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List of Approved Home Lab Kits and Procedures

NOTE: Neither students nor faculty are required to sign any agreement pertaining to the use of the home "lab kits" provided by Carolina Labs. However, it is important that all kits are used in accordance with the manufacturer's recommendations in order to prevent voiding any liability policy coverage. Questions regarding the use of home lab kits should be referred to Environmental Health and Safety (EHS) and/or Risk Management.

Company	Kit number	Kit name	Approved/ EHS Guidance
ANY	VIRTUAL	VIRTUAL LABS	Virtual labs (those performed entirely on a computer) do not require EHS review and are thus approved as a category.
Arduino, Elegoo, NI, and similar	ANY ROHS-compliant kit	Low-volts, low-power ROHS-compliant consumer DIY electronics kits	YES. DIY data logging kits and similar commercially available low-volts ROHS-compliant consumer electronics are approved.
Carolina	#221521, #225598, #225299, #226015, #225024, #580183, #580189	At home dissection kits in "Carolina's Perfect Solution", including frog, grasshopper, crayfis, starfish, earthworm, and heart and kidney.	YES. Students should wear gloves and safety glasses/goggles, and should work in a well-ventilated area (outdoors, use bath fan, open window, etc.). Instruction should include guidance of safe use, cleaning, and care of scalpels.
Carolina	580537	Blood and blood vessels Hematocrit	NO - EHS does not allow students to work with human body fluids in regular undergraduate labs.
Carolina	580536	Blood and blood vessels Wright Stain	NO - we do not allow students to work with human body fluids in regular undergraduate labs.
Carolina	580172	Blood typing w Simulated Blood	YES
Carolina	580542	Cardiovascular Physiology V2.1	YES
Carolina	580534	Chemical and Physical Digestion	NO. Kit contains several allergens and hazardous chemicals that cannot be safely disposed of at home.
Carolina	580073	Fundamentals of Microscopy	YES. Instructors should provide guidance on how to handle broken glass slides (info in LRSP)
Carolina	580554	Lymphatic system and immunity	YES
Carolina	580550	pH Homeostasis	YES
Carolina	580544	Respiratory physiology	YES
Carolina	580548	Urinary Physiology	YES if performed only with simulated urine. EHS does not allow students to work with human body fluids in regular undergraduate labs.
N/A	homemade	Accuracy and precision	YES. Students explore concepts of precision and accuracy using commercially baked cookies (Oreos and Chocolate Chip cookies specified in protocol; allow substitutes as needed for allergies and such.)
N/A	homemade	Arterial road map (model building)	YES.
N/A	homemade	Basic Laboratory Techniques	YES. Students use a balance, beaker and water, metric ruler, etc. to determine volume, density, etc. of common objects such as coins.

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N/A	homemade	Beer's Law: determining concentration of red food dye	YES. Students build a home spectrophotometer using a cardboard box and a phone app, and use commercially available food dye in water.
N/A	campus equipment	Biol 230 "Follow along at home" labs	YES. Students borrow micropipettors from campus and learn to manipulate liquids using water and vegetable oil. They also follow along as the professor completes a variety of molecular biology procedures, but the students do not use any reagents.
N/A	homemade	Chemistry of ice packs	YES.
N/A	homemade	Colligative properties	YES. Students create glucose and sucrose solutions of various concentrations and determine boiling and freezing points and compare to plain water. Microwave is used to heat water. Students should have oven mitts/potholders and handle hot vessels with care.
N/A	homemade	Effect of types of sugar and pH on browning rate	YES, using baking parchment and keeping a close watch on the oven.
N/A	homemade	Entropy of urea dissolution	YES. Lab uses a small amount of urea. Microwave is used to heat water. Students should have oven mitts/potholders and handle hot vessels with care.
N/A	homemade	Flower arrangement	YES
N/A	homemade	Growing microgreens	YES
N/A	homemade	Growing plants at home	YES.
N/A	homemade	Handwashing effectiveness using bread as an indicator	YES. Student starts with 3 slices of bread and 3 ziploc bags. One slice is handled with unwashed hands and put into a ziploc. Student uses hand sanitizer then handles second slice and puts into second bag. Student washes hands properly then handles third slice and puts into third bag. Student observes bread over a few days to look at the amount of mold that results.
N/A	homemade	hydrate ratio of epsom salt	YES. Heating in microwave to evaporate water - include caution for handling hot items.
N/A	homemade	Ideal gas law using yeast and hydrogen peroxide	YES.
N/A	campus equipment	Microscopy using prepared slides and slides of baker's yeast	Yes. Students would borrow microscopes from the campus collection for 2 weeks, to look at prepared slides and potentially also baker's yeast stained with food coloring
N/A	homemade	Mirror therapy	YES.
N/A	homemade	Mole concept, using beans as surrogate atoms	YES.
N/A	homemade	Molecular geometry	YES. Students make marshmallow- and-toothpick models of atoms or molecules. Include warning to use care with toothpicks so as not to stab oneself.

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N/A	homemade	Mug cake as a chemical reaction (chemistry of baking)	YES with proviso that students should not cook with ingredients to which they or others in their household have known allergies. Microwave is used to heat the mixture. Students should have oven mitts/potholders and handle hot vessels with care.
N/A	homemade	Observations using M&Ms or similar candy	YES. Students with allergies may substitute as appropriate. Candy is dissolved in water, vinegar alcohol, etc. for students to learn basics of scientific observation.
N/A	homemade	pH of common foods and mild cleaners	YES. Note that we have a vetted list of items to test, and that hazardous chemicals such as chlorine bleach are not on the list due to disposal concerns.
N/A	homemade	Sauerkraut fermentation	YES
N/A	homemade	Separation of mixtures	YES. Students use simple techniques to separate a mixture of sodium chloride, sand, and iron filings.
N/A	homemade	Sourdough bread	YES. If culturing wild yeast on Sabouraud-Dextrose agar, students should not open plates once cultures have grown, and they should tape them securely and dispose in trash. Cultures should not be grown for anything other than culinary microorganisms.
N/A	homemade	Starting houseplants from cuttings	YES.
N/A	homemade	Stoichiometry: white vinegar + sodium hydrogen carbonate (baking soda) or sodium carbonate (washing soda)	YES.
N/A	homemade	Students follow FAO guidelines for testing effectiveness of potato blanching	YES.
Nasco	custom kit	World Campus Chem 101 kit	YES