Candidate 1 evidence

Pressure and Temperature

Aim:

My aim is to see what happens to the pressure as you change the temperature in a fixed mas of gas.

Underlying physics:

This experiment was done to observe the relationship between pressure and temepreture. The pressure and temperature are directly propotional to each other, this means that as one increases so does the other. This is do as the particals get heated up they gain kinetic energy due to this they start to strike the container walls per unit area, this then means the pressure of the container increases.

Description of Experiment:

- I measured the pressure of the flask as I changed the temeprature, using a water bath
- I changed the temperature of the flask by taking it out the water bath
- I measured the pressure every 5°C drop
- I got my results by looking at a datea logger

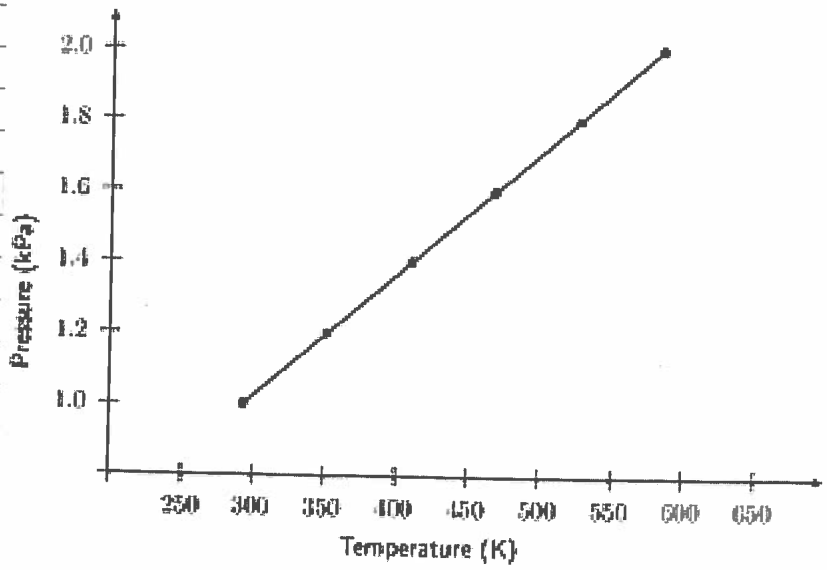
Experimental data:

Temperature °C	Pressure kPa Results 1	Results 2	Results 3	Average
60	100.5	100.7	100.7	100.6
55	99.5	99.3	99.1	99.3
50	98.3	98.2	98.1	98.2
45	97.1	96.8	96.7	96.9
40	95.7	95.5	95.5	95.6

Graphical presentation:

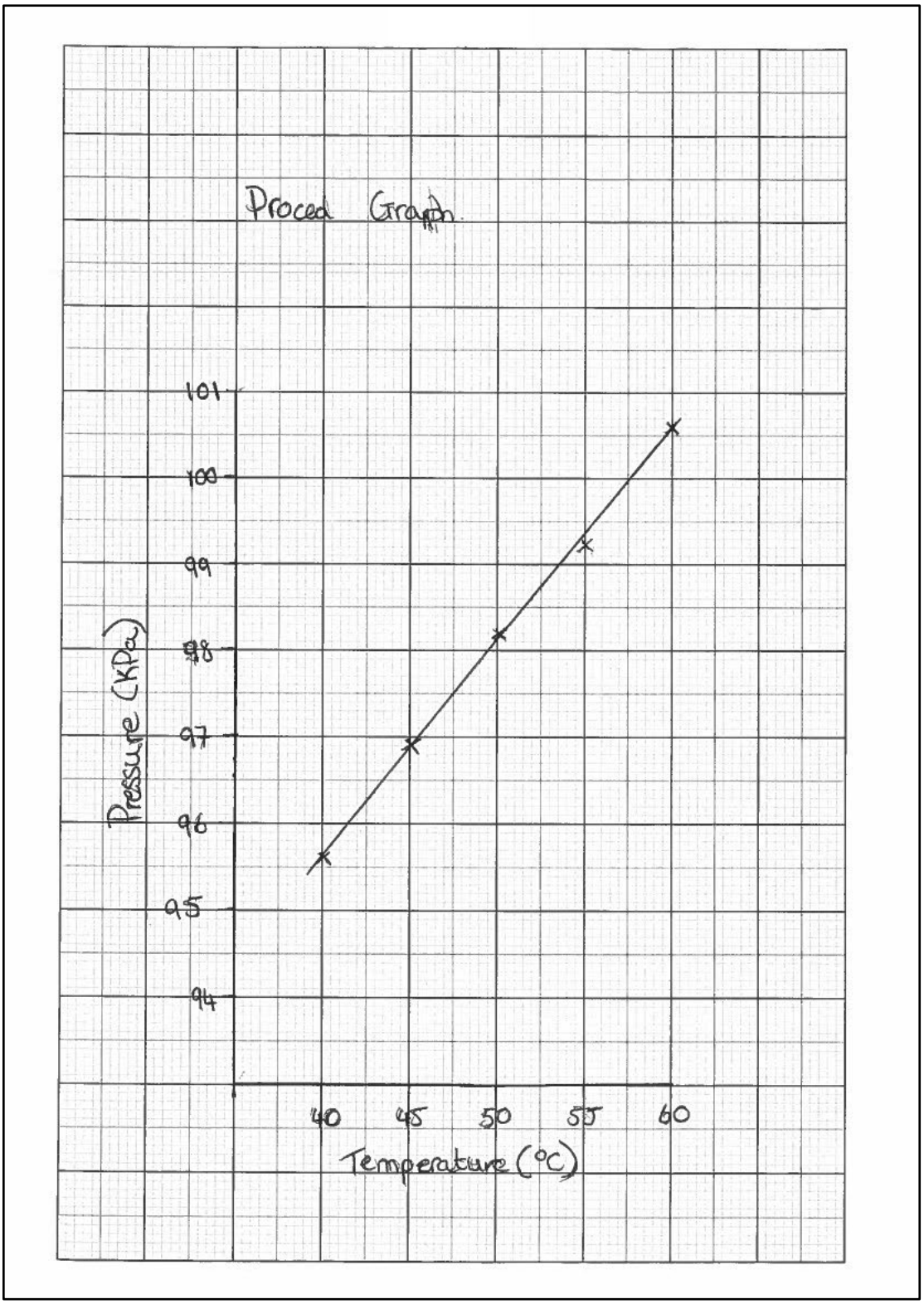
Included

Data from internet source:



I got this graph from the internet, the URL:

https://introductiontogaslaws101.weebly.com/gay-lussacs-law.html


Proced Graph
101
100
99
98
97
96
95
94
Pressure (kPa)
40
45
50
55
60
Temperature (°C)

Analysis:

The graph I have got is similar to the graph from the internet therefore it is valid and accurate

Conclusion:

From the that I have gathered it shows the relation ship between pressure and temperature It shows what happen to one as the other increases or decreases, the other one increas or decreases.

Evaluation:

For my experiment to be accurate the gas inside the flask had to be the same to keep all results fair. One way I could improve my accuracy of the experiment is by repeating the experiment more times, by doing this I could minimise the error and take an average at the end.

Refrences:

I got all my information from the following:

book: Physics Nat 5, Author: Arthur Baillie, ISBN: 978-1-444-8438-9

Website: https://m.carolina.com/teacher-resources/Interactive/gay-lussacs-law-temperature-pressure-relationship-in-gases-determination-absolute-zero/tr10730.tr