



# THE EXTERNAL OOS



**Intertek Testing Services (Australia) Pty. Ltd.**

Trading as:

**PROBE Analytical**

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**Presentation for:**

**Parenteral Drug Association  
Australia Chapter**

**29<sup>th</sup> July 2008**



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# History of PROBE Analytical

- Originally ICI's research laboratory
- Intertek is a leading worldwide inspection, testing and certification company that has the experience, expertise, resources and global reach to support its customers through its extensive network of laboratories and offices and over 21,000 people in more than 110 countries.
- Intertek purchased PROBE Analytical in 1999.
- PROBE is an advanced chemical analysis laboratory specialising in Pharmaceutical, Cosmetic, Veterinary testing and a leader in the provision of investigative & problem-solving services.
- PROBE is Intertek's only TGA accredited laboratory.



# PROBE Accreditations

- TGA: GMP
- APVMA
- NATA: ISO/IEC 17025 (various methods)
- ISO:9001
- TGA: Permit to Import Licence
- AQIS (Quarantine approved)
- Drugs/Poisons S4, S7, S8
- NICNAS



# PROBE Analytical

- 54% Pharmaceutical
- Stability storage 5°C, 25°C/60% RH, 30°C/65% RH and 40°C/75% RH
- Stability testing services
- Raw materials, finished products and unknowns (contaminants)



# PROBE Analytical

- **General wet chemistry**
- **HPLC: UV, RI, Conductivity, FLD, ECD**
- **LC/MS**
- **GC: FID, TCD, ECD, MSD**
- **ICP-OES**
- **Graphite furnace AA**
- **NMR**
- **SEM-EDXA**
- **FTIR**
- **Polarimeter**
- **Brookfield Viscometer**
- **DTA Thermal analysis**
- **UV Spectroscopy**





# Why have an OOS System?

- Customer requirement
- TGA requirement
- Commercial advantage
- Make audits easier
- Tracking for KPI
- Staff training program
- Equipment replacement program



# Preparation for OOS

- A GMP Agreement is in place before any work performed
- Use TGA Code of Good Manufacturing Practice for Medical Products as guide for preparing GMP Agreement
- Defines the protocol and responsibilities between PROBE and the client for aspects of testing including OOS Investigations



# Preparation for OOS

- OOS results are formally investigated
- Confirmed OOS are reported in writing to client
- OOS investigation is completed within 24 hours
- All documentation is retained for a minimum period of 10 years



# Responsibilities

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- OOS is PROBE responsibility
- Acceptance or rejection of results is customer responsibility
- Decision to retest is customer responsibility



# Effective OOS Investigation

- How the investigation is carried out
  - Laboratory Investigation
  - Out Of Specification Investigation
- How findings are communicated
- How and who makes the decisions
- How retesting is handled



# Effective OOS investigation

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- OOS affects Lab, QA and Customer
- Requires a good relationship between all parties
- Clearly define roles for OOS investigations
- QA has the final approval for OOS



# Laboratory Investigations (LI) & OOS

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- Investigations must satisfy both TGA and clients.
- LI used for internal issues
- OOS used for failed results



# Laboratory Investigations (LI) & OOS

- LI is used for the following:
  - Instrument failure
  - System suitability failure (internal and external)
  - Analyst error
  - Expected OOS result

**PROBE initiates retesting for LI**





# Laboratory Investigations (LI) & OOS

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- An OOS is used when initial checks pass and result fails
- Customer initiates retesting for OOS (in writing)



# Laboratory Investigation Form

PROBE Job Number

Investigation completed by:

Date:

Relevant SOP: 165

References (if any):

Customer Details:

Company:

Contact Name:

Sample Details:

PROBE Sample ID:

Customer Sample ID:

Issue Found Yes / No

Area of Issue

Preparation of Samples

Preparation of Standards

Analysis

Calculations

Other

Details of Issue & any Investigation conducted: (attach extra pages if needed)



# Laboratory Investigation Form

Root Cause of Issue:

Corrective Actions required to prevent reoccurrence of issue:

SIR No: (if applicable)

Is original result invalidated after investigation Yes / No

Can original raw data still be used: Yes / No

Does re-analysis of solutions need to be repeated: Yes / No

Does entire sample / standard preparation and analysis need to be repeated: Yes/ No

Investigator Signature:

Date:

Supervisor Signature:

Date:



# OOS Form

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- Investigation is a checklist
- Paperwork checked
- Instrument checked
- Calculations checked
- Retesting



# OOS Form

PROBE No.

Investigator:

Date:

OOS No.

Analyst:

Close out with in one month  
of issuing investigation report

As per SOP 165

Lab Note book references:

Customer details

Company:

Contact name:

Sample Details

PROBE Sample ID.

Customer Sample ID.

Reasons for Investigation.



# OOS Form

ACTION

COMMENTS

SIGNATURE

## 1. Specification/Limit

Correct test method used

System suitability passed

Raw data checked

Calculations checked

Test method followed correctly

Lab QC data within acceptance criteria

Method QC data within acceptance criteria



# OOS Form

ACTION

COMMENTS

SIGNATURE

Sub sampling performed correctly

Calibration of Instruments and equipment within acceptance criteria

Sample/Standards stored correctly

Potency of reference standard (supplied COA).

Correct Application?

Correct preparation and expiry dates of reagents and reference standards

Training records – analyst correctly trained



# OOS Form

ACTION

COMMENTS

SIGNATURE

2. Instrument/Equipment checked for:

Set up

Correct operation

Unusual noise or performance

Calibration

3. Initial Analysts checks acceptable

4. Is result due to sample contamination in laboratory?

5. Does result appear to be caused by

Instrument error

Analyst error

Other laboratory assignable cause

(if Yes in house re-test required)

6. Can original result be invalidated after this investigation?





# OOS Form

## 7. In-house Laboratory Retest:

Has client been informed of in-house retest?

Is in-house retest result acceptable?

## 8a. OOS Investigation Summary and In-house Retest Summary (this section to be completed by analyst)

## 8b. Detail OOS Root Cause and Corrective Action required (if applicable) SIR number (if applicable)

## 8c. Comments by Supervisor (if applicable)

## 8d. OOS Investigation Completed:

Signed (Investigator)

Signed (Supervisor)



# OOS Form

9. Is retest ordered by client (in writing)?

Is client retest to be conducted on original sample or has another sample been received?

Any special instructions for client retest (eg. Replicates)?

10a. Client Ordered Retest Summary

10b. Detail root cause and Corrective Action required (if Applicable)

SIR Number (if applicable)

10c. Comments by Supervisor (if Applicable)

10d. Client Ordered Retesting Completed: (or approval if no retesting was carried out)

Signed by Analyst:

Signed by Supervisor:

Signed by Customer:

May be signed by PROBE team Leader on behalf of the customer

(attach email showing their approval of the OOS investigation)



# KPI Tracking

- Monitor the number per month
- Assign causes: Equipment, People, Customer or other/unknown causes
- Report monthly to PROBE Team and Management
- Annual QA report
- Generate KPI on PROBE's performance
- Link to Quality Feedback System



**The most  
important part of  
external OOS is  
communication**



**We thank you for your time and attention during our presentation.**



*There is a difference*



**Quality is our business**



# General Enquiries

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