Out of Specification(OOS)

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What is Out of Specification (OOS)

The result obtained out of defined test limit is called out of specification.

USFDA guideline "Investigating Out of Specification (OOS) Test Results for Pharmaceutical Industry" Published by CDER in Oct 2006.

Quality unit should have well define SOP for OOS

The scope of SOP should be well define

History Of OOS guideline

Event	Year
USFDA audited Barr Laboratory, identified attempt of “Test until pass “ and other abnormality,	1989/1991/ 1992
FDA prosecuted Barr Laboratory, Court directed to FDA to draft the OOS guidelines	Feb 1993
FDA generated draft OOS guideline	Sept 1998
FDA published final OOS guideline	Oct 2006

OOS Investigation

Laboratory Investigation

Must be

- Thorough
- Timely
- Unbiased
- Well documented
- Scientifically sound

OOS Investigation –(Phase I)

Laboratory Investigation

Check list to identify obvio.us Laboratory error

1. Analyst qualification and training on intended work
2. Correctness Test specification and Method
3. Instrument calibration or performance
4. Preparation test solutions and dilutions
5. Validity of Reagents and standards
6. Performance of system suitability
7. Correctness of calculation and etc….

OOS Investigation –(Phase I)

Laboratory Investigation

If Analyst Error identified,.it should be

- logical and appropriate
- not on hypothetical basis

Identify appropriate assignable cause for Laboratory error

Correct the error, and repeat the analysis to invalidate the OOS.

Suggest the Corrective and Preventive actions e.g. training to the Analyst, Requalification of Analyst etc. whatever the scientifically appropriate.

OOS Investigation –(Phase II)

Extended Investigation

If No assignable cause fou.nd in phase I investigation, Phase II investigation should be initiated

- Retesting of Material with other analyst (n≥ 3)
- Resampling and testing
- Investigation at Plant
- Further Extend investigation (upon rejection)

Tool for OOS Investigation & Related Corrective and Preventive action

Identify the Suspect

5M –Tool to Identify the Route cause

Man

Machine

Material

Method

Movement

Scan the Suspect

- Target the suspect
- Use 5 why technique to reach at root cause
- Ask Why, Why, Why, Why and Why five times and try to reach at more probable reason
- To check the reason scientifically sound - Process each reason with six sigma technique -DMAIC

Process the Root cause

Six sigma technique (DMAIC)

Define

Measure

Analyze

Improve

Control

Corrective And Preventive Action

- Draw appropriate root cause.
- Root cause should be logical and scientific.
- Collect the historical evidence if any with same process or any other process in the plant.
- Identify the need for extend the investigation to past or future batches…
- Provide corrective action with evidence
- Suggest preventive action
- Conclude the activity in timely manner.