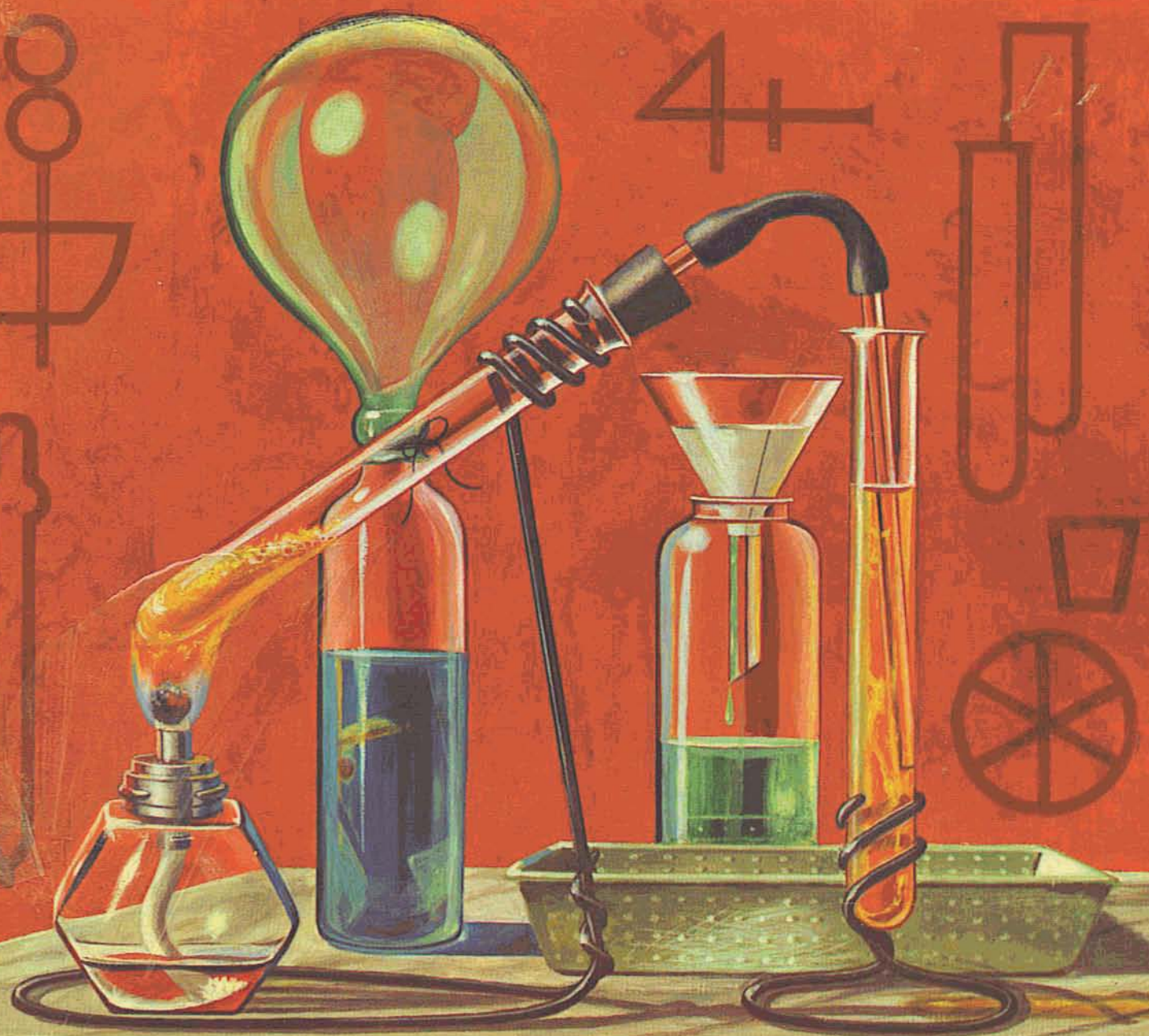


THE GOLDEN BOOK OF CHEMISTRY EXPERIMENTS

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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GOLDEN PRESS  NEW YORK

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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.

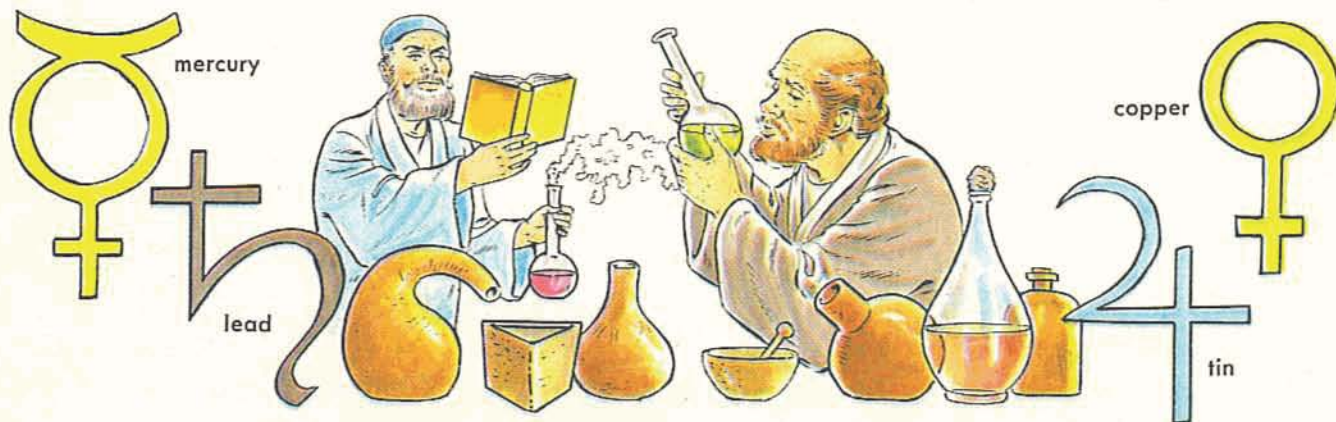
Subscript: a small numeral indicating the number of atoms of a certain element in the formula of a compound.

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

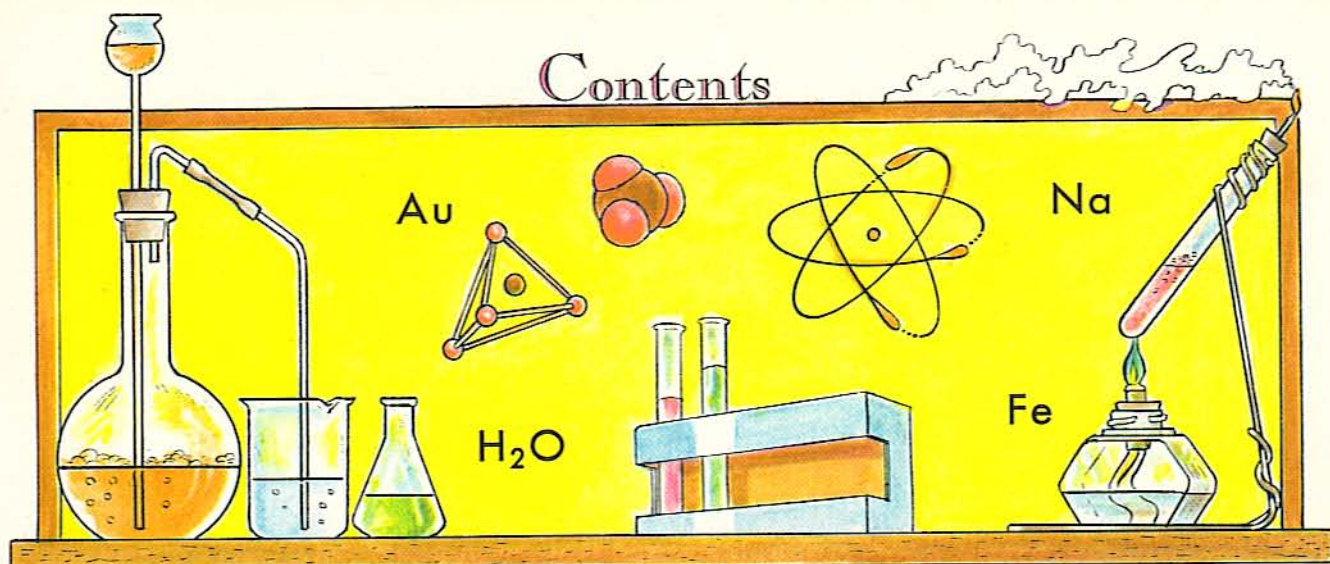
Symbol: a letter or two letters representing one atom of an element.

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.



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