

cResults Presents: Smart-QC™ Cost of Quality Module

The most robust platform for QC Laboratories - capacity planning for analysts / instruments and tests allocation to analysts across the various laboratories

In today's business environment and economic conditions, most of the companies in the life science industry are focusing on two main areas: **Cost** and **Cycle Time**. Lean and Six-Sigma teams are getting more pressure to accelerate process excellence initiatives and expedite the realization of these cost reduction improvements. For the past decade, many companies have engaged in an effort to better understand their internal cost of their quality operation. (both QA and QC) But, due to the complexity and the lack of comprehensive data structure, they end up with a very high level cost allocation to come up with an estimate of their cost of product / test, cost of reviewing a batch record and more.

DIRECT COSTS: In Smart-QC, we have created an accurate and robust Cost of Quality module. The model includes hands-on-time (HOT) by test for both analysts and instruments from the planning module (DIRECT RESOURCE), which are aggregated to the product level. The analysts cost is calculated by multiplying the hourly cost per lab resource with the HOT. The total instrument direct cost is calculated in similar manner by multiplying the direct hourly cost of each instrument that participated in the test and the required hrs. based on the standards that are used in the Planning module. Furthermore, additional direct costs are included related to consumables, and sample costs that are collected for test and product level.

INDIRECT COSTS: The direct costs are calculated based on the direct HOT for both Analysts and Instruments as well as the related materials associated with the testing. Smart-QC offers various allocation methods which allows the users to select how the over-head and the indirect costs will be assigned to each product. Some of the allocation method / cost drivers leverage the planning data that were already collected and used for resource planning. These include cost drivers as volume, analyst time, instrument time required and more.

The cost of quality module is directly connected with the forecast hence users can easily translate the new given demands and their effects in terms of QC Laboratories cost. Smart-QC allows the user to save a base-line (i.e., 2009 Budget), while assessing various scenarios / initiatives and see what will be the impact on cost. These initiatives can be related to MAKE OR BUY decisions, Automation, campaign strategy and more. By having an integrated cost of quality to the resource planning, the QC management team can also generate their expected budget based on a given forecast, stability volume, reduced test program and more. Finally, Smart-QC enables the QC management team to generate costing related reports such as: Direct Cost Per Test, Direct Cost Per Product, Cost Per Test Per Period, Cost Per Product Per Period, Cost By Category, Top 10 Cost Items by Period, Lab Budget By Item / Work Center, Cost by Work Center and more.

In summary: Today's economy enforces us to take some of the costing techniques and approaches to the 21st century and demands more accurate and value added cost modeling to help the process excellence team focus their effort on high cost product / test / cost items to drive cost reduction and value added initiatives.



www.Smart-QC.com


Boosting Operating Performance


Manage Efficiency

1.888.366.7660 | www.cResultsConsulting.com



3 Executive Drive 2nd Floor, Somerset, NJ 08873 P: 732-748-1990; F: 732-748-1993

Smart-QC Costing Module is another innovation to help laboratories better manage the current pressure on cost reduction

Cost Parameters Types Cost Category Per Test OH Type Cost Drivers Cost Category

Rows

Parameter ID	Parameter Description	Comments
100	Volume (Samples)	Allocation will be done based on number of Samples in the applicable work center
200	Square Feet	Depreciation will be allocated based on actual space used by each work center
300	Hand On Time (HOT) ANALYSTS	Allocation based on HOT used in each applicable workcenter
400	Instrument Time (Equipment Hrs.)	Cost as Calibration, En

Smart-QC provides the platform to enter various costing information such as OH, Product and test costs, Resources cost and more.

Furthermore, **Smart-QC** allows the usage of various allocation methods and cost drivers to improve the accuracy of the cost allocation of in-direct cost on the various work centers (i.e., Finished good lab, Stability, Raw Material) as well as on the product level. This visibility provides Process Excellence team with a more focused approach to cost reduction, and the Sales and Marketing team accurate cost of quality that could be significantly impacted by volume.

The test cost table provides the user the choice to enter various consumables cost that are used during the test which are divided into categories such as media, mobile phase, glassware etc., or enter a total cost number.

Active: Test Id 690.1.16 Sub Test Id General

Test Cost

<input type="checkbox"/>	Test Cost Category	Qty	Unit Cost	Total Cost Per Rem	Comments
<input type="checkbox"/>	Glassware	1	1	1	
<input type="checkbox"/>	Chemical	2	4	8	Media and Mobile
<input type="checkbox"/>	Consumables	10	1	10	
report total:				19	

TEST COST

1 - 3

Test Id	Sub Test ID	Test Desc	Test Group ID	Workcenter ID	Cost
690.1.15	General	690.1.15-General	Physical/Qualitative (1)(RM)	RM Testing	9
690.1.16	General	690.1.16-General	Physical/Qualitative (1)(RM)	RM Testing	9
690.1.17	General	690.1.17-General	Physical/Qualitative (1)(RM)	RM Testing	9
690.1.18	General	690.1.18-General	Physical/Qualitative (1)(RM)	RM Testing	9
690.1.19	General	690.1.19-General	UV (1)(RM)	RM Testing	9

At the end, Smart-QC provides robust reporting capabilities that includes cost per product, cost per test as can be seen in the example on the right. The cost per sample based on assumed campaign size is multiplied by the volume and provides the total cost per product for a given period / volume as well as for test. This information can be sorted by cost and user can explore the highest cost test / product and the components of this cost that can be tackled by the Process Improvement team.

SMART QC Manage Efficiency

PRODUCT SUMMARY COST

Base Line OH Cost General Parameters Workcenter

Rows

Period	Product	Qty	Workcenter	Resource Id	Hourly Rate	Resource Requirement	Cost	Resource Req. Per Sample	Sample Cost
2009	120.03.1.FG	46	FG Testing	Analyst	40	597.35	\$23,894.	12.99	\$519
2009	120.03.1.FG	46	FG Testing	Distek Disintegrator	3.5	28.75	\$101.	0.63	\$2
2009	120.03.1.FG	46	FG Testing	HPLC	10	106.00			\$23
2009	120.03.1.FG	46	FG Testing	Oven	2.5	2,358.00			\$28
2009	120.03.1.FG	46	FG Testing	TLC	3.5	54.00			\$4
2009	120.03.1.FG	46	FG Testing	UV	8.5	71.75			\$13
2009	120.03.1.ST	46	Stability Testing	Analyst	40	264.80			\$30
2009	120.03.1.ST	46	Stability Testing	HPLC	10	106.00			\$23
2009	120.03.1.ST	46	Stability Testing	Oven	2.5	786.00			\$43
2009	120.03.1.ST	46	Stability Testing	UV	8.5	31.50			\$6
2009	140.01.1.FG	80	FG Testing	Analyst	40	1,651.88			\$26

Cost Model