



KIT CONTENTS LIST FOR USE WITH: Chemistry (Grade 11)

4th Edition

BJU Press®

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<u>Text Reference</u>	<u>Item Description</u>	<u>Item Quantity</u>	<u>Notes</u>
1-19	MicroChem Kit (KT-MICCHEM)		MicroChem kit. Optional. This kit is a suitable lower-cost alternative to doing the labs in the lab manual.
All Labs	BJU Press Chemistry 11 Lab Manual (BJ-SCI11-D)		BJU Press chemistry 11 lab manual. Order separately.
All Labs	BJU Press Chemistry 11 Teacher's Edition (BJ-SCI11-C)		BJU Press chemistry 11 teacher's edition. Order separately.
All Labs	BJU Press Chemistry 11 Teacher's Lab Manual (BJ-SCI11-E)		BJU Press chemistry 11 Teacher's lab manual. Order separately.
All Labs	BJU Press Chemistry 11 Textbook (BJ-SCI11-B)		BJU Press chemistry 11 text book. Order separately.
Several Labs	Alcohol Lamp Burner, Wickless (CE-LAMP)		You need a burner but one is not included in the kit. This alcohol burner is a lower cost option to the lab burner we recommend. Order separately.
Several Labs	Beaker, glass, 150 ml (CE-BE10150)	2	Beaker glass, 150ml. Use for 100ml beaker 11A and extra 250ml beakers in 12A.
Several Labs	Beaker, glass, 250 ml (CE-BE10250)	1	Beaker, glass, 250 ml.
Several Labs	Butane Gas Fuel Refill, 57 g (100 ml) (UN-BUTFUEL)		This is butane fuel for the Lab Burner. It is also available at the grocery store. Order separately.
Several Labs	Chemical Splash Safety Goggles, Adult (CE-GOGGLE1)	1	Chemical Splash safety goggles. Should be used by both student and teacher when using chemicals. Order extras as needed.
Several Labs	Clay Triangle, 2" pipe-stems (CE-TRIANG1)	1	Clay Triangle, 2" pipe-stems.
Several Labs	Crucible & Beaker Tongs (CE-TONG)	1	Crucible and beaker tongs.
Several Labs	Denatured Alcohol Fuel, 16 ounces (UN-ALCFUEL)		This is alcohol fuel for the alcohol burner if you choose to order it. Order separately.
Several Labs	Digital Platform Scale, 300 g x 0.01 g (BS-DBX0300)		We recommend this scale. It is accurate to 0.01g for all labs. It is not included in kit. Order separately.
Several Labs	Funnel, glass, 75mm dia. (CE-FUNNGLS)	1	Funnel, glass, 75mm diameter.
Several Labs	Graduated Cylinder, glass, 10 ml (CE-CYGL10)	1	Graduated cylinder, glass, 10 ml.
Several Labs	Lab Apron No. 1, vinyl, 6 mil (CE-APRON1)	1	Should be used by both student and teacher when using chemicals. Order extras as needed.
Several Labs	Pipet (medicine dropper) (CE-DROPPER)	4	pipet (medicine dropper)
Several Labs	Portable Micro Lab Burner (CE-BURNLAB)		You need a burner but one is not included in the kit. We recommend this one but you can also use an alcohol burner. Order separately.
Several Labs	Ring Support, 4" (CE-RING4)	1	Ring support, 4"
Several Labs	Safety Gloves, size 8 - 8.5 Medium (CE-SGLOVEM)	1	Always wear chemically resistant gloves when using chemicals. Order CE-SGLOVES for size 6, CE-SGLOVEM for size 8, CE-SGLOVEL for size 9, all the same price.
Several Labs	Support Stand, 4" x 6" base, 18" rod (CE-STAND2)	1	Support Stand, 4" x 6" base, 18" rod.

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Several Labs	Test Tube Brush, small (CE-TTBRUSH)		Test tube brush, small. Order separately.
Several Labs	Test Tube Rack, 20 mm, 40 holes (CE-TTR2040)	1	Test tube rack, 20 mm, 40 holes.
Several Labs	Test Tubes, extra large, 20 x 150 mm (CE-TTUBEXL)	2	Test tubes, extra large, 20x150mm. Use instead of four 10ml beakers in 11A.
Several Labs	Thermometer, Celsius, 12" (ME-THER30B)	1	While not accurate to 0.1°C, this thermometer is adequate for these labs.
Several Labs	Watch Glass, 100 mm (CE-WATCHLG)	2	Watch glass, 100mm. These will work for all labs requiring watch glasses.
Several Labs	Wax pencil (marks glass) (BE-WAXPENC)	1	wax pencil.
Several Labs	Weighing Paper, 4" x 4", 500 sheets (BS-WHPAPR4)		Use 4" squares of wax paper or white paper. Order separately or find at local supply store.
Several Labs	Wire Gauze, ceramic center, 5" (CE-GAUZE)	1	Wire gauze, ceramic center, 5"
2A, 18B	Sand, fine, 1 lb. (GS-SANDFIN)	1	sand, fine, 1lb. Can Use table salt (NaCl) from home.
2A, 2B, 4A	Vernier Caliper (ME-CALIPER)	1	Vernier Caliper.
2A, 6, 9C	Evaporating Dish, 80 ml (CE-EVAPDSH)	1	Evaporating dish, 80 ml.
2A, 8, 11A, 12A	Filter Paper, 11 cm, 10 pack (CE-FILTAP)	1	Filter paper, 11 cm, 10 pack.
2B	Bar Magnets, 1.2" ceramic, 2 pack (MG-BAR1C)	1	
2B	Sulfur, 30 g (UN1350)	1	Follow the instructions in the teacher's lab manual to make iron sulfide from iron and sulfur.
2B, 11B	Magnifying Glass, 2", 3X Lens (OP-MAGNIFY)		Optional.
2B, 4A, 9C, 10B	Spatula, stainless steel (CE-SPATULA)	1	Spatula, stainless steel.
2B, 6	Iron Metal Filings, 30 g (CH-IRON)	1	Iron metal filings. Use as an unknown for lab 6.
2B, 9C, 13B, 14, 16A	Hydrochloric Acid, 12 Molar, 30 ml (UN1789)	1	
3A	Meterstick, 100 cm (ME-METER2)		Optional, you can just use the ruler with multiple measurements.
3A	Recording Timer Paper Tape (MC-TAPE)		Optional, just tape 1" wide strips of paper together.
3A, 3B, 5, 10A, 12B	Ruler, clear plastic, 15 cm (DE-RULER)		Ruler, clear plastic, 15cm. Use any 15cm ruler. Order separately or find at local supply store.
3A,3B,5,10A,12B	Ruler, 30 cm (ME-RULER)	1	Ruler, 30 CM
4A	Lithium Chloride, 30 g (CH-LICL)	1	Lithium chloride, 30g. We supply chloride salts to reduce cost.
4A	Sodium Nitrate, 30 g (UN1498)	1	Use table salt (NaCl) from home to test a sodium pair.
4A	Spectroscope, Quantitative (OP-SPEQUAN)	1	Use incandescent, fluorescent and LED lights from around your home.
4A	Strontium Chloride, 10 g (CH-SRCL2)	1	We just supply chloride salts to reduce cost.
4A	Wooden Splints, 20 pack (CE-SPLINTS)	1	Wooden Splints, 20 pack.
4A, 13B	Potassium Nitrate, 30 g (UN1486)	1	
4A, 15	Iron III (ferric) Chloride, 30 g (UN-FECL3)	1	Use as an additional chloride salt for lab 4A.
4A, 17A, 18A, 19	Beaker, glass, 50 ml (CE-BEI0050)	2	Beaker glass, 50ml. Use mix of 50ml and 150ml beakers for 3-4 50ml beakers in 18A and 19A.
4A, 6, 15	Potassium Chloride, 30 g (CH-KCL)	1	Potassium Chloride, 30 g. We just supply chloride salts to reduce cost for 4A. Use as an unknown for lab 6.

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6	Battery, 9-volt, alkaline (EL-BALK-9V)	1	Battery, 9-volt, alkaline. For conductivity tester.
6	Candle, 4" white (OP-CANDLE)		Use a small part of any candle for paraffin wax in lab 6. Order separately.
6	Copper Wire, insulated, #24, 15' (EL-WIRE24H)	1	Copper wire, insulated, #24, 15'. For conductivity tester.
6	LED, red, diffuse type, 5 mm (EL-LEDRED)	1	LED, red, diffuse type, 5 mm. For conductivity tester.
6	Resistor, 1K ohm, 1/4 watt (EL-RES001K)	1	Resistor, 1K ohm, 1/4 watt. For conductivity tester.
6, 11A, 18B	Acetone, 30 ml (UN1090)	1	Use 10ml for 6 and 20ml for 11A.
7	Clay, modeling, 4 oz. stick (GS-CLAY)	1	Clay, modeling 4 oz. stick
7	Molecular Model Set, Student (CE-MODELST)		Molecular model set, student. Optional, but recommended instead of clay and toothpicks. Order separately.
8	Boric Acid, 30 g (CH-BORIC)		Boric acid. Optional to make base spill neutralizing solution. Order separately.
8	Copper Powder, 30 g (CH-CUPOWD)	1	Copper powder. Use instead of copper wool for lab 8.
8, 10A, 12AB	Stirring Rod, glass, 10" (CE-STIR10)	1	Stirring Rod, glass, 10"
8, 10B	Graduated Cylinder, glass, 25 ml (CE-CYGL025)		Graduated cylinder, glass, 25 ml. Optional. Use the 10ml or 100ml graduated cylinders. Order separately.
8, 16B, 18B	Sodium Hydroxide, 30 g (UN1823)	1	
8, 17B, 18A	Sulfuric Acid, 18 Molar, 30 ml (UN1830)	1	
8, 9A, 9B	Crucible & Lid, 15 ml, high form (CE-CRUCIBL)	1	Crucible & lid, 15 ml, high form.
8, 9A, 9B	Crucible & Lid, 15 ml, high form (CE-CRUCIBL)	1	Crucible & lid, 15 ml, high form.
8, 9C, 18A	Sodium Bicarbonate, 30 g (CH-NAHCO3)	1	Sodium Bicarbonate, 30g.
9A, 13B, 17A	Magnesium Ribbon, 60 cm (UN-MG)	1	
9A, 13B, 17A	Sandpaper, 1 sheet medium grit (PT-SANDPAP)	1	
9B, 18B	Copper II Sulfate (cupric), 30 g (CH-CUSO4)	1	Copper II sulfate (cupric) 30g. Use for the hydrate salt in 9B.
9C, 12A, 16B	Wash Bottle, 250 ml, Narrow Mouth (CE-WASHBTL)	1	Wash bottle, 250ml, narrow mouth.
10A	Capillary Tubes, vial of 100 (CE-CAPILL)	1	Capillary tubes, vial of 100.
10AB, 13AB	Beaker, glass, 600 ml (CE-BE10600)	1	Beaker, glass, 600 ml. Use instead of 1000ml beaker in 10A and 400ml beaker in 13A.
10B	Aneroid Barometer (AS-BAROM3)		Optional, get local barometric pressure online. Purchase separately.
10B	Glass Tube, 5 mm, 12" long (CE-TUBEG12)	1	Glass Tube, 5 mm, 12" long.
10B	Glass Tube, 5 mm, 3" long (CE-TUBEGLS)	1	Glass tube, 5mm, 3" long.
10B	Graduated Cylinder, polypropylene, 250 ml (CE-CYPP250)		Graduated cylinder, polypropylene, 250 ml. optional. Order separately.
10B	Hydrogen Peroxide 30%, 30 ml (UN-PEROXID)	1	
10B	Manganese Dioxide, 15 g (UN-MNO2)	1	
10B	Pinch Clamp (CE-PINCHCL)	1	Pinch clamp.
10B	Rubber Stopper, #2, 1-hole (CE-STOP02A)	1	Rubber stopper, #2, 1 hole.
10B	Rubber Tubing, 4.8 mm, 2' long (CE-TUBERU2)	1	Rubber tubing, 4.8 mm, 2' long.

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10B, 13AB	Rubber Stopper, #2, solid (CE-STOP02C)	4	Rubber stopper, #2 solid.
10B, 15, 16B, 17B	Erlenmeyer Flask, 250 ml (CE-FLA1250)	1	Erlenmeyer flask, 250 ml. Use instead of a 500ml flask for lab 10B and 125ml flask for 17B.
11A	Marbles, pack of 15 (GS-MARBLSM)	1	Marbles, pack of 15.
11A	Mineral Oil, Klearol, 30 ml (CH-MINROIL)	1	Mineral oil, Klearol, 30ml.
11A, 14	Digital Stop Watch, 2" (ME-STOPWAT)		Optional, use a stopwatch app on your phone. Order separately.
11A, 14	Digital Stop Watch, 2" (ME-STOPWAT)		Optional, use a stopwatch app on your phone. Order separately.
11A, 14	Digital Stop Watch, 2" (ME-STOPWAT)		Optional, use a stopwatch app on your phone. Order separately.
11A, 14	Digital Stop Watch, 2" (ME-STOPWAT)		Optional, use a stopwatch app on your phone. Order separately.
11A, 14, 16A	Test Tubes, small 13 x 100 mm (CE-TTUBESM)	2	Test tubes, small 13x100 mm.
11A, 15	Rubber Stopper, #6.5, 2-hole (CE-STOP06B)	1	Rubber stopper, #6.5 2 hole.
11A, 18A	Ethyl Alcohol, 95%, 30 ml (UN-ETHYALC)	1	
11B	Mineral Study Kit, 15 specimens (RM-MISTUDY)	1	Optional, research minerals online.
12A	Cup, clear plastic, 9 oz, 3 pack (CE-BEAKCUP)	1	Optional. We omitted materials for lab 12A to reduce cost. Use instead of multiple 250ml beakers.
12A	Fertilizer Soluble, 30 g (CH-FERTIL)		Fertilizer. Optional. We omitted materials for lab 12A to reduce cost.
12A	Lids, plastic, 9 oz, 3 pack (GS-LID9OZ)		Lids, plastic, 9 oz, 3 pack. Optional. We omitted materials for lab 12A to reduce cost. Use instead of multiple watch glasses. Order separately.
12A	Protozoa Culture Kit (LM-PROTIST)		Optional, use to make pond or ditch water. Make 4-5 days in advance. We make materials for lab 12A optional.
12A, 16A	pH Meter, Digital, 0-14 pH range (ME-PHMETER)	1	We omitted materials for lab 12A to reduce cost.
12B	Ammonium Chloride, 30 g (CH-NH4CL)	1	Ammonium Chloride, 30g.
13A	Copper Metal Shot, 30 g (CH-CUPELL)	1	Copper metal shot, 30g.
13A, 13B	Styrofoam Cups, 8 oz, with lids 5 pack (CE-CUPSTYR)	1	styrofoam cups with lids
13AB, 15, 18A	Test Tube Clamp (CE-TUBHOLD)	1	Test tube clamp.
13AB, 16A, 17B	Graduated Cylinder, glass, 100 ml (CE-CYGL100)	1	Graduated cylinder, glass, 100 ml. Use the 100ml graduated cylinder repeatedly instead of 250ml for lab 10B.
14	Deluxe Red Laser Pointer (OP-LASRED)		Optional. We omitted materials for lab 14 to reduce cost. Order separately.
14	Sodium Thiosulfate, 30 g (CH-NA2S2O3)		Sodium Thiosulfate. Optional. We omitted materials for lab 14 to reduce cost.
14, 16B, 17B	50 ml Burette, PTFE Stopcock (CE-BUR50SC)	2	Optional. We omitted materials for labs 14, 16B and 17B to reduce cost.
14, 16B, 17B	Deluxe Double Burette Clamp (CE-CLPLINC)		Double burette clamp. Optional. We omitted materials for labs 14, 16B and 17B to reduce cost. Order separately.
15	Potassium Thiocyanate, 30 g (CH-KSCN)	1	Potassium Thiocyanate.
16A	Methyl Orange, solution, 30 ml (CH-METHOR)	1	Methyl Orange, Solution.
16A	Methyl Red, 0.02% solution, 30 ml (CH-METHRED)	1	Methyl red, 0.02% solution, 30ml.
16A	Thymol Blue, 15 ml (CH-THYMBLU)	1	Thymol Blue, 15ml.

<u>Text Reference</u>	<u>Item Description</u>	<u>Item Quantity</u>	<u>Notes</u>
16A, 17A, 18A	Glacial Acetic Acid, 30 ml (UN2789)	1	Also use for unknown acid in lab 16A. Can also be diluted to make vinegar in 17A.
16B	Phenolphthalein Solution, 30 ml (UN-PHENOLS)		Optional. We omitted materials for lab 16B to reduce cost. Order separately.
16B	Potassium Hydrogen Phthalate, 15 g (CH-POTHPHL)		Potassium Hydrogen phthalate 15g. Optional. We omitted materials for lab 16B to reduce cost.
17A	Alligator Clip Leads, 2 pack (EL-ALCLIP2)	1	Alligator clip leads, 2 pack.
17A	Carbon Electrode Rod, 0.5" x 4" (EL-ELECTC)	1	Carbon electrode rod, 0.5"x4". Use instead of pencil leads.
17A	Digital Multimeter (EL-DIGMULT)		Digital multi meter. Optional. Most of the lab can be done without it. Order separately or find at local supply store.
17A	Zinc, metal electrode, 4" (EL-ELECTZN)	1	zinc, metal electrode, 0.5"x4".
17B	Ferrous Sulfate (Iron II), 30 g (CH-FESO4)	1	ferrous sulfate (iron II) 30g.
17B	Potassium Permanganate, 30 g (UN1490)	1	
18A	Methyl Alcohol, anhydrous, 30 ml (UN-METHALC)	1	
18A	Salicylic Acid Powder, 30 g (CH-SALICYL)	1	Salicylic acid powder 30g.
18A, 19	Isopropyl Alcohol, 90%, 30 ml (UN-ISOPALC)	1	
18B	Mortar and Pestle, 80 ml (CE-MORTAR)	1	Mortar and pestle, 80 ml.
19	Cork, No. 9 (CE-CORK09)	1	Cork no. 9.
19	Wire, copper, 14 gauge, 6" (PT-WIRECOP)	1	Use corn or vegetable oil and table salt (NaCl) from home.

1. The products in this kit are intended for parent/teacher use to complete curriculum lab activities with students.
2. Some items are not designed for or intended primarily for children ages 12 and under.
3. Some materials and many chemicals we provide are dangerous and may be harmful if misused. With your purchase, you are assuming all responsibility for any injuries or damages resulting from the storage, use, and disposal of all materials and chemicals.
4. Some products may differ from the web image (such as clay, food coloring, etc.)
5. Some items readily available at grocery stores or not offered by Home Science Tools are not included.
6. We guarantee that you will be happy with every purchase from HST. All products are covered by our 90-day money-back guarantee.

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