

Q units of measurement:-

Measurement is expressed in

(1) Number

(2) Units → identifies dimension of measured property → mass, volume, concentration

- Metric system

↳ Traditional system

↳ units - length, mass and time

↓ in

cm, gm & sec. (CGS).

meter and

kg and ^{sec} (MKS).

↓

Not convenient

→ Not convenient and reasonable volume in clinical chemistry.

o International System of Unit (SI Unit)

↓

o Due to inconvenience of metric system, SI system was accepted internationally in 1960.

o Units in this system is called SI units

o 3 classes of SI unit system

↳ Base

↳ Derived

↳ Supplemental units

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① Base units & fundamental base units

- | | |
|----------------------|---------------|
| ① length | meter (m) |
| ② Mass | kilogram (kg) |
| ③ time | second (s) |
| ④ E. current | Ampere (A) |
| ⑤ Temp | Kelvin (K) |
| ⑥ Amt of substance | mole (mol) |
| ⑦ luminous intensity | candela (cd) |
| ⑧ Catalytic amount | katal (kat) |

② Derived units :-

Derived from 2 or 3 base units

- ex ① Volume \rightarrow cubic meter (m^3)
② mass density \rightarrow kg per cubic meter (kg/m^3)
③ Conc. of amt of substance \rightarrow mole per cubic meter (mol/m^3)

③ Supplement units :-

SI units not classified as base/derive

- only 2 ex \rightarrow ① Radian (for plane angles)
② Steradian ("Solid")

\Rightarrow Some units outside SI units are imp in certain applicatⁿ
ex \rightarrow liter \rightarrow reference volume in clinical analysis.

* Standard Reporting of test result

→ Problem in reports

(1) Dif. lab use dif name for same test

(2) " " " same name for dif test

↳ ex (1) PP₂BS → 75 gm glu

↳ 100 gm glucose

↳ post feed

(2) Urinary protein → random

↳ 24 hr

(3) Test name does not present all necessary info.

ex: urinary protein → concentration.

↳ per day excret?

→ Answers of problem.

• If lab describe test name in a universal cross-accepted way.

(1) LOINC - logical observation identifiers, name, code.

(2) NPO

(3) SNOMED CT (Systematized nomenclature of medicine and clinical terms)

(1) LOINC

database for universal name and code for identifying lab and clinical test.

purpose → ^{transmission} exchange of lab. results and clinical test results across lab, hospitals, countries etc.

RELMA - Software

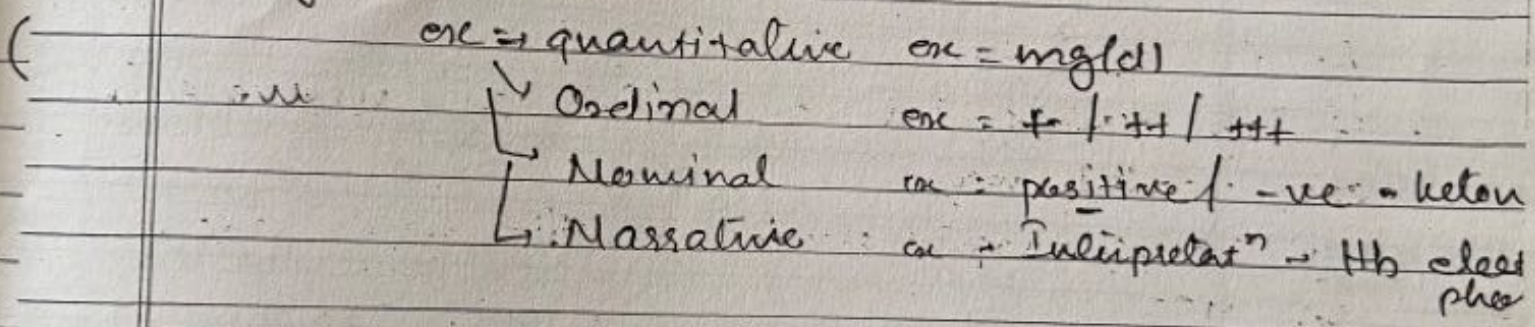
use → Used by software companies for LIS

- ② In name agencies
- ③ gov. agencies.

→ Formal

each test name has 6 parts

- ① Components - ex = glucose (Analyte)
- ② kind of property → characteristic of what is measured. ex = concentration.
- ③ Time aspect. → point in time (spot)
 - ↳ interval in time (eg hrs)
- ④ System
 - ↳ specimen type
- ⑤ type of scale



⑥ type of method

⑧ NPU (Nomenclature properties, units) includes

- ① Name of system or abbreviatⁿ
- ② A dash
- ③ Name of analyte (anal. abbreviatⁿ)
- ④ A comma
- ⑤ The quantity name or its abbreviatⁿ
- ⑥ An equal sign
- ⑦ The numeric value and its unit

ex. GLE - glucose, ^{concentration} = 100 mg/dl