Physics video of the week, number 4

Making fuming nitric acid https://youtu.be/QmCdrDLyNXQ

I True or false? Circle the correct answer and justify if it's false

Ⓣ/F 1 Fuming nitric acid can light common lab gloves on fire.

True.

T/Ⓕ 2 To make fuming nitric acid, the speaker uses hydrochloric acid.

False – The speaker uses *sulfuric* acid.

T/Ⓕ 3 To speed up the reaction, the speaker cools down the reactants.

False – The reaction is sped up by *heating* the reactants, according to the Arrhenius equation.

Ⓣ/F 4 The orange color comes from nitrogen dioxide gas.

True – Excess heat decomposes the nitric acid to form $NO_{2(g)}$.

T/Ⓕ 5 The process used to cool down the gas to a liquid form is called crystallization.

False – It's a *distillation*, a common process in chemical reactions that form gases and a means of purification.

Ⓣ/F 6 The speaker determines the concentration of his product by measuring its density.

True – Most physical properties of mixtures depend on the relative proportions of each compound.

T/Ⓕ 7 Using gloves in a lab is something one must always do without thinking.

False – Every safety measure is well thought of beforehand.

II Translate into English

- ◇ Oxydant : oxidizer
- ◇ Fusée : rocket
- ◇ Faire bouillir : to boil
- ◇ Colonne réfrigérante : condenser column
- ◇ Feuille d'aluminium : aluminium foil
- ◇ Sous vide : under vacuum
- ◇ Curieusement (expression idomatique) : oddly enough