Alkohol	6
Dist VSO2	12

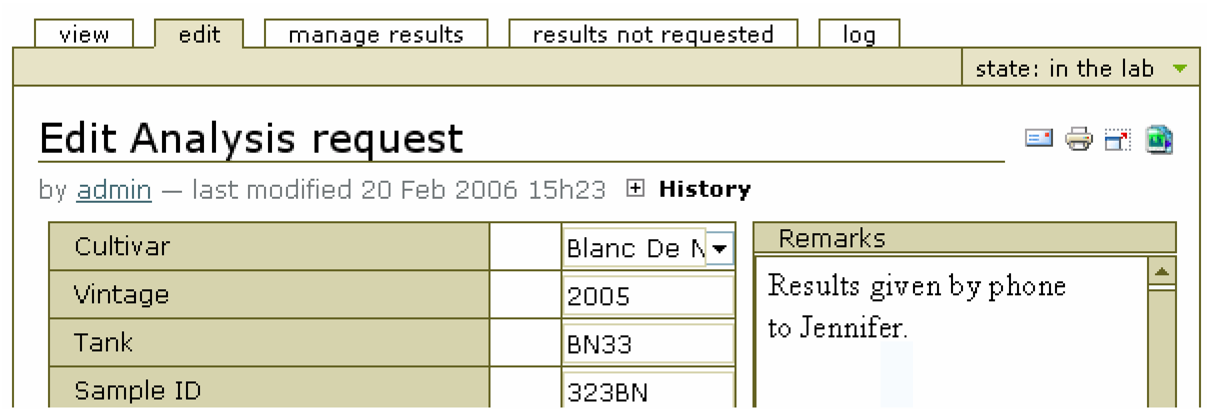
Regards, BBK Test laboratory

Test results relate only to the items tested. This document shall not be reproduced except in full, without the written approval of BBK Test laboratory.
Test results are 95% accurate. Environmental conditions: Ambient, unless stated otherwise under 'Remarks'

44. Analysis request result email

The published analysis requests may be viewed by selecting the **published** radio button in the analysis request area

Should the results be required by the client before they are verified, they may be given telephonically. A record of this is made in the **Remarks** text area linked to the analysis request while it is still **in the lab.** This field is visible only to lab personnel



45. Analysis request remarks column

Authorising lab clerks to verify and publish results

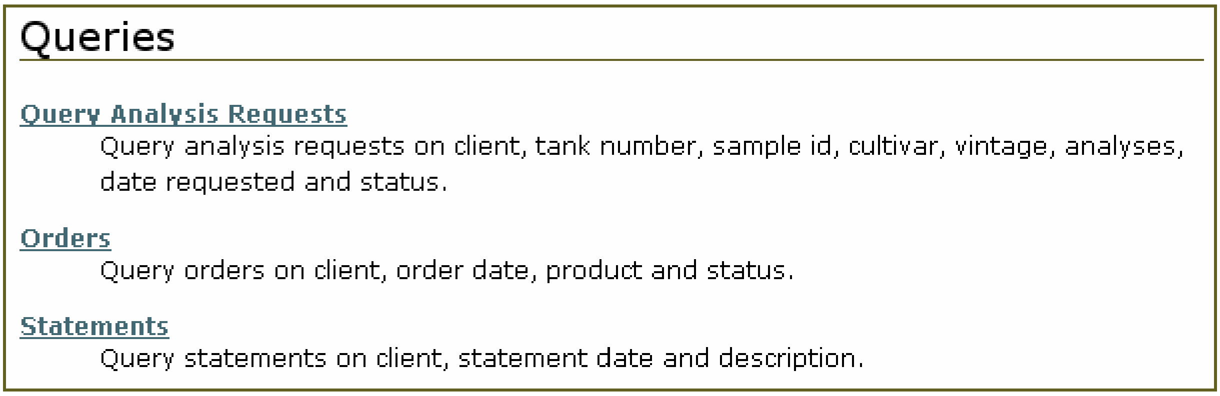
It is possible for a lab manager to assign verification and publication capability to a lab clerk. To do this the system administrator assigns the lab clerk to a group which has a **reviewer** role. Details under Bika LIMS System Setup

Analysis Request Modifications

An analysis request may be modified by the client while it is still in **sample due** status. Once it is in **in the lab** status, it may be modified only by the lab manager

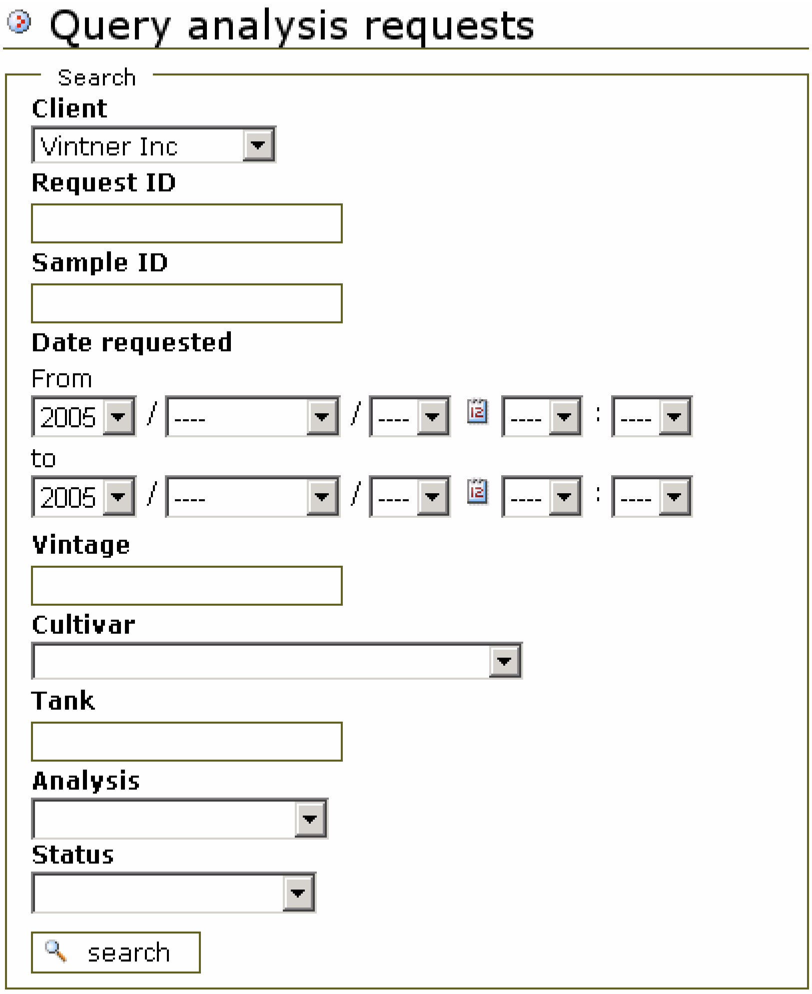
Analysis Request Query, View, Print and Email

Queries may be run against the Bika LIMS database to find analysis requests, jobcards, orders and statements defined by specified search criteria. All access to data is restricted to the authorisation profiles of the users' roles. Clients may view only their own data. The **|queries|** tab presents the various query options



46. Query options

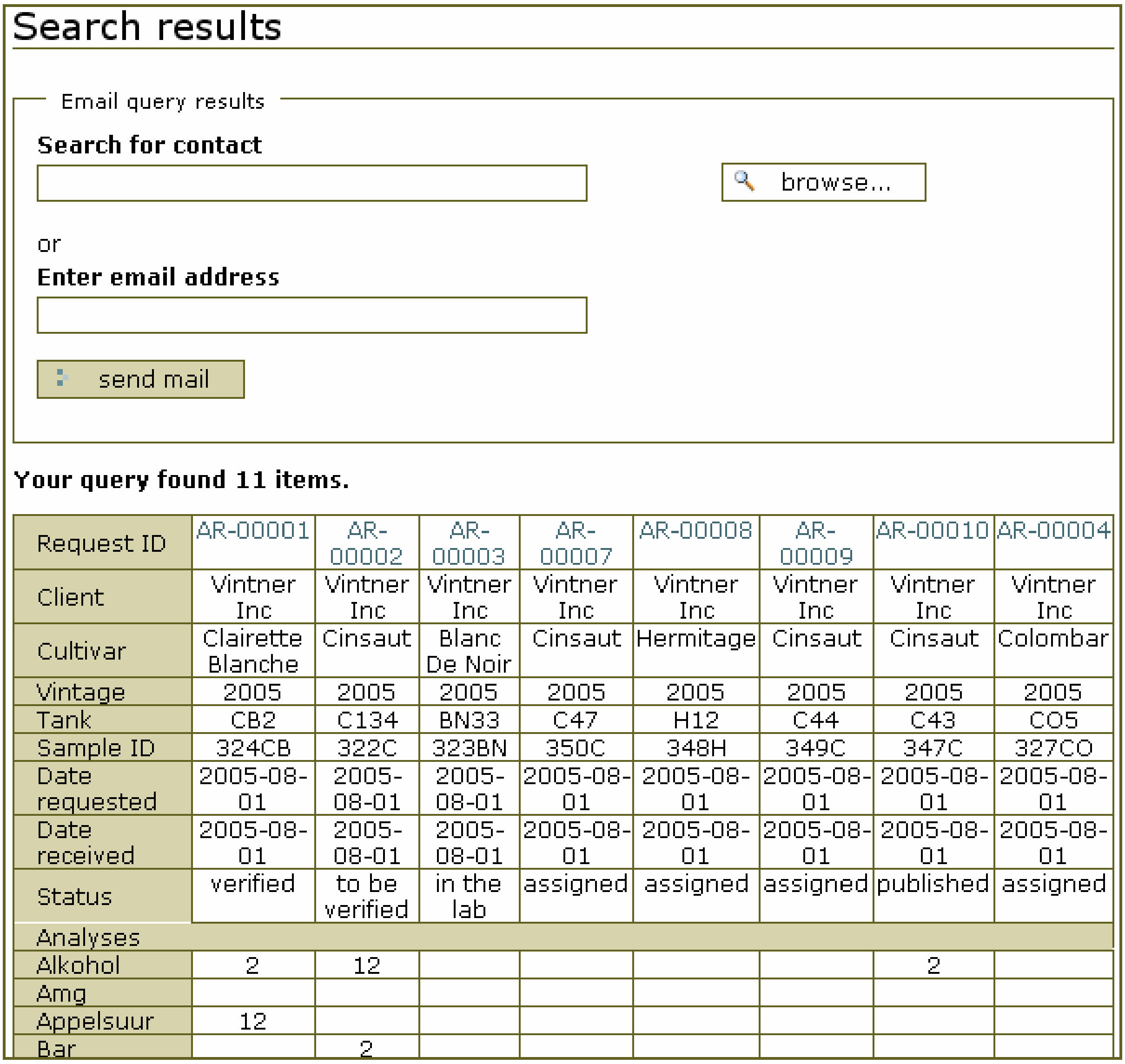
Click on the **Query Analysis Requests** link to search for analysis requests and job cards. The search is specified through one or more search criteria fields as shown. Any or all of the search criteria may be used



47. Query analysis request search specification

Client contacts do not have the option of selecting the company. The system restricts the query to data pertaining to the client

The results of the ququery are displayed, with the option to email these results to a specified address, or to a client contact registered to the system



Search results

Email query results

Search for contact

browse...

or

Enter email address

send mail

Your query found 11 items.

Request ID	AR-00001	AR-00002	AR-00003	AR-00007	AR-00008	AR-00009	AR-00010	AR-00004
Client	Vintner Inc	Vintner Inc	Vintner Inc	Vintner Inc	Vintner Inc	Vintner Inc	Vintner Inc	Vintner Inc
Cultivar	Clairette Blanche	Cinsaut	Blanc De Noir	Cinsaut	Hermitage	Cinsaut	Cinsaut	Colombar
Vintage	2005	2005	2005	2005	2005	2005	2005	2005
Tank	CB2	C134	BN33	C47	H12	C44	C43	CO5
Sample ID	324CB	322C	323BN	350C	348H	349C	347C	327CO
Date requested	2005-08-01	2005-08-01	2005-08-01	2005-08-01	2005-08-01	2005-08-01	2005-08-01	2005-08-01
Date received	2005-08-01	2005-08-01	2005-08-01	2005-08-01	2005-08-01	2005-08-01	2005-08-01	2005-08-01
Status	verified	to be verified	in the lab	assigned	assigned	assigned	published	assigned
Analyses								
Alkohol	2	12					2	
Amg								
Appelsuur	12							
Bar		2						

48. *Query analysis request results*

Click on the **[browse]** button to select a client contact

49. *Browse contact email addresses*

Click on the **select** link of the appropriate client contact person to return to the query result page with the appropriate email address, or click on the **view** link to view the contact details

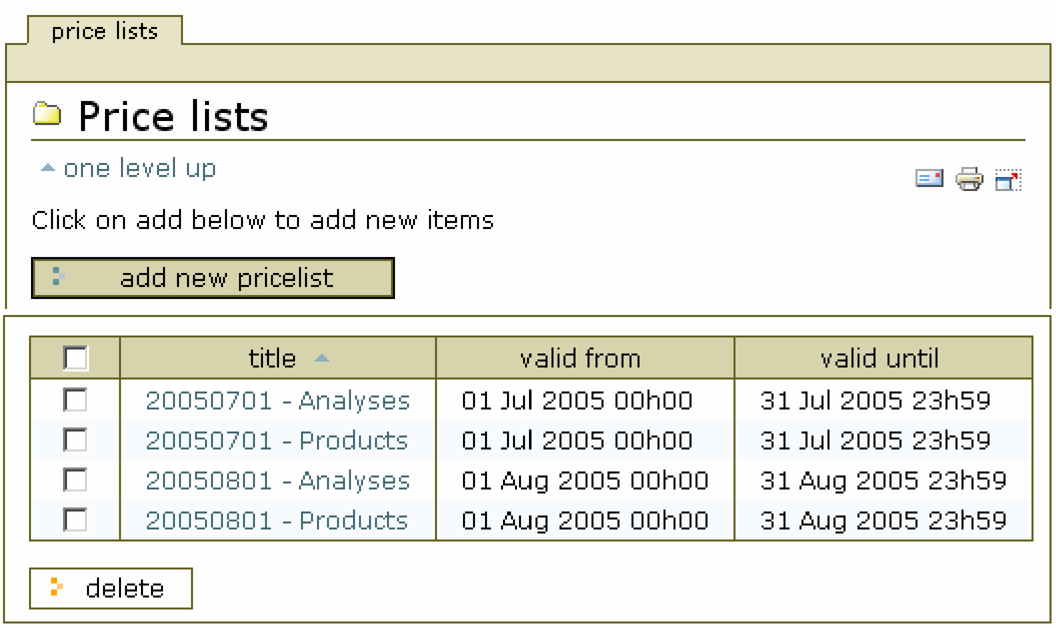
Analysis request summary reports are available to lab management, and described under the section **Management Reports**

5 Price Lists

Price Lists provide a snapshot of prices at a moment in time. They may be created and deleted by lab managers. All lab personnel may view, print and email price lists

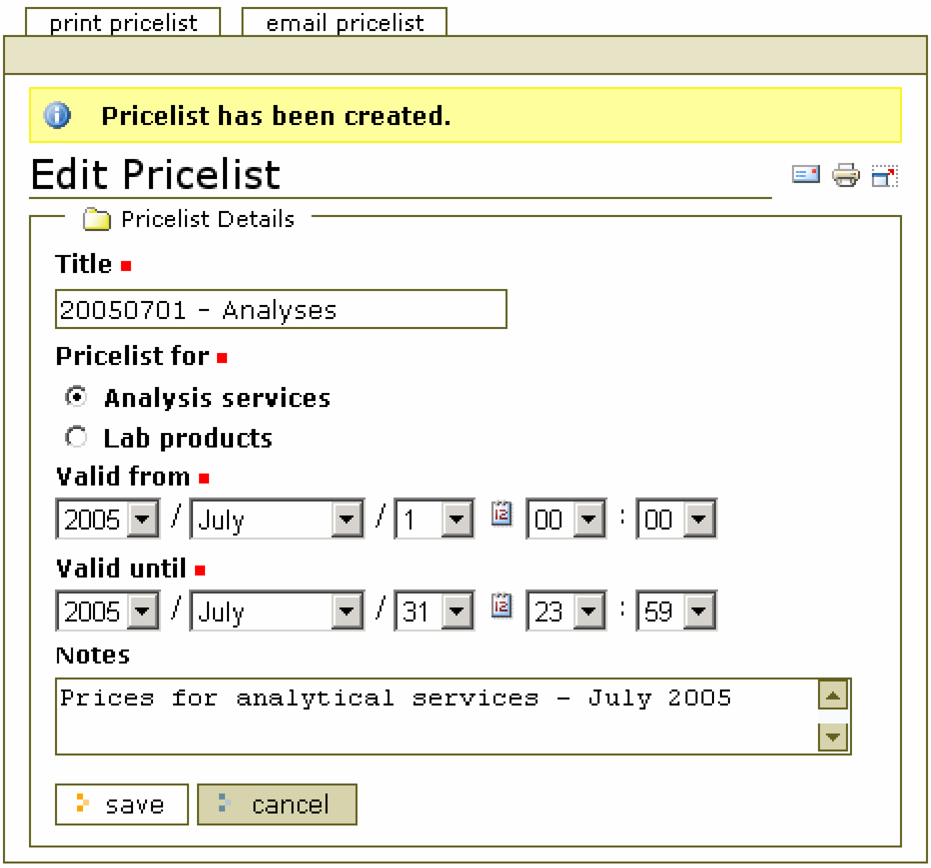
Client contacts do not have access to price lists. However, lab personnel may email a price list to a client contact

The link to price lists is on the left navigation bar. Click on the **Price Lists** link, to see all the current price lists



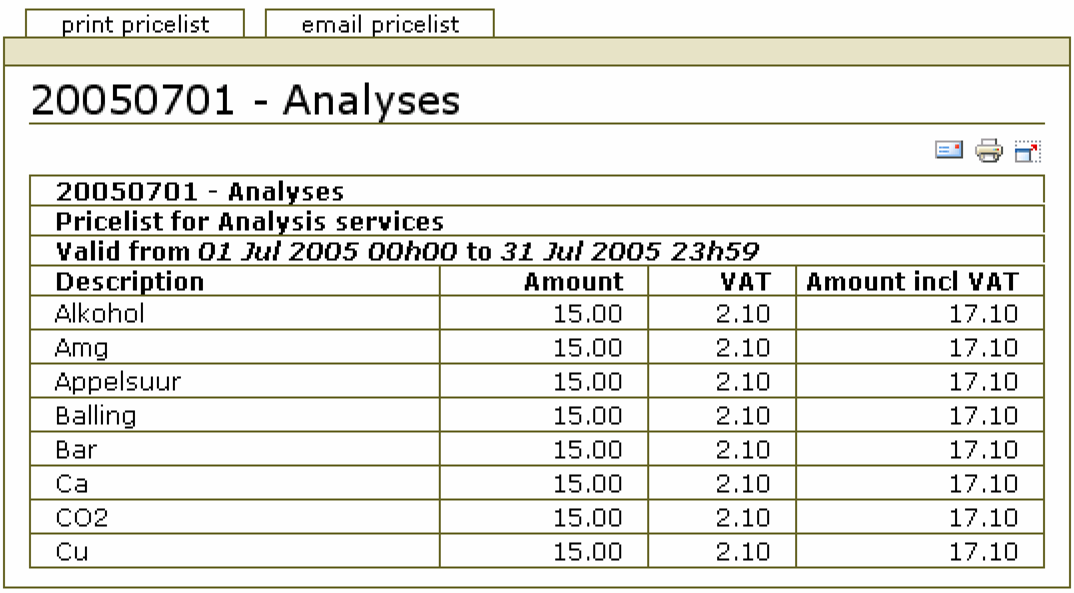
50. Price lists

Click on the **[add new pricelist]** button to create a new price list, or select a price list checkbox to delete by clicking on the **[delete]** button



51. Create a pricelist

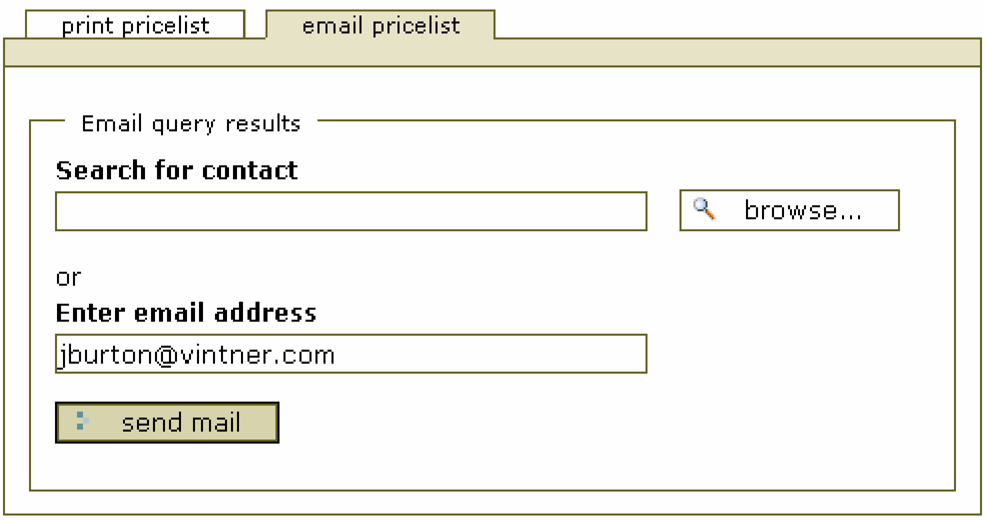
Once the price list has been saved, it is displayed, and may be printed or emailed



20050701 - Analyses			
Pricelist for Analysis services			
Valid from *01 Jul 2005 00h00* to *31 Jul 2005 23h59*			
Description	**Amount**	**VAT**	**Amount incl VAT**
Alkohol	15.00	2.10	17.10
Amg	15.00	2.10	17.10
Appelsuur	15.00	2.10	17.10
Balling	15.00	2.10	17.10
Bar	15.00	2.10	17.10
Ca	15.00	2.10	17.10
CO2	15.00	2.10	17.10
Cu	15.00	2.10	17.10

52. Price List

Click on the **|print pricelist|** tab to prepare a printable format of the price list, or on the **|email pricelist|** tab to send the price list to an email address



53. Email price list

Enter a known email address, or click on the **[browse]** button to select a client contact

54. Browse contact email addresses

Click on the **select** link of the client contact to return to the email price list page with the appropriate email address, or click on the **view** link to view the contact details

Click the **[send mail]** button to send the email to the selected address

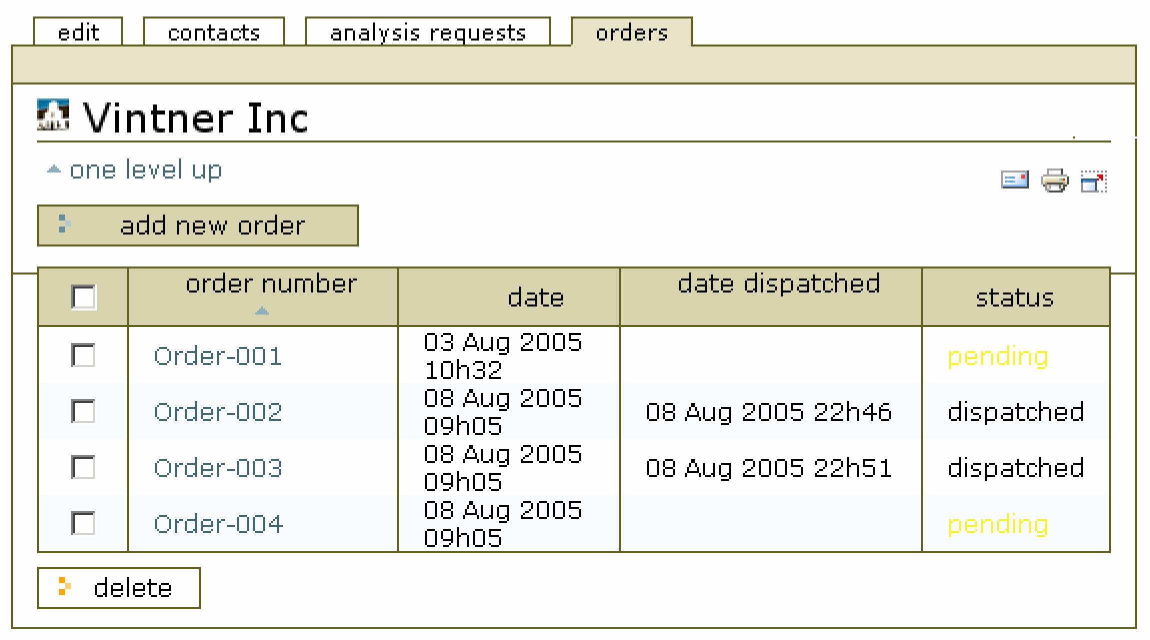
6 Product Ordering

The laboratory offers a number of items for sale to its clients. The list of items are defined by the lab manager under **bika setup.** These items appear in the list of items to be ordered when placing an order

A newly placed order is in **pending** status. Once the order has been fulfilled, the status changes to **dispatched**

Placing an Order

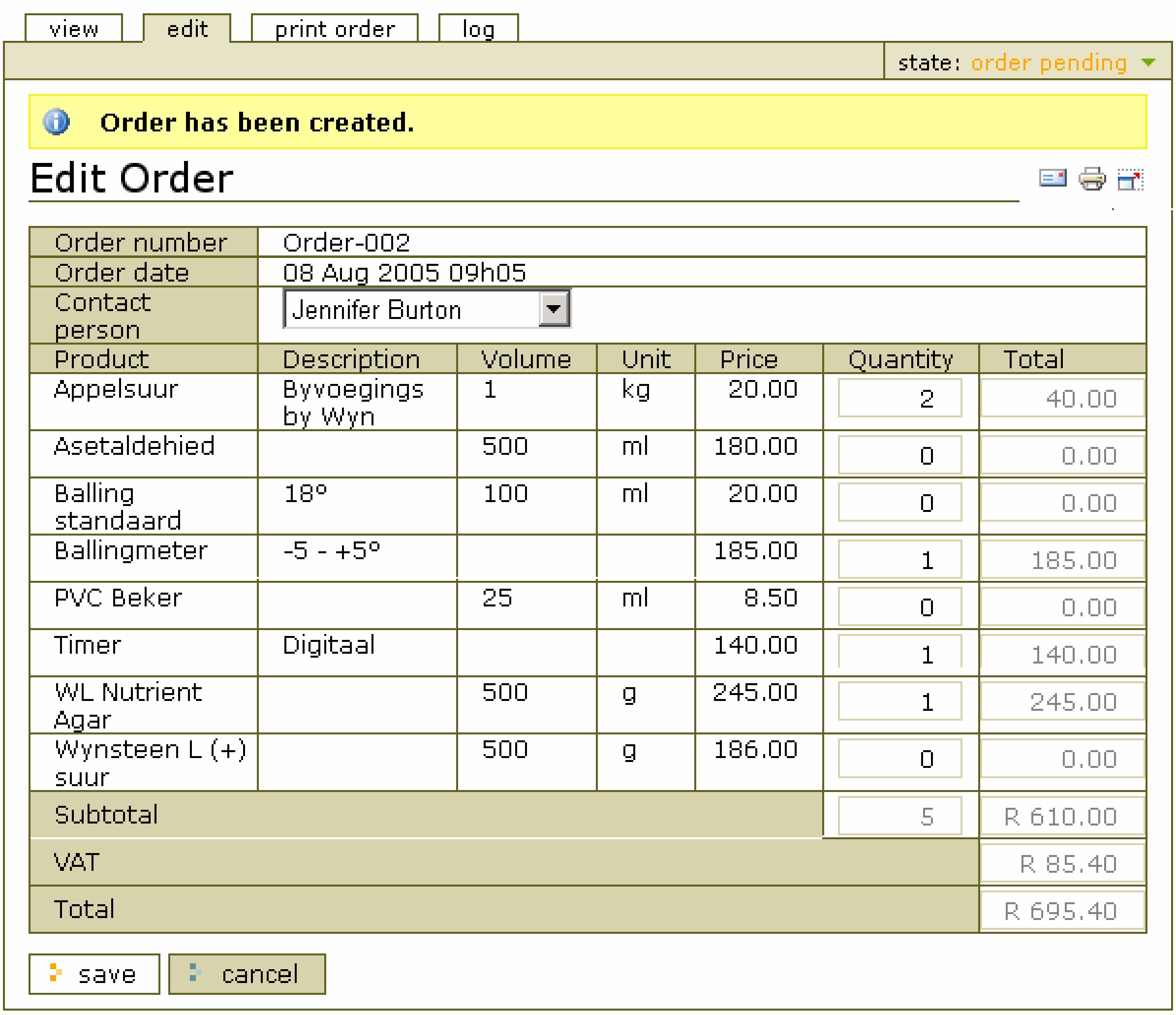
The client clicks on the **|orders|** tab to view existing orders and add a new order. Lab personnel placing an order on behalf of the client navigate to the **client**, then click on the **|orders|** tab. All the orders for that company, pending and dispatched, are shown



	order number	date	date dispatched	status
	Order-001	03 Aug 2005 10h32		pending
	Order-002	08 Aug 2005 09h05	08 Aug 2005 22h46	dispatched
	Order-003	08 Aug 2005 09h05	08 Aug 2005 22h51	dispatched
	Order-004	08 Aug 2005 09h05		pending

55. Client's order list

The client clicks on the **[add new order]** button to place an order, or on an order number link to edit an existing order in pending status



view | edit | print order | log

state: order pending

Order has been created.

Edit Order

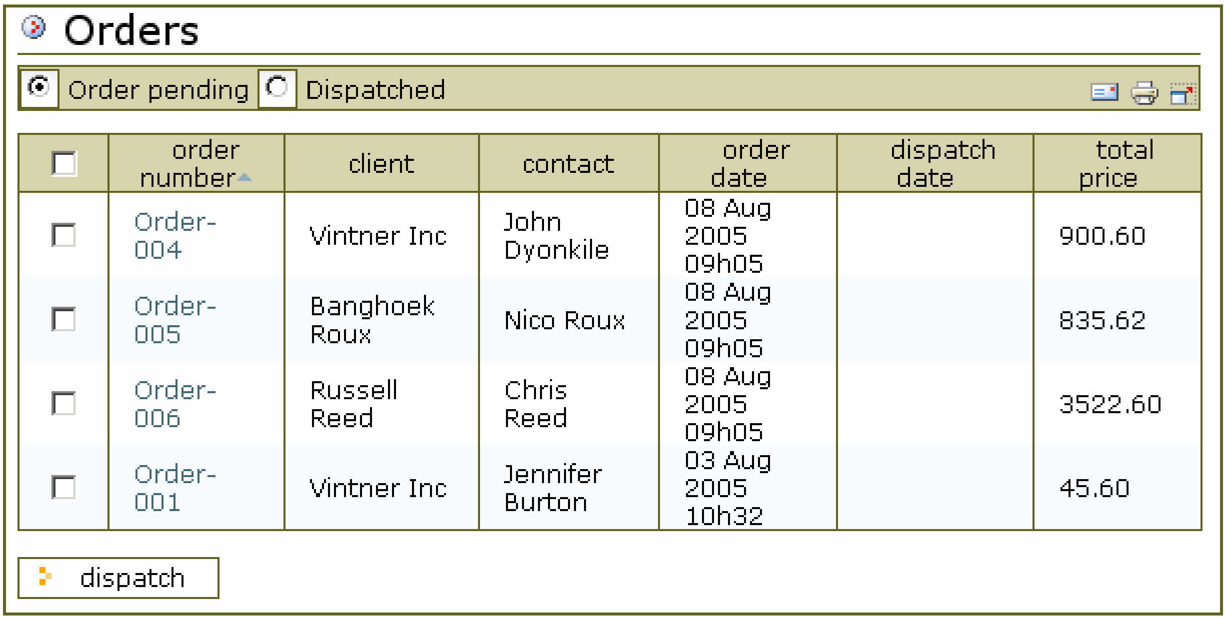
Order number	Order-002					
Order date	08 Aug 2005 09h05					
Contact person	Jennifer Burton					
Product	Description	Volume	Unit	Price	Quantity	Total
Appelsuur	Byvoegings by Wyn	1	kg	20.00	2	40.00
Asetaldehied		500	ml	180.00	0	0.00
Balling standaard	18°	100	ml	20.00	0	0.00
Ballingmeter	-5 - +5°			185.00	1	185.00
PVC Beker		25	ml	8.50	0	0.00
Timer	Digitaal			140.00	1	140.00
WL Nutrient Agar		500	g	245.00	1	245.00
Wynsteen L (+) suur		500	g	186.00	0	0.00
Subtotal					5	R 610.00
VAT						R 85.40
Total						R 695.40

save | cancel

56. Create new order

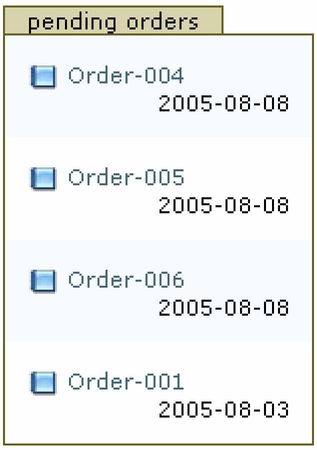
Managing Orders

Lab personnel may view orders by clicking on the **|orders|** tab on the main menu line. The orders for all clients are sorted by status, viewed by clicking on the appropriate radio button



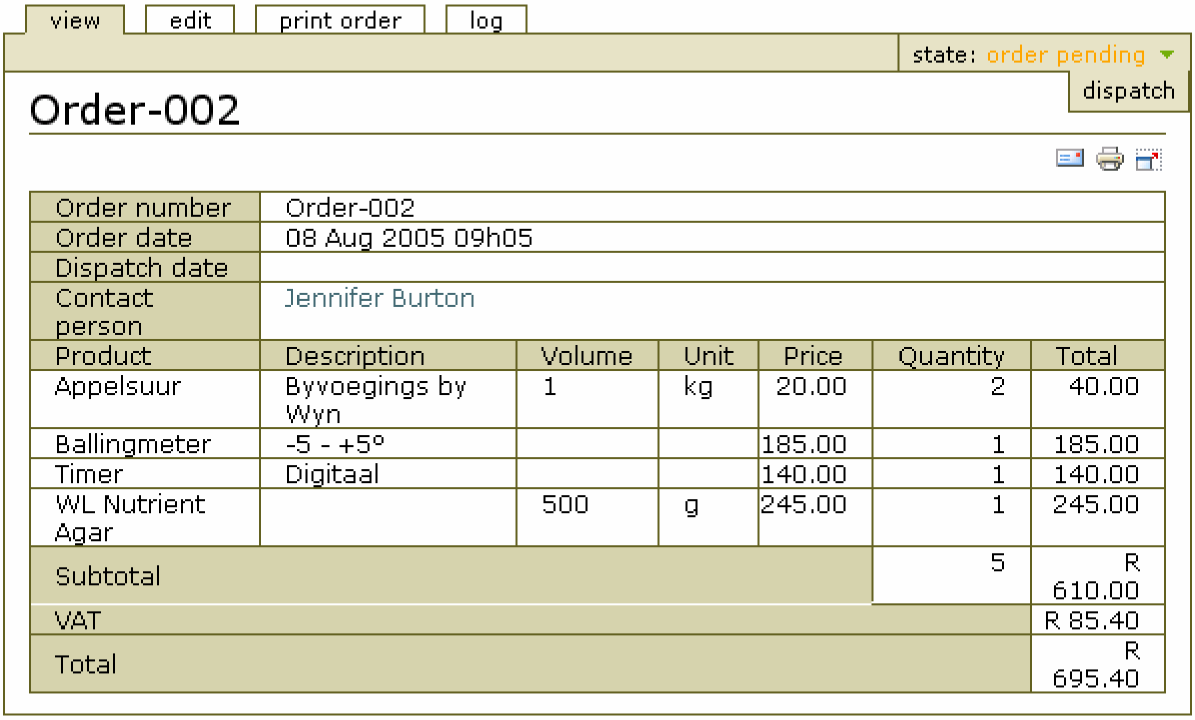
57. Order list

Pending orders also appear to the lab clerk in a pop-up to the right of the screen



58. Orders pending pop-up

The lab clerk may select the checkboxes and click on **[dispatch]**, or click on the order number link in the list, or click on the order number link in the pop-up to see the order details



view | edit | print order | log

state: order pending

dispatch

Order-002

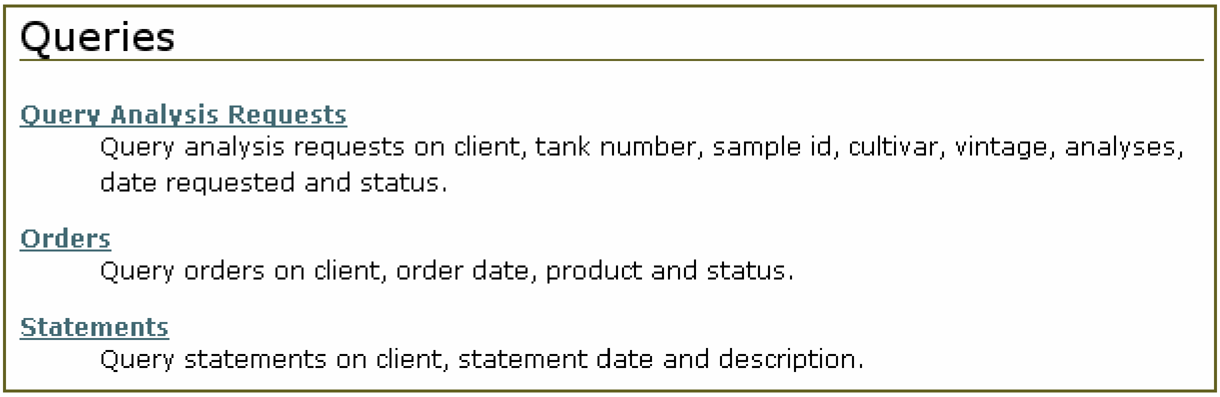
Order number	Order-002					
Order date	08 Aug 2005 09h05					
Dispatch date						
Contact person	Jennifer Burton					
Product	Description	Volume	Unit	Price	Quantity	Total
Appelsuur	Byvoegings by Wyn	1	kg	20.00	2	40.00
Ballingmeter	-5 - +5°			185.00	1	185.00
Timer	Digitaal			140.00	1	140.00
WL Nutrient Agar		500	g	245.00	1	245.00
Subtotal					5	R 610.00
VAT						R 85.40
Total						R 695.40

59. Order detail

Use the drop-down to change the status of the order to **dispatched**

Order Query, View, Print and Email

Queries may be run against the Bika LIMS database to find orders defined by specified search criteria. All access to data is restricted to the authorisation profiles of the users' roles. Clients may view only their own data. The **|queries|** tab presents the various query options



Queries

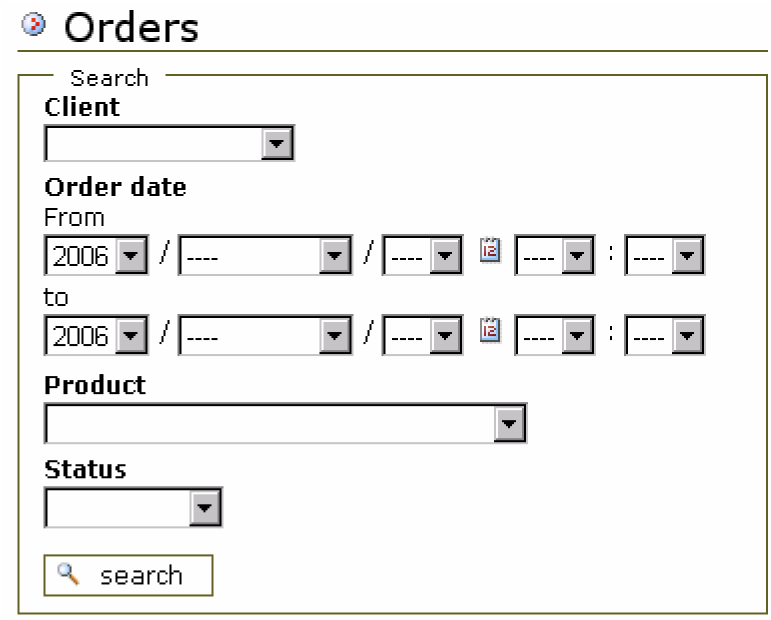
Query Analysis Requests
Query analysis requests on client, tank number, sample id, cultivar, vintage, analyses, date requested and status.

Orders
Query orders on client, order date, product and status.

Statements
Query statements on client, statement date and description.

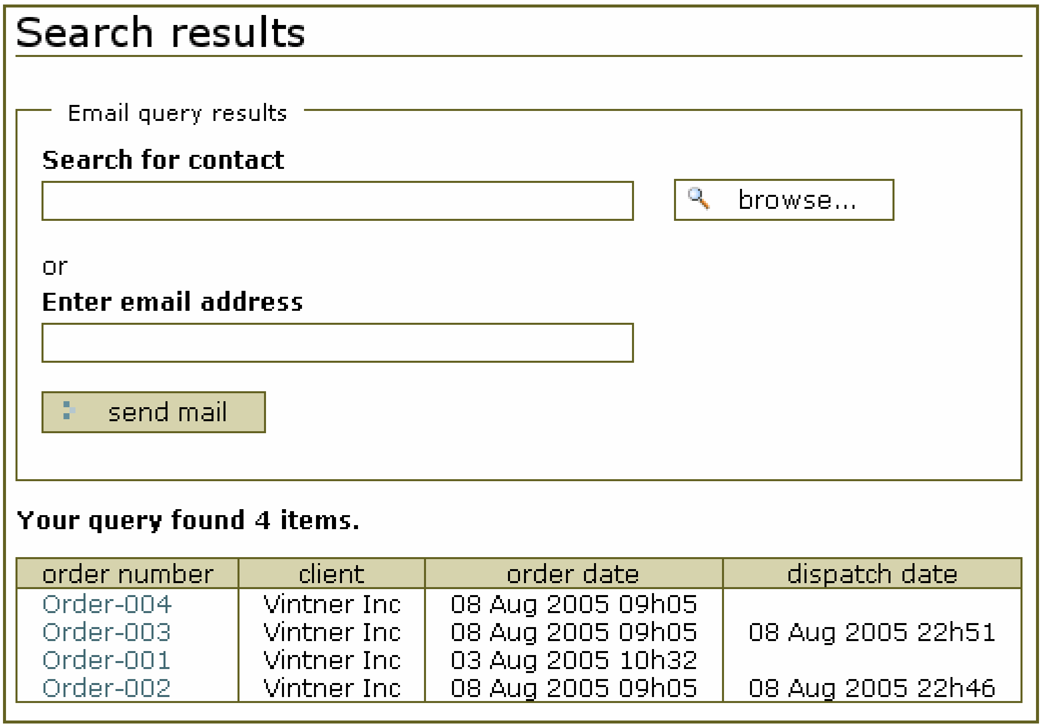
60. Queries menu

Click on the **Orders** link. The order query form is presented



61. Query orders

Any or all of the search criteria may be used to perform the search. Click on the **[search]** button to execute the search



62. Query orders results

Client contacts do not have the option of selecting the company. The system restricts the query to data pertaining to the client.

The query results are displayed. Individual order details may be viewed by clicking on the order number link, or the results may be emailed to a specified address, or to a client contact registered to the system

Click on the **[browse]** button to select a client contact

63. Browse contact email addresses

Click on the **select** link associated with the client contact person to return to the query result page with the appropriate email address, or click on the **view** link to view the contact details

Once the contact name or email address has been entered, click on the **[send mail]** button to send

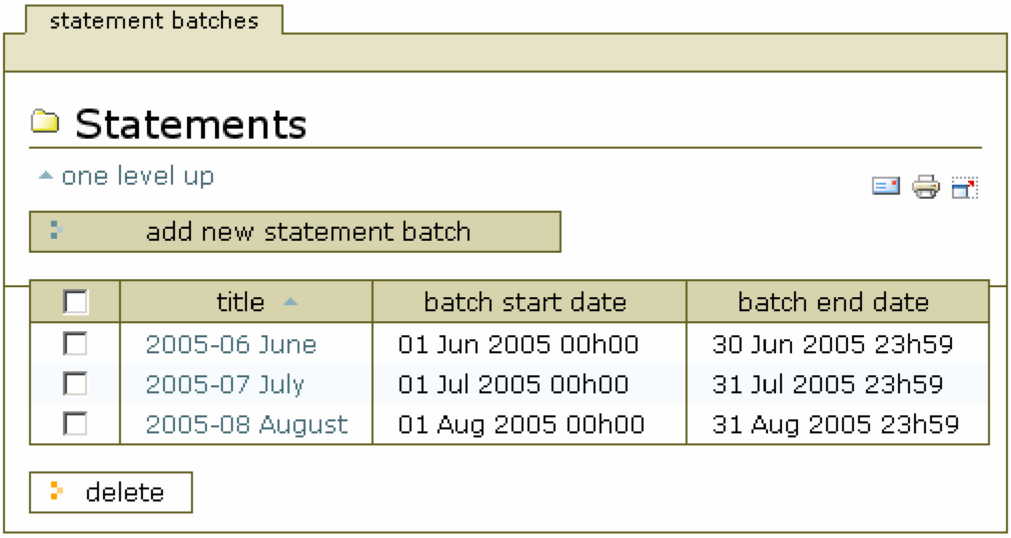
7 Statements

Statement batches are a means of grouping chargeable services in a specified date range, in a format which may be printed or emailed

Statements may be created and deleted by lab managers. They may be viewed and printed by all lab personnel

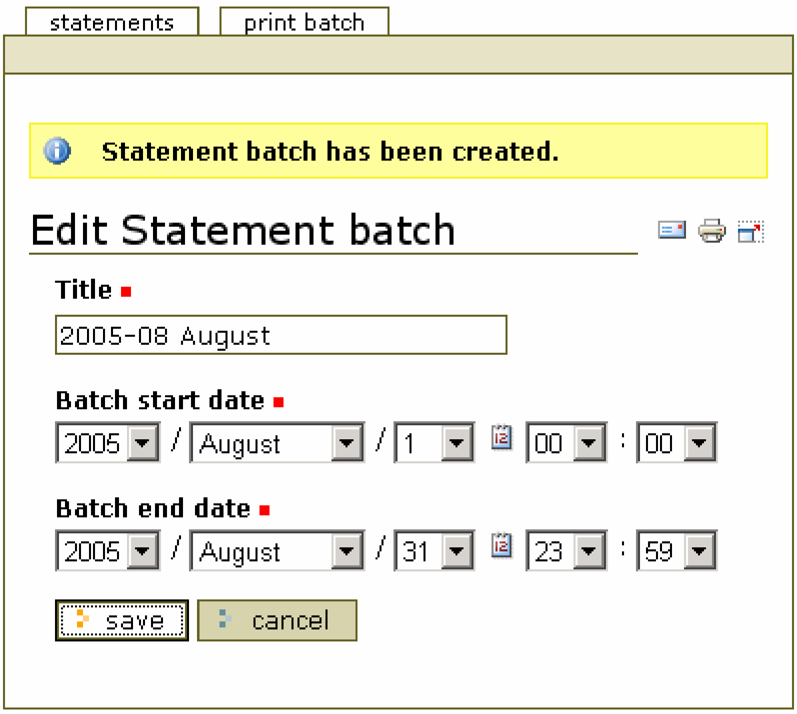
Client contacts do not have access to the statement functionality

Statements are accessed from the left navigation bar. All current statement batches are shown, and may be drilled down to view individual statements per client company



64. Statement batches

Click on the **[add new statement batch]** button to create a new statement batch, or on a statment batch title to view an existing statement batch



65. Create statement batch

The statement batch is created, comprising one statement per client company, for the specified date range statements | print batch

2005-08 August

one level up

statement number	client	date	subtotal	vat	total
statement_11	Banghoek Roux	05 Sep 2005 22h12	30.00	4.20	34.20
statement_12	Vintner Inc	05 Sep 2005 22h12	280.00	39.20	319.20

66. Statement batch

Click on the statement number to view the statement

print statement | log

Vintner Inc

Vintner Inc 54321	**P.O.Box 1235, Franschhoek, 2451, South Africa**	**Tel: +27 284 555-1435 Fax: +27 284 555-1436**
Monthly Statement	**statement_12**	**2005 Aug, *2005-08-01 to 2005-08-31***

Date	Description	Amount	VAT	Amount incl VAT
02 Aug 2005	AR-00010 C43 Cinsaut 2005 347C	30.00	4.20	34.20
03 Aug 2005	AR-00005 FP4 Fernao Pires 2005 325FP	20.00	2.80	22.80
09 Aug 2005	AR-00013 C12 Cinsaut 2005 362C	70.00	9.80	79.80
09 Aug 2005	AR-00002 C134 Cinsaut 2005 322C	80.00	11.20	91.20
09 Aug 2005	AR-00001 CB2 Clairette Blanche 2005 324CB	80.00	11.20	91.20
2005 Aug	**Total**	**R 280.00**	**R 39.20**	**R 319.20**

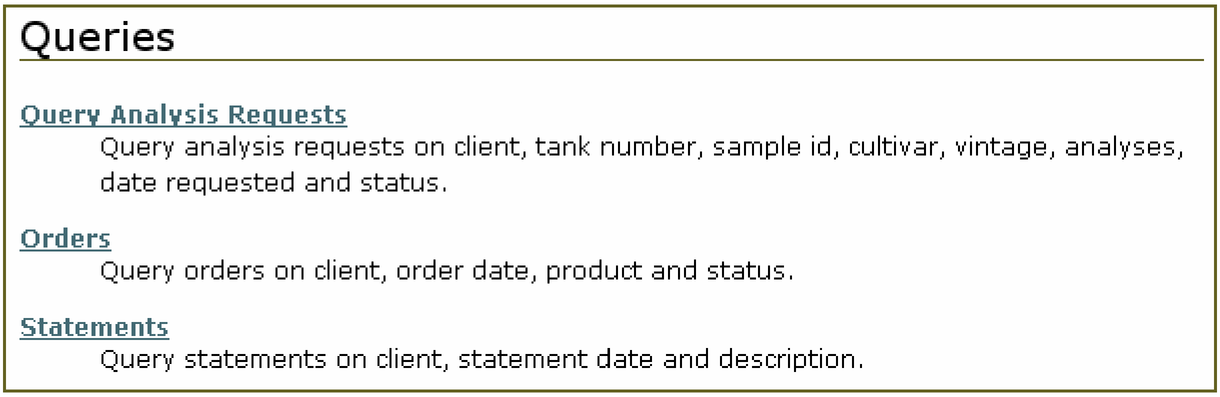
67. Statement

The statement includes all the analytical services which were performed within the specified date range

Click on the **|print statement|** tab to view the statement in a printer-friendly format

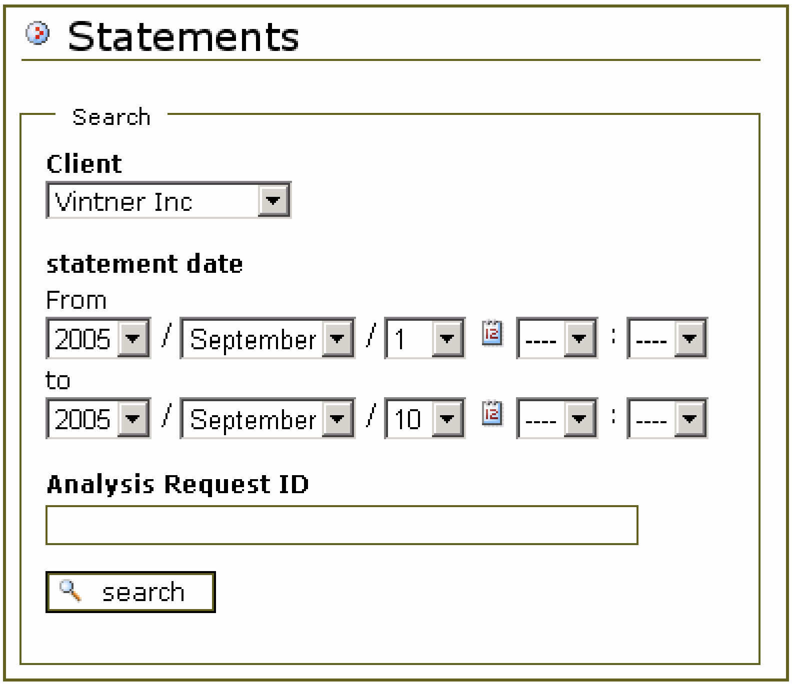
Statement Query, View, Print and Email

Queries may be run against the Bika LIMS database to find statements defined by specified search criteria. All access to data is restricted to the authorisation profiles of the users' roles. The **|queries|** tab presents the various query options



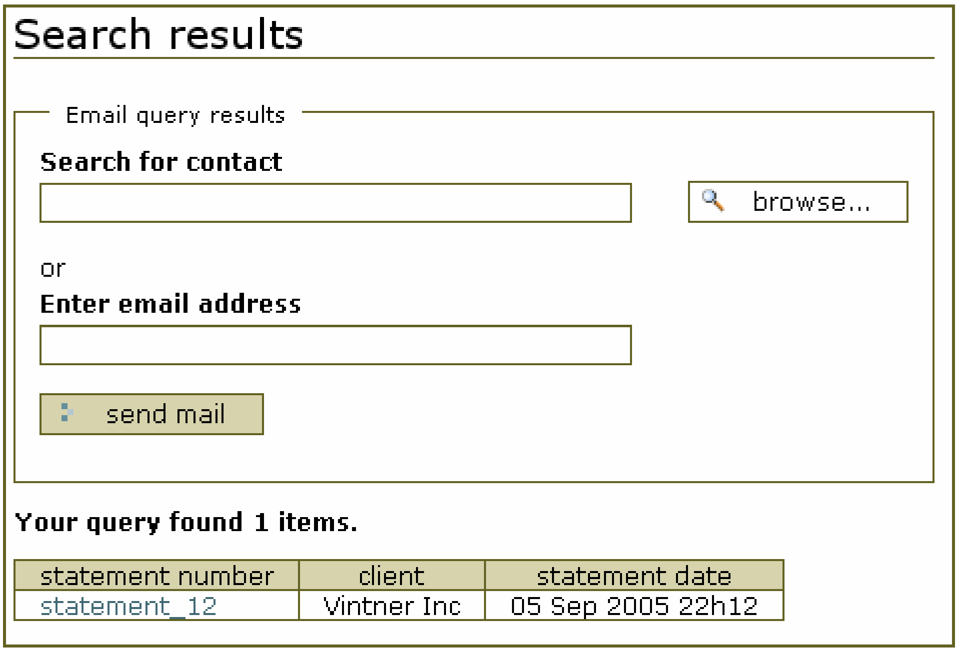
68. Query options

Click on the **Statements** link to search for statements. The search is specified through one or more search criteria fields as shown



69. Query statement search specification

The list of statements which satisfy the query is displayed, with the option to email these results to a specified address, or to a client contact registered to the system



70. Query statement results

Click on the **[browse]** button to select a client contact

71. Browse contact email addresses

Click on the **select** link associated with the client contact to return to the query result page with the appropriate email address, or click on the **view** link to view the contact details

8 Management Reports

Management reports provide summary information for the number of requests per analysis service, and the number of requests per client. The reports are available to those lab personnel with lab manager or lab clerk permissions. The reports are available from the **|reports|** tab on the main menu

Reports

Analyses totals

Report the number of analyses requested per analysis service.

Analysis requests per client

Report the number of requests per client.

72. Report menu

Click on the **Analyses totals** link to view the number of analyses requested per analysis service

Requests for analyses

analyses	number of requests
Alkohol	14
Amg	2
Appelsuur	6
Balling	1
Bar	1
Ca	1
CO2	2
Cu	1
Dist TSO2	0
Dist VSO2	0
Fe	0
Fenole	0
Filter ind	1
Koud stab	0
Melksuur	4
Mikro	0
O2	1
Org lep	0
Pektien	0
pH	4
pH Dropout	0
Prot	0
Reduserende Suikers	4
Steriel	1
TA	4
TS Dropout	0
TSO2	1
VA	5
VSO2	1

73. Analyses requests per analysis service

Click on the **Analyses requests per client** link to view the summary of analyses requests issued per client

Analysis requests per client

client	number of requests
Banghoek Roux	0
Chateaux Pau	0
Darwin Dry	0
Drogerijstkloof	0
Gna Products	0
GouKou Koöp	0
Nuwehoop	0
Russell Reed	0
Vintner Inc	14
Vizcaino Bay	0

74. Analysis requests per client

9 Site Setup

The Bika LIMS system is configured in the **Site Setup** area, reached by clicking on the **site setup** link. This function is only available to the administrator.

Site Setup covers

- **Plone Configuration –** Plone configuration settings, not covered in this manual
- **Add-on Product Configuration** – additional product configuration settings. Not covered in this manual.
  The **schema editor** enables the modification of the Bika LIMS to industry and laboratory specifications. Described in the Schema Editor manual
- **Bika Configuration** – Specification of laboratory specific information for the Bika LIMS. This section describes Bika Configuration

Bika Configuration

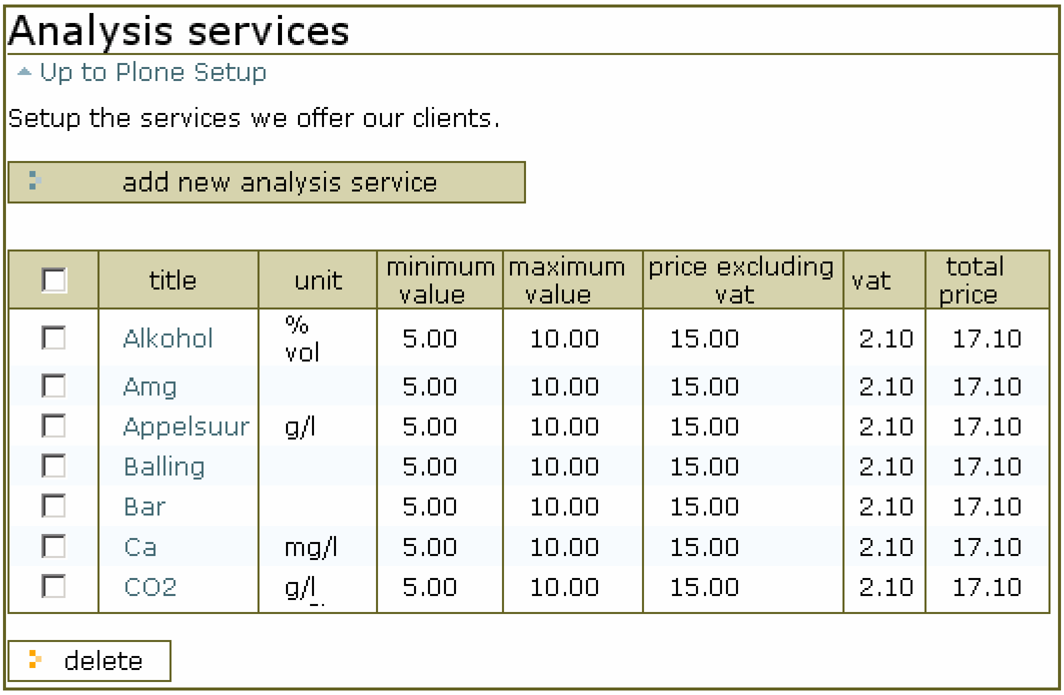
- Analysis services
- Bika settings
- Client categories
- Client publication preferences
- Client statement preferences
- Client status
- Cultivars
- Laboratory information
- Mail Templates settings
- Products
- Users and Groups Administration

75. Bika configuration

All the menu functions are presented, and remain in the left navigation area while in the control panel

Analysis Services

All the Bika LIMS system's analytical services and their prices are listed here


Analysis services

Up to Plone Setup

Setup the services we offer our clients.

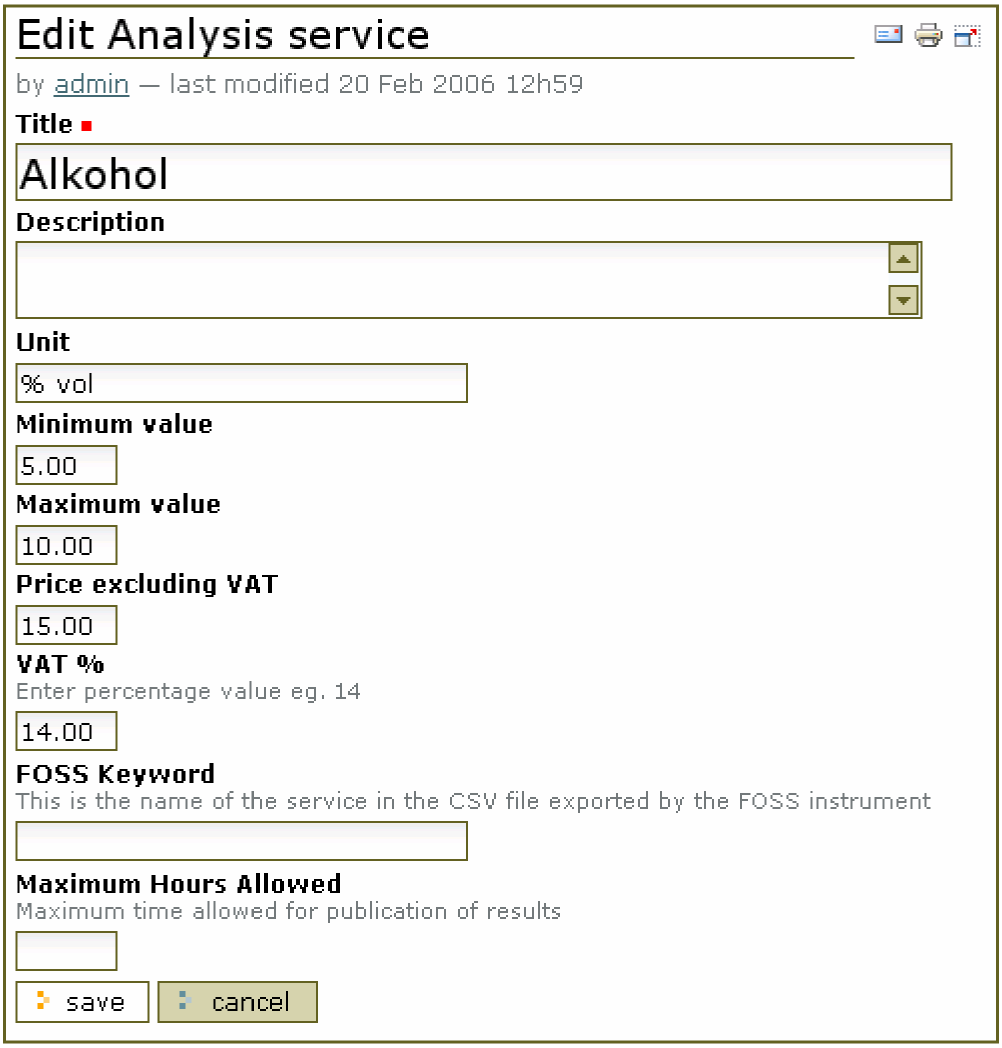
add new analysis service

	title	unit	minimum value	maximum value	price excluding vat	vat	total price
	Alkohol	% vol	5.00	10.00	15.00	2.10	17.10
	Amg		5.00	10.00	15.00	2.10	17.10
	Appelsuur	g/l	5.00	10.00	15.00	2.10	17.10
	Balling		5.00	10.00	15.00	2.10	17.10
	Bar		5.00	10.00	15.00	2.10	17.10
	Ca	mg/l	5.00	10.00	15.00	2.10	17.10
	CO2	g/l	5.00	10.00	15.00	2.10	17.10

delete

76. Analysis services

Click on **[add new analysis service]** to add a new service, or click on the title of an existing service to edit it



77. Analysis service

The **Minimum value** and **Maximum value** fields are used to determine whether a test result is out of range, and therefor highlighted in the analysis request results

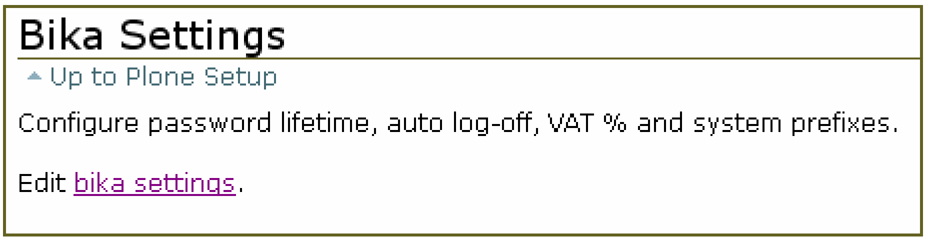
The **VAT %** defaults to the system default but may be edited

The **FOSS Keyword** is the name of the service in the .csv file created by the Foss instrument

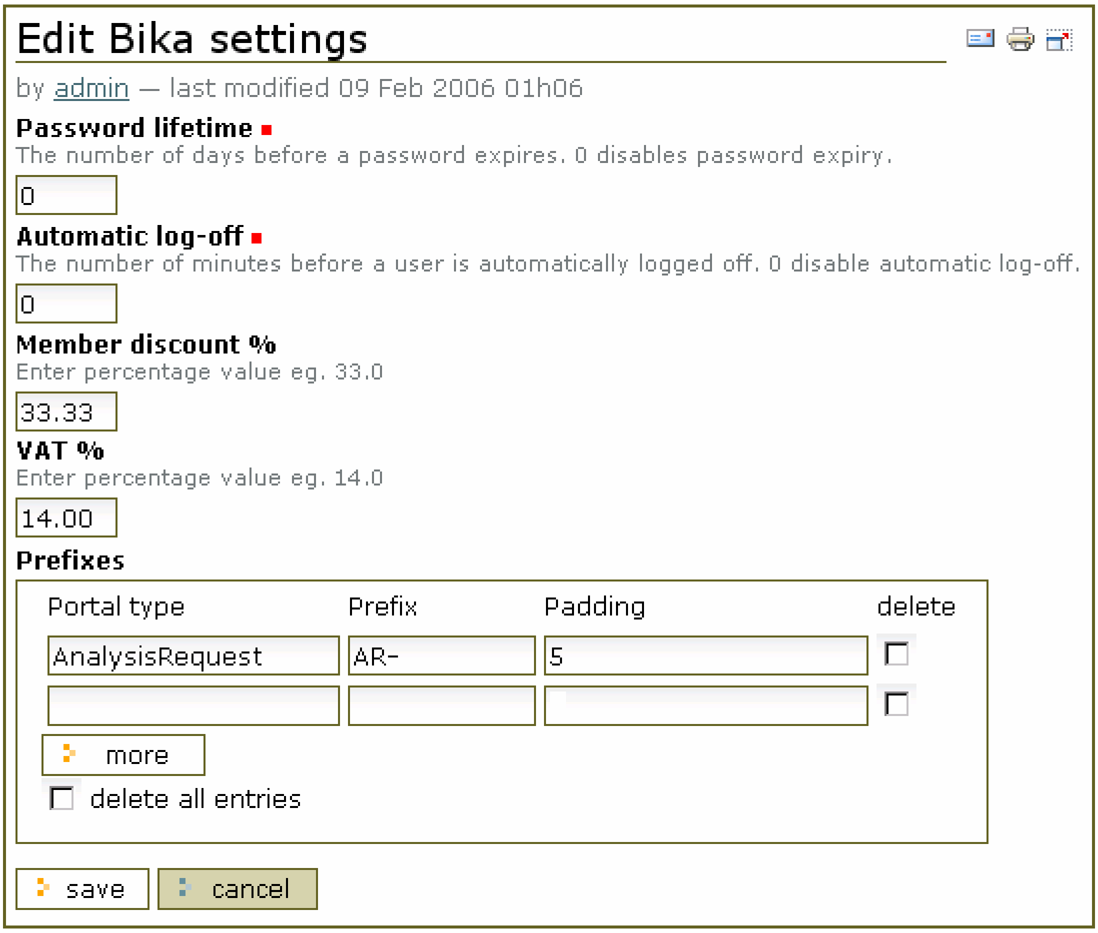
Maximum Hours Allowed is the time limit specified for this test to be concluded. When an analysis request exceeds this time limit, it is displayed in the **late analyses** pop-up

Bika Settings

Bika settings define the default values specific to the Bika LIMS installation



78. Bika settings menu



79. Bika settings

System wide preferences are set here by the lab manager or system administrator

Password lifetime defines the number of days before users' passwords expire, requiring them to renew their passwords. A zero value implies passwords do not expire

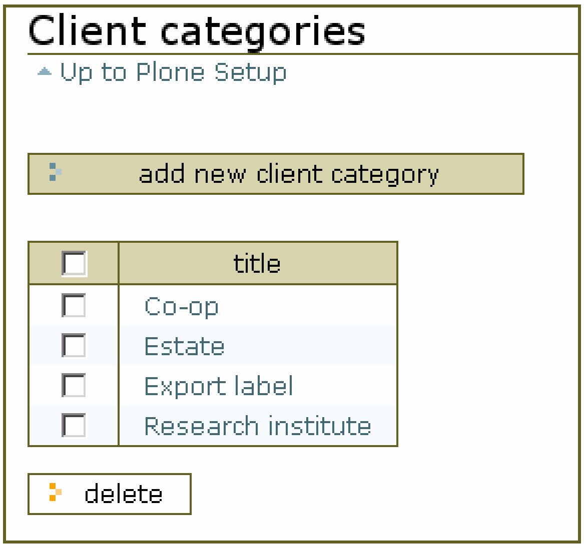
Automatic log-off defines the number of minutes of inactivity before the system automatically logs the user off. A zero value implies automatic log-off is disabled

VAT percentage to be applied to services and products. The VAT may be changed per individual service, but this value sets the system default

The Bika LIMS system generates serial numbers as new objects are created, e.g. analysis requests, jobcards, orders. The prefixes and formats for these serial numbers are defined in the **Prefixes** list. The prefix may include special characters, typically '-'

Client Categories

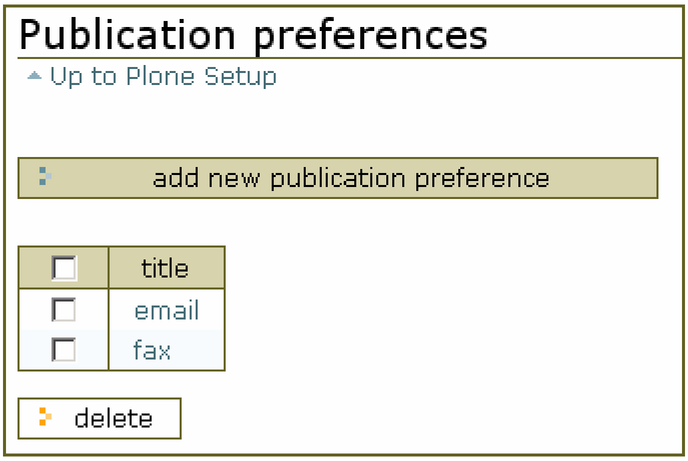
May be used as applicable to the client



80. Client categories

Publication Preferences

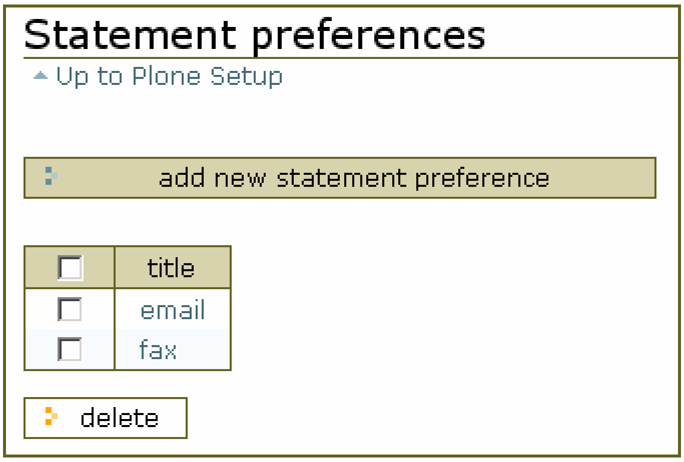
The publication preference options available to client contacts. The values will appear in the list of options offered when client contacts' publication preferences are selected



81. Client publication preferences

Statement Preferences

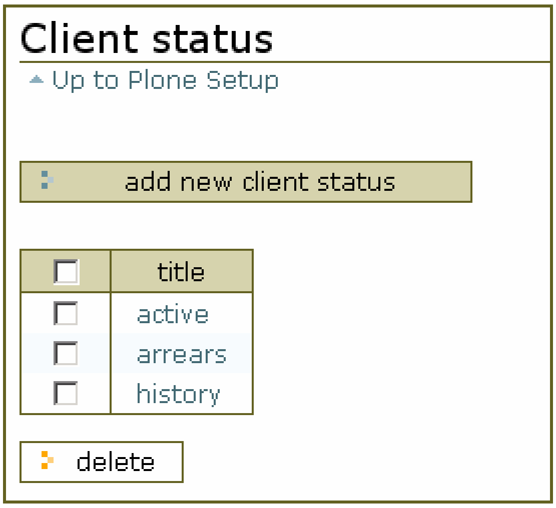
The statement publication preference options available to client contacts



82. Client statement preferences

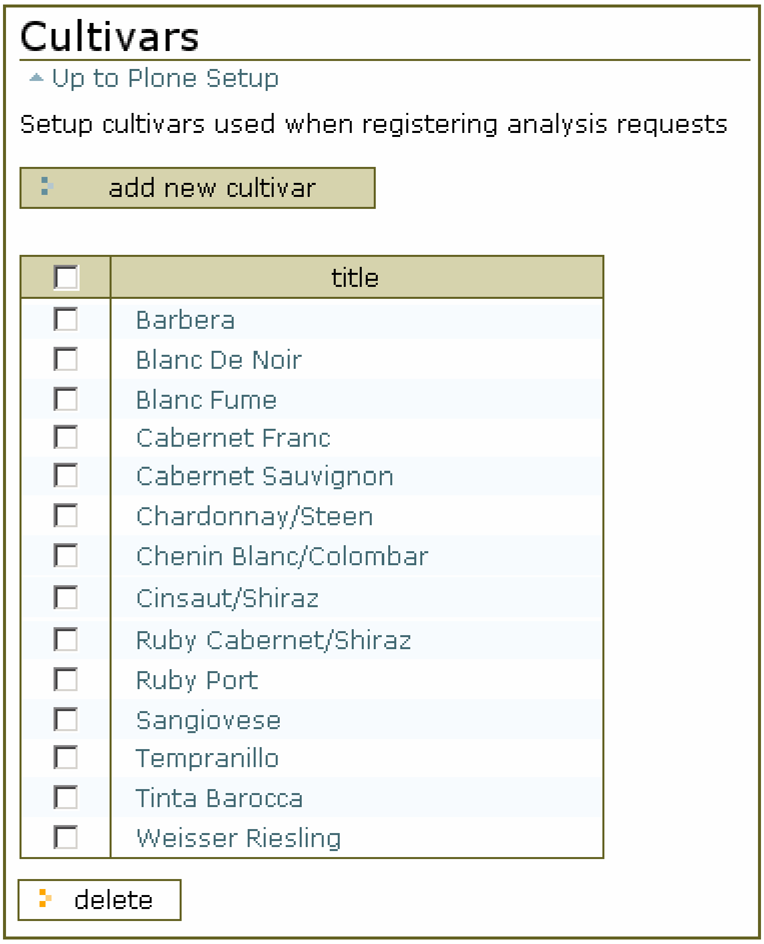
Client Status

For future use



83. Client status

Cultivars



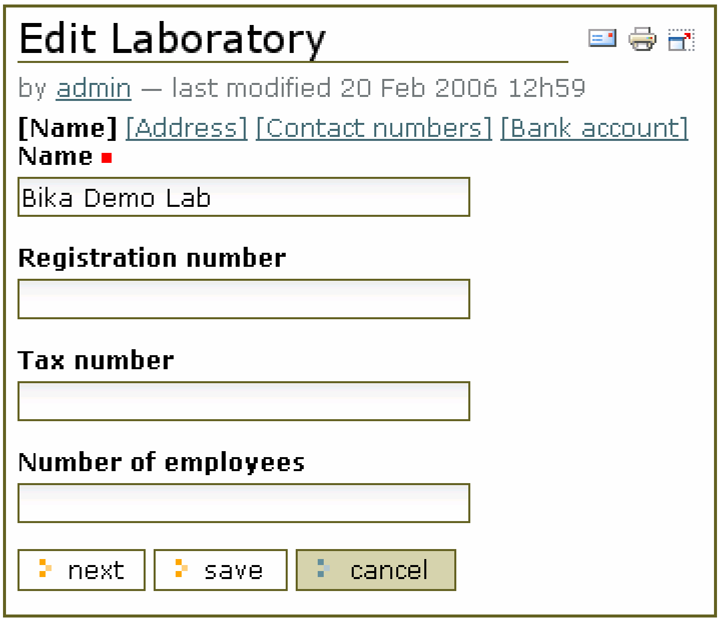
84. Cultivars

These are the cultivars of the samples which are submitted. This list appears for selection when the cultivar is entered into an analysis request

Laboratory Information

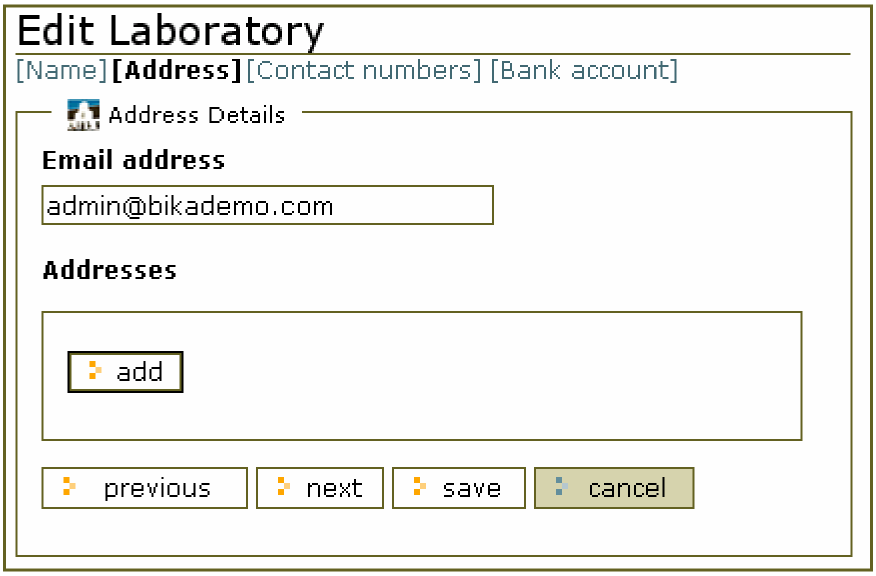
Laboratory information includes the name of the laboratory, contact numbers, physical and postal address, email address and the laboratory personnel and their contact details. Click on the **laboratory information** link

The laboratory name is entered, and using the **[next]** button, the addresses, contact numbers and bank account details are entered



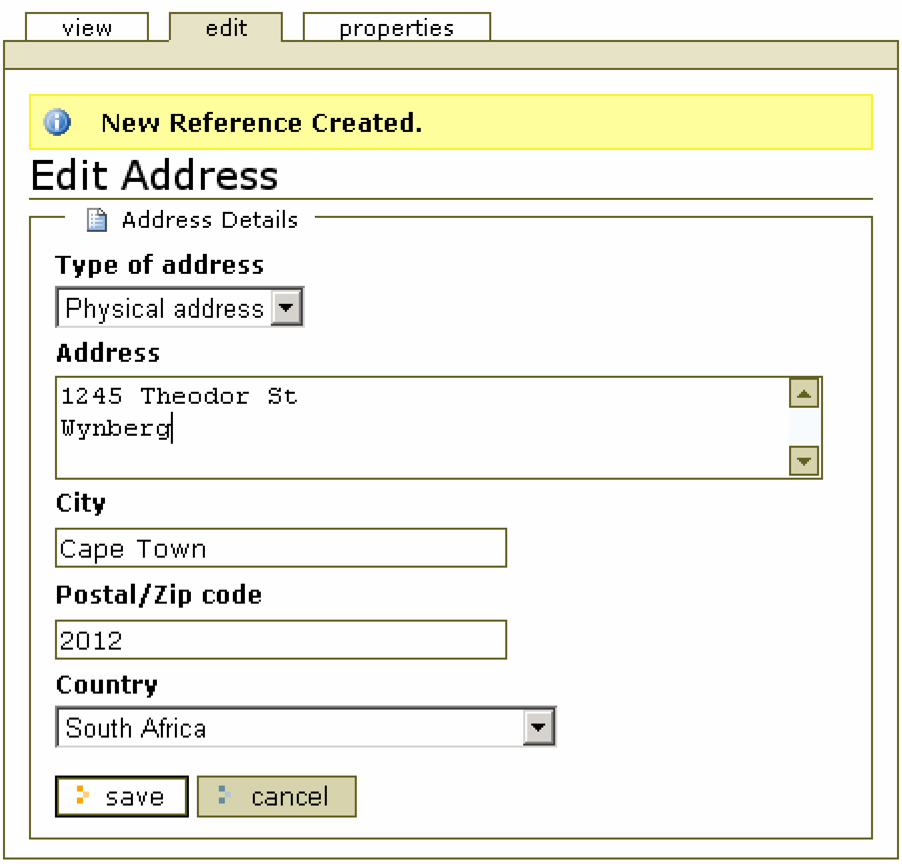
85. Laboratory details

Click on the **[next]** button to navigate to the address form



86. Laboratory address details

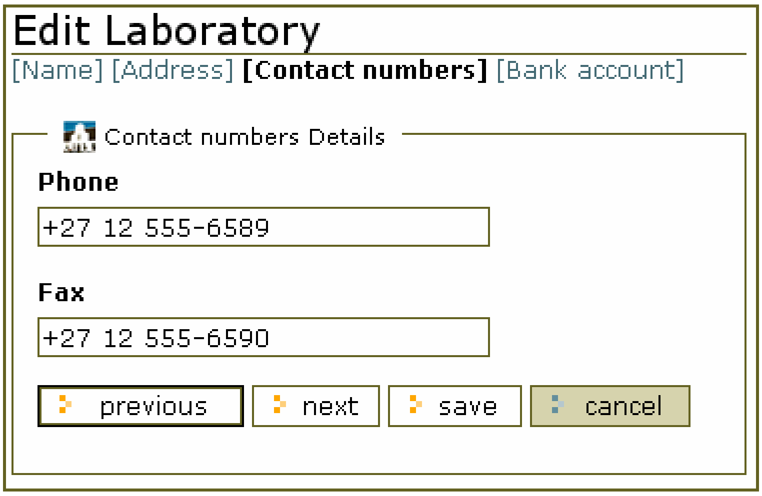
Enter the email address, then click on the **[add]** button to add up to four addresses



87. Laboratory address details

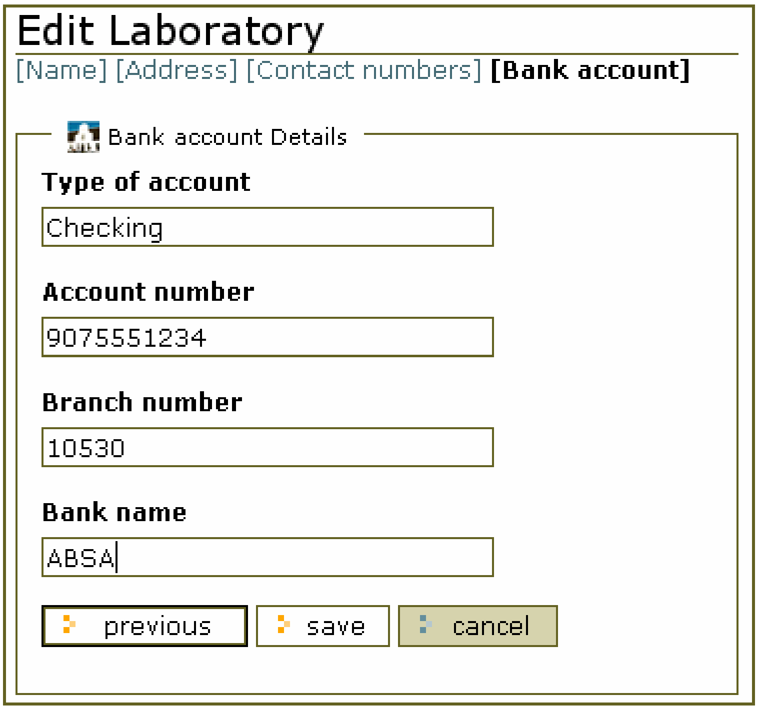
An address may be added for each of **Physical address, Mailing address, Billing address** and **Shipping address.** Select the type of address from the drop-down, and enter the address details. Repeat the address add procedure to add each type of address

Click on the **[next]** button to navigate to the Contact Numbers form



88. Laboratory contact numbers

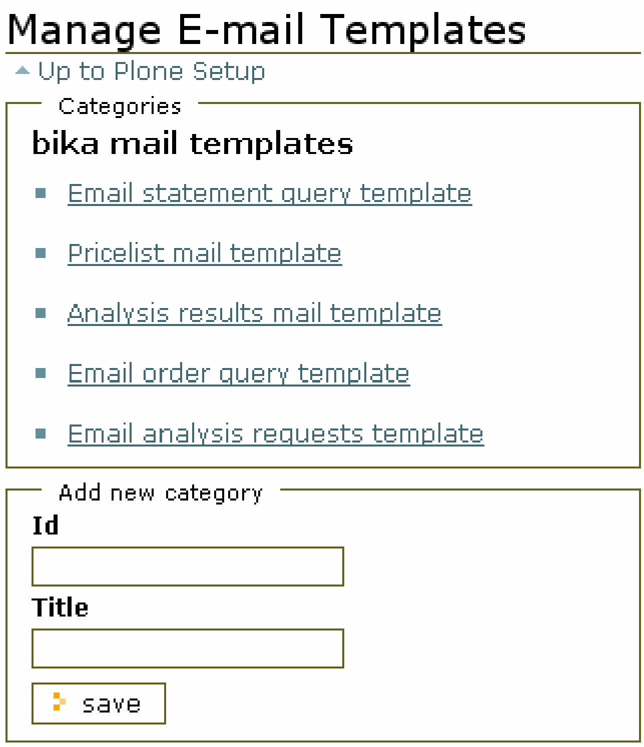
Click on the **[next]** button to navigate to the bank account details form



89. Laboratory bank details

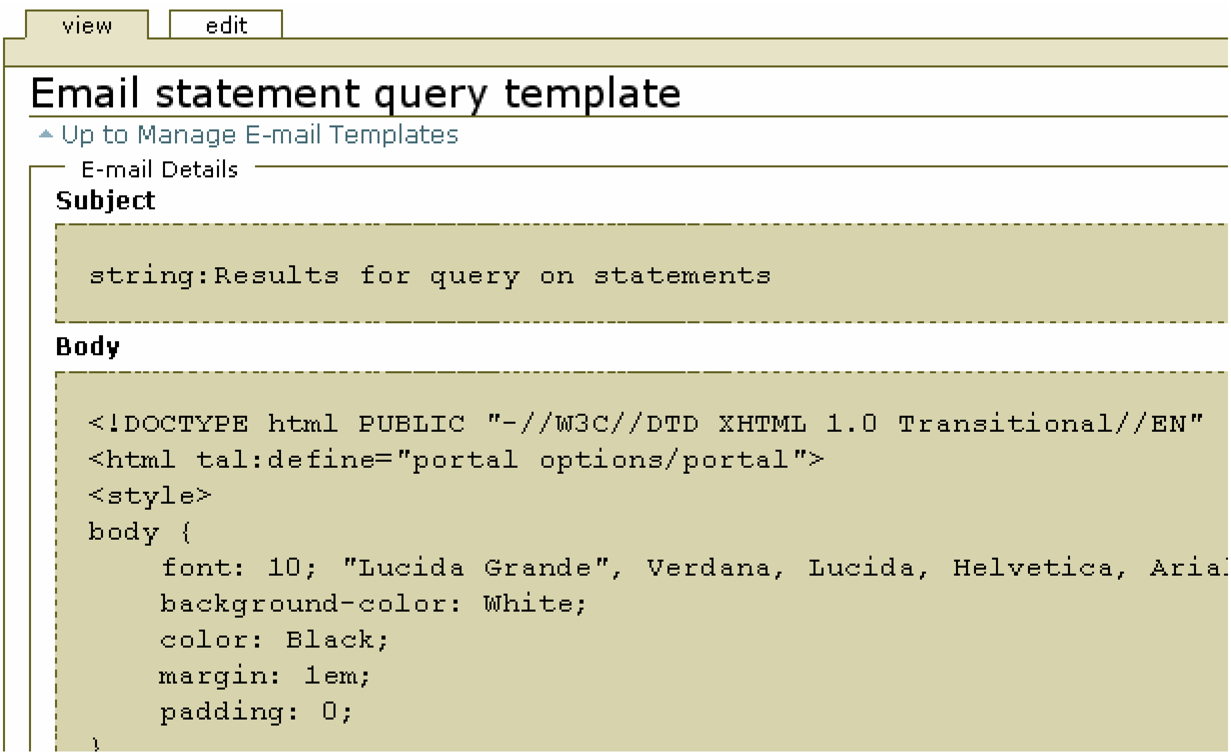
Mail Templates

The lab manager or systems administrator maintains lay-out templates for results publication to clients as emails and faxes. Graphics, e.g. logos, may be included in the templates



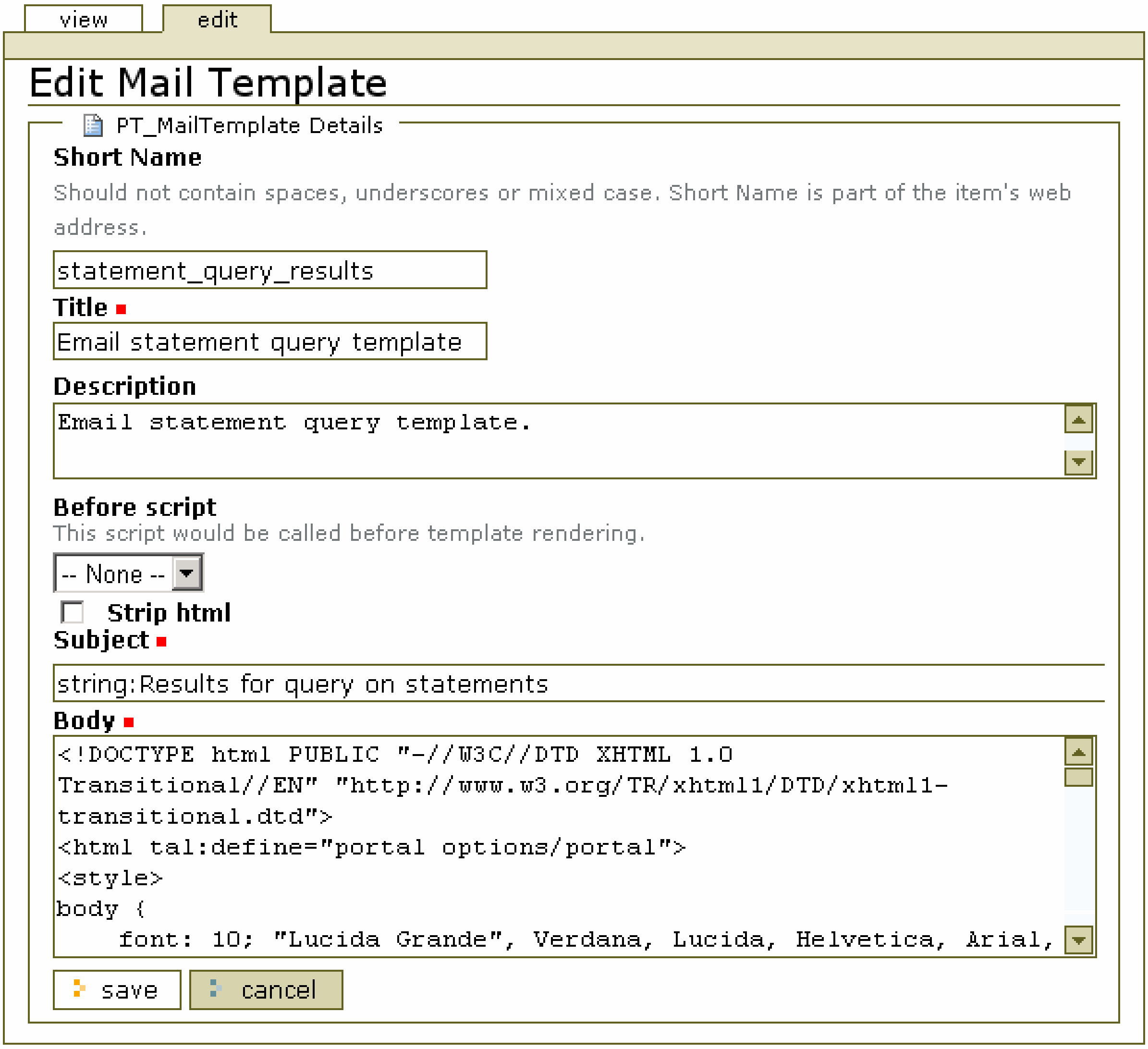
90. Email templates

Click on the links to view and edit the email templates



91. Excerpt of email statement template

Click on the **|edit|** tab to edit the template

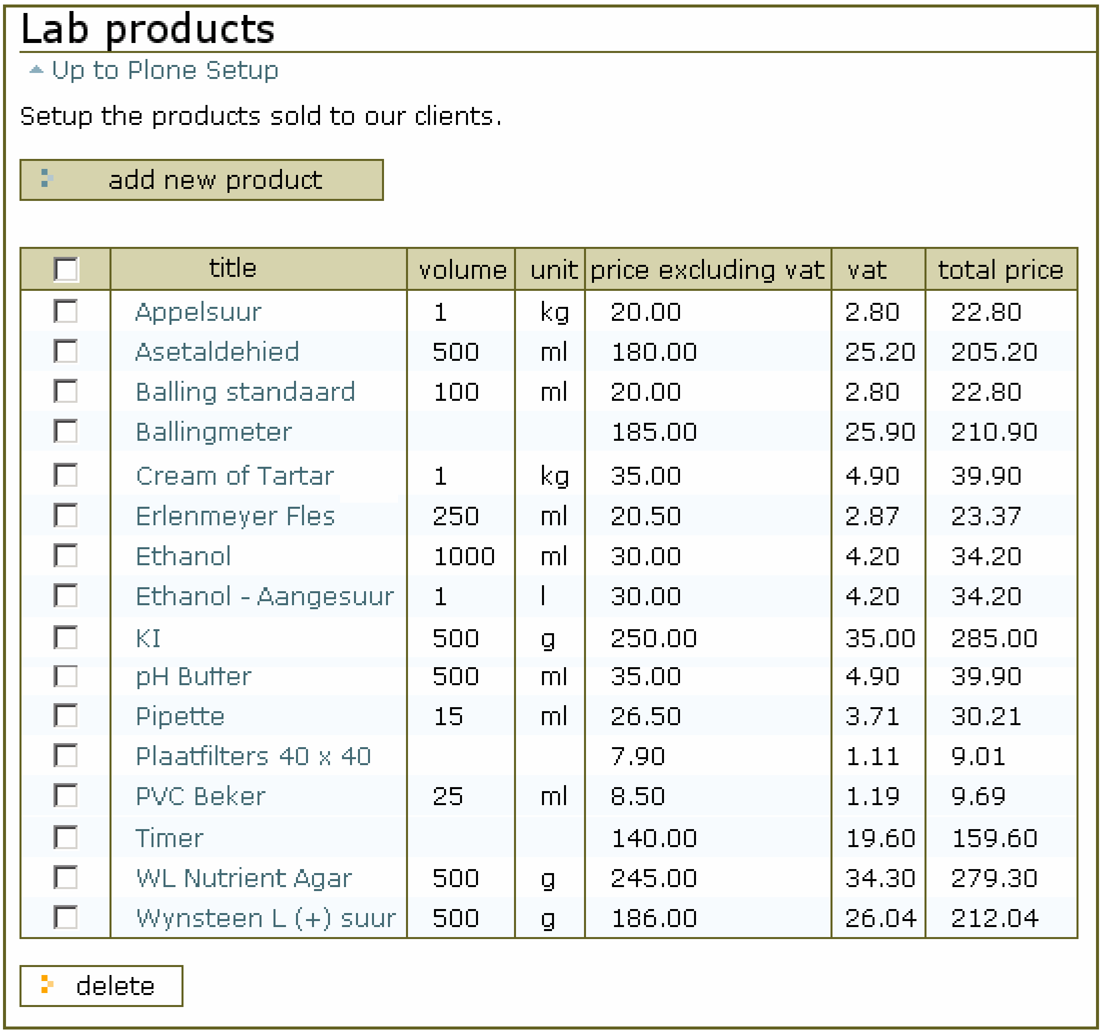


92. Email template edit

Click on **[save]** to commit the changes

Products

The products available for sale are specified in this area



Lab products

Up to Plone Setup

Setup the products sold to our clients.

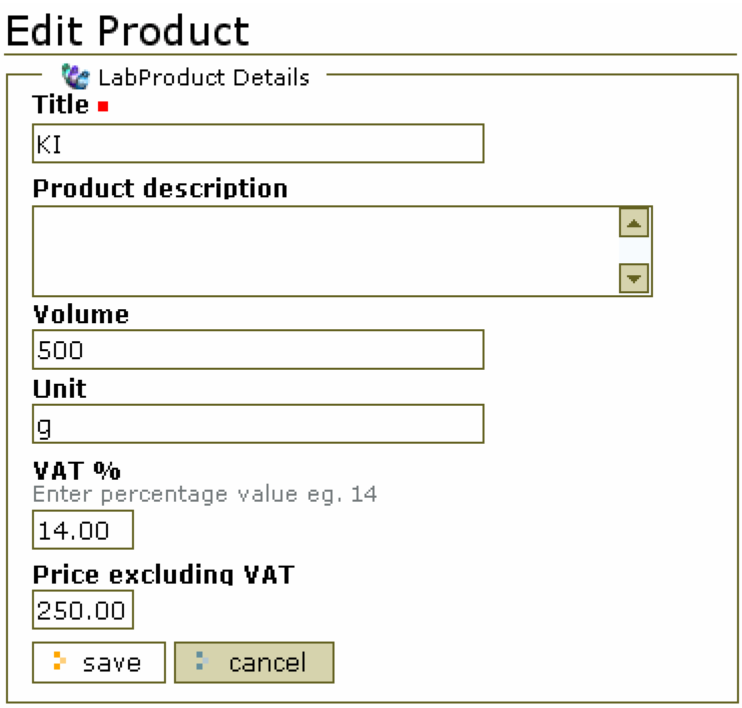
add new product

	title	volume	unit	price excluding vat	vat	total price
☐	Appelsuur	1	kg	20.00	2.80	22.80
☐	Asetaldehied	500	ml	180.00	25.20	205.20
☐	Balling standaard	100	ml	20.00	2.80	22.80
☐	Ballingmeter			185.00	25.90	210.90
☐	Cream of Tartar	1	kg	35.00	4.90	39.90
☐	Erlenmeyer Fles	250	ml	20.50	2.87	23.37
☐	Ethanol	1000	ml	30.00	4.20	34.20
☐	Ethanol - Aangesuur	1	l	30.00	4.20	34.20
☐	KI	500	g	250.00	35.00	285.00
☐	pH Buffer	500	ml	35.00	4.90	39.90
☐	Pipette	15	ml	26.50	3.71	30.21
☐	Plaatfilters 40 x 40			7.90	1.11	9.01
☐	PVC Beker	25	ml	8.50	1.19	9.69
☐	Timer			140.00	19.60	159.60
☐	WL Nutrient Agar	500	g	245.00	34.30	279.30
☐	Wynsteen L (+) suur	500	g	186.00	26.04	212.04

delete

93. Laboratory products

Click on a product title to edit the product details



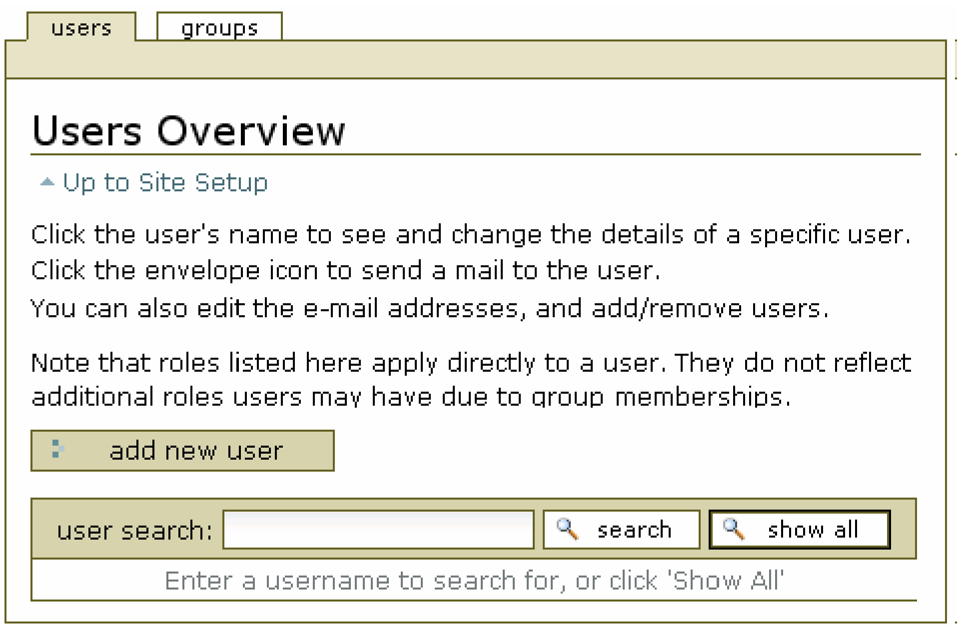
94. Edit product details

The VAT % defaults to the system defined value, but may be overridden here for this product

Users and Groups Administration

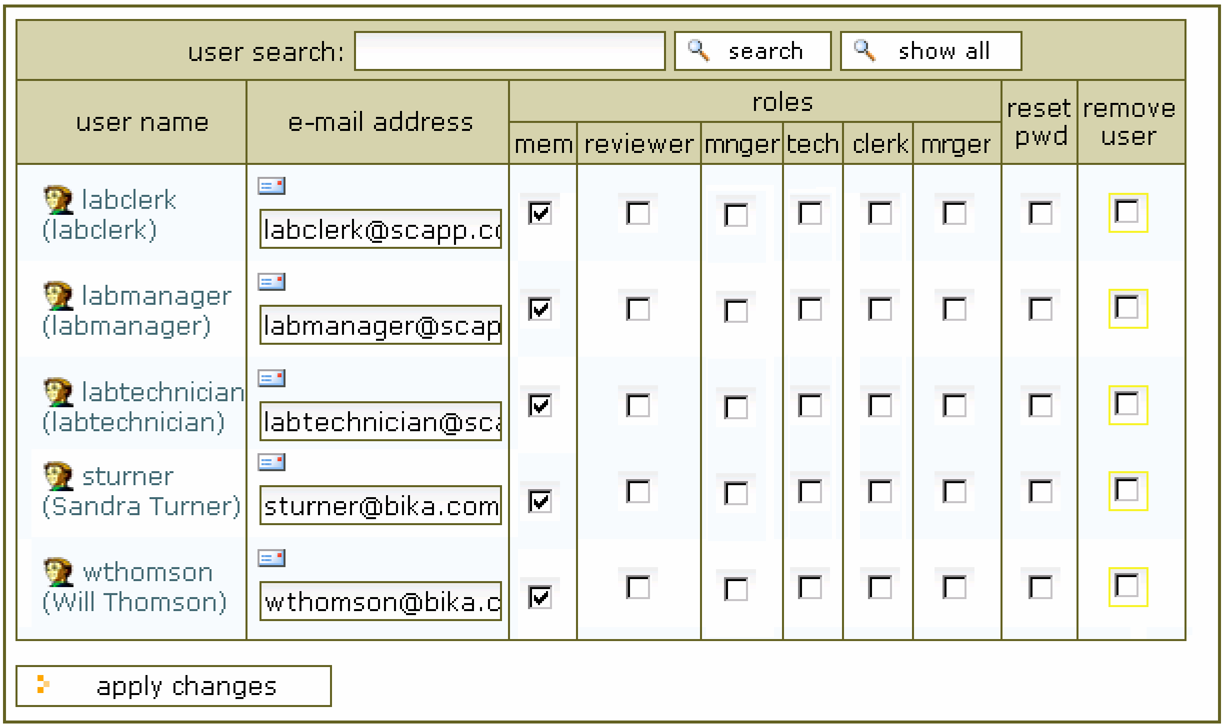
Users

Laboratory personnel are registered and assigned their roles from the **Users and Groups Administration** menu option. Note that client contacts are not registered here – they are accessed via the **Clients** option on the main menu



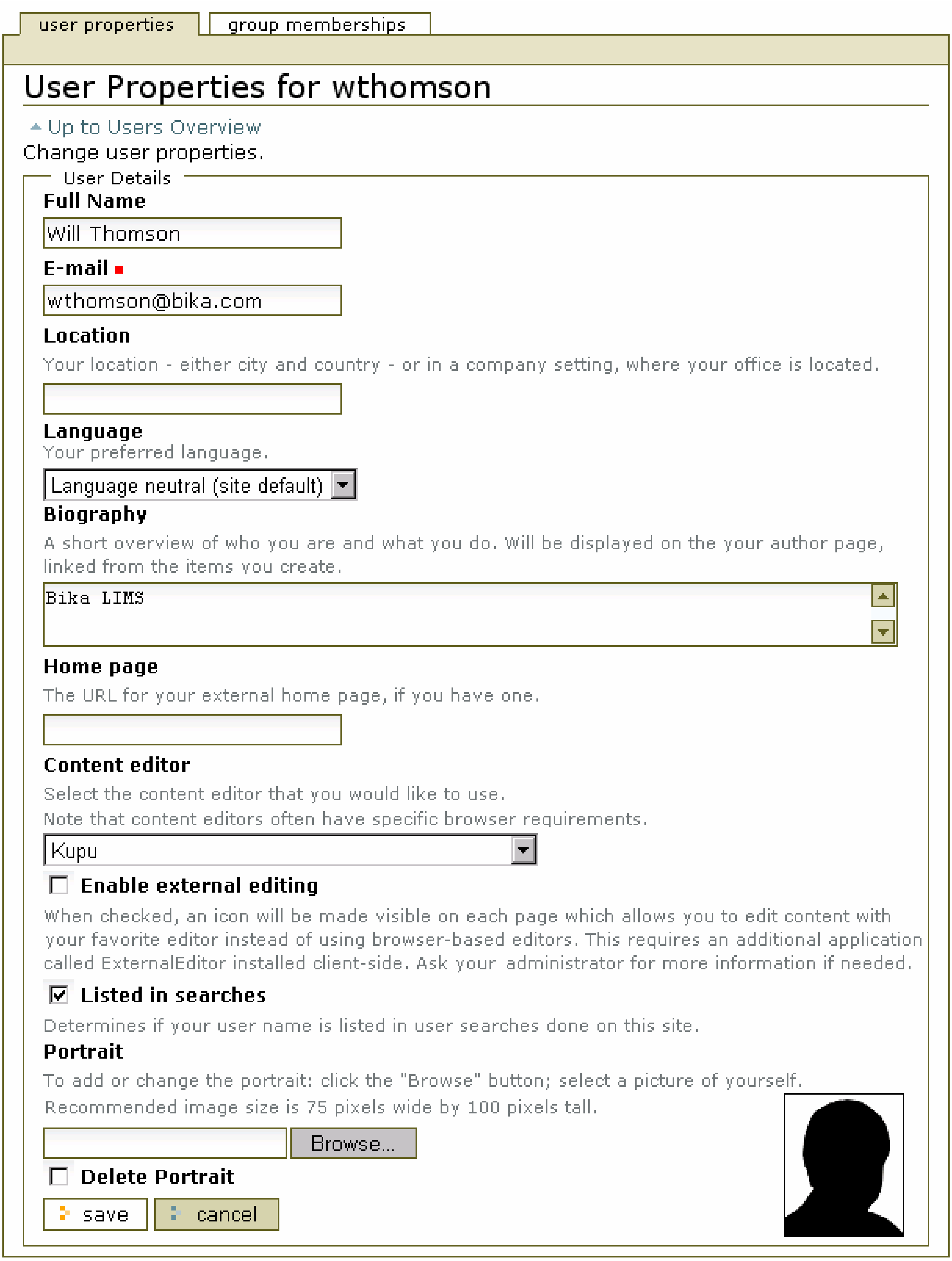
95. Users overview

The **[search]** or **[show all]** buttons display the users



96. Users

The email addresses may be modified, roles assigned the password reset, a user removed from the system. Click on the **[add new user]** button to add a user, or click on the **user name** to view or modify user details



97. User properties edit

Enter the user details, and optionally load a portrait of the user

Click on the **|group membership|** tab to assign this user to a group. See next section

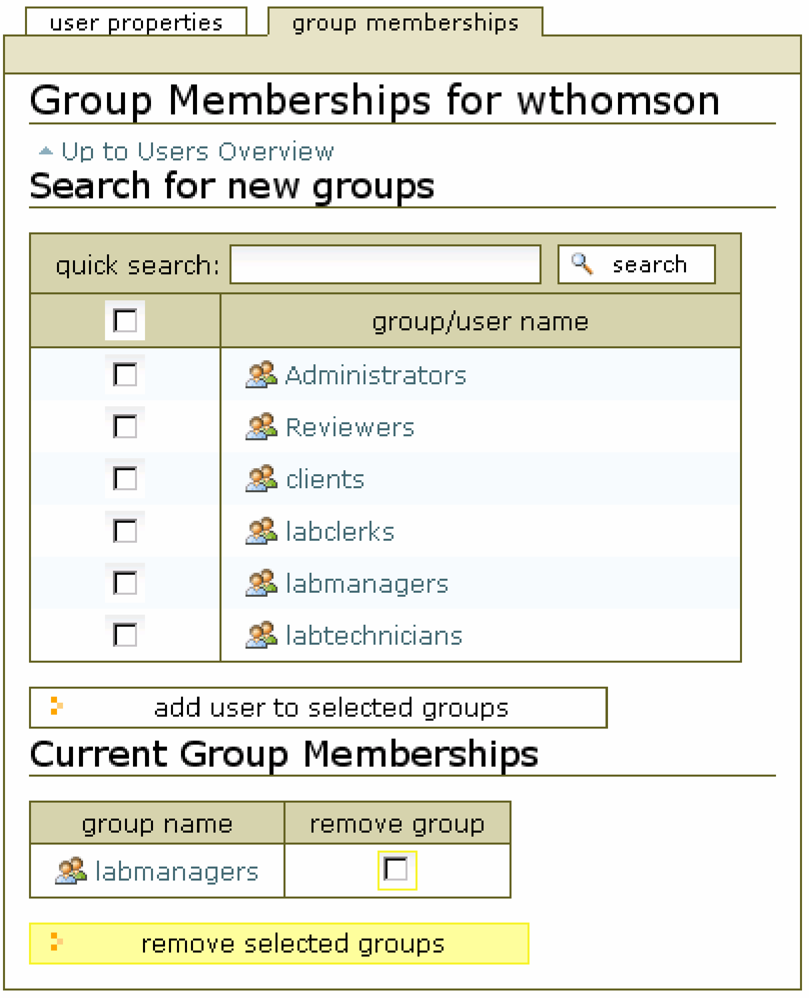
Groups and Roles

Roles determine the authorization and functionality the user has within the system. The following roles are defined:

- member – all members of the portal are in the member group. Client contacts are typically only members of this group, and may view only their own company's data
- reviewer – assigned to lab managers and any lab personnel authorized to verify results
- labmanager – Bika setup functionality and all other functionality except system setup functions reserved to the system administrator
- labtechnician – able to manage test results and job cards
- labclerk – able to receive samples, submit analysis requests and manage product orders
- manager
- owner

Groups are logical collections of users, such as departments and business units. Groups are then given roles, and users are assigned to groups. The users within the group inherit the functionality of the roles assigned to the group

Click on the **|groups|** tab from the main **Users and Groups Administration** area to manage groups

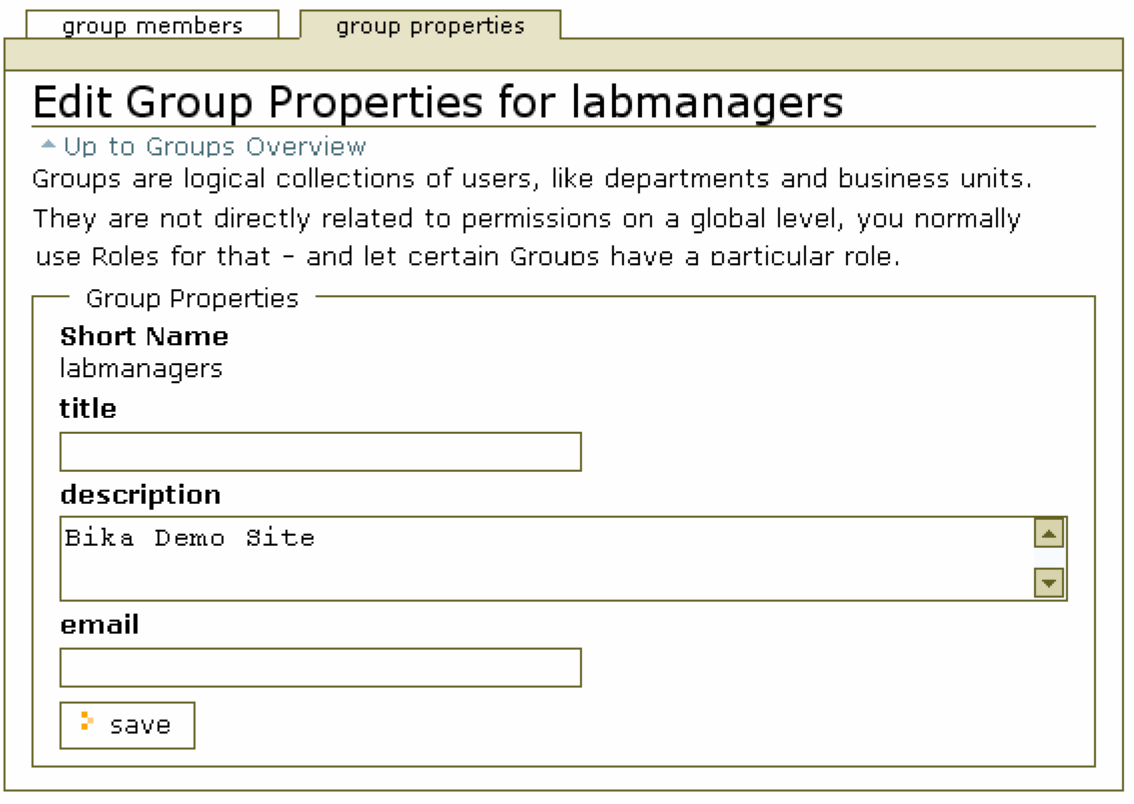


98. Group membership

The user's current group membership is displayed. To add a user to a group, select the appropriate checkboxes and click the **[add users to selected groups]** button

To assign roles to groups, select the appropriate checkboxes and click the **[apply changes]** button

Click on the **[add new group]** button to add a group, or click on the group name to view or modify group properties

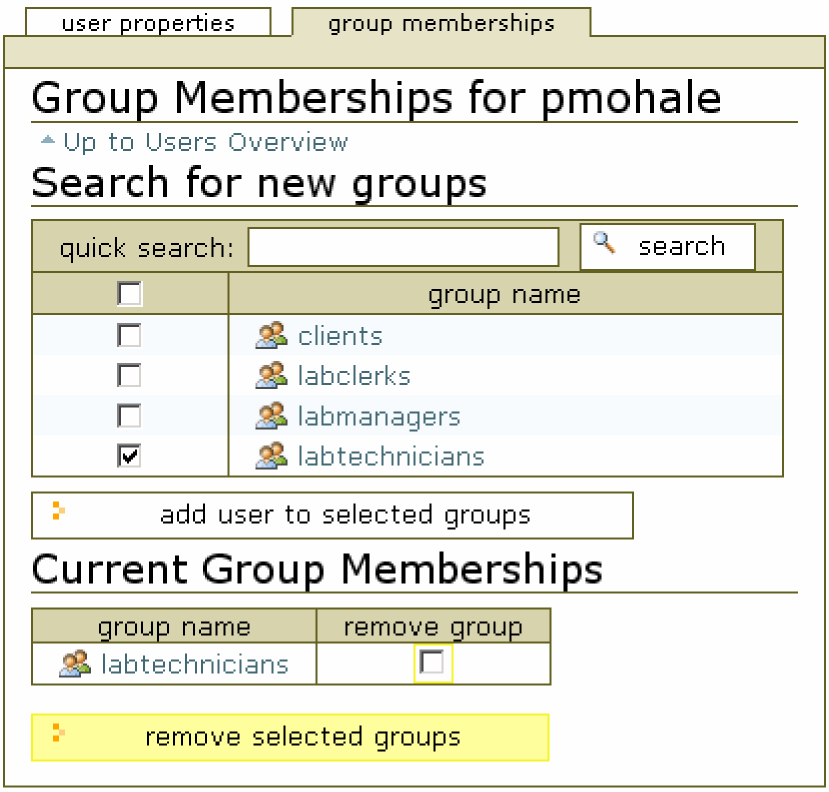


99. Group properties

Adding Users to Groups

Users may be added to groups in two ways: Edit the user, and select multiple groups they should join, or edit the group and add multiple users

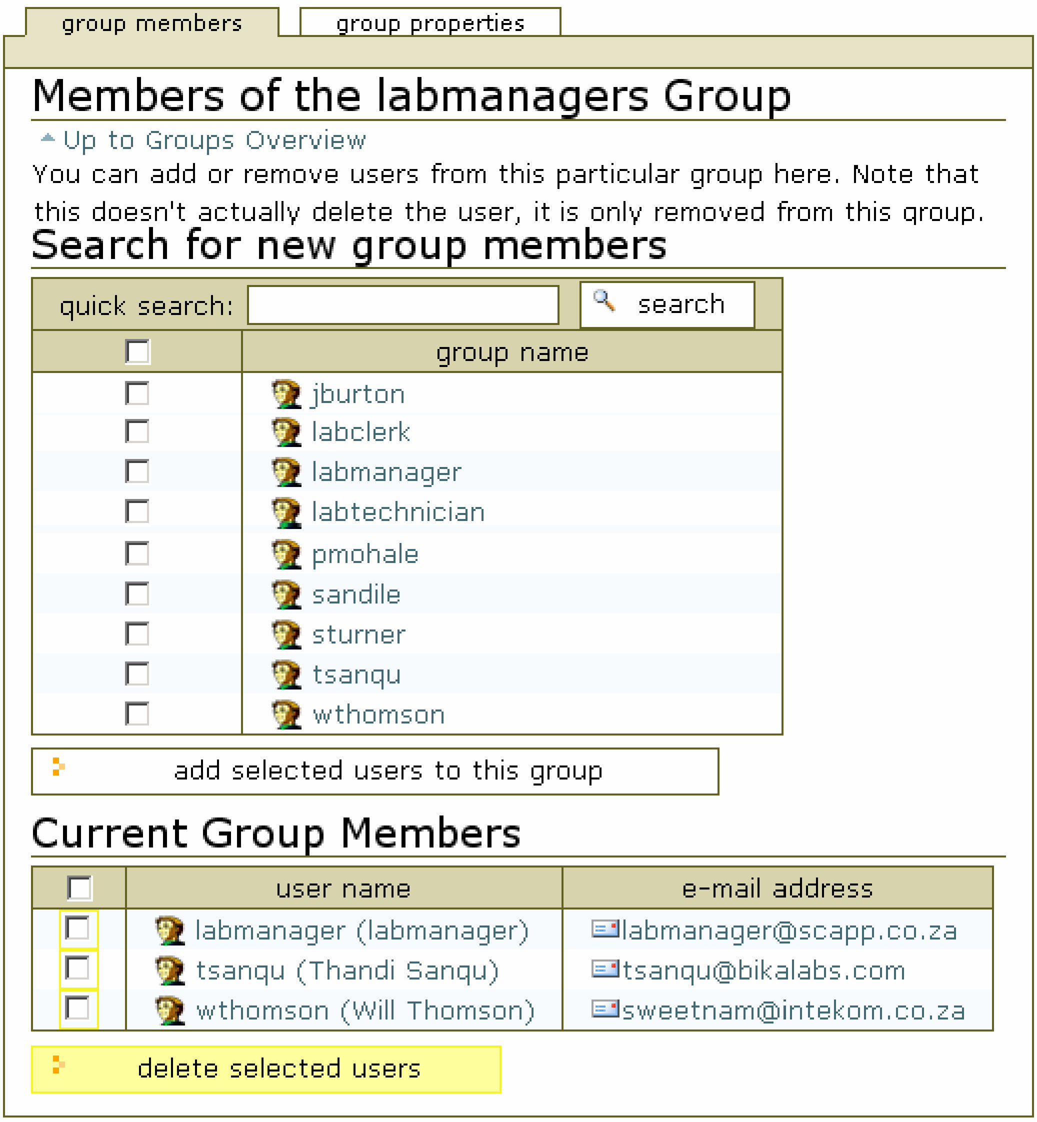
Click on the **|group membership|** tab of the user properties form:



100.Group membership for user

The available groups are shown above, while the current groups to which this user belongs are shown below. Select the appropriate checkboxes and click on **[add user to selected groups]** to add the user. To cancel the user's membership to the group select the appropriate checkbox from the **Current Group Memberships** list, and click on **[remove selected groups]**

To add multiple users to a group, click on the **|group members|** tab of the **group properties** form



101.Group membership

The available users are shown above, while the current group members are shown below. Select the appropriate checkboxes and click on **[add selected users to this group]** to add the user. To cancel the user's membership to the group select the appropriate checkbox from the **Current Group Members** list, and click on **[delete selected users]**. Deleting a user does not remove the user from the system, it is only removed from this group