Introduction to QA/QC in analytical radiochemistry

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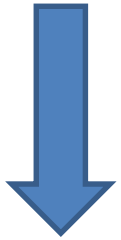
QA/QC

- Crucial for early detection of any problems with instrument orm ethod



- Enable that we can take appropriate measures to correct for them
- Accreditation to ISO 17025

Method validation

- Fit for purpose

- Analysis of reference materials
- Participation in interlaboratory comparisons
- Linearity
- Reproducibility
- Repeatability

- Validated methods need to be checked before used in our laboratory

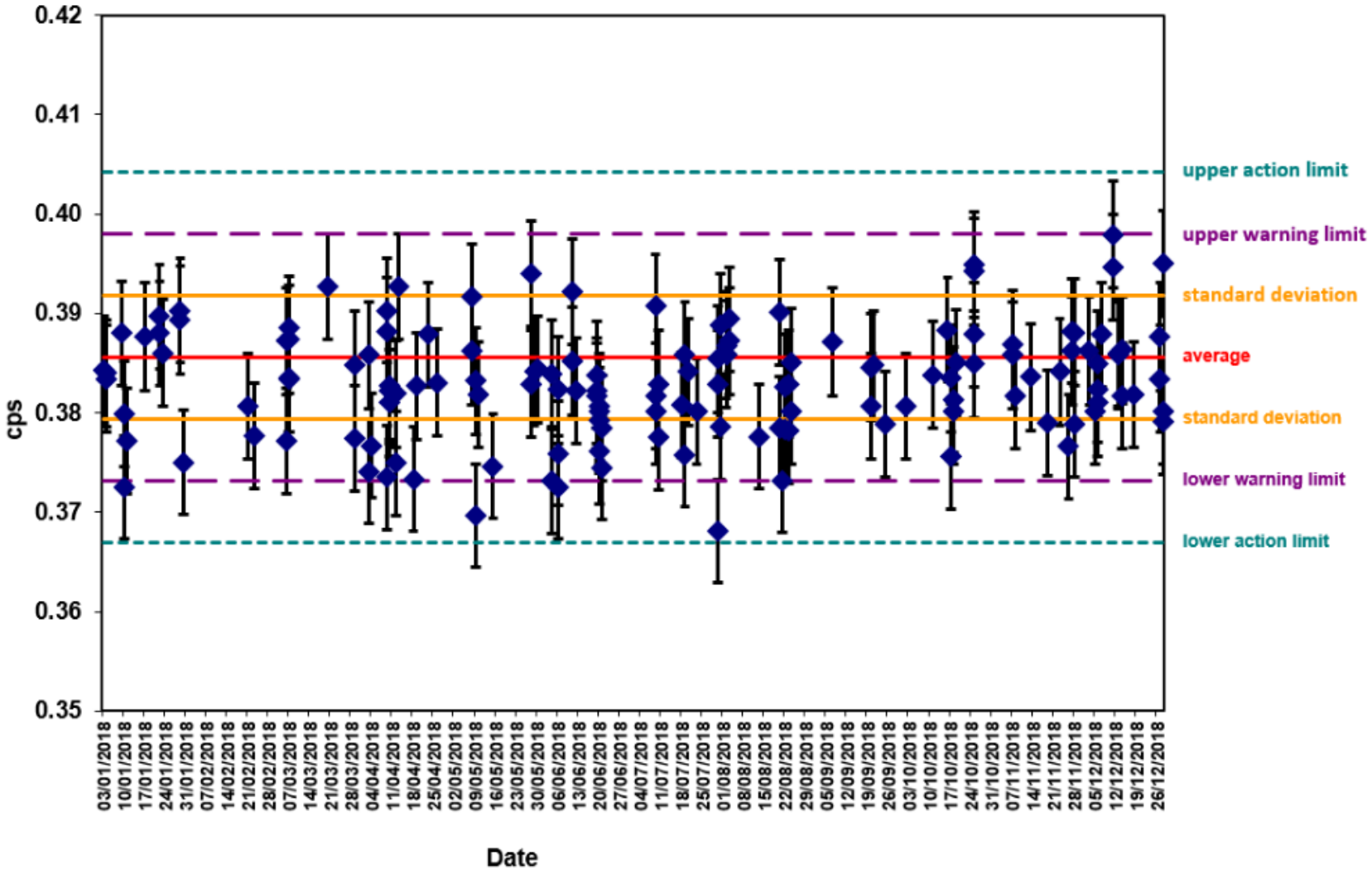
Parameters affecting quality of results

- Room temperature
- Detection efficiency
- Instrument background
- Blank count rate
- Results of analysis of reference materials or internal standards

- Plot them with time => control chart

- At least 10 inputs, better through whole year

Control chart



Using control chart

- Method is under control
  - value within upper and lower warning limits or
  - between warning and action limit and last two values are within upper and lower warning llimits
- Method is under control but out of statistical control
  - 7 consecutive values are increasing or decreasing
  - 10 out of eleven last consecutive values lies on one side of average value but within upper and lower limits
- Method is not under control:
  - control value is out of action limit
  - control value is betweeen warning and action limit and at least one out of last two values are is also between warning and action limit

meet cinch

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