Batch Invoicing

Version 0.2, lemoene, 25 April 2022

1. Purpose of this document

This document establishes a common understanding in layman language of how the software must meet the sponsors' requirements.

Signed off by both sponsor and contractor, it serves as a specification for programmers and as a quality management tool for acceptance testing by users thereafter. It governs accurate quoting on the work required.

1.1 Change Control

It is not uncommon that functional improvements to the specification are identified during testing and acceptance, which require the document to be adjusted, and by implication, the Budget, Delivery and Payment Schedules

1.2 Version history

v 0.3 28 April 2022

Changes to invoice body - all the Analyses in the Batches selected for invoicing, are counted and totalled per Analysis on Invoice lines

v 0.2 25 April 2022

Made changes to reflect new information that several Batches must be included on the same Invoice

v 0.1 26 May 2021

Original version used for first quote

2 Code structure and repos

The Issuing of Invoices should use the same machinery now used for the publication of COAs, using a Batch Invoice template

The functionality be developed in generic format as senaite.batchinvoice, from which a more specific lab Template be made

3 Background

NB. Not the same as Sample Invoices. The lab issues invoices per Batch and the functionality specified here must not be confused with Invoicing per individual Sample, which may later inherit the Batch Invoice functionality and lay-outs

In this case, Clients may have more than one Batch on the same Invoice and they have to pay the invoice before any processing is done on its Samples

This requires the Invoice to be PDFd when the Batches' information and that of its Samples and their Preparation and Analyses required have been captured

The Invoice must be versioned as Analyses may be added or removed from Samples further along the workflow, and an updated Invoice be issued

4 Invoice per group of Batches

When a big group of Samples are registered at the same time for a Client, the lab might break it up in smaller batches, e.g. a group of 100 Samples may be analysed in 10 Batches

The user selects the Batches to be included from a Client's *Active* Batch list and creates the Invoice. Invoice lines are separated per Batch

5 Configuration items

New attributes:

Client billing email address, in addition to its general email address, to be used for emailing Invoices

Lab billing email address, in addition to its general email address - copies of Invoice will be mailed to the lab's Accounts department at this address

Email invoices to Client Y/N - The lab needs this as Invoice won't be emailed to the Client

5.1 Decimal comma

Note that the lab uses commas as decimal marks. It is configured in the set-up and it must be read from there and applied in the Invoice

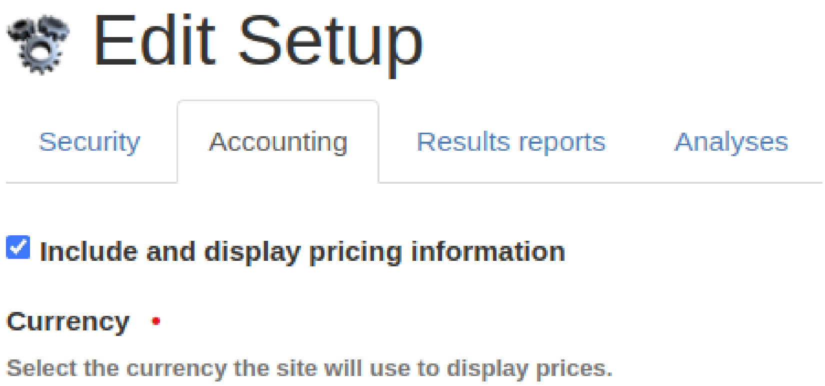
6 Prerequisites

6.1 1 Client per Batch

This functionality will only work if Batches are uniquely associated with batches can be invoiced

6.2 Only with Financials enabled

The Invoicing functionality is only available when the Financials setting is enabled in the LIMS setup. Inhouse labs won't need it



7 In the UI

In this edition only PDF Invoices are listed, per Batch, Client and Globally

In a next version a Batch's Invoice can be kept dynamically updated on its own Invoice tab for reviews

In the version put forward here, the Invoice is visible the first time in its PDF preview. And thereafter as saved PDF in the Batch's Invoice list, the Client's and global list

Only labmanagers see the Invoice information

8 Invoice Workflow. Use Case

In the text here, 'Accounts' indicates the lab's Accounting Department

1. Samples arrive from a Client with supporting documentation detailing the Analyses required
2. Lab clerks at reception capture the information in LIMS Batches
3. And store the Samples
4. In a best case scenario, the Clients are educated to register their own Samples, and prices are totalled and displayed for them as they go along
5. The Client needs to pay for the work before it may proceed
6. On the Client's *Active* Batch list, the user reviews and selects the Batches to be Invoiced and press the [Invoice] button
7. Best not to display the [Invoice] button on the global Batches list and only on the Clients' to ensure the Invoices compiled are from the same client

Then, like for COA publication:

8. The system renders the Invoice as PDF preview
9. If mistakes are picked up, it is modified on the Samples, and the Invoice previewed again
10. The user may go back, or Save and Email the Invoice from the system to the Client. **NB** In this case, the Invoices are not emailed to the client
11. The user issues the Invoices, by clicking an [Email] button on the Invoices preview
12. The Invoices are cc'd to the lab manager and Accounts
13. The Invoice is listed on the Clients' Issued Invoice tabs, and main Invoice navigation item
14. ~~The Invoice is hyperlinked on each of the Batches it contains~~
15. All the Invoices in the LIMS can be viewed by Lab managers from an Invoices item in the left hand navigation column
16. The Client pays and it is picked up by the Accounts Department
17. Accounts informs the lab that the work on the Batches may start
18. The lab retrieves the Samples from Storage
19. In the LIMS, the user goes to the Batches and *Receives* the Samples

20. The Samples are now in *Received* state and their Analyses become available for incl;usion on Worksheets

21. The Samples are prepared and analysed, their results captured, verified and published

22. If any Analyses were removed or added during the procedure, a new Invoice can be created, with new sequential invoice # and put through the same workflow

9 Emailing Invoices

~~The user previews the Batches' Invoice from a Client Batch list, the LIMS builds a PDF preview and displays it to the user~~

~~When found to be in order, he/she pushes the [Email] or [Save] button on the preview to formalise the document as a PDF~~

~~Similar to COA publication, the user can navigate back to fix issues on its Samples if necessary,~~

~~When an Invoice is Emailed it'll also be saved~~

1. When the Labmanager presses [Email] on the Invoices preview, a draft email is displayed, like for COAs
2. It displays a default text body, that the user may edit
    - 2.1. email subject: Batch Invoice <Invoice ID>
    - 2.2. in the email body, the batches included are listed and hyperlinked:

      Dear Sir/ Madam

      Please find attached an invoice for the analysis of the samples included in batches:

      <Batch ID>, <Client Batch ID, <Batch description>
      <Batch ID>, <Client Batch ID, <Batch description>
      ...

      Much appreciated
      <Lab name>

      *** This is an automatically generated email, please do not reply to this message. ***

3. The user may also deselect any of the recipients
4. The user clicks Send to complete the action

10 Batch Invoice IDs

The Invoice IDs remain configurable in the ID server in the LIMS setup, and could typically be made up with a prefix, Client ID, year and a sequence number, e.g. *Inv-AG22-001*

11 Invoice UI and Layout

11.1 Invoice Body

~~The content of this page changes if any of the Samples it includes, becomes cheaper or more expensive by adding more Analyses or removing some~~

~~This invoice preview is basically the HTML version of the Invoice body. The information here is printed in the Invoice when it is issued, the eventual Invoice is generated from this page.~~

The invoice body is made up of a table with Analysis totals from all the Batches included on the Invoice

E.g. if 25 Samples are processed in 3 Batches, all having different tests done on them, a summary and count is made of all the Preparation steps, Analysis Profiles and further individual Analyses are made an presente per row and Quantity, the count for each Analysis in the whole group of Samples Invoiced

It may result in an Invoice body like this:

Analysis of Samples in Batches.				
Item	Qty	Description	Price	Amount
1	25	Crushing & Pulverization 300g	$13,50	$337,50
2	16	PSD	$50,00	$800,00
3	25	LOI	$1,00	$25,00
4	5	Specific Gravity	$15,00	$75,00
5	12	Bulk Density	$15,00	$180,00
6	8	Screen FA	$70,00	$560,00
7	12	Aqua Regia Digestion	$8,00	$96,00
8	8	Au F-AAS	$13,00	$104,00
9	12	Au Pt Pd 30g FA-aq ICP-OES	$21,00	$252,00
10	5	XRF Elements FP	$40,00	$200,00
			Subtotal	$1 467,00

14 % VAT	$205,38
Total	$1 672,38

The rows are sorted as

Preparation steps **(in sort order)**

Profiles alphabetically

Additional ASs (if any) in sort order and then alphabetically

11.2 Invoice Total

The invoice amount is totalled at the bottom of the table, VAT calculated and the total indicated as the amount payable

11.3 Invoice Footer

Bank account information

Bank account:

<Account Name>

<Account Number>

<Bank name>

<Bank branch>

In the Geoangol Template, the Bank account information is:

Bank account:

BAI: AO06 0040 0000 8567 3998 1018 4

BIC: AO06 0051 0000 5683 0487 1010 7

CGA: AO06 0004 0000 0561 0508 1013 3

BMA: AO06 0055 0000 0615 0443 1017 2

When the Invoice is ready to be issued, the user presses the [Email] or [Save] button on the Invoice page

12 Invoice PDF

The PDF reflects the information on the Invoice preview tab described above, but prints it in business letter style with lab logo, including:

The invoice header with the lab address and contact information and lab logo. Followed by the Client's contact information

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NIF: 5405162850

Client name
Client address

Client Telephone #
Client email address

The Invoice number is displayed prominently as the 'Billing Note', and the Invoice Date, Job Requisition and Tax payer number

Billing Note: 22-0562

Job Requisition: FT000-01-2022

Tax payer number:

Date: dd Month Year

All the Samples on the Invoice will be for the same Order / Requisition number, and the Order number on the first Sample is printed as the Requisition number

12.1 Published Invoices

Clients get an Invoices tab, much like the current Analysis Reports tab and page where all the Invoices issued to Clients are listed and linked to their PDFs

All invoices, to all Clients, are listed to lab managers under an Invoices menu item in the left hand navigation column

13 Authorisations

Only lab clerks and lab managers see the Invoices page and Client Invoice tabs and it is only displayed to them, not to analysts or samplers

Only lab managers may use the Invoice action button and it is not displayed to anybody else

Clients may view their Invoices on their own Invoices page but have no other authorisations there