KS4 Practical Mark Scheme

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

FAIL | G | F | E | D | C | B | A | A*

Section 1

Sources

S1 Two relevant sources are identified. (If websites full URL needed).

S2 The usefulness of one source is commented on.

S3 A comparison between the usefulness of the two sources is made.

Hypothesis

H1 State a reasonable hypothesis (prediction).

H2 Explain hypothesis (prediction) using accurate science.

Variables

V1 Stated your independent variable.

V2 Stated your dependent variable.

V3 Stated 2 or more controlled variables.

V4 Explained how you have controlled these two variables.

V5 Explained how not controlling these variables could affect your investigation (results

V6 Identified one of your variables that is difficult to measure accurately.

V7 Explained why this variable is difficult to measure accurately.

V8 Suggest how this variable could be measured more accurately.

Diagram

D1 State some equipment.

D2 State all of the equipment needed.

D3 Draw a simple scientific diagram with equipment labelled in ruler and pencil.

Method

M1 Written a step by step method with most of the steps.

M2 Described in detail all of the steps, including how to record measurements.

M3 If I follow your method I will get accurate results.

M4 Your Method includes a reference to the precision at which measurements must be made.

M5 Your method explains <u>why</u> you will need to repeat the experiment.

M6 You have clearly identified controls stated how they are monitored.

M7 There is no spelling errors, or punctuation missing from your method.

Risk Assessment

R1 You have identified any significant hazards.

R2You have stated appropriate control measures for the hazards.

Table

T1 Your results table has your variables as headings.

T2 Your results table includes appropriate units for all of your headings.

Intervals

I1 You have stated the interval used for your independent variable. Including units.

I2 You have stated wether or not the interval with a simple explanation.

I3 You have stated wether or not the interval was suitable with a detailed explanation.

Section 2

Practical Skill

P1 You have demonstrated that you can measure accurately.
This means you are measuring to the nearest 0.1g in solids or the nearest 0.5ml in liquids.
Your teacher will decide wether or not you have achieved this, you do not need to write anything down.

Graph

G1 Your graph has a sensible x (across) axis, labelled with units.

G2 Your graph has a sensible y axis (up) with units.

G3 Your graph has it's points plotted in the right places to within 1mm in pencil.

G4 Your graph has a suitable line of best fit, or a sentence saying there is no correlation if there is none.

Analysis

A1 You have stated wether your results supports your prediction of not.

A2 You have used two points of data (numbers) to describe how your results supports your prediction or not.

A3 You have referred to overall trend in your graph, and wether this supports or not your prediction.

Evaluation

E1 You have correctly identified any anomalous results or stated that you have no anomalous results.

E2 You have identified wether you needed to repeat any results.

E3 You have stated one source of random error in your method/results. This cannot be human error.

E4 You have stated one source of systematic error in your method/results. This cannot be human error.

E5 You have stated how these errors can affect you actual results (numbers)

E6 You have described how you could reduce these errors if you repeated the experiment.

Looking at another Group's Results

L1 You have compared your results (overall trend/pattern) with another group's results.

L2 You have included data (numbers) in your comparison.

L3 You have stated why we compare our results with other groups (reproducibility ,pattern, check)

Context

C1You have stated a real life context where the results of this experiment apply.

C2 You have explained how the trend in your results apply to this real life context.

C3 You can stated how your results can be used in the context.

Section 1 Total	/30	Section 2 Total	/20	Practical total	/50