

Repeatability

ability to get same result when ~~the~~ same person

↓
repeats the measurement using the same equipment under the same condition over a period of time

eg:- I imagine a technician weighs 5 gm sample of chemical using an analytical balance.

↓
perform 5 times in a row, using the same balance, same conditions,

↓
no factor change b/w the measurements

wt → 5.001 gm
5.000
5.002
5.001
5.000 g

} close
Good
repeatability

↓
Balanced operators are performing consistently

Reproducibility

this measures how consistent the results are

DIFFERENT people

↓
DIFFERENT Equipment

at Different labs.

Carry out same measurement under

DIFFERENT Conditions

eg- Same 5 gm chemical

↓
2 different technicians to weigh it

each in separate lab

using different Balances

Each lab will have Different environment condition

eg:- Temp.
Humidity.

↳ Equip (could be calibrated differently.

Technician A might record

5.001

5.002

5.009

Tech. B - 2nd lab

4.999

5.005

5.001

Good reproducibility

↓
method can give good reproducibility reliable results even when carried out by different operators in different settings