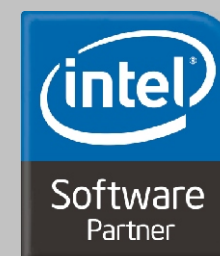
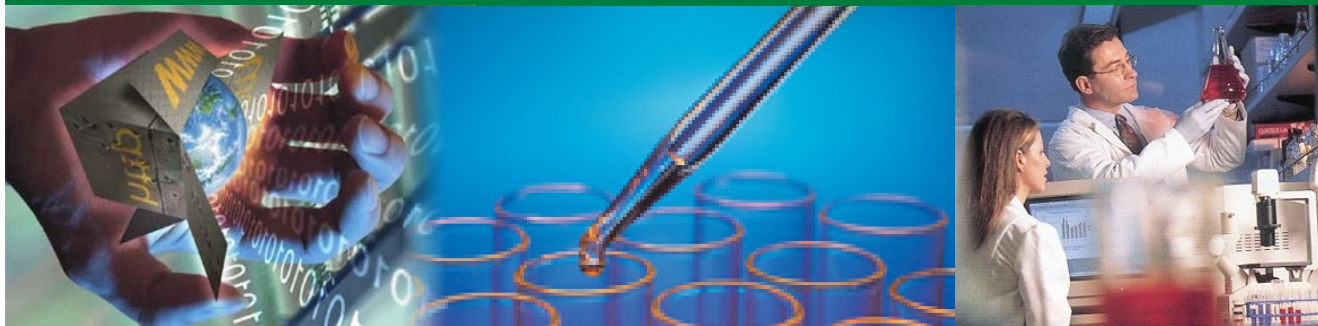


# OasisLIMS Labmaster<sup>®</sup>



**Cost saving,  
increases manpower utilization by 40%**

## **Saving in time and subsequent increase in efficiency / productivity while using OasisLIMS**

While working manually, details of a sample received for testing in a QC lab are entered in sample register. The analyst refers product specifications to see all relevant details like test procedures, tests to be carried out, standards and calculations etc. when a sample is issued to him. The analysis is carried out as per the specifications, results are calculated and compared with the standards. It is then decided whether the sample is passing or failing with respect to the specifications. Accordingly, the certificate of analysis is written in the prescribed format. It is checked by a senior analyst for its compliance with standards, completion of all tests, correctness of decision etc. The certificate of analysis is typed or printed through an editing software. It is re-checked by a senior analyst. Various labels are printed and pasted at different stages. The relevant entries are then made in the sample register indicating completion of testing of sample.

This is a typical sequence of working in a QC laboratory.

In order to evaluate the time saved while using a LIMS package, let us take an example of analysis of Paracetamol. To calculate the actual time spent on different activities in a lab, it is assumed that a chemist completes analysis of 3 samples of this raw material in a day. It is fairly a reasonable figure. It is also assumed that normally in any company, out of the total 9 hours of working, an analyst gets about 8 hours of effective working.

After making these assumptions let us now see the break-up of time spent on various quality control activities in both manual and OasisLIMS modes -

Let us start with the manual mode -

### **In manual mode**

Activity	Time consumed (in minutes)			
	Per sample	Chemist	Typist	Supervisor
Preparation of labels	15	45		
Calculations	10	30		
Report preparation	10	30		
Preparation of labels	15	45		
Report checking	5			15
Typing	10		30	
Re-checking	5			15
Subtotal		150	30	30
Referring to MTD/Pharmacopoeia		15		
Total		165	30	30

You will notice, the extreme left column lists the various documentation activities involved in testing a sample whereas the other columns give details on time spent on these activities by different persons.

It may be highlighted here that the figure of 15 minutes for writing labels is based on the fact that usually there are 5 to 10 containers per consignment. Taking the average as 8 containers and assuming the time taken for writing each label as 2 minutes, it will take about 16 minutes to write labels for all containers of the consignment.

Similarly, referring to Master Technical Dossiors or Pharmacopoeias has been kept separate since the time spent on this activity will be common for all the three samples.

This makes it - 165 minutes by the chemist  
                  30 minutes by the typist and  
                  another 30 minutes by the supervisor

for carrying out only the documentation work involved in testing of 3 Paracetamol samples.

Now, let us see the break-up of one chemist day -

Break up of One Chemist day :

In a working day, a Chemist conducts analysis of 3 samples of Paracetamol

One working day                   = 480 minutes   (a)  
Time spent on documentation = 165 minutes   (b)  
Time spent on analysis (a-b) = 315 minutes

In a working day, a chemist, who conducts analysis of 3 samples of Paracetamol has 8 hours (i.e. 480 minutes) available for effective working. Out of these 8 hours, he spends 165 minutes on documentation work.

Therefore, the time he spends on analysis and other manual activities is equal to 480 minus 165, that is - 315 minutes.

The figures of these two break-ups gives the total time spent by the Q.C. team on completing this activity.

Total time spent by Q.C. team on analysis of 3 samples of Paracetamol:

Activity	Time consumed (in minutes)			
	Chemist	Typist	Supervisor	Total
Analysis	Documentation	Typist	Supervisor	Total
315	165	30	30	540

It is 315 minutes plus 165 minutes plus 30 minutes each of both typist & supervisor thus making it equal to 540 minutes.

## In software mode

After sample entry, the software automatically takes over the further operations and generates the worksheet / protocol sheet giving all the tests required to be performed for the sample and user defined formats for entering readings / observations by analyst.

On completing the tests, all the readings / observations are fed into OasisLIMS. The package automatically calculates the results, compares the findings with the standards and also decides about the compliance or non-compliance with the standards. After this, it prints out the report in the prescribed format. Report checking and rechecking while using LIMS is reduced to random checking as its integrity is pre-established. Based on whether the sample is passing or failing, it also automatically generates the Approval or Rejection labels for each and every container.

Let us now calculate the time spent on documentation activity while in software mode

Activity	Time consumed (in minutes)			
	Per sample	Chemist	Typist	Supervisor
Sample login	3	10		
Date entry	3	10		
Subtotal		20		
Random checking				5
Total		20		5

With OasisLIMS, - there are just two activities i.e. Login and Data entry

The total time spent is just 20 minutes by the chemist  
and 5 minutes by the supervisor  
and there is no time spent by the typist

Now, since, from previous calculation, we know that it takes 315 minutes to carry out analysis and other misc. activities of 3 Paracetamol samples, let us then see for this software mode -Total time spent by Q.C. team on analysis of 3 samples of Paracetamol:

Activity	Time consumed (in minutes)			
	Chemist	Typist	Supervisor	Total
Analysis	Documentation			
315	20		5	340

It is 315 minutes plus 20 minutes plus 5 minutes making it equal to 340 minutes in total.

Approximate saving in time while using the software:

In Manual mode: 540 Minutes In software mode : 340 Minutes Saving in time: 37.03%

We can save about 200 minutes every day per chemist. This time can be effectively utilized in other activities of the department.

Thus, use of the software results in saving valuable man-hours of technical staff, eliminates time spent on calculations, writing and checking reports thereby utilising it more effectively to bring about an over all increase in productivity.

## One time activity while using OasisLIMS

Once the input format for a test is set in the package, generation of protocol sheet and subsequent entry of readings / observations is very well organised for all the products (RMs / FPs / Intermediates / Bulk / Packing etc.).

Product test links can be referenced or copied for similar products / different strengths of a product.

Default values may be used for constants (such as dilutions, titration factors, wavelength etc.) to minimise data entry time.

Once prepared in the package, subsequent maintenance of product specifications is automatic. History of specifications is also automatically maintained.

Analytical data is maintained centrally under OasisLIMS and entire information is available instantaneously.

## Some other important aspects

OasisLIMS is an excellent management control tool.

OasisLIMS may later be interfaced with your instruments.

It may also be interfaced with your ERP package, if any.

There are in-built checks in the system at all possible levels.

It serves as a viable alternative to time-consuming operations.

It improves laboratory functioning / operations as per cGMP/ GLP.

Integrity of the package is pre-established. This reduces time of senior technical personnel while checking certificate of analysis etc.

Permitted sequencing of steps is enforced with use of OasisLIMS.

With OasisLIMS, there is restriction on generation of duplicate controlled documents, such as work sheet, certificate of analysis etc.

As entire data is centrally located, activities such as stability data compilation and trending of analytical data are extremely easy with OasisLIMS. In manual system, this otherwise requires lot of data to be organized from different sources.

Calculate of results of test methods such as content uniformity, release pattern, dissolution etc, and manually cross checking the same with the standards is a tedious and time consuming job.

With OasisLIMS, it hardly takes any time.

## Oasis Infotech

(A division of Oasis Test House Limited)

### Corporate Office

SP-2, 22 Godown Industrial Estate, Jaipur, Rajasthan, India

Phone: 91 141 2214001, 2211254, 2211417 e-mail: [oasusers@gmail.com](mailto:oasusers@gmail.com) / [oasusers@rediffmail.com](mailto:oasusers@rediffmail.com)

