

# Is Ozone Effected by smoke?



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# question

- Does smoke affect ground level ozone?

- Hypothesis:
- We thought that there would be more ozone in smoke than in air because of pollution.



# Materials

- outdoor fireplace
- distilled water
- wood
- matches
- ozone strips
- fire starter
- lamp post
- rope
- paperclips
- ladder
- skewer
- wooden pole

# The Variables

- Independent variable: smoke
- dependent variable: ozone level
- constants: area, humidity, time, etc.
- control: normal ozone level

# The steps to victory (in science)

our steps

- acquirer materials
- build a legit fire
- place the ozone strips
- wait one hour
- check ozone strips
- match to color
- place data on chart



# Safety measures

- we had to make sure we didn't get burned by the fire and not to trip and hurt ourselves at night

# Average Ozone Levels For Smoke and Non-smoke

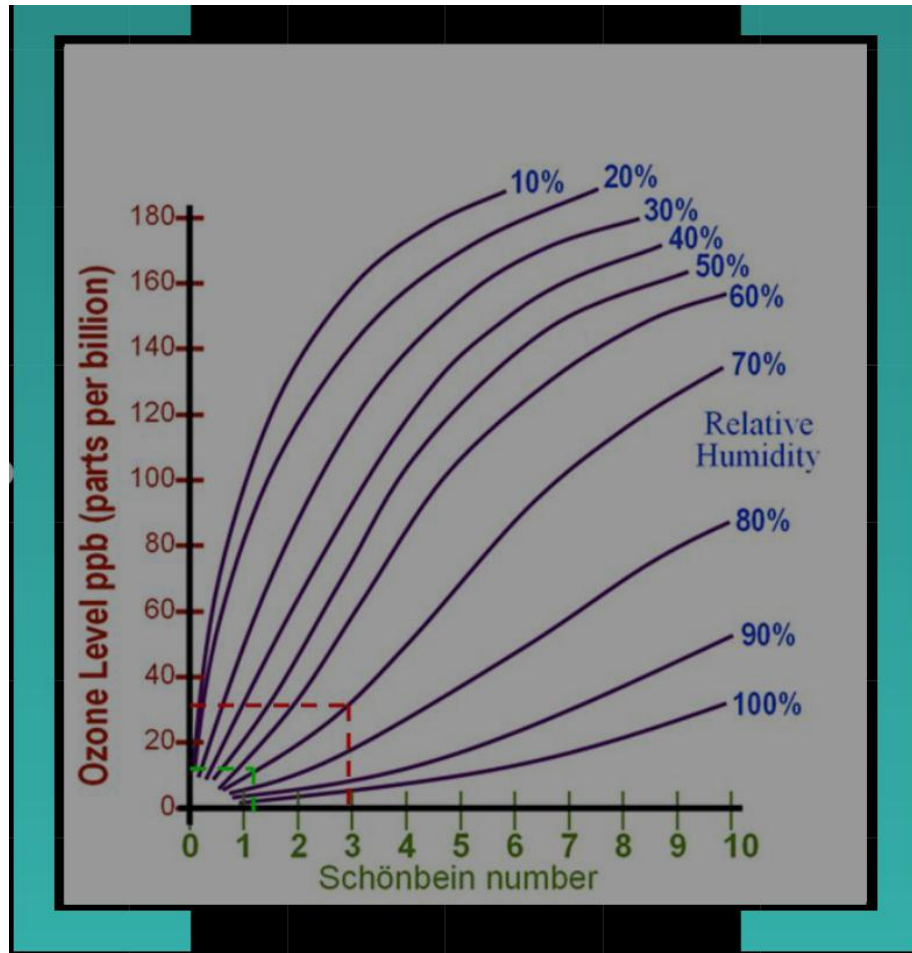
## (Table)



ind variable	Schoenbein Number			Average	Average Ozone level (parts per billion)
	trial 1	trial 2	trial 3		
smoke	2.5	3.0	3.3	2.9	30
non-smoke	2.0	1.1	0.6	1.2	11



# average ozone levels of smoke and no smoke



## Smoky Ozone level VS. Plain Ozone level



# Conclusion

- We thought that there would be more ozone in smoke than in air because of pollution.
- The data did support our hypothesis in that there was more ozone in the air and less in the regular non-polluted air. We learned that ground level ozone is also affected by pollutions as well as the other problems you have seen featured in the projects before us. This project does not show any correlation. This experiment could be improved by being able to control the amount of smoke put out by the fire and then adding different fires with different amounts of smoke. This experiment does lead to other questions like, how much pollution does it take to actually affect the ground level ozone. It could be that it is one more reason to stop polluting the air with noxious gases such as smoke and fumes.

