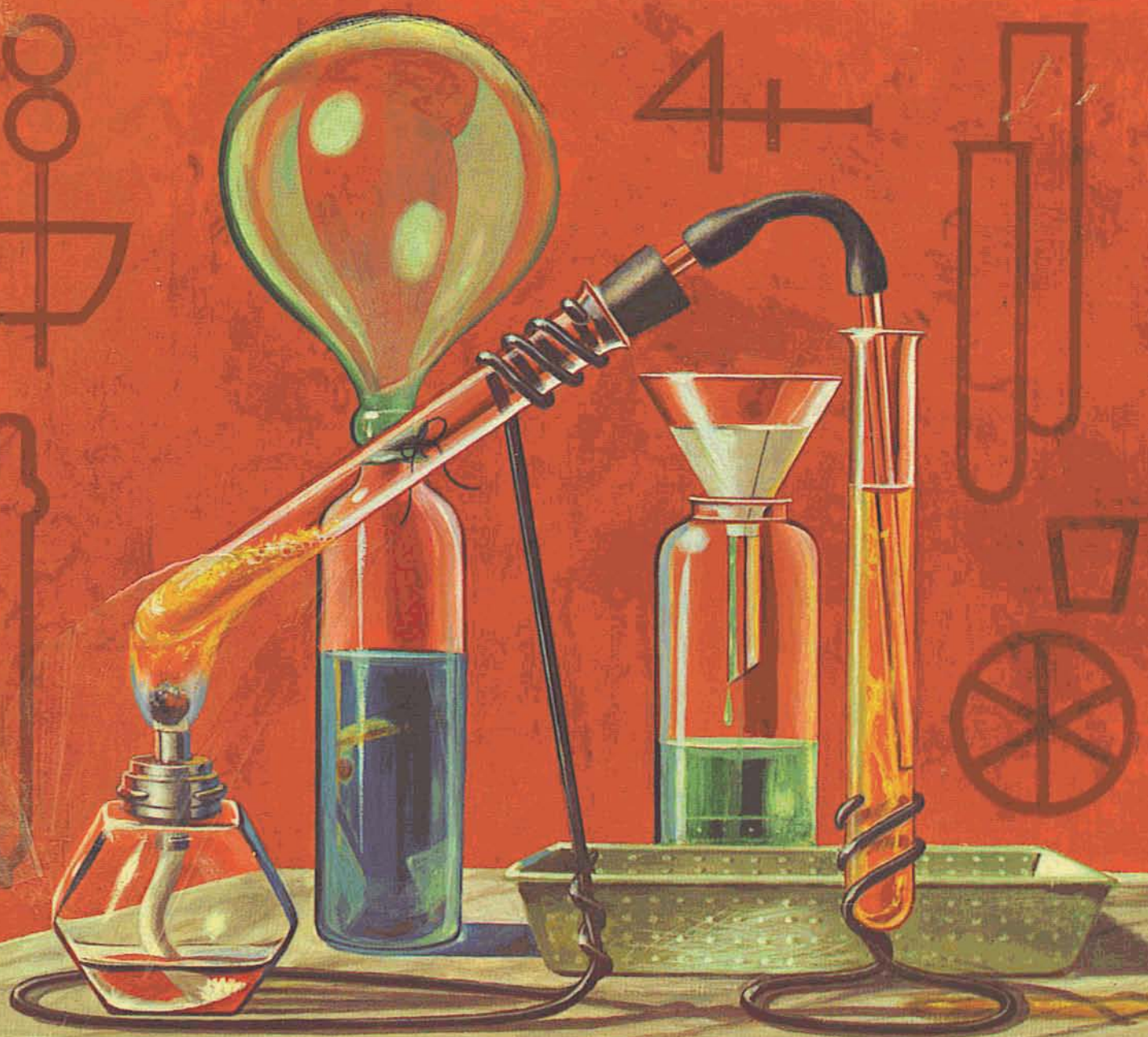


THE GOLDEN BOOK OF CHEMISTRY EXPERIMENTS

HOW TO SET UP A HOME LABORATORY—OVER 200 SIMPLE EXPERIMENTS




THE GOLDEN BOOK OF
Chemistry Experiments

How to Set Up a Home Laboratory—
Over 200 Simple Experiments

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Words Used by Chemists

Acid: a hydrogen-containing compound that releases hydrogen ions in solution.

Alloy: a material made up by combining two or more metals.

Analysis: breaking down a compound into two or more substances.

Anhydrous: free from water.

Atom: the smallest unit of an element that can enter into the making of a chemical compound.

Atomic weight: the weight of an atom compared with the weight of an oxygen atom set at 16.

Base: a compound containing the hydroxide group (OH).

Catalyst: a substance that helps in a chemical reaction without itself being changed.

Chemical change: a change of a substance into another substance having different properties.

Chemistry: a branch of science dealing with the compositions of substances and the changes that can be made in them.

Combustion: burning; a chemical change that produces heat and light.

Compound: a substance consisting of two or more different kinds of atoms in definite proportions by weight.

Crystal: a solid in which atoms or molecules are arranged in a definite pattern.

Density: the weight of a liquid or a solid in grams per cm^3 or milliliter.

Distillate: a liquid that has been turned into vapor and again cooled into a liquid.

Distillation: the process of producing a distillate.

Ductile: capable of being drawn out into a wire.

Electrolysis: breaking down a substance by passing an electric current through it.

Electrolyte: a substance that, when in a solution or when melted, will conduct an electric current.

Element: a substance that contains only one kind of atoms.

Equation: a complete description of a chemical reaction by the use of symbols, formulas, and signs.

Evaporation: the changing of a substance into vapor; also the process of removing water by heating.

Filtrate: a liquid obtained by filtration.

Filtration: the process of straining a liquid from a solid through porous material, usually filter paper.

Formula: a group of symbols and numbers giving the composition of a compound.

Hydrate: a compound containing loosely bound water of hydration (water of crystallization) that can be driven off by heating.

Hydroxide: a compound that contains the hydroxyl (OH) radical.

Ion: an electrically charged atom or group of atoms (radical).

Malleable: capable of being hammered or rolled into a thin sheet.

Matter: anything that takes up space and has weight.

Metal: an element that is a good conductor of electricity, has luster, and whose oxide forms a base with water.

Metalloid: an element that has properties of both metals and nonmetals.

Mixture: a mingling of substances not combined chemically.

Molecular weight: the sum of the atomic weights of the atoms that make up a molecule of a compound.

Molecule: the smallest unit of a compound that can exist in the free state.

Neutralization: the reaction of an acid and a base to give a salt and water.

Nonmetal: an element that is a poor conductor of electricity, does not have luster, and whose oxide forms an acid when combined with water.

Organic chemistry: the chemistry of the carbon compounds.

Oxidation: the process by which a substance combines with oxygen.

Precipitate: an insoluble solid formed in a solution by chemical reaction.

Radical: a group of atoms that behave chemically as a single atom.

Reaction: a chemical change.

Reduction: removal of oxygen; the opposite of oxidation.

Salt: compound (other than water) formed by the reaction of an acid and a base.

Saturated solution: a solution that contains the maximum amount of solute under the conditions.

Solubility: the number of grams of a solute needed to make a saturated solution in 100 grams of solvent.

Solute: the substance dissolved in a solvent.

Solution: a non-settling mixture of a solute in a solvent.

Solvent: a liquid in which a solute is dissolved.

Sublimation: a process by which a solid is turned into vapor and again cooled into a solid without passing through a liquid stage.

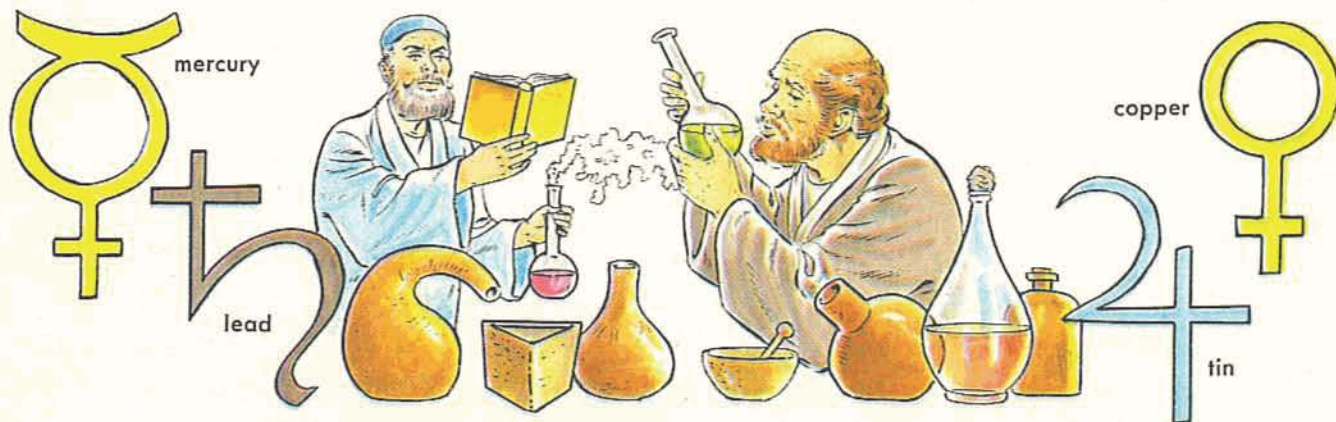
Subscript: a small numeral indicating the number of atoms of a certain element in the formula of a compound.

Substance: any specific kind of matter whether element, compound, or mixture.

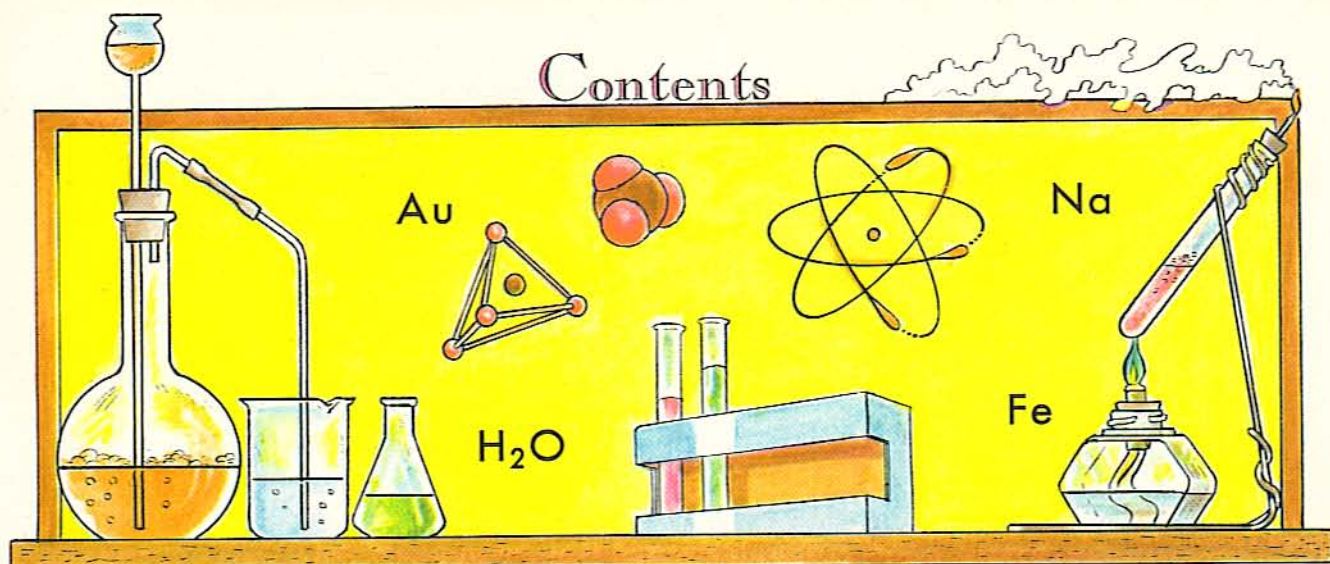
Symbol: a letter or two letters representing one atom of an element.

Synthesis: the making up of a compound from simpler compounds or from elements; the opposite of analysis.

Valence: the number of hydrogen atoms which one atom of an element can displace or with which it can unite.



Contents



WHAT CHEMISTRY IS

WORDS USED BY CHEMISTS.....	2
THE IMPORTANCE OF CHEMISTRY.....	4
CHEMISTS OF THE PAST.....	6

YOUR HOME LABORATORY

EQUIPMENT FOR CHEMISTRY.....	9
SETTING UP YOUR HOME LABORATORY.....	10
MAKING APPARATUS FOR EXPERIMENTS.....	12
SCIENTIFIC MEASUREMENTS.....	14
CORRECT LABORATORY TECHNIQUES.....	16

THE SCIENTIFIC APPROACH

MR. FARADAY'S CANDLE.....	18
YOU — SCIENTIST!.....	20
ELEMENTS, COMPOUNDS, AND MIXTURES.....	22

WATER AND GASES

WATER — OUR MOST IMPORTANT COMPOUND... ..	24
OXYGEN — THE BREATH OF LIFE.....	26
HYDROGEN — LIGHTEST OF ALL.....	28
CARBON DIOXIDE.....	30
NITROGEN AND ITS COMPOUNDS.....	32
CHLORINE — FRIEND AND FOE.....	34

CHEMICAL FORMULAS

CHEMICAL SHORTHAND.....	36
THE PERIODIC TABLE OF THE ELEMENTS.....	38

ACIDS, BASES, AND SALTS

THE MYSTERIES OF SOLUTIONS.....	40
WORKING WITH ACIDS.....	42
WORKING WITH BASES.....	43
SALTS — CHEMICALS OF MANY USES.....	46

NONMETALS

IODINE — VIOLET OR BROWN?.....	48
SULFUR AND ITS COMPOUNDS.....	50
SILICON — THE ELEMENT YOU STEP ON.....	54
BORON — FUTURE ROCKET-POWER ELEMENT?..	56

METALS

SODIUM AND POTASSIUM.....	58
CALCIUM — FOR BUILDING.....	60
LET'S COMPARE TWO METALS.....	62
ALUMINUM — IN ABUNDANCE.....	64
MANGANESE — METAL OF MANY COLORS.....	66
WE LIVE IN AN AGE OF IRON.....	68
COPPER — YESTERDAY, TODAY.....	70
SILVER — ONE OF THE "NOBLE" METALS.....	72

MORE ABOUT FORMULAS

VALENCES AND FORMULAS.....	74
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ORGANIC CHEMISTRY

CARBON — ELEMENT OF A MILLION COMPOUNDS.	76
THE CHEMISTRY OF CARBON COMPOUNDS.....	78
THE FORMULAS OF CARBON COMPOUNDS.....	80
A LOT OF HYDROCARBONS.....	82
CARBOHYDRATES — SWEET AND BLAND.....	84
MANY KINDS OF ALCOHOLS.....	88
CARBOXYLIC ACIDS.....	90
FATS AND OILS FOR ENERGY.....	92
SOAP AND SOAP MAKING.....	94
PROTEINS—THE BODY-BUILDING FOODS.....	96
COLLOIDAL DISPERSIONS.....	100
NATURAL AND ARTIFICIAL FIBERS.....	102
PLASTICS — A MODERN GIANT.....	104

CHEMICAL MATHEMATICS

WORKING OUT CHEMICAL EQUATIONS.....	106
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THE FUTURE OF CHEMISTRY

WHAT'S AHEAD IN CHEMISTRY?.....	109
---------------------------------	-----

WHERE TO GET CHEMICALS AND EQUIPMENT... ..	110
COMMON CHEMICALS AND THEIR FORMULAS.....	111
INDEX.....	112

