

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



Varastegan Institute For  
Medical Sciences

# Auto analyzer

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# Autoanalyzer

- A device for biochemical experiments

through :

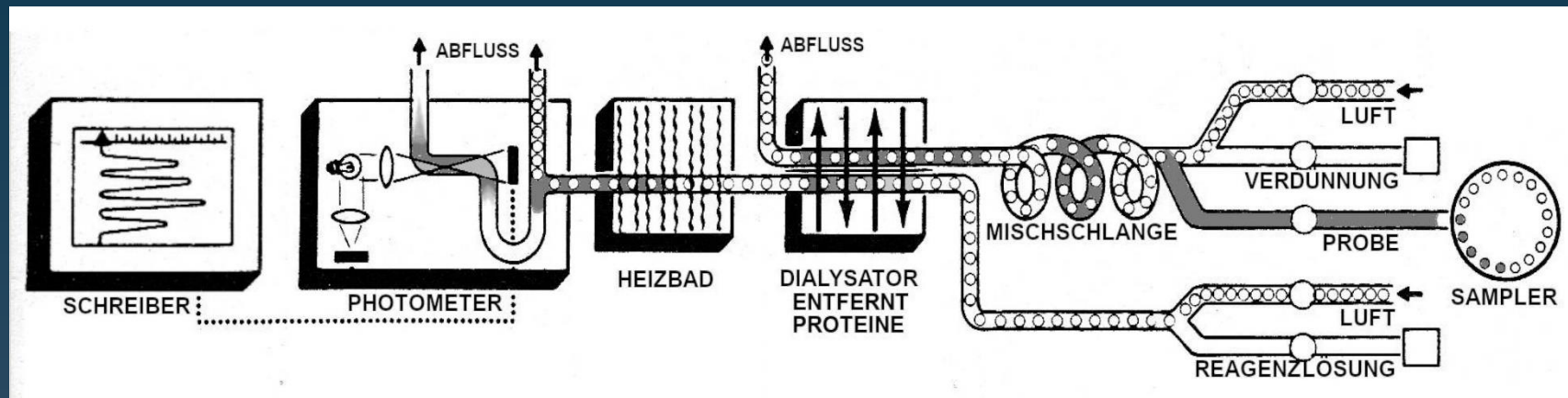
1. Mixing sample and reagent
2. Reagent reaction
3. Colorimetric measurements



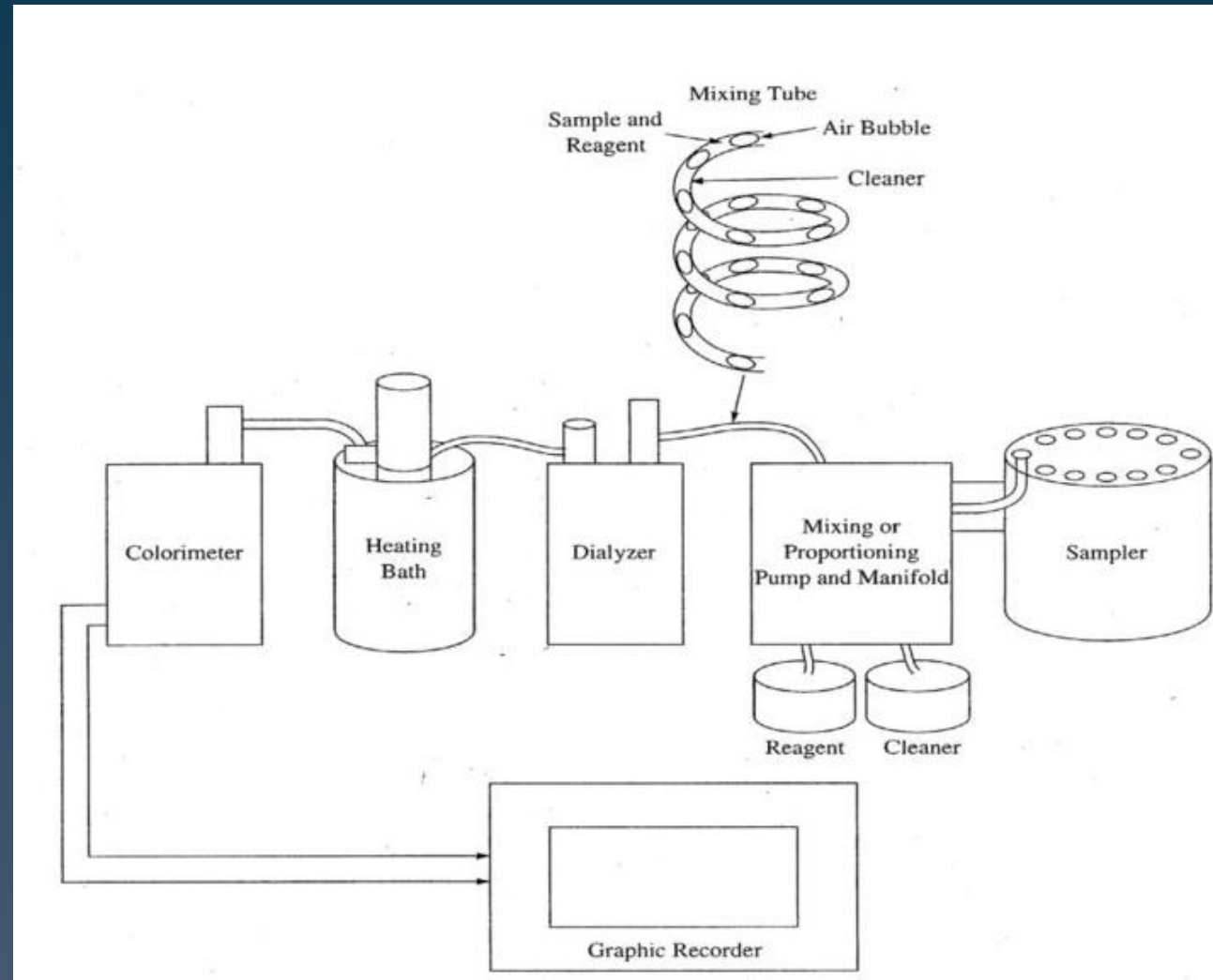
# Analysis Methods

- Continuous flow analysis
- Centrifugal analysis
- Discrete analysis

# Continuous flow analysis



# Block diagram

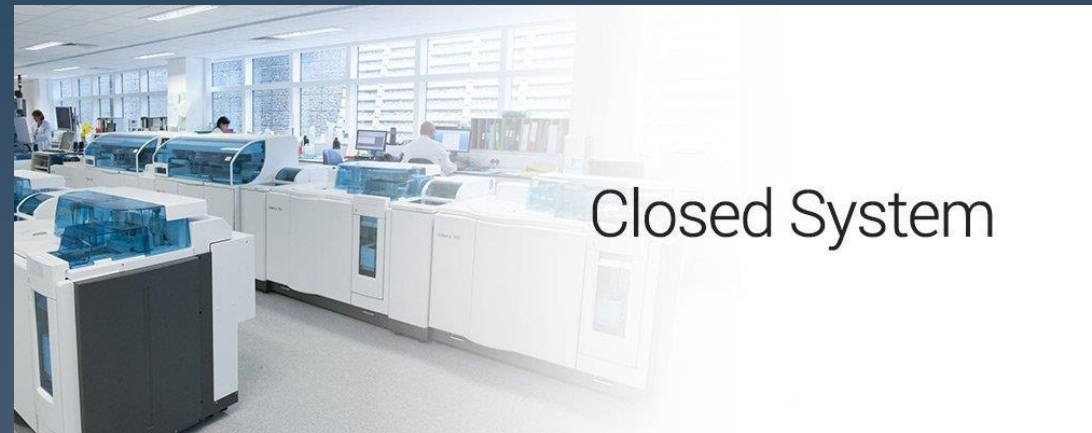


# Types of Autoanalyzers

- Open



- Close







# Types of Autoanalyzers in terms of reading method

- Batch Analyzer
- Multibatch analyzer
- Random Access Analyzer

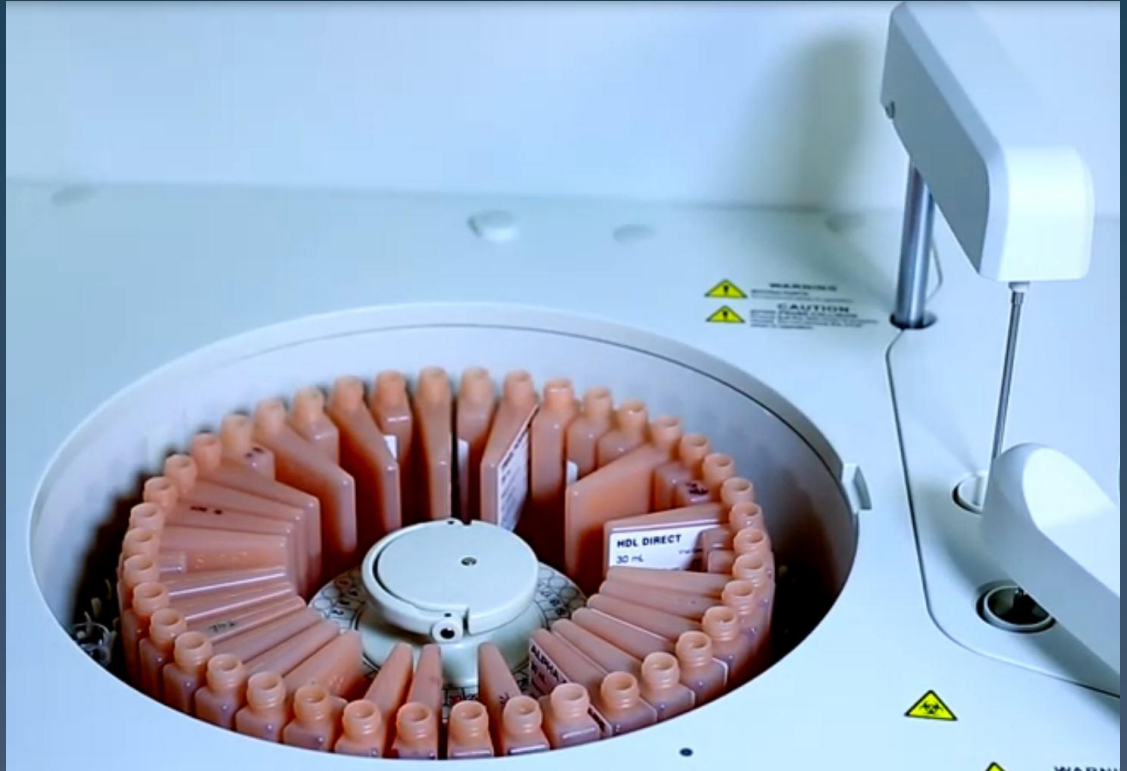
# Biochemical Autoanalyzer Components

- Tray for holding sample



# Biochemical Autoanalyzer Components

- Tray for holding reagent



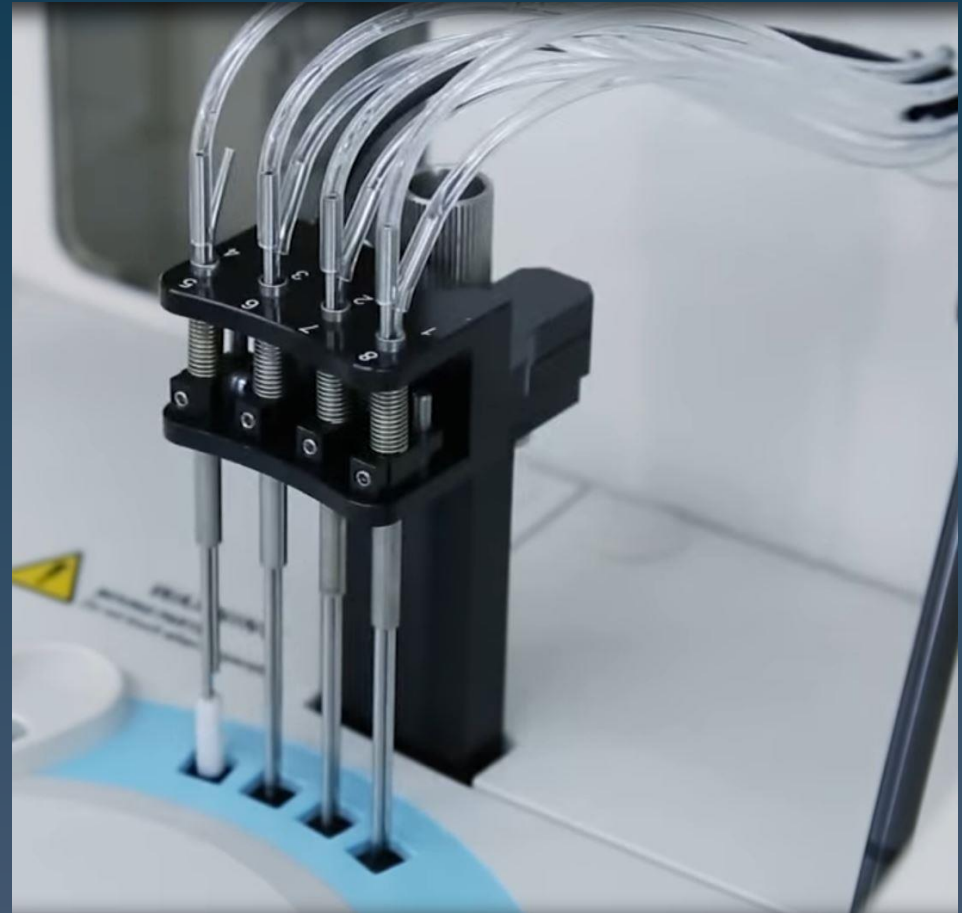
# Biochemical Autoanalyzer Components

- Reaction tray



# Biochemical Autoanalyzer Components

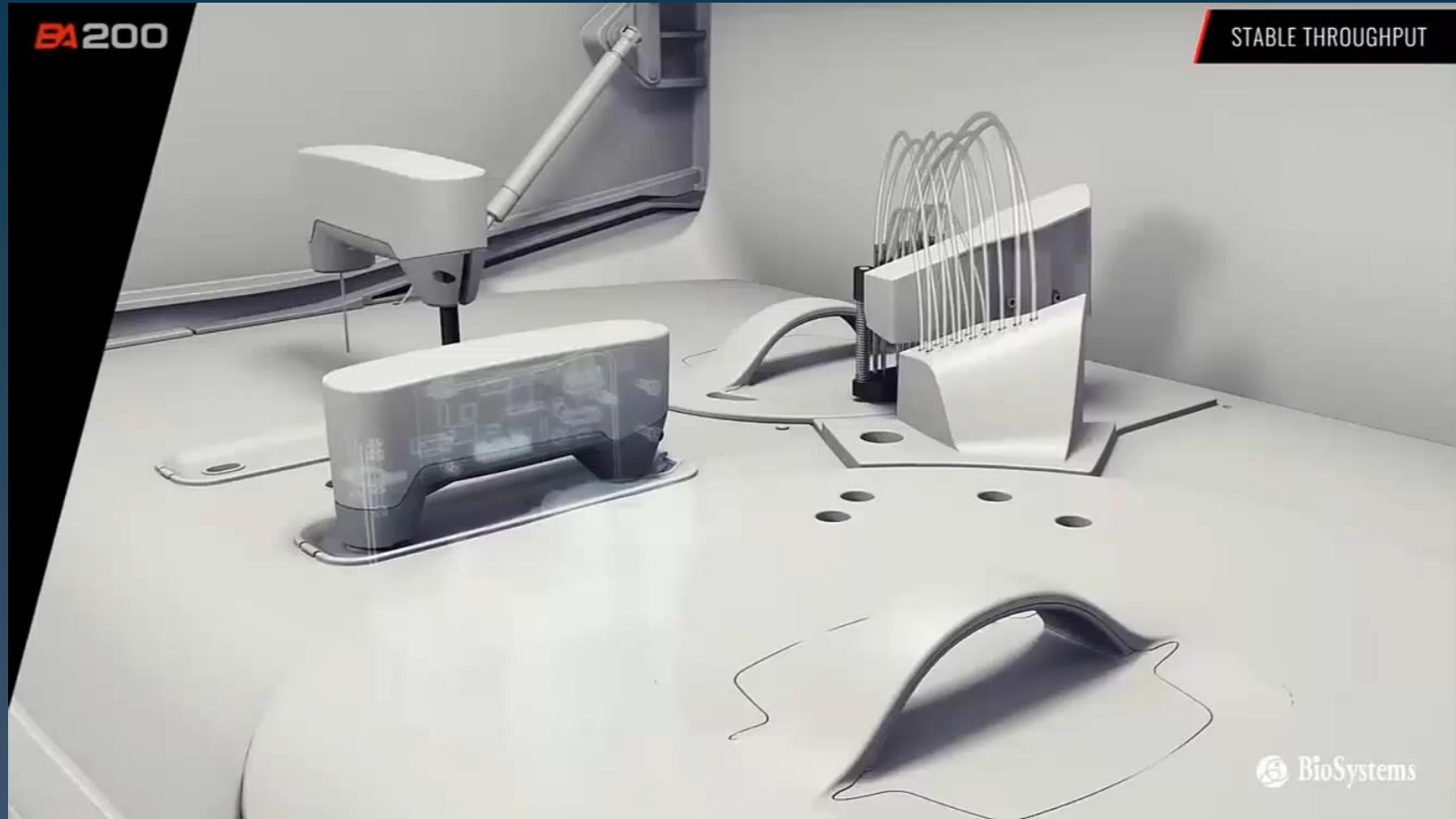
- Cuvette wash



# Biochemical Autoanalyzer Components

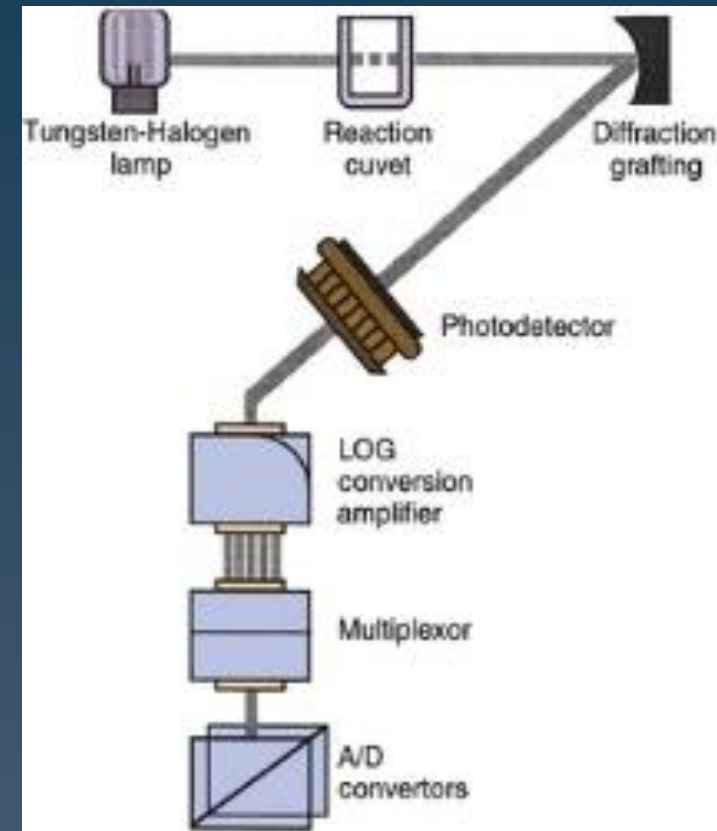
- Transmitter probe





# Biochemical Autoanalyzer Components

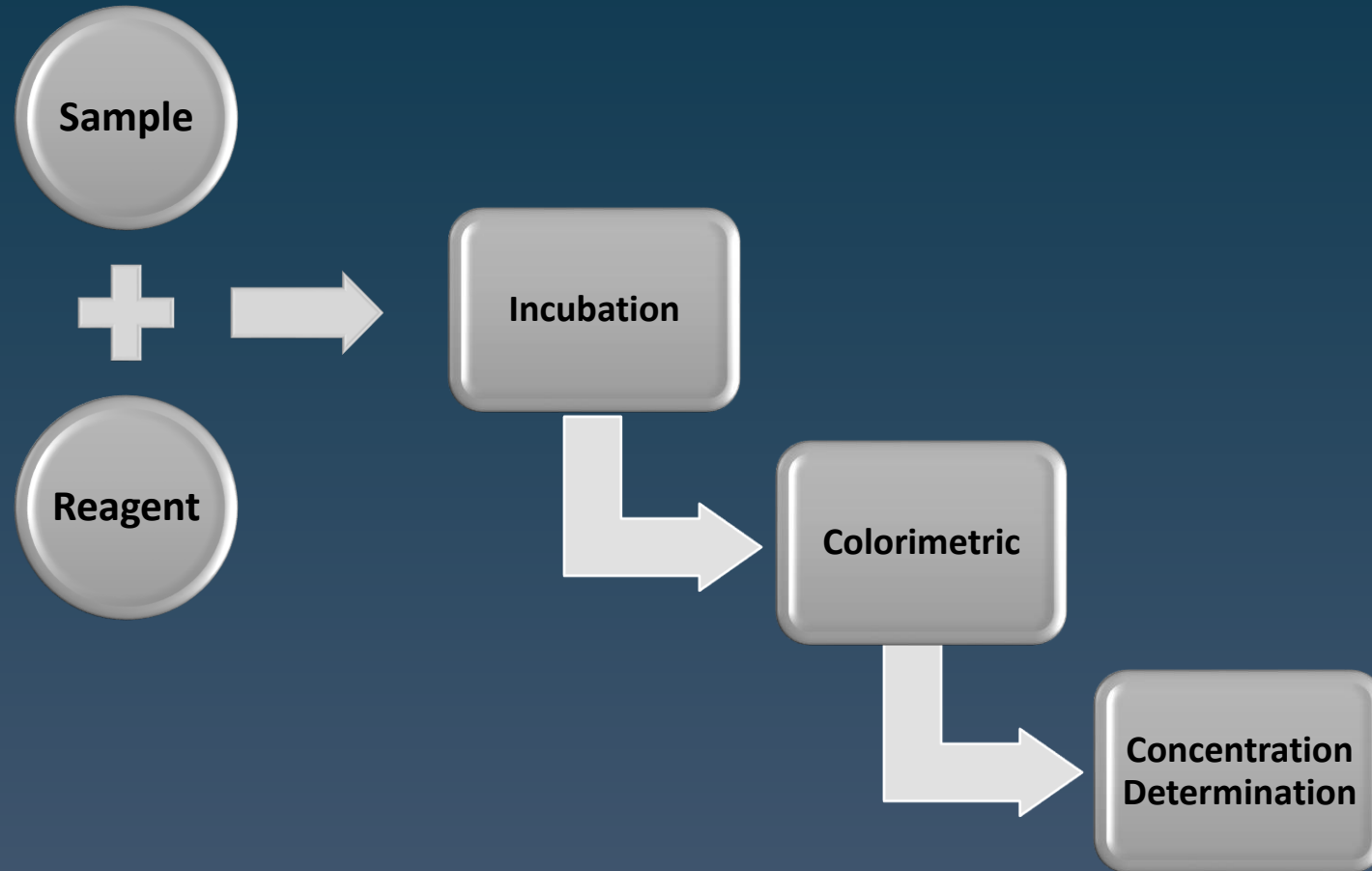
- Heating Bath
- Optical system
  - Light source
  - Monochromator
  - Photo detector

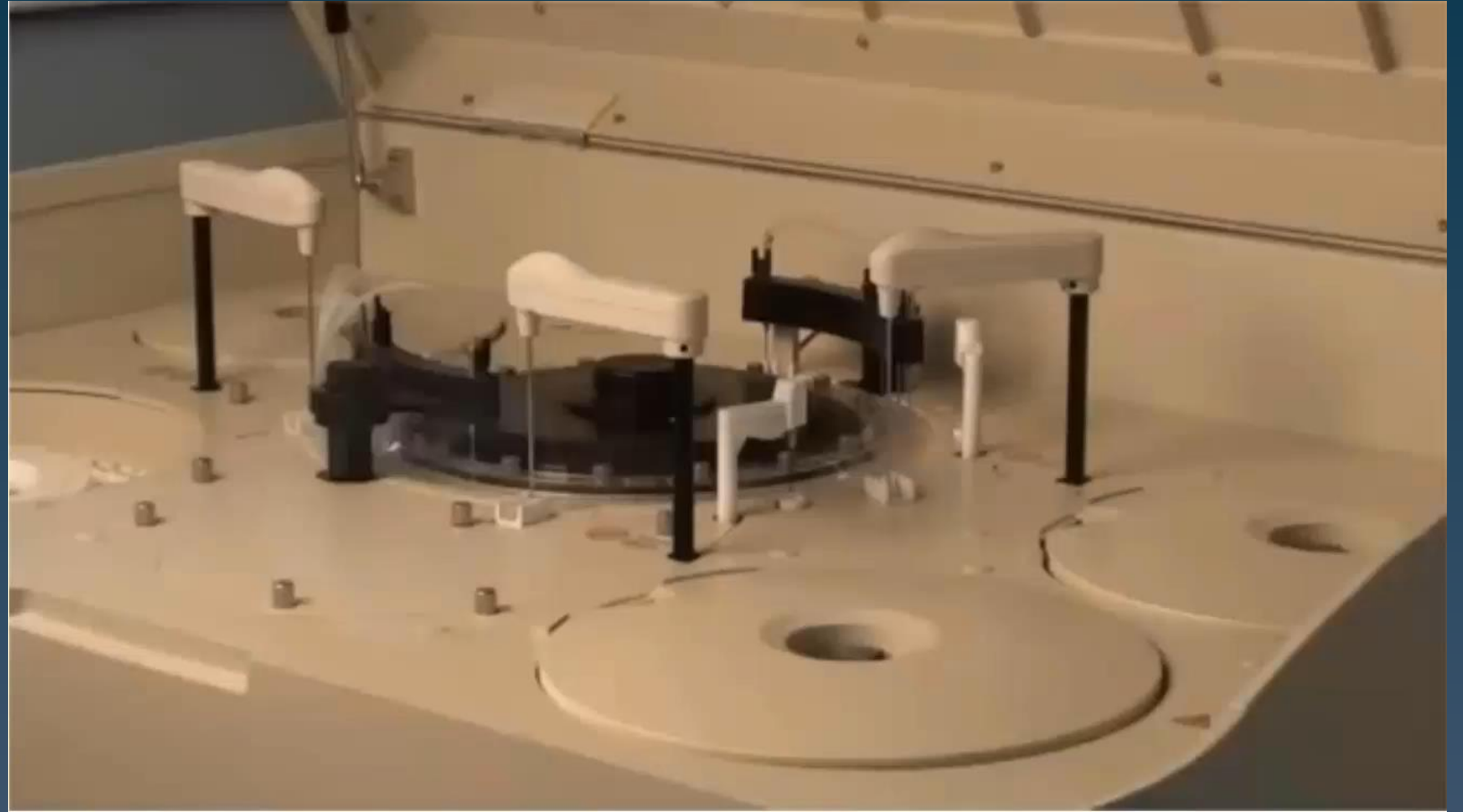






# Principles of Autoanalyzer Operation







# Measurement Methods in Autoanalyzer

- Photometry
- Reflective photometer
- ISE
- Nephelometry
- Fluorometry

# Autoanalyzer Applications

Reduce Ancillary Cost



Sample Saving



Increase of Measurement Accuracy



Accuracy in Experiments  
Repetition



Increasing Speed



Human Error Reduction



# References

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- [www.aparat.com](http://www.aparat.com)
- <https://www.youtube.com/watch?v=YTHwCQbvYYg>



Thank you for  
your attention