Proficiency Testing
Ian Baxter
We all know what it is about

- Proving your accuracy
- In a Round Robin or internal comparison testing
- To satisfy accreditation requirements
What we do

- Receive the test samples
- Perform the analyses
- Forward the results by mail or online
- Wait for the report reviewing performance
- Congratulate ourselves on our skills
- Occasionally do a bit of checking if all the other labs are ‘out’

Easy
Of course we never ...

But then ...

PROCRSTINATE
NOW
AND
PANIC
LATER

Results Count
Accreditation Audit!

Do you recognise these?

- Which Programs and Rounds did we join in?
- Which samples?
- Where is that report?
- What were our z-Scores?
- Didn’t someone write a report on that outlier z-Score?
Now we panic

- Extra work to find, collate and check all your documents
LabWare to the rescue!

KEEP CALM
BECAUSE WE HAVE
PROFICIENCY IN OUR HANDS

KeepCalmAndPosters.com
“Proficiency Testing Component Template”

‘Component’ means that it can be applied to any existing system

Under the ISO 17025 Template umbrella, but is managed separately

It is available from LabWare in conjunction with consultant time

Let’s explore the concepts (not too detailed)
Proficiency Testing Template

- Records the Programs and Rounds you participate in
- Links to a Proficiency Testing Project
  - In-house analysis samples
  - Separate samples for the results summary to report back to the organiser
  - A place to store your z-Scores
- File links to documents
- Links to Investigation Manager for those outlier z-Scores
- And more
**Main Interface**

The image shows a screenshot of a software interface for a proficiency testing program. The interface includes a table with columns for Group Name, Reported Name, Prefix, Program Type, Organiser, Program Involvement, Coordinator, and more. The table details a program named ACME-PT_WATER, which is for Acme Proficiency Testing - Water tests, conducted twice yearly. The interface also shows other details such as the frequency (2), frequency units (Years), next round due date (12-NOV-2014), and project template (PROFICIENCY_TESTING). The lower part of the screenshot includes a section for Prof Test Program Analytes, showing measurements for phosphorus (P) with an active status and one replicate.
Program Details

- List the analytes and matrices used in the proficiency testing program

- List your lab as a participant
Record each Round

- Record the Round Number and Dates
- Links to Project and Report
Project details and options

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Project Samples
But wait, there’s more ...
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- The Proficiency Template helps record your participation in PT rounds organised by other parties, however …

- Many of you will organise PT rounds
  - For your internal, interstate and/or overseas laboratories
  - For a jointly shared and organised PT program where you will act as the organiser on a rotational basis

- The Proficiency Template is designed to help you act as the organiser of the round
Features for the Organiser

- Program and round specification
- Document creation
  - Cover Letter – one per participant
  - Instructions Sheet – generic
  - Results Sheet – one per participant
- Project to record all results and outcomes
- Statistical evaluation of results
- Generate the Evaluation Report
  - Including z-Score bar chart graphs
- Document templates are provided
<Subroutine.PROF_TESTING_COVER_L>

<<var:notificationDate>>

<<var:contactFullName>>

<<var:contactFullAddress>>

Dear <<var:contactFirstName>>

RE: <<var:profProgramName>>

We have recently been in contact with you about the Testing Program.

Please find enclosed with this letter:

- Copy of instructions to participants
- Results Sheet

Please read the instructions carefully: The results sheet must be return to Generic Company Ltd no later than <<var:resultsDueDate>>
Project Samples for Statistics

PROFICIENCY_TESTING : PT-Demo-01-140522

Summary | Samples | Results
---|---|---
32 TEST-(13)-DEMO-01-EFFLU-1
33 TEST-(13)-DEMO-01-EFFLU-2
34 RSLT-(13)-DEMO-01-EFFLU-1
35 RSLT-(13)-DEMO-01-EFFLU-2
36 RSLT-(72)-DEMO-01-EFFLU-1
37 RSLT-(72)-DEMO-01-EFFLU-2
38 EVAL-DEMO-01-EFFLU-1
39 EVAL-DEMO-01-EFFLU-2

| Aliquot | False |
| Approval Id | 0 |
| Approved | False |
| Changed On | 11/06/2014 11:18:59 |
| Chk Aliquot Specs | False |
| Chk Aliquot Status | False |
| Collection Offset | 0 |
| Composite | False |
| Date Completed | 11/06/2014 11:18:59 |
| Date Started | 11/06/2014 11:18:35 |
| Description | Effluent |
| Has Flags | False |
| In Cal | True |
| In Control | True |
| In Spec | True |
| Investigated | False |
| Login By | SYSTEM |
| Login Date | 27/05/2014 09:59:55 |
| Lot | 0 |
| Modified Results | False |
| Num Containers | 1 |

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Functionality

- What you have seen is available

- Planned enhancements
  - Investigation Manager link
  - The Evaluation Report for an individual participating laboratory
  - Establish protocols for data transfer
    - XML files
    - Program / Round details
    - Results
    - Between LabWare users and hopefully to/from commercial PT organisers
  - Preparation of samples (e.g. homogeneity testing)
Consider Statistical Limitations

- Appropriate for in-house or cooperative proficiency testing
- Statistics is a specialist field
- The template provides the basic statistical evaluation, but …
  - No expert judgement at evaluation
  - No guidance on how to handle atypical scenarios
- Continue to work with commercial proficiency testing providers
- Developing data transfer protocols will help both Organiser and Participants
Interested?

- **New sites**
  - Gain immediate useful functionality
  - Help us extend the template

- **Talk to**
  - Me or your consultant
  - Your LabWare project manager
  - Our sales executives

- **Plan**
  - Consultant time
So now you can

KEEP CALM AND LOVE YOUR LAB
Acknowledgements

- Two Australian sites have been fundamental in developing the template

- Thanks to:
  - Sibelco Australia
  - Cairns Regional Council