

How to Obtain the Chemicals Not Included in CHEM C2000 or CHEM C3000

Additional Chemicals Needed for CHEM C2000

- About 100 ml (4 oz) of Hydrogen peroxide (3% Solution)

Additional Chemicals Needed for CHEM C3000

- The chemical above, and
- About 100 ml (4 oz) of Sodium hydroxide (4% Solution, 1 mol/l)
- About 100 ml (4 oz) of Hydrochloric acid (7% Solution, 2 mol/l)
- About 10 ml (0.4 oz) of Silver Nitrate Solution (1% Solution)
- Denatured Alcohol (a 16 oz bottle should be sufficient)

Where to Find Them

If you are having trouble locating the chemicals, we suggest the following:

- We suggest looking for a dilute (5% to 7%) solution of **hydrochloric acid** at drug stores, natural remedy stores, or science supply stores. If you find a more concentrated solution, you can dilute it down to the correct solution by adding the acid to an appropriate amount of water to dilute it to 7%.
- We suggest looking for a dilute (4%) solution of **sodium hydroxide** at science supply stores, or creating dilute aqueous solutions from "lye" or "caustic soda" powders which can be purchased from the hardware store.
- We suggest looking for **hydrogen peroxide** at your local drug store.
- We suggest looking for **denatured alcohol** at your local drug store. This is sometimes called "methylated spirits" or "rubbing alcohol." We suggest a solution of at least **70% ethyl alcohol**. This works better than isopropyl alcohol.
- We suggest looking for **silver nitrate** at science supply stores, or photography dark room supply stores. You may need to purchase silver nitrate in solid form (crystals, tablets) and create a very dilute aqueous solution from it.

If you would like to purchase the chemicals **online**, here are the web addresses of some online chemical suppliers:

www.powscience.com/store/powscience/c3000supplementset.html

www.unitednucler.com/chem.htm

www.advance-scientific.net

www.onlinesciencemall.com

www.sciencekit.com

Work with a Science Teacher or School Science Lab

If you are having an especially troubling time locating the chemicals in your area, we recommend that you work with your child's science teacher or the science laboratory at your child's school to perform the additional experiments. All of these chemicals are found in most junior high and high school chemistry labs. We realize that working with a science teacher is not always a viable option, but established institutions like schools and labs have easier access to the chemicals required by these chemistry kits.

CHEM C2000 and C3000 are advanced chemistry sets that require a serious commitment to the study of chemistry. If you would like to exchange your CHEM C3000 for a CHEM C2000, which does not require as many additional chemicals, or a

CHEM C1000, which requires very few additional items, we will happily see what we can do to make the exchange.