Data Integrity in the pharmaceutical laboratory

ISPE | Czech Republic | Slovakia Affiliate

Pozvánka na

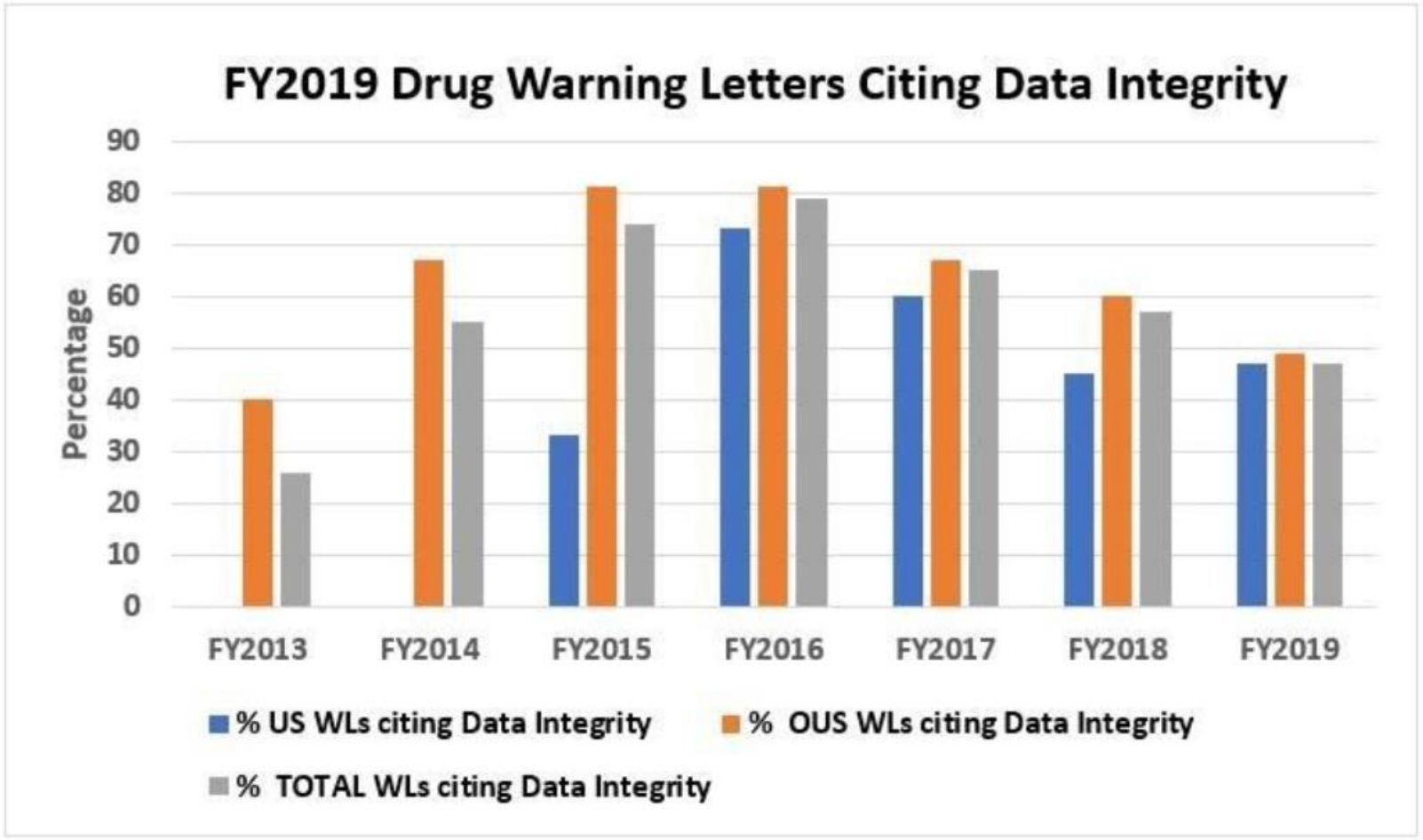
Workshop Afilace ISPE České republiky a Slovenska

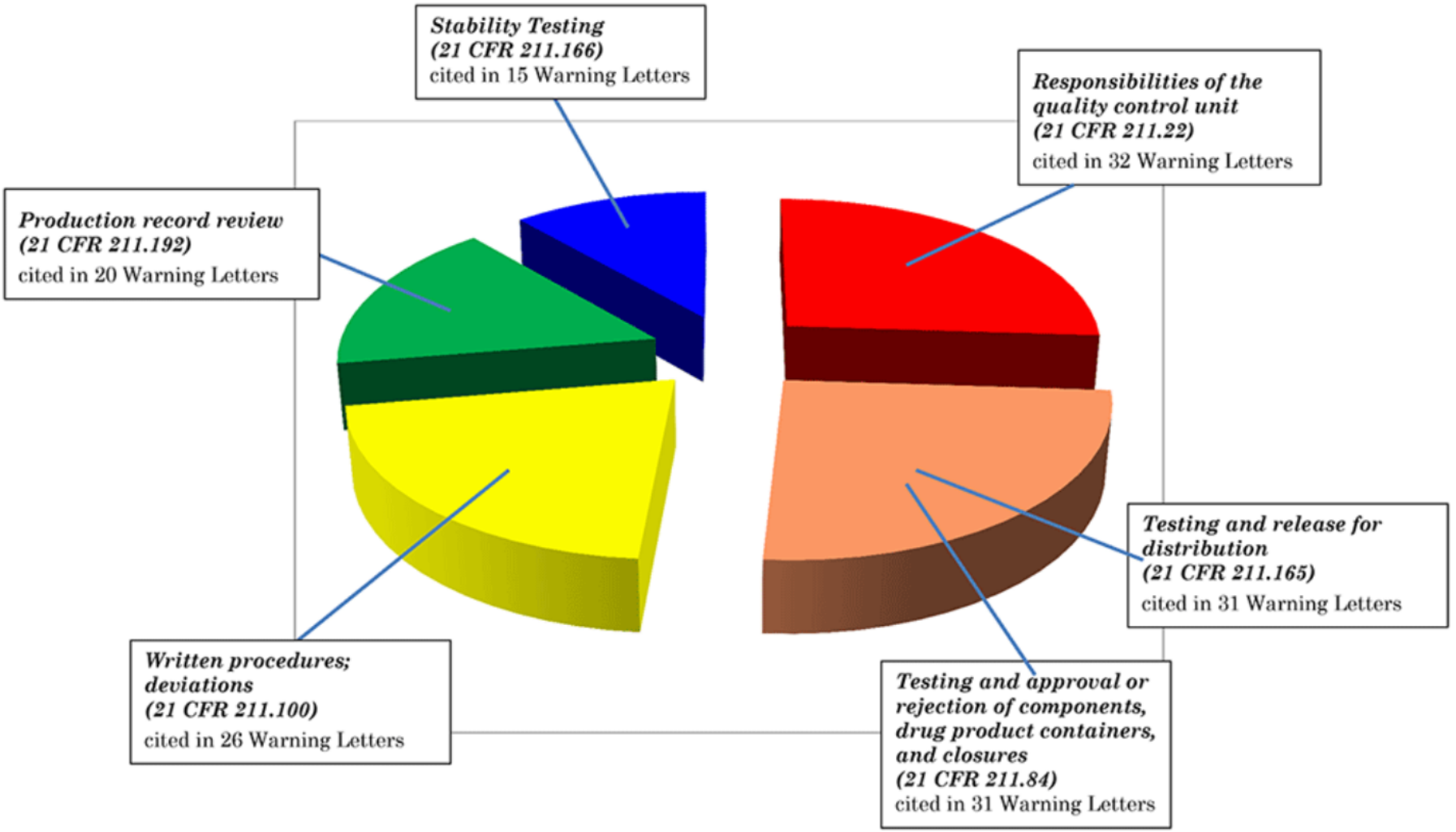
30. září, 2021 v Praze, Hradčanské náměstí 60/12,

Women in Pharma®

Motto workshopu: *„Co muži tají před ženami a dívkami ve farmacii“*

www.ld-consulting.cz


FY2019 Drug Warning Letters Citing Data Integrity
Percentage
90
80
70
60
50
40
30
20
10
0
FY2013
FY2014
FY2015
FY2016
FY2017
FY2018
FY2019
% US WLs citing Data Integrity
% OUS WLs citing Data Integrity
% TOTAL WLs citing Data Integrity

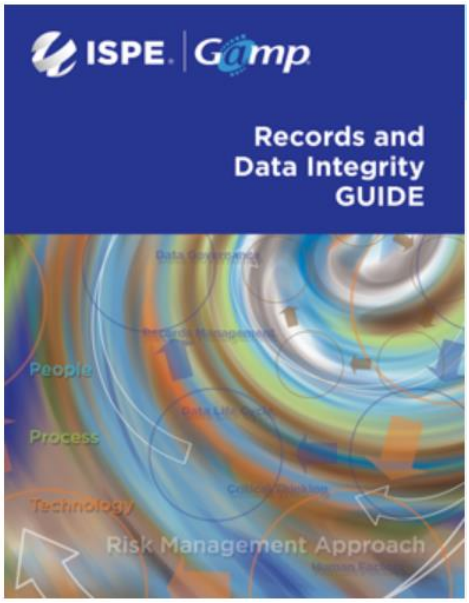

Stability Testing
(21 CFR 211.166)
cited in 15 Warning Letters
Responsibilities of the quality control unit
(21 CFR 211.22)
cited in 32 Warning Letters
Production record review
(21 CFR 211.192)
cited in 20 Warning Letters
Testing and release for distribution
(21 CFR 211.165)
cited in 31 Warning Letters
Written procedures; deviations
(21 CFR 211.100)
cited in 26 Warning Letters
Testing and approval or rejection of components, drug product containers, and closures
(21 CFR 211.84)
cited in 31 Warning Letters

WHERE to find detailed informations

- MHRA [Medicines & Healthcare products Regulatory Agency] – GMP Data Integrity Definitions and Guidance for Industry
- WHO [World Health Organization] – Guidance on Good Data and Record Management Practices
- FDA – Data Integrity Guidance and Compliance with CGMP
- MHRA – GxP Data Integrity Definitions and Guidance for Industry
- PIC/S [Pharmaceutical Inspection Co-operation Scheme] – Good Practices for Data Management and Integrity
- EMA [European Medicines Agency] – Data Integrity Guidance Q&A

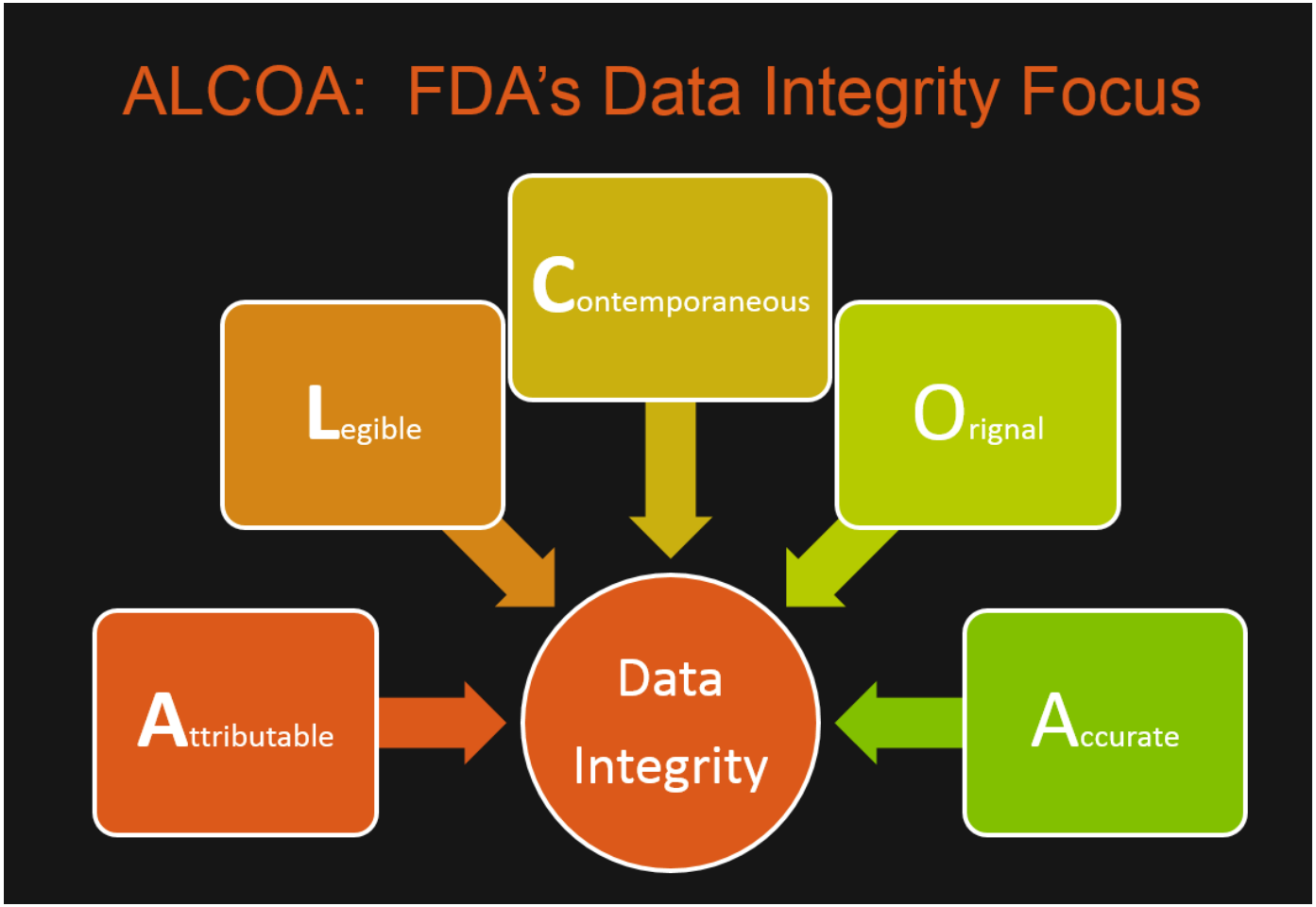
NEW 2021

PIC/S: Good practices for data management and integrity in regulated GMP/GDP environments



Important Concepts

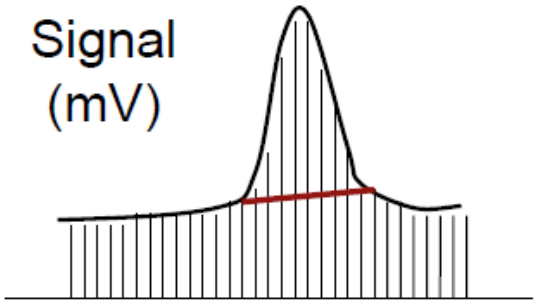
- Metadata
- Audit Trails
- Static versus dynamic records
- Backup datasets
- System validation

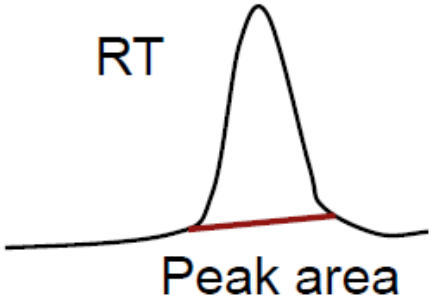


Attributable – mít vlastnost, znak, cestu, symbol
Legible – čitelný
Contemporaneous – současný, souběžný
Original – původní
Accurate – správný, přesný, pravdivý

personnel should be trained in detecting data integrity issues as part of a routine CGMP training program

Example: Chromatographic Data





Raw-data:
area slices

Metadata:
processing parameters
integration parameters
calibration tables

Processed data:
peak area
amount

For reprocessing the data we need the processing parameters and the processing software ⇒ all 3 types of data have to be archived

There are different types of records in chromatography :

- **Original or raw data**
  - area slices as calculated from predefined time slices and form the intensity of the signal. Sample information, instrument ID and the operator name also belong to this category
- **Processing parameters or meta data**
  - integration parameters and calibration tables. If sample specific software are used to make further post run calculation, these programs or macros also belong to this category
- **Final results or processed data**
  - Peak data and amounts, information on a sample, like compound names and amounts

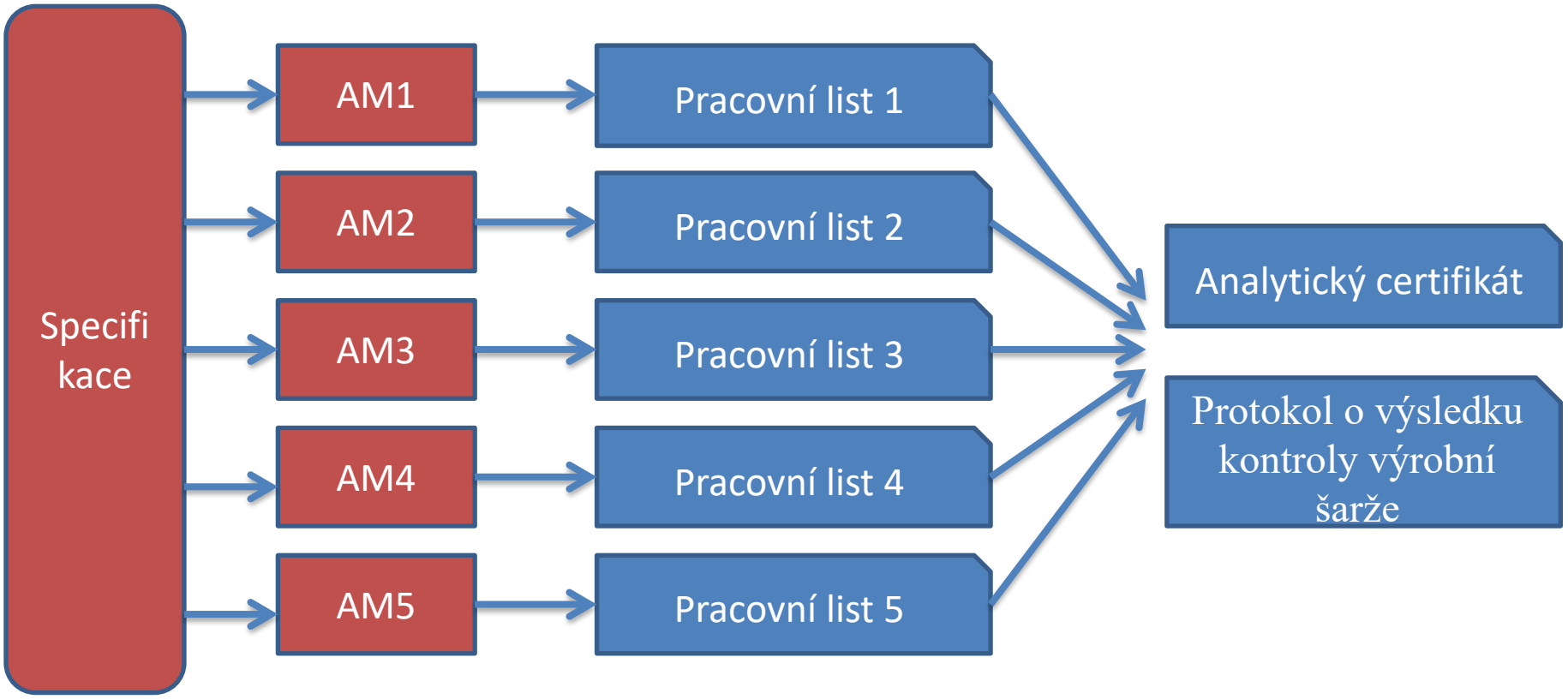
For reprocessing the data we need the processing parameters and the processing software ⇒ <u>all 3 types of data have to be archived</u>

What has to be implemented into each laboratory

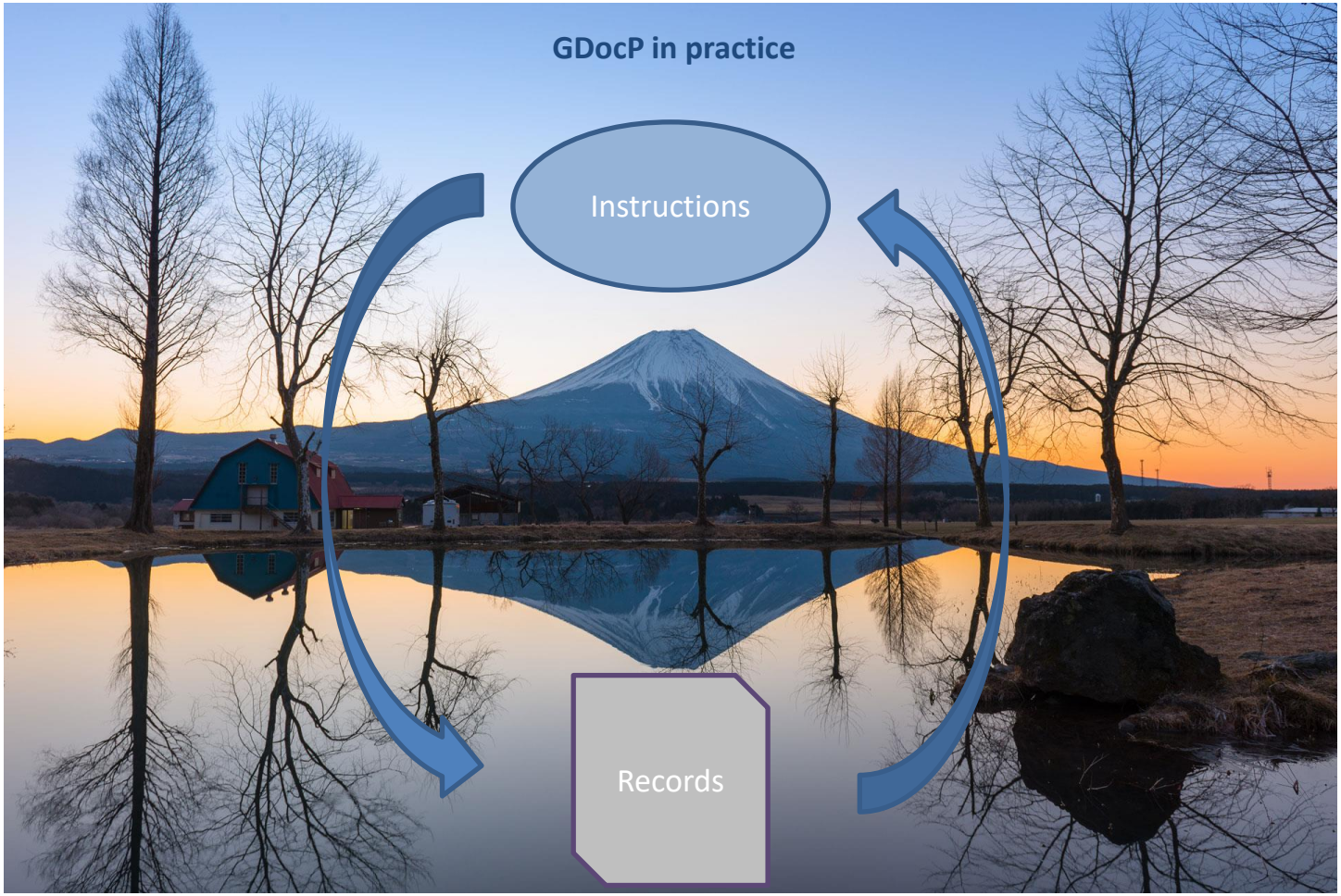
Instructions: specification, analytical method, protocols, manuals

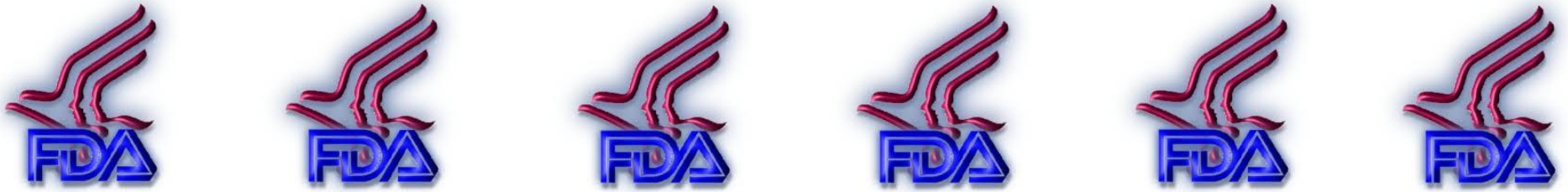
Records: analytical performance record, reports, CoA, laboratory logbooks

Electronic laboratory system for data handling and more…


Specifi kace
AM1
AM2
AM3
AM4
AM5
Pracovní list 1
Pracovní list 2
Pracovní list 3
Pracovní list 4
Pracovní list 5
Analytický certifikát
Protokol o výsledku kontroly výrobní šarže

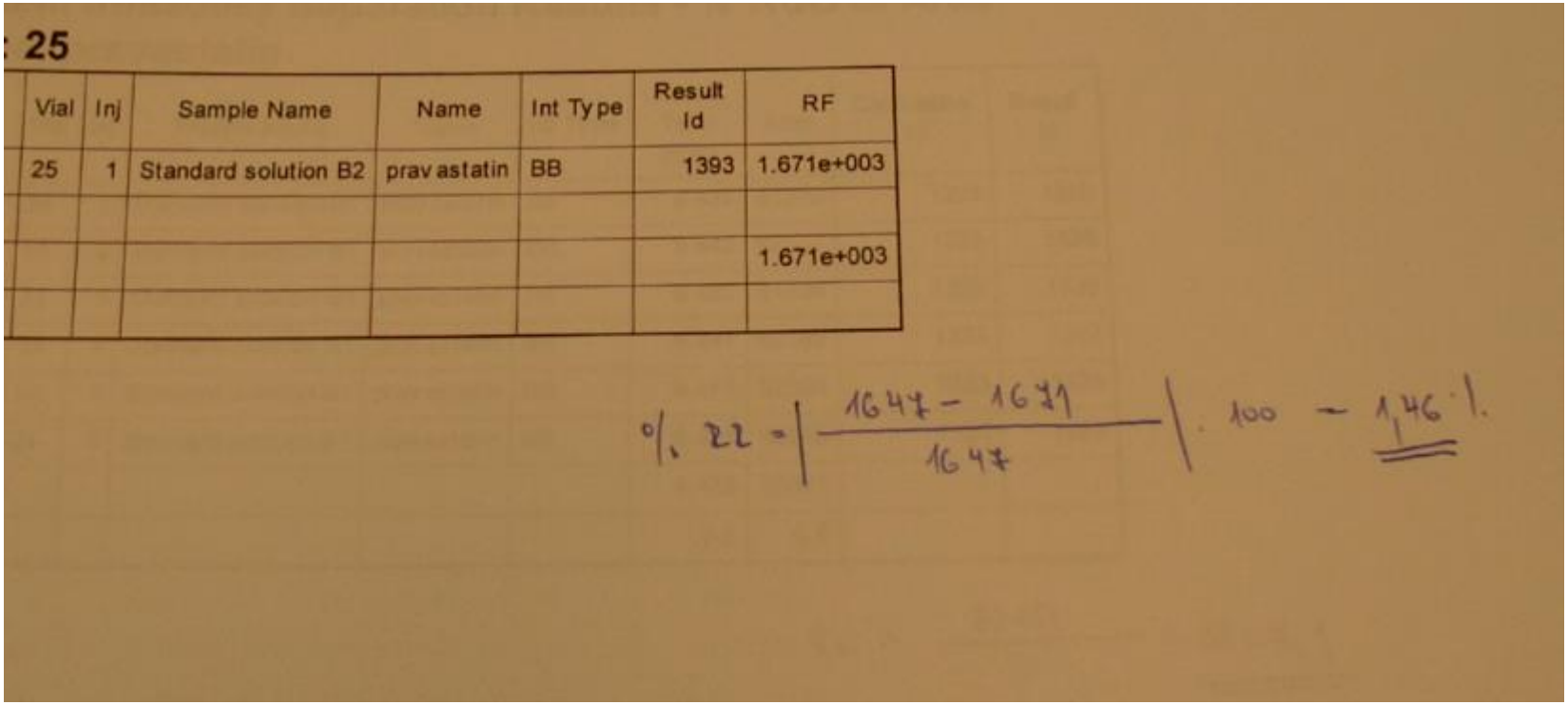

DATA
INTEGRITY


GDocP in practice
Instructions
Records



- Instruments must be qualified and fit for purpose [§211.160(b), §211.63]
- Software must be validated [§211.63]
- Any calculations used must be verified [§211.68(b)]
- Data generated in an analysis must be backed up [§211.68(b)]
- Reagents and reference solutions are prepared correctly with appropriate
- records [§211.194(c)]
- Methods used must be documented and approved [§211.160(a)]
- Methods must be verified under actual conditions of use [§211.194(a)(2)]
- Data generated and transformed must meet the criterion of scientific soundness [§211.160(a)]
- Test data must be accurate and complete and follow procedures [§211.194(a)]
- Data and the reportable value must be checked by a second individual to ensure accuracy, completeness and conformance with procedures [§211.194(a)(8)]

Správná dokumentační praxe chyby

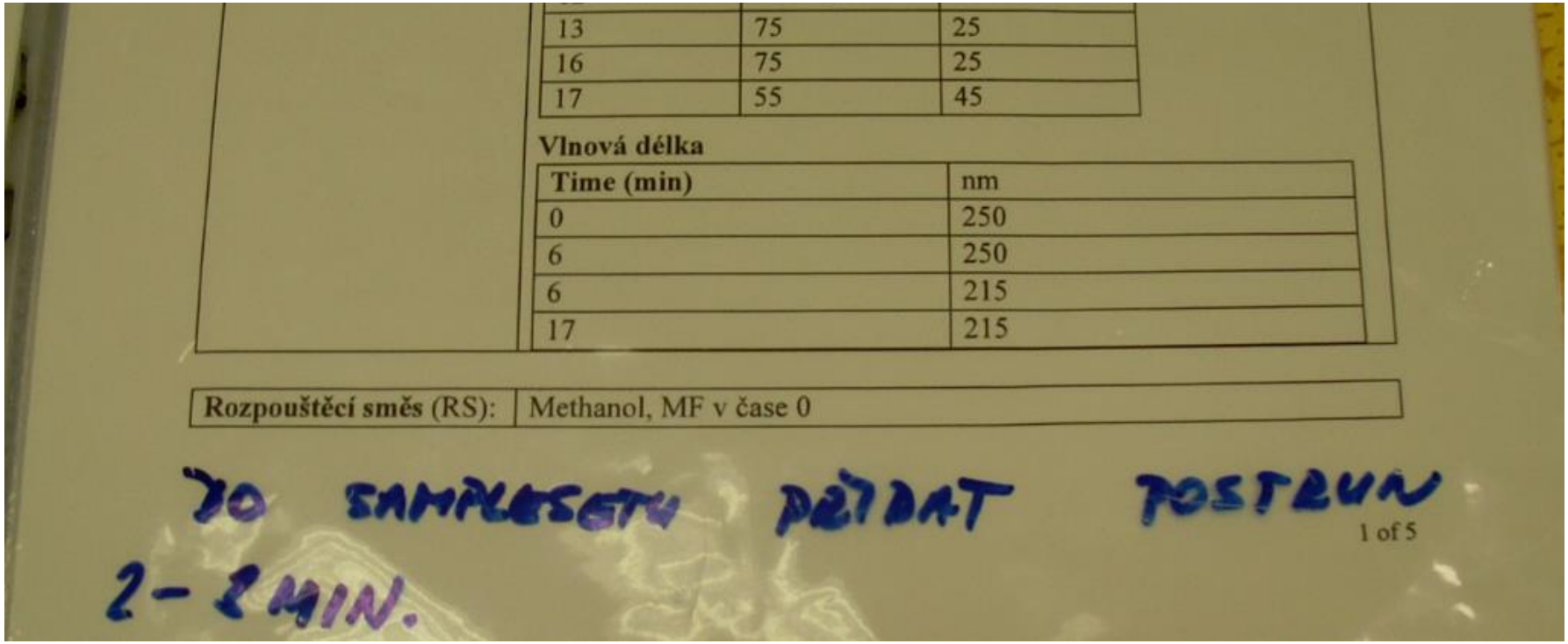


25

Vial	Inj	Sample Name	Name	Int Type	Result Id	RF
25	1	Standard solution B2	pravastatin	BB	1393	1.671e+003
						1.671e+003

$\% = \left| \frac{1647 - 1671}{1647} \right| \cdot 100 = 1{,}46\ \%$

Správná dokumentační praxe chyby



13	75	25
16	75	25
17	55	45

Vlnová délka

Time (min)	nm
0	250
6	250
6	215
17	215

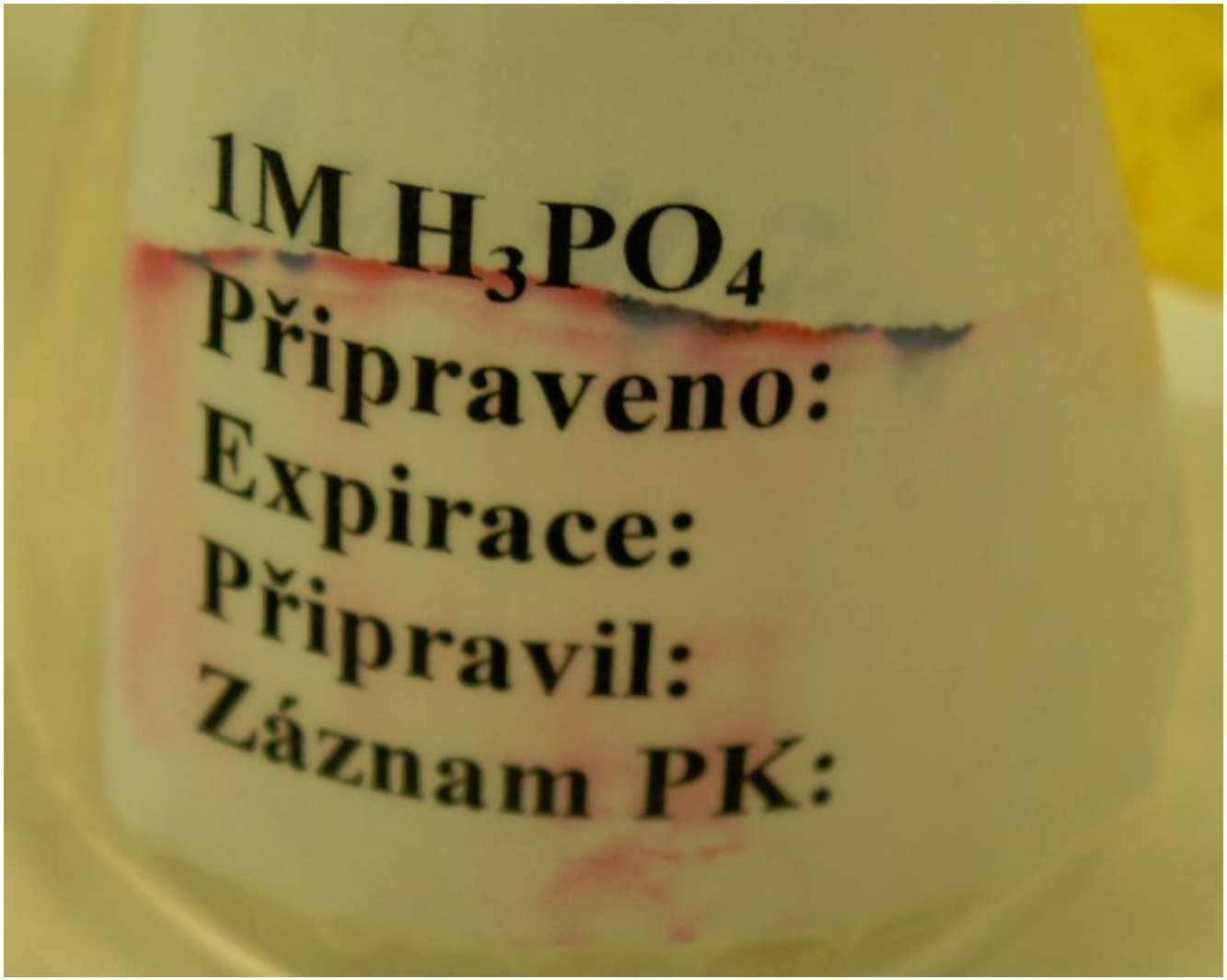
Rozpouštěcí směs (RS):	Methanol, MF v čase 0

20 SAMPLESETU PŘIDAT POSTRUN

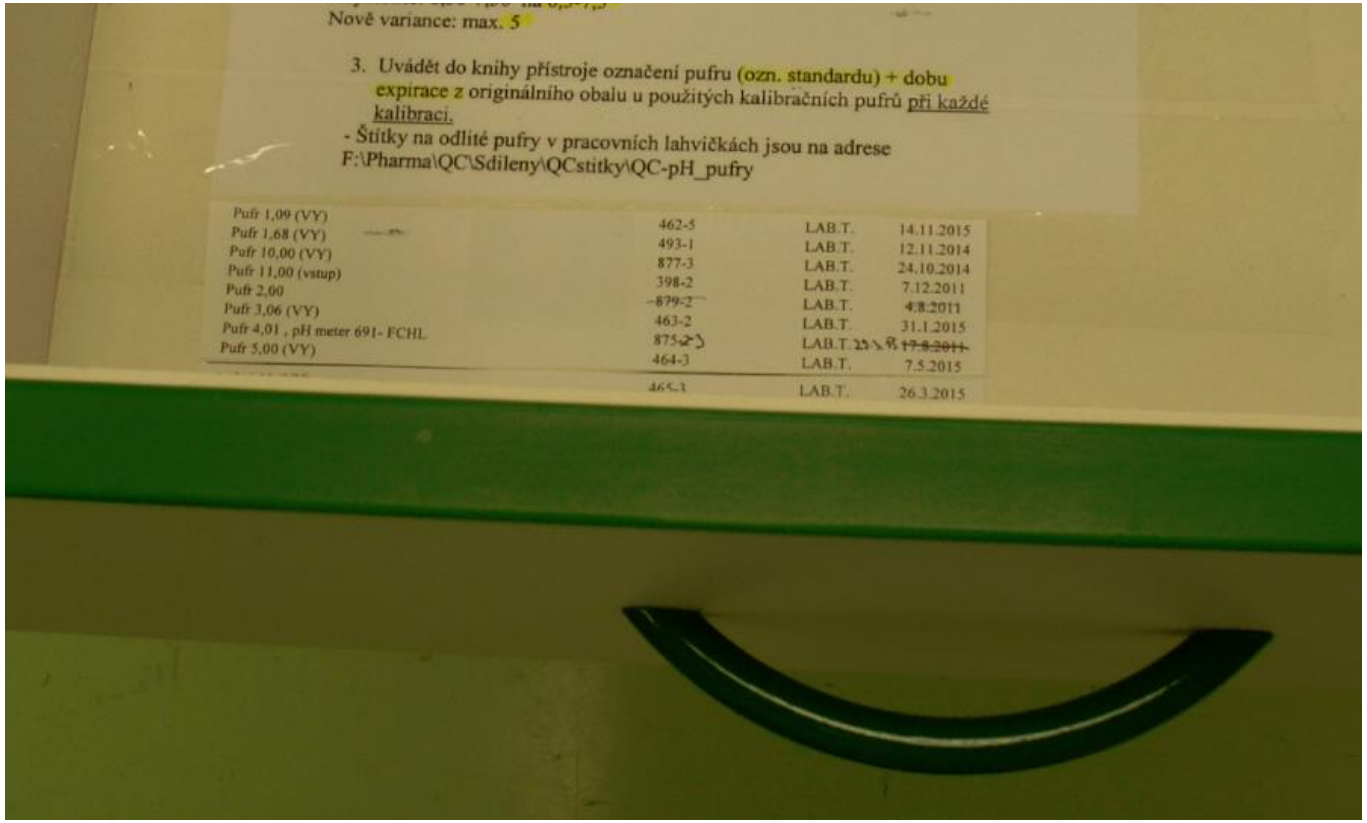
1 of 5

2-2 MIN.

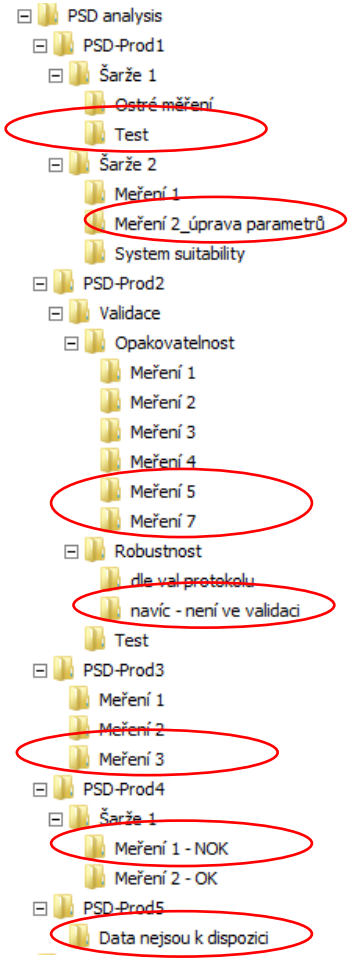
Správná dokumentační praxe chyby



Správná dokumentační praxe chyby



Data Integrity - Audit trail



§ 211.194 „report non-conforming test results“

§§ 211.188, 211.194, and 212.60(g) “complete information,” “complete data derived from all tests,”

§ 211.68 “backup data are exact and complete”

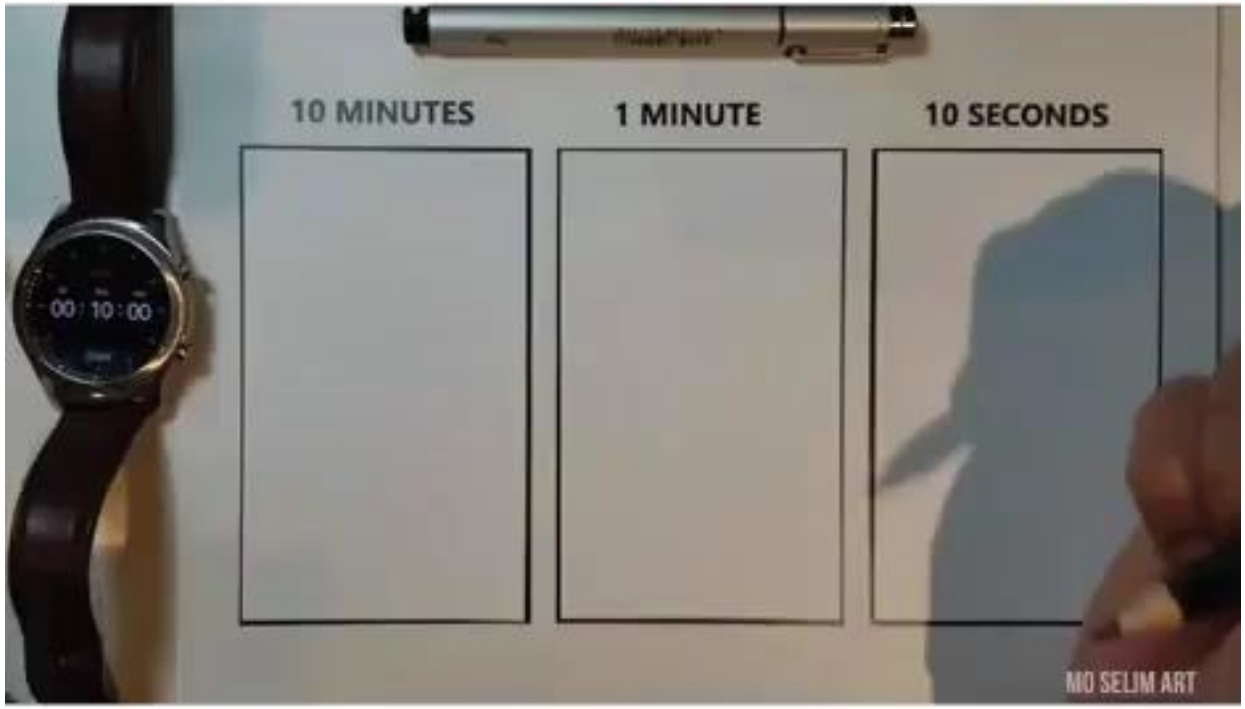
§§ 211.22, 211.192, and 211.194(a) “reviewed for accuracy, completeness, and compliance with established standards”

§ 211.194 „report non-conforming test results“

§ 211.194 „report non-conforming test results“

§ 212.110(b) “stored to prevent deterioration or loss”

WHEN A CLIENT WANTS A 1 MONTH JOB DONE IN 1 WEEK



SHOW HIM THIS VIDEO

Děkuji za pozornost