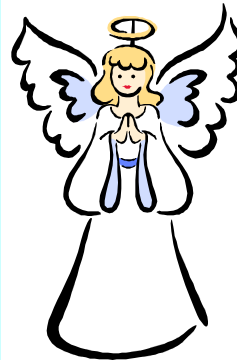




**Orgo's Angels**



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## What Chemicals Causes glass and fireworks to be so colorful?










### Glass Pigments

Compounds	Colors
iron oxides	greens, browns
manganese oxides	deep amber, amethyst, decolorizer
cobalt oxide	deep blue
gold chloride	ruby red
selenium compounds	reds
carbon oxides	amber/brown
mix of manganese, cobalt, iron	black
antimony oxides	white
uranium oxides	yellow green (glows!)
sulfur compounds	amber/brown
copper compounds	light blue, red
tin compounds	white

lead with antimony

yellow

## Fireworks!!!!

Color	Compound
 <b>Red</b>	strontium salts, lithium salts lithium carbonate, $\text{Li}_2\text{CO}_3$ = red strontium carbonate, $\text{SrCO}_3$ = bright red
 <b>Orange</b>	calcium salts calcium chloride, $\text{CaCl}_2$ calcium sulfate, $\text{CaSO}_4 \cdot x\text{H}_2\text{O}$ , where $x = 0, 2, 3, 5$
 <b>Gold</b>	incandescence of iron (with carbon), charcoal, or lampblack
 <b>Yellow</b>	sodium compounds sodium nitrate, $\text{NaNO}_3$ cryolite, $\text{Na}_3\text{AlF}_6$
 <b>Electric White</b>	white-hot metal, such as magnesium or aluminum barium oxide, $\text{BaO}$
 <b>Green</b>	barium compounds + chlorine producer barium chloride, $\text{BaCl}^+$ = bright green
 <b>Blue</b>	copper compounds + chlorine producer copper acetoarsenite (Paris Green), $\text{Cu}_3\text{As}_2\text{O}_3\text{Cu}(\text{C}_2\text{H}_3\text{O}_2)_2$ = blue copper (I) chloride, $\text{CuCl}$ = turquoise blue
 <b>Purple</b>	mixture of strontium (red) and copper (blue) compounds
 <b>Silver</b>	burning aluminum, titanium, or magnesium powder or flakes

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