

What is viability?  
What do you measure?

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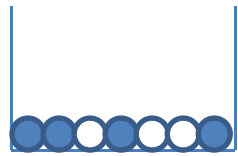
# What is a viability assay

- A viability assay provides evidence a cell is “alive”.
  - Membrane is intact
  - Active enzymes are present
  - Cell function observed
  - RNA levels not indicative of stress
- Viability is an interpretation of a measurand value
- Measurement assurance is only related to the measurand value.

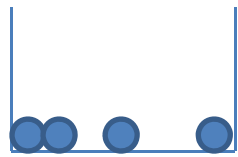
# List of viability assays

- ATP assay
- MTS/MTT/XTP/Resazurin
- Calcein AM/fluorescein diacetate
- Ethidium Br/Propidium Iodide/Trypan blue/Evans Blue/Neutral Red
- Lactate dehydrogenase
- Flow cytometry/apoptosis
- Cell size and mass

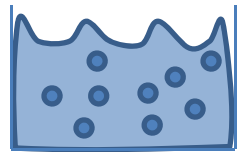
# What do you measure for viability?



1. Sample



2. Rinse



3. Add reagents  
4. measure

## Example Measurands

1. Fluorescence intensity from a cell or nuclei
2. Fluorescence intensity from well solution
3. Absorbance in a cell
4. Absorbance from a well solution
5. Photon intensity from a well solution
6. Light scattering and fluorescence intensity per cell
7. others

Question: What else could we measure to provide evidence that our measurand value is correct?