

Example of part of an explicit peer marking schedule (not surprisingly this is more comprehensible to those who have done the actual practical).

The marking schedule is associated with a practical exercise in which the students follow a set schedule and are required to write it up in a set format. Available marks are given in parentheses and students can award up to the available number.

3. It should have a title (1) and a heading of introduction.(1)

Does the introduction state the objectives;

- a). give you experience of analysing data from 2 types of binding experiment (1)
- b). to develop you data handling, IT, presentation and critical skills (2)
- c). to practice the calculation of drug binding constants (1)

4. The heading of method must be there (1) and in that section it must state " see handout " or the method must be written out.(3). Any changes from the published method MUST be recorded.

5. The heading of results must be there (1) and the write-up should distinguish between experiment A and experiment B (2)

6. The numerical data should be given or there should be a reference to the data-sheet (if the latter the data sheet MUST be attached to the report) (3)

7. There should be a heading Analysis of results or some such wording (3)

8. ONE or more examples (15) of how the total number of moles of bound ligand at equilibrium can be calculated from the measured dpm. $491\text{dpm from filter; } = 491/60 \text{ dps} = 8.18 \text{ dps.}$
 $80 \text{ Ci/mmol} = 3.7 \times 10^{10} \times 80 = 2.96 \times 10^{12} \text{ dps/mmol}$
specific radioactivity = $2.96 \times 10^{15} \text{ dps/mole}$
moles bound ligand (TB) = $8.18/2.96 \times 10^{15} = 2.76 \times 10^{-15} \text{ moles.}$

9. ONE or more examples (15) of how the final concentration of free ligand (in moles/litre) at equilibrium can be calculated from the initial concentration (in moles/litre) and the amount of ligand bound per tube.

Amount initially = amount free + bound at equilibrium

amount free = initial amount - bound amount. NOTE difference between amount (moles) and concentration (moles/l). Note also moles/l is the same as molar (M).

initial concentration = $1 \times 10^{-10} \text{ moles/litre}$

therefore the amount in a 0.25ml sample is $2.5 \times 10^{-14} \text{ moles initially}$

amount bound (TB above)= $2.76 \times 10^{-15} \text{ moles; therefore free} = 2.224 \times 10^{-14} \text{ moles}$

and therefore the concentration of free ligand (FL)= $8.89 \times 10^{-11} \text{ moles/l (M)}$

10. A table with title (3) of the initial concentration of free ligand (IFL) in moles/litre (3), the total amount of bound ligand (TB) (3) in moles/tube and the concentration of free ligand at equilibrium (FL) (moles/litre) (3)

initial conc ligand (IFL)(M)	bound ligand (TB) moles/tube	conc free ligand at equilibrium (FL) (moles/litre)
1×10^{-10}	2.76×10^{-15}	8.89×10^{-11}
....		
2×10^{-8}	3.56×10^{-14}	1.98×10^{-8}