

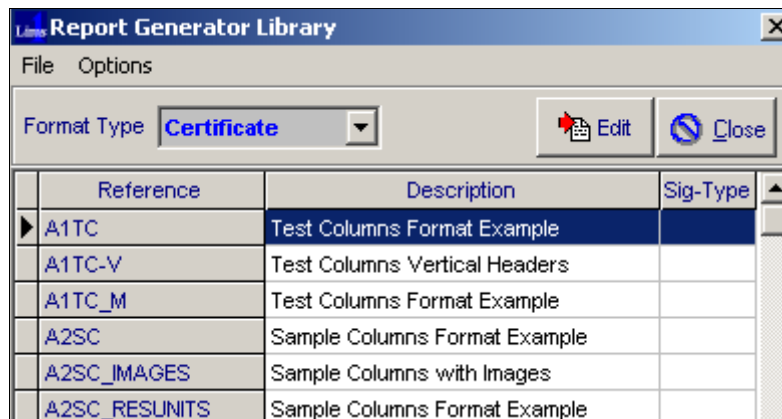
Lims1 REPORT FORMAT GENERATOR

Overview

The final step for routine laboratory operations is to create a Laboratory Report (Certificate of Analysis) for work performed. These reports can be quite basic or extremely complex according to analytical requirements and the requirements of clients for which the reports are to be provided.

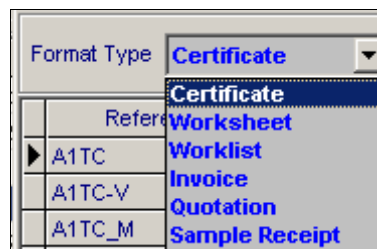
One of the more challenging areas for Laboratory Information Systems is provision of a comprehensive Report Formatting method which may be readily used by laboratory staff to create customised reports specific to laboratory and laboratory client requirements. While there are a number of 'off the shelf' Report Generator/ Writers available which may be used to create reports these systems tend to be either very difficult to use, inflexible or both. To overcome these limitations the Lims1 Report Generator has been developed from the ground up and fully integrated into the core Lims1 system to provide the laboratory with the ability to design and implement a wide range of reports including multi-formatted reports to handle complex laboratory reporting requirements.

The Report Format Generator may be used to establish Certificate of Analysis, Worksheets, Sample Receipt Reports, Worklists and Invoice formats.



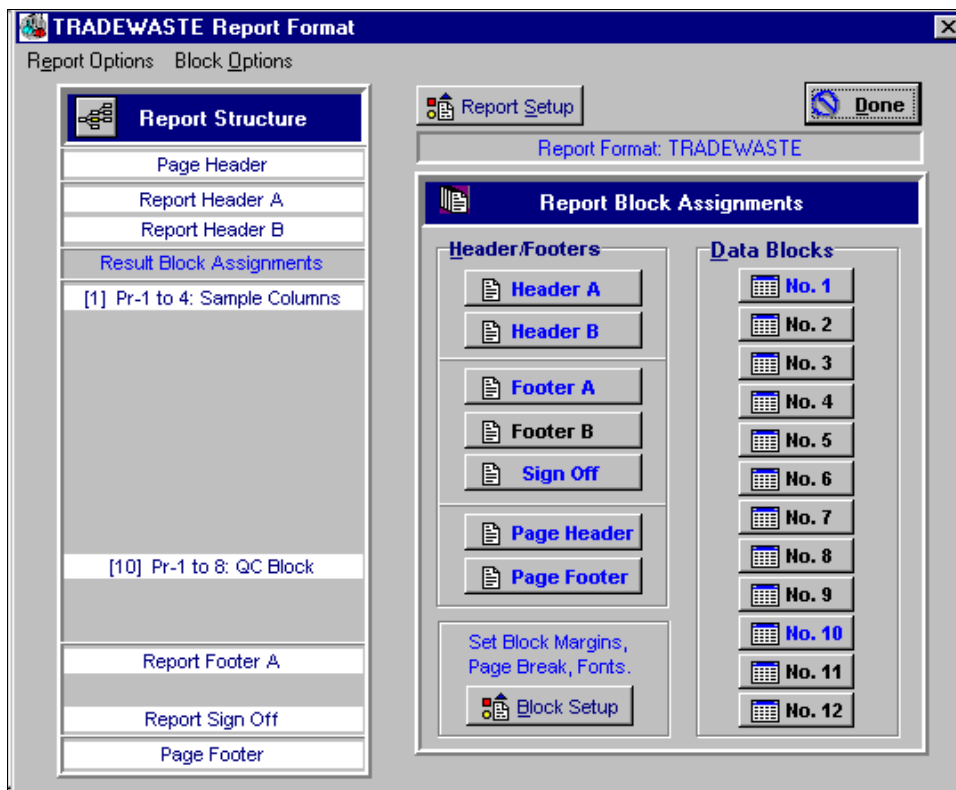
Types of Reports

The Report Format Generator may be used to establish Certificate of Analysis, Worksheets, Sample Receipt Reports, Worklists Invoice and Quotation formats.



Each of these types of reports may have a un-limited number of formats.

Report Format Status Screen



Report Format Construction

A laboratory report normally consists of the following components...

Report Heading : First blocks printed

Information such as laboratory reference codes, client information, key job registration information, dates and registration comments. In addition, Images such as Company Logos and Letterheads may be assigned to a Report Header.

Data Blocks : Body of report

Result Block Tables provide the ability to establish spreadsheet like grids with a number of formatting options. Analytical results would normally be laid out in these tables (other options are available) using test columns, sample columns or a free field format.

Tables of results may include descriptions of tests performed, reporting units, results reported in significant figures, calculated results, comments and other information. Up to eight individually formatted Result Blocks may be established for each format. This can include unique table format construction for each block and extend over multiple pages.

Report Footer: Printed after Data Blocks

Most often used to contain general user established text and additional 'work specific' comments relating to the job.

Report Sign Off: Printed at established page position on last page of report.

Normally includes identification of approving officer, title, date of approval, etc. The signature of the approving officer, stored as an image file, may also be assigned to the Sign Off Block.

Page Headings: Information to be printed on heading of each page.

Concurrent information such as Laboratory References, client information and dates may be included.

Page Footers: Information to be printed at footer of each page.

Normally would include page number and number of pages. May also include sign-off details for each page.

Development of Report Formats

A Report Format consists of a number of Formatted Blocks. These blocks can include both system database fields and user assigned 'text' fields to be included in the report.

Database fields are selected using a simple point and click method to select fields from menus specific to database functions or entry of text to be included in the report. Each database or text field can be assigned parameters such as font styles and justification.

In a similar manner to other report generators, a report format is divided into 'Report Blocks'. These blocks are individually established and placed in the report according to requirements. Each block is created as a separate entity. Report Blocks can also be saved and retrieved from a *Report Block Library* for inclusion in other reports.

The screenshot shows a dialog box titled "Report Header A" with a menu bar (Registration, Samples/Results, Comments, Setup Tables, Options, Invoice/Quote, Expand Form) and a toolbar (Edit Block, Text Label, Block Setup, Clear, Done, Cancel). Below the toolbar, it displays "Column 34" and "Line 1". The "Function" is set to "Awaiting Entry" and the "Field" is "Nil Assignment". The main area contains the following assignments:

- Job Reference: JobRef=====
- Job Description: JobDes=====
- Registration Date: RegDate=====
- To: ClientName===== Attention: ClContact=====

Example of a Report Block used for headers, footers and report sign off.

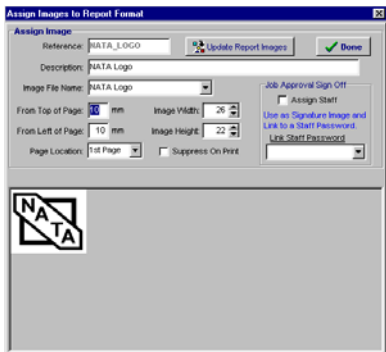
The screenshot shows a dialog box titled "Result Block 1 (Test Columns)" with a menu bar (Registration, Samples/Results, Comments, Setup Tables, Options, Invoice/Quote, Expand Form) and a toolbar (Text Label, Block Setup, Edit Table, Reset, Done, Cancel). It displays "No. Columns 18" and "Column Width 14 mm". The main area shows a table with 18 columns (Col-1 to Col-18) and several rows:

- Heading:** Our Referenc, Your Referenc, TestDesA, TestDesB, TestDesC, TestDesD, TestDesE, TestDesF, TestDesG, TestDesH
- Data Columns:** JobRef, SmDes, EResA_R, EResB_R, EResC_R, EResD_R, EResE_R, EResF_R, EResG_R, EResH_R
- Footer:** Units, UnitsA, UnitsB, UnitsC, UnitsD, UnitsE, UnitsF, UnitsG, UnitsH

At the bottom, it states "Table Type: Test Columns" and "Table Fields: Black=Text Field, Blue=Data Field".

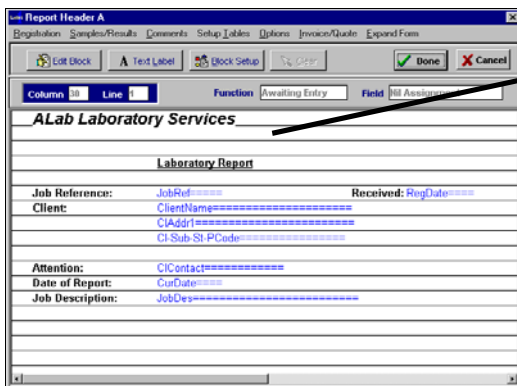
Example of Result Block Table Setup

Designing Reports: A report format is divided into report blocks including report headings, footer and data blocks. Each block is individually designed and then merged with other report blocks to create a report. The example presented below shows how individual report blocks are compiled into a simple laboratory report.

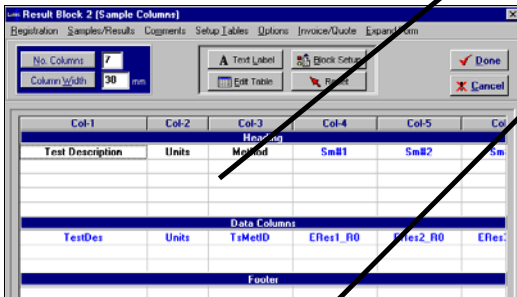


Create a Library of Images to be included in reports such as company letter heads, logos and signatures.

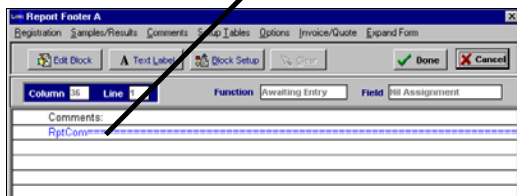
In this example a NATA Logo is placed on the report.



Report Header Block Setup




Results Data Table Block Setup



Report Footer Block Setup

ALab Laboratory Services



Laboratory Report

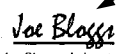
Job Reference: EX0010 **Received:** 6/05/01
Client: Acme Manufacturers Pty. Ltd.
 3 Pacific Street
 BRENTWOOD QLD 4111

Attention: Elvis Perkins
Date of Report: 28/05/01
Job Description: Lot 22 Trade Waste

Sample No	Sample Description
EX0010/1	Southern Pipe
EX0010/2	Eastern Pipe

Test Description	Units	Method	EX0010/1	EX0010/2
pH		5.002	7.3	6.8
Suspended Solids	mg/L	1.301	478	157
Total Organic Carbon	mg/L	1.308	44	23
Biological Oxygen Demand	mg/L	1.307	12	15
Total Oil and Grease	mg/L	1.304	255	(NT)

Comments:
 Samples will be discarded one month after the date of the report, please advise if you wish to have your samples returned.

Approved for Release by 
 Joe Bloggs, Laboratory Manager.

Signature Image included based on an authorising password.