

Nitrocellulose

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MATERIALS

- Nitrocellulose (gun cotton)
- BBQ lighter
- 2 Watch glasses
- Cotton

PRESENTATION

- Place a cotton ball on the watch glass and light it with the BBQ lighter
- Show the incomplete combustion of the cotton
- Place a similarly sized piece of nitrocellulose on the other watch glass and light it with the BBQ lighter
- Optimally, there should be no residue left behind and no smoke. Based on how well the nitrocellulose was made, and how old it is, there may be some. It will still be dramatically different than the cotton ball.

Feel free to use as big of a piece as you wish. Just be sure to test a small piece and work up in increments to make sure that you don't get burned.

DISCUSSION

- Balanced equations
- Nitration
- Combustion

- History (why old films caught on fire, uses as a wood finishing product, and so on...)

HAZARDS (MSDS Links)

Nitrocellulose: <http://www.suchem.com/images/msds23.pdf> [1]

[Undergraduate](#) [2]

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http://www.chem.arizona.edu/lecture_demos/boyle%27s_law_qual

Links:

[1] <http://www.suchem.com/images/msds23.pdf>

[2] <http://www.chem.arizona.edu/taxonomy/term/11>