Quotient Bio Analytical Sciences
an LGC business

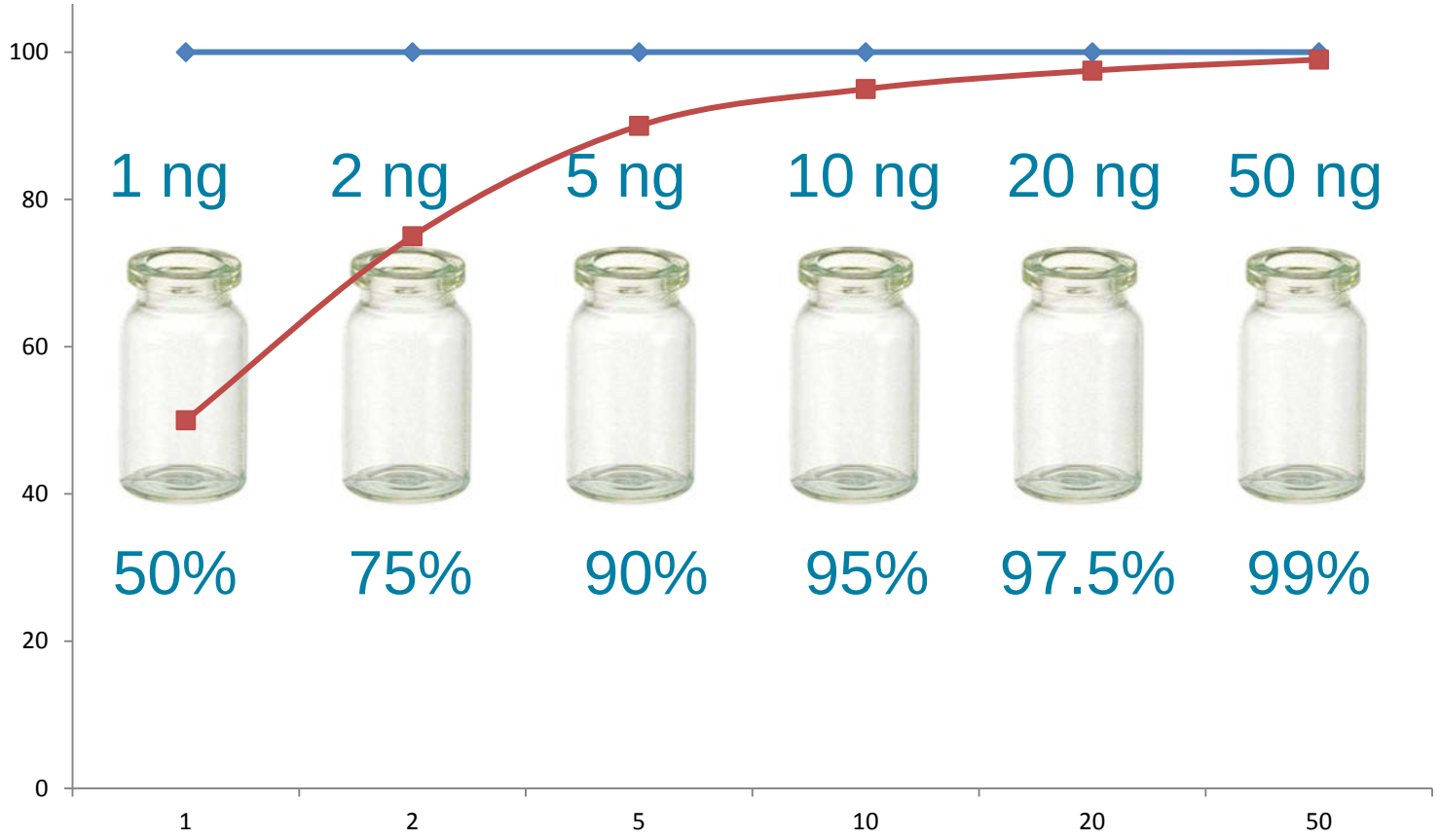
Non-specific binding, Non-linearity or Nonsense?

David Neville
Principal Scientist

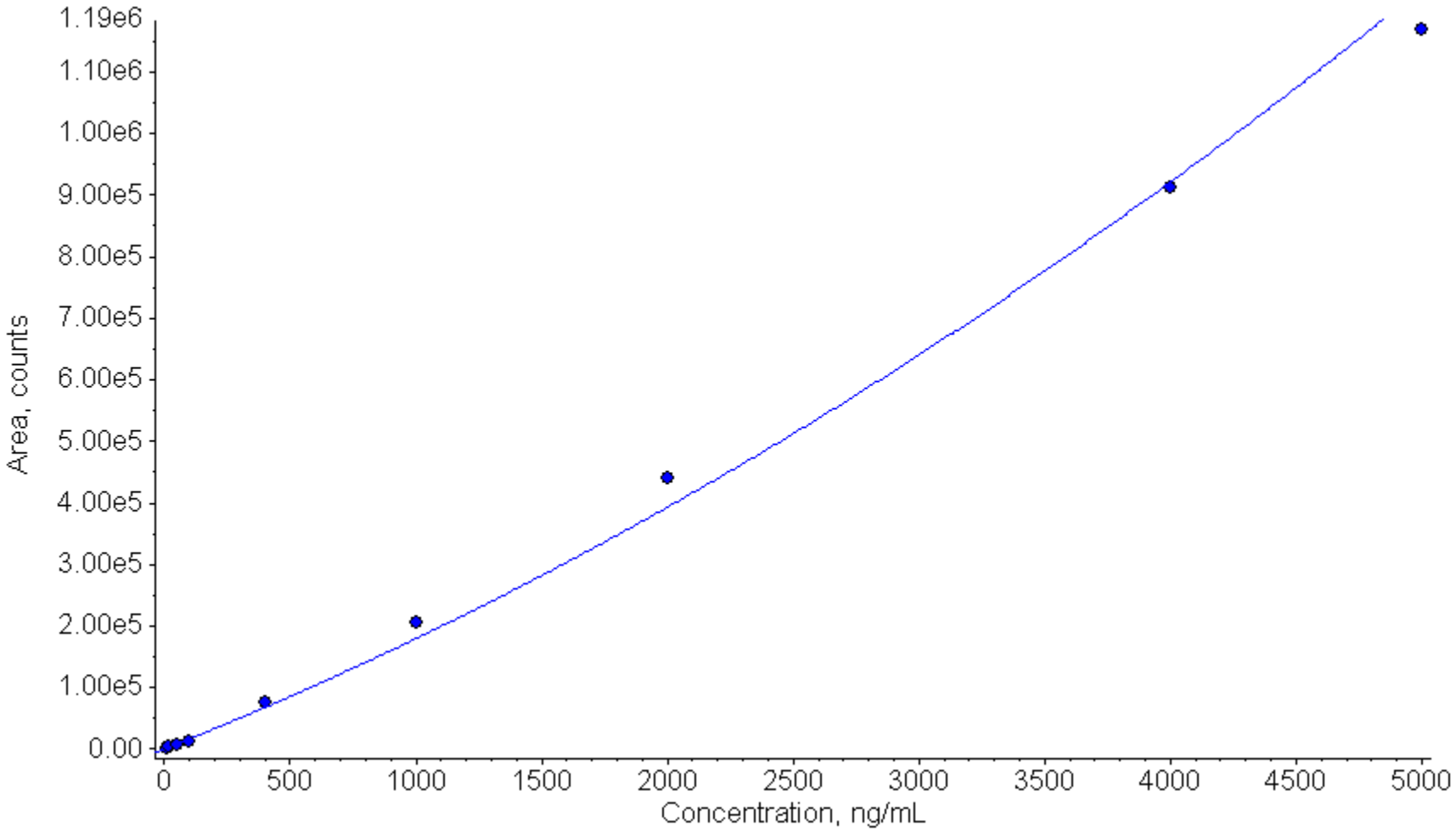
Non-specific binding

For example:

Capacity to bind 0.5 ng



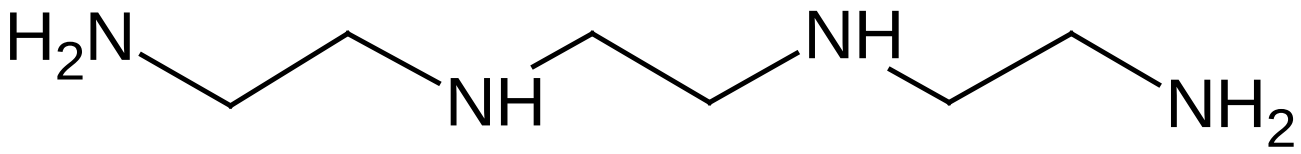
Non-specific binding

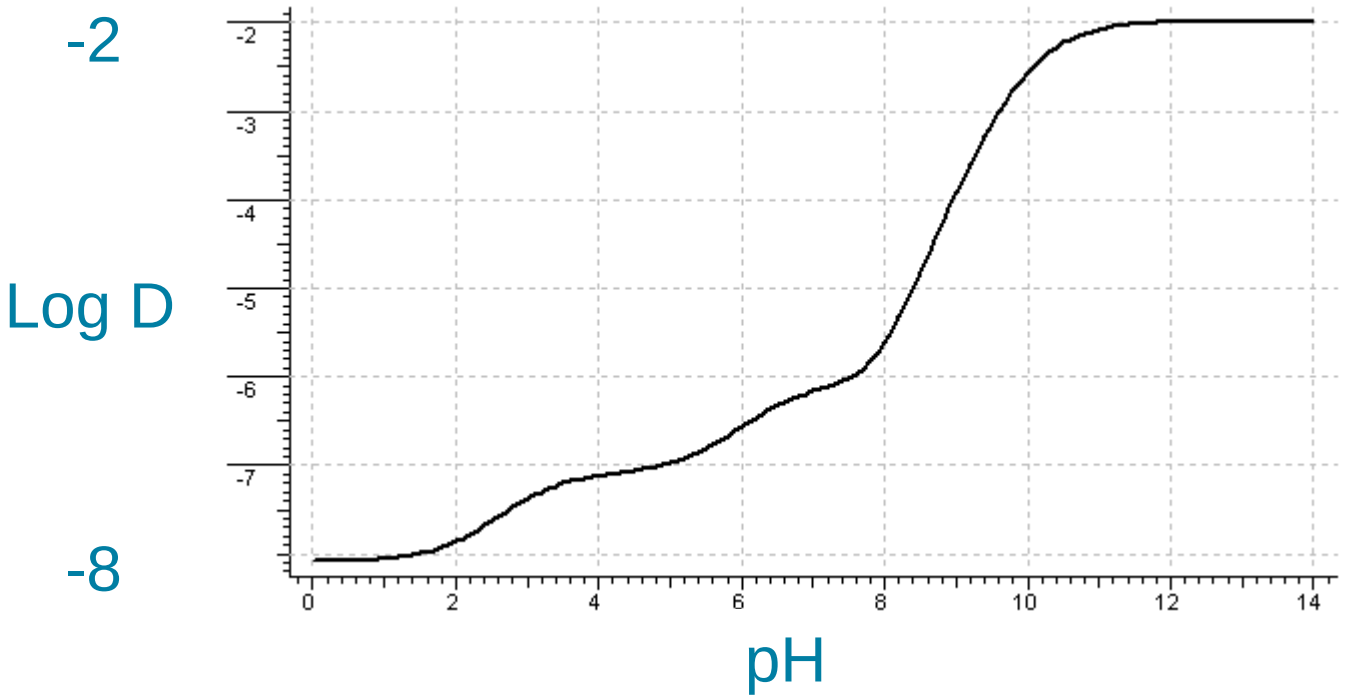


How to fix non-specific binding

- Choice of container
- Additives:
    - Bovine serum albumin (BSA)
    - Organic solvent
    - Surfactant (Tween80)

Test compound



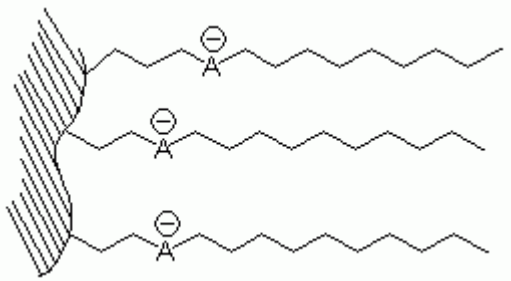


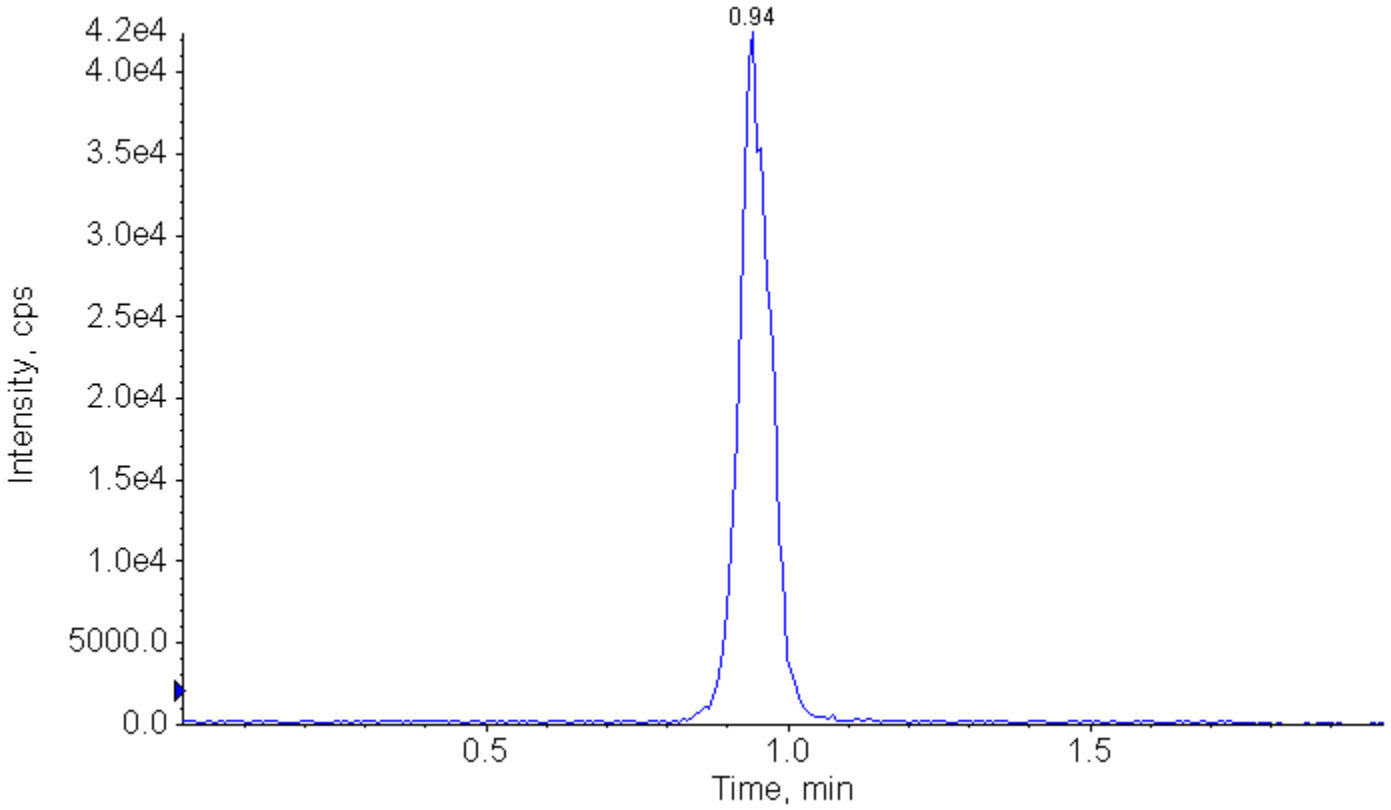
Initial method

SIELC Primesep 200, 50 x 2.1 mm, 5 µm, 100A

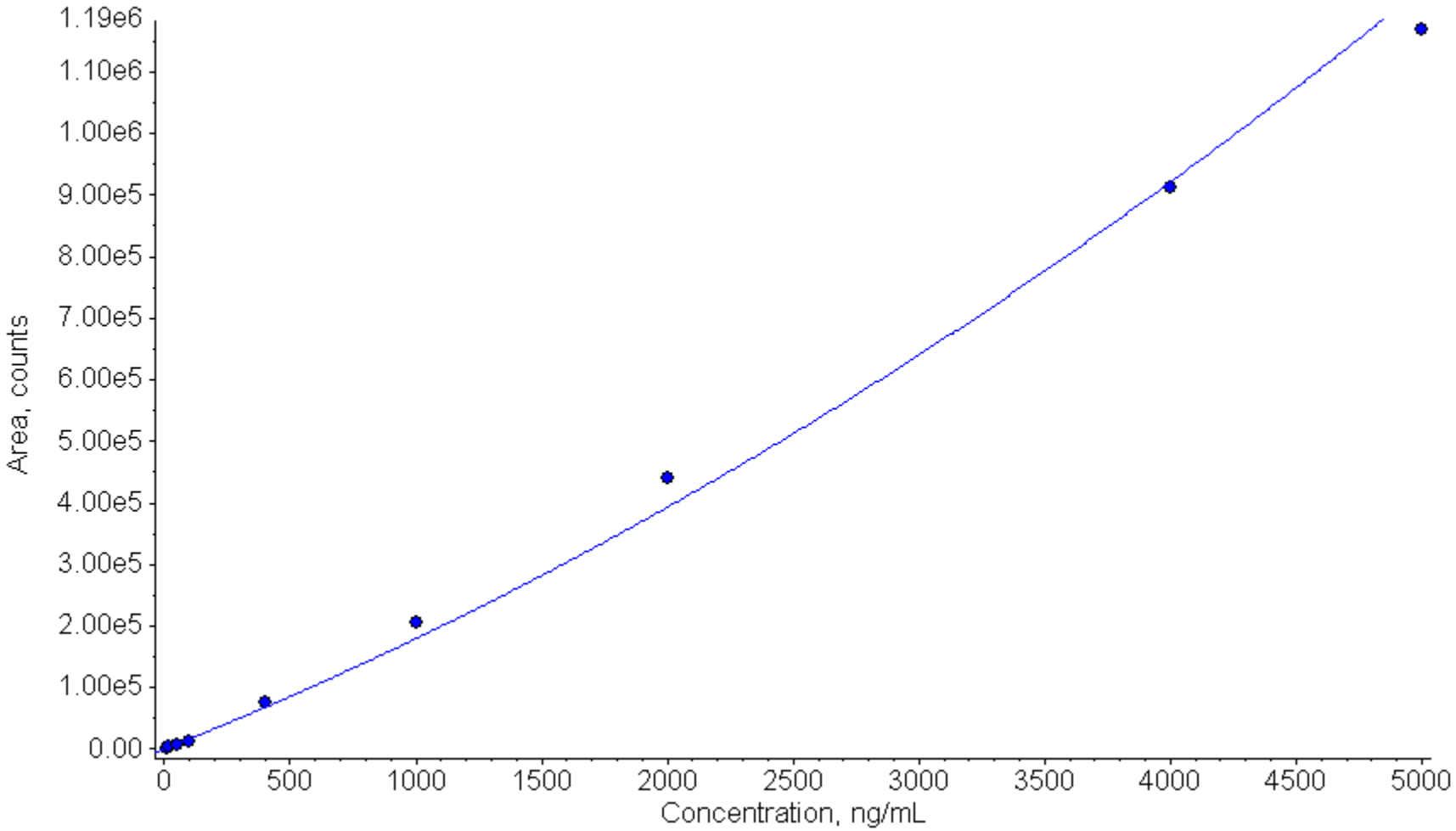
Acetonitrile containing 0.1% (v/v) trifluoroacetic acid

Water containing 0.1% (v/v) trifluoroacetic acid

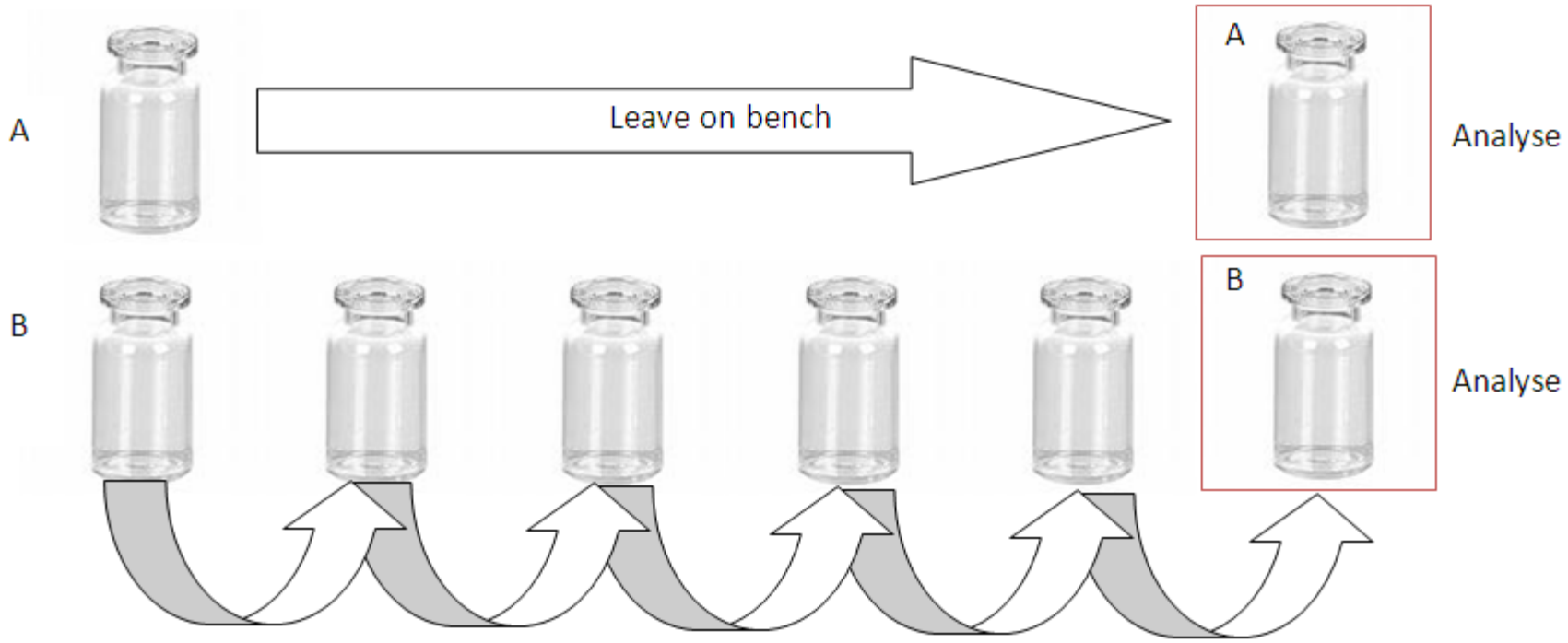




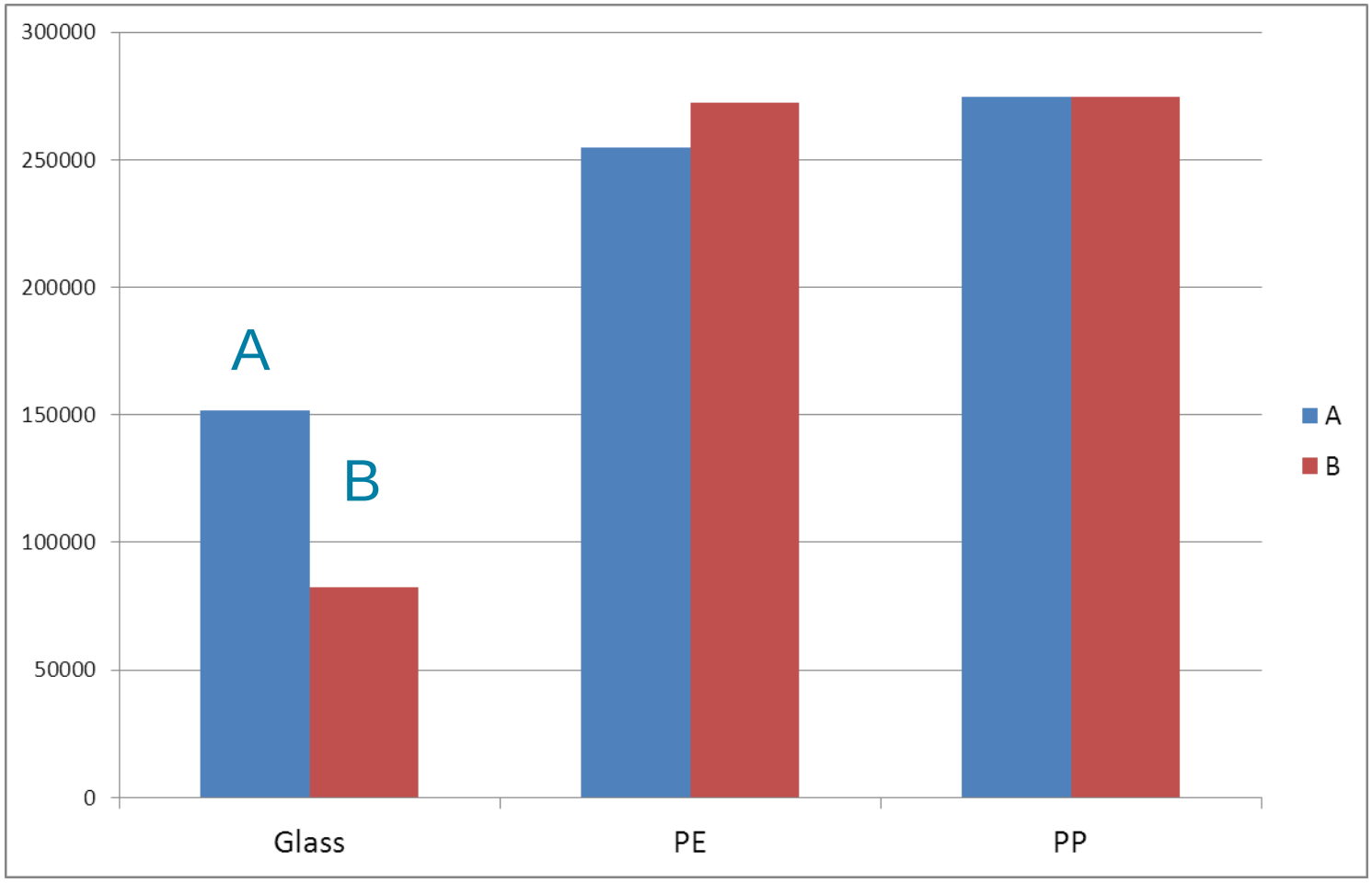
Calibration lines



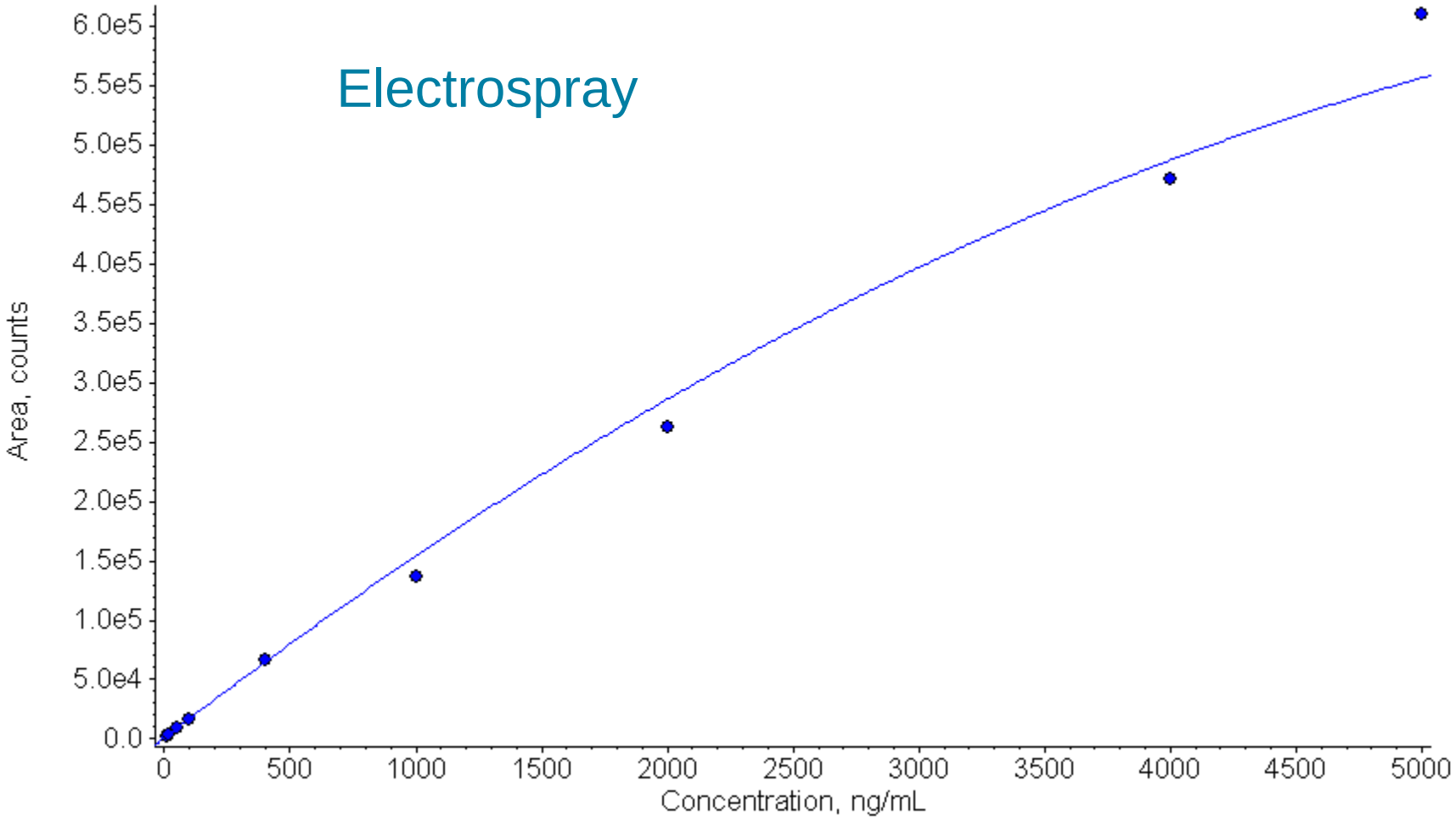
Test for binding



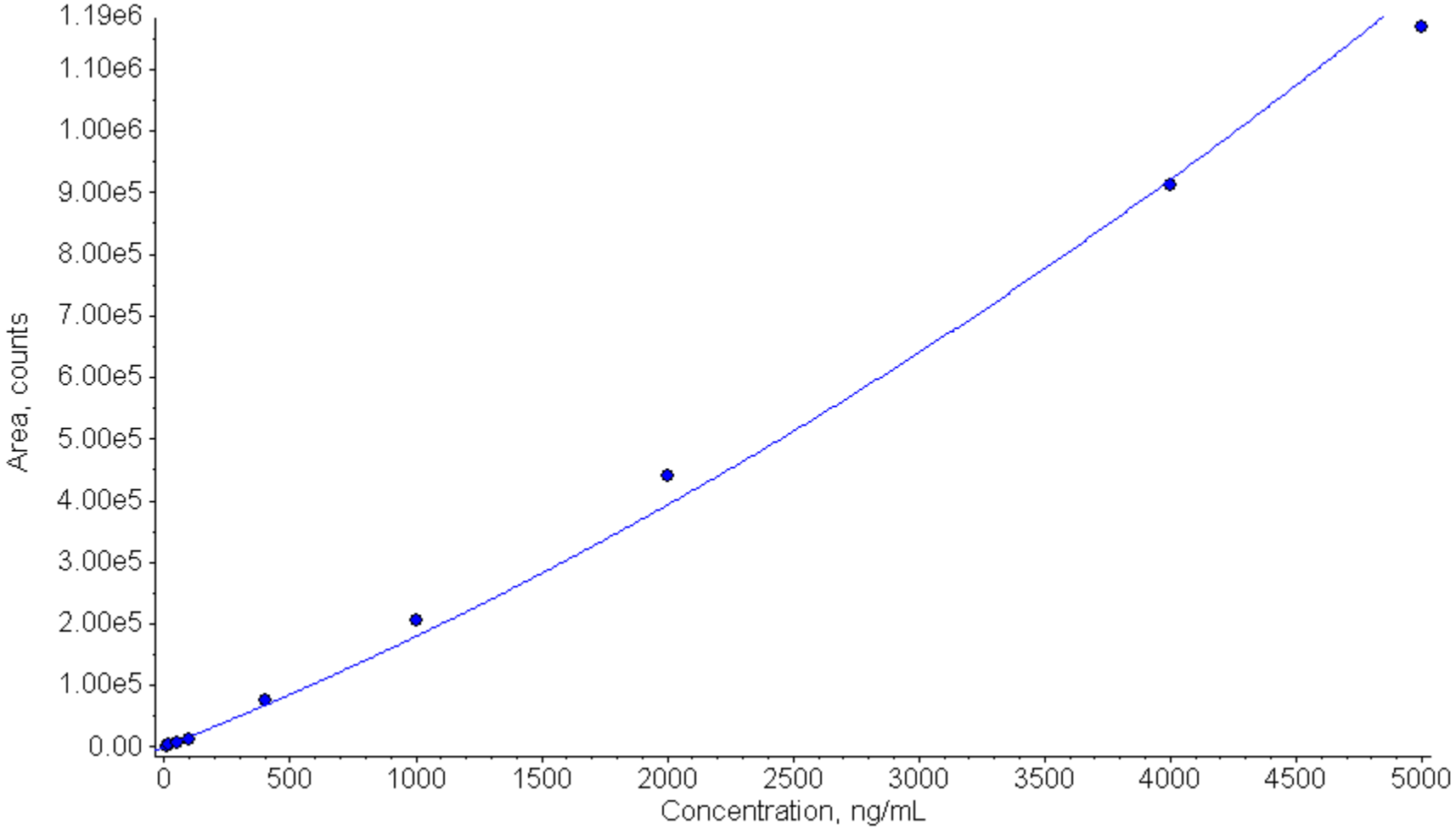
Binding results



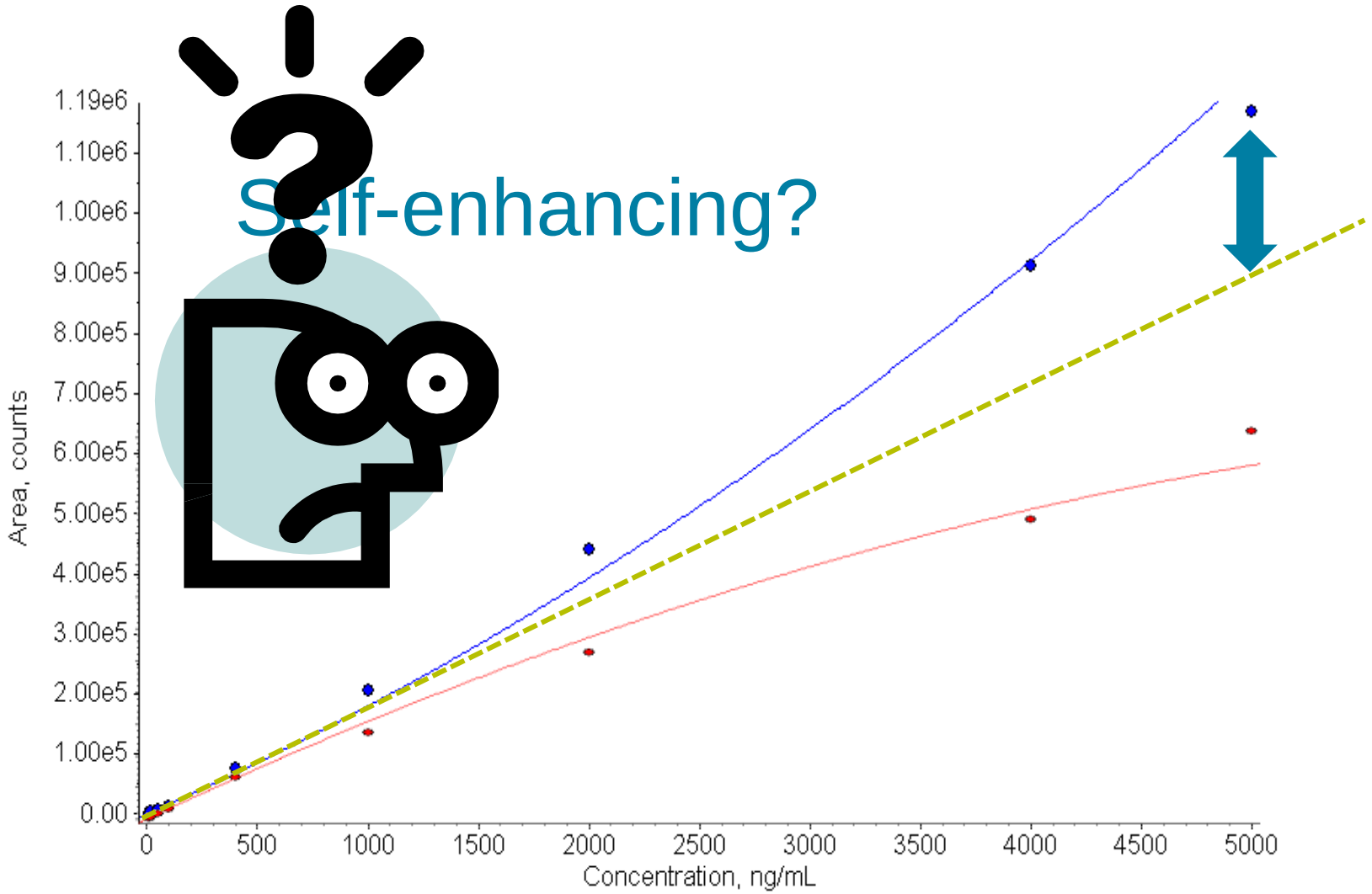
Was the problem fixed?



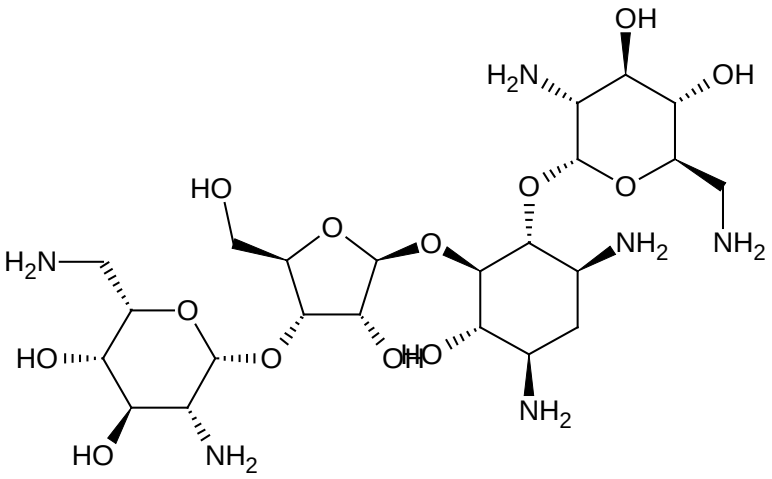
Same solutions via APCI

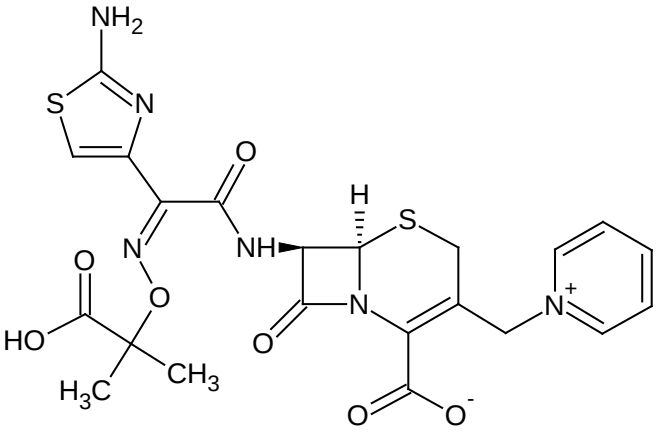


Electrospray vs. APCI



Two other cases





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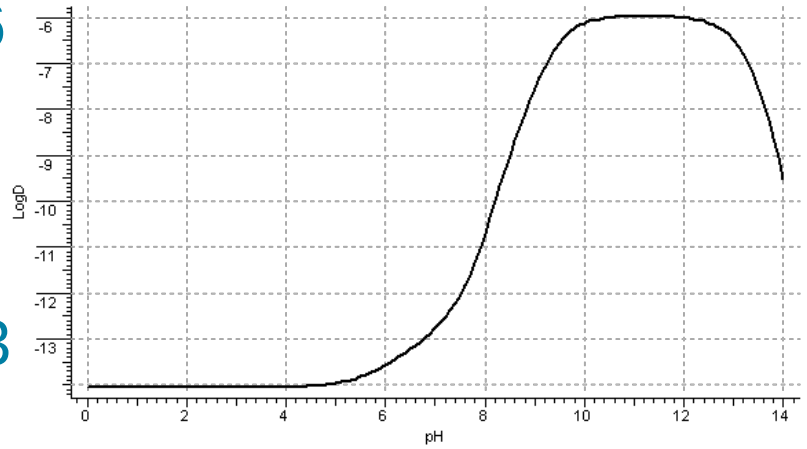
-13



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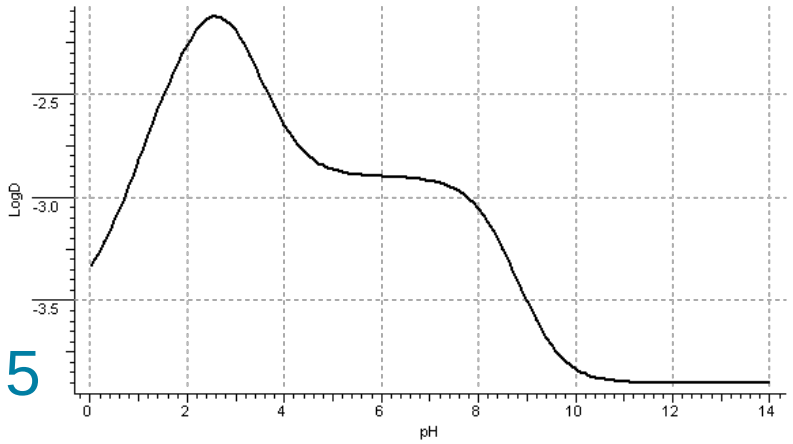
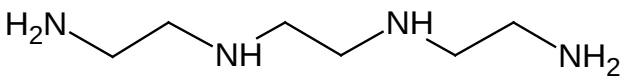
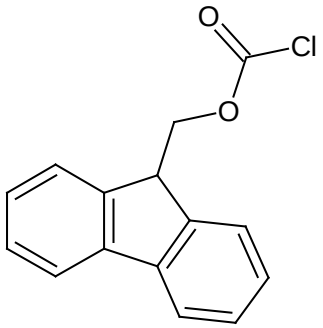
-3.5



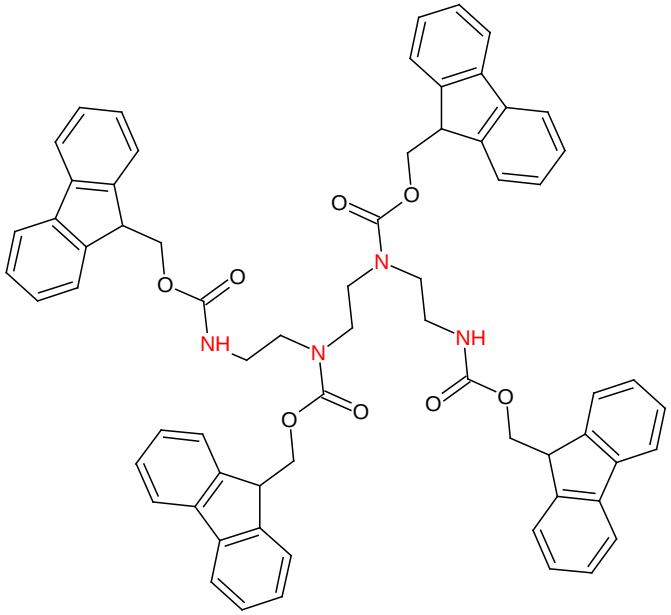
How to fix this – cheat!





FMOC-chloride

30°C, 30mins



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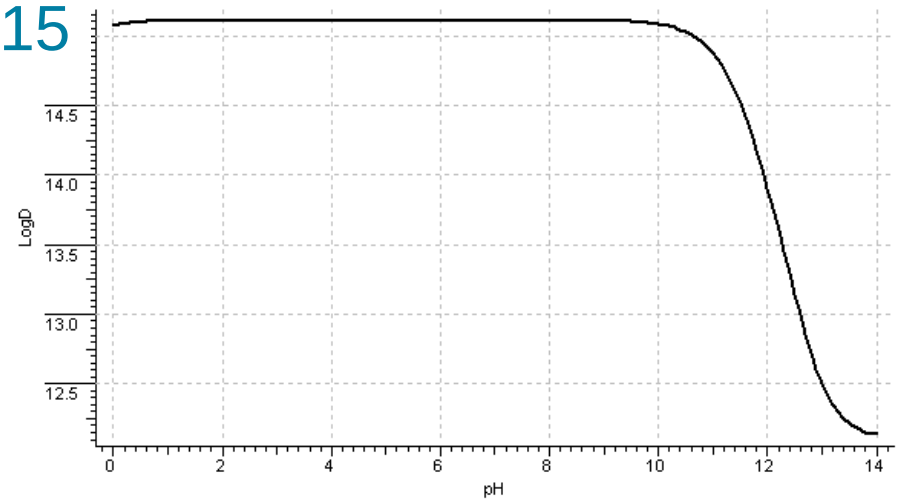

Acknowledgements

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Catarina Horro Pita

Quotient
Bio Analytical
Sciences
an LGC business