<http://www.ivy-rose.co.uk/Chemistry/GCSE/Common-Chemicals-in-the-Home_Molecular-Formulae.php>

Common Chemicals found in the Home

This page is intended to help students of basic (school-level) chemistry with questions such as:

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| * **List the common names together with their chemical names and formulae of 20 household chemicals**. OR * **Identify 20 chemicals in everyday household items** (*which is a hint to read the "ingredients" labels on packets of cleaning materials, paints and other containers of substances in your home*).   or other similar questions, which may ask for more or fewer examples. |

The following table of the **chemical names and molecular formulae of common chemicals** is arranged in alphabetical order of the common (often "household" or "domestic") name of the chemical. If you are not sure what the molecular formulae mean you can look up the symbols by viewing the [list of chemical elements (listed in alphabetical order of chemical symbol)](http://www.ivy-rose.co.uk/Chemistry/Chemical-Elements_List-ByChemicalSymbol.php).   
You can also read more about [molecular formulae of organic molecules](http://www.ivy-rose.co.uk/Chemistry/Organic/Molecular-formulae-of-organic-molecules.php).

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| **Common /  Household Name** | **Chemical Name2,3** | **Molecular Formula** | **Notes:** |
| http://www.ivy-rose.co.uk/Images/spacer_006600.gif | | | |
| **Alcohol** | ethanol | C2H6O | The type of alcohol found in alcoholic beverages - and also some thermometers. |
| **Alka Seltzer**\* | sodium bicarbonate¶ | CHNaO3 | |  | | --- | | ¶ Among other ingredients. | | \* Trade name (*formula found online - see note below*) | |
| **Antifreeze** | ethylene glycol | C2H6O2 | Used as an automotive antifreeze. Highly [toxic](http://www.ivy-rose.co.uk/Health/Health-Latest.php?id=3649). |
| **Antiperspirant** | aluminum chlorohydrate | Al2Cl(OH)5 | Used in deodorants and antiperspirants. Aluminum chlorohydrate refers to a group of salts of which the molecular formula given is an example.  The general formula is AlnCl(3n-m)(OH)m |
| **Aspirin®**\* | acetylsalicylic acid | C9H8O4 | Aspirin is a registered trademark owned by Bayer, the generic term is**acetylsalicylic acid (ASA)**. |
| **Baking powder** | sodium bicarbonate¶ | NaHCO3 | Used in baking where it reacts with other ingredients, releasing carbon dioxide (CO2), helping dough rise.  ¶ Among other ingredients. Some baking powders contain sodium bicarbonate with one or more acidic phosphates |
| **Battery acid** | sulphuric acid | H2SO4 | Used in lead-acid batteries for cars and other vehicles. Formerly known as**vitriol**. |
| **Bleach**(laundry) | sodium hypochlorite¶ | NaClO | ¶ Common "domestic" bleach is often a solution of approx 3–6% sodium hypochlorite (NaClO) with "oxygen" and other chemicals. |
| **Boracic acid** | boric acid | H3BO3 | Sometimes used in products for antiseptic, [insecticide](http://www.ivy-rose.co.uk/References/glossary_entry717.htm), or flame retardant properties. Toxic esp. if ingested or inhaled. |
| **Borax** | sodium tetraborate decahydrate | Na2B4O7⋅10H2O | Used as a multipurpose cleaner and bleach. |
| **Brass** | alloy of copper and zinc | Cu and Zn | Used to make fixtures, fittings and ornaments. Examples date from the Roman period (history). |
| **Bronze** | alloy of copper and tin | Cu and Sn | Other metal elements may also be present. Now used mainly for ornaments, previously various products incl. weapons. Examples date from antiquity, incl. the European "Bronze Age" (approx. 2500BC in Britain). |
| **Calgon®**\* | calcium hexametaphosphate¶ | (NaPO3)6 | |  | | --- | | ¶ Among other ingredients. Calgon is a brand registered trademark of several corporations. Its name was a combination of the phrase "calcium gone". | | \* Trade name (*formula found online - see note below*) | |
| **Caustic soda** | sodium hydroxide | NaOH | Used in products for cleaning, unblocking sinks, drains and even toilets. Highly corrosive alkali. |
| **Chalk** | calcium carbonate | CaCO3 | Uses incl. blackboard chalk, pavement (or, in USA, "sidewalk") chalk, gymnastics and rock-climbing, and sometimes in **toothpaste**. |
| **Diamond** | carbon | C | Uses incl. **diamond jewellery** and diamond glass-cutters. |
| **Drano**\* | sodium hydroxide¶ | NaOH | |  | | --- | | Drain cleaning product, USA. ¶ Among other ingredients. | | \* Trade name (*formula found online - see note below*) | |
| **Easy-off**\* | sodium hydroxide¶ | NaOH | |  | | --- | | Oven cleaner. ¶ Among other ingredients. | | \* Trade name (*formula found online - see note below*) | |
| **Egg shells** | calcium carbonate | CaCO3 | Natural product. Part of hens' eggs not usually eaten or used in cooking. |
| **Epsom salts** | magnesium sulphate | MgSO4⋅7H2O | Historically various "home" medicinal uses, also traditionally used as ingredient of**bath salts**. |
| **Formalin** | 40% solution of formaldehyde+ | CH2O | +also known as methanal, an [aldehyde](http://www.ivy-rose.co.uk/Chemistry/Organic/Naming-Aldehydes.php). Used in some products as a disinfectant or anti-bacterial agent. |
| **Glycerine** | glycerol | C3H5(OH)3 | Used in pharmaceutical products, e.g. some cough syrups, expectorants, toothpastes, mouthwashes, skin care products, shaving creams, hair care products, soaps, water based personal lubricants. |
| **Graphite** | carbon | C | The "lead" in traditional pencils is a form of graphite. |
| **Gypsum** | calcium sulphate dihydrate | CaSO4⋅2H2O | Also known as "plasterboard". Used in construction, incl. interior walls in houses. Usually covered in a thin layer of plaster then either paint, wallpaper or tiles. |
| **Lime** | calcium oxide | CaO | Less common in modern homes than in the past. Glows when heated; was used in theatres before invention of electric lighting. Health risks on skin contact or inhalation. |
| **Liquid paper**\* | titanium dioxide¶ | TiO2 | |  | | --- | | Generic name: Correction Fluid. ¶ Among other ingredients. The organic solvent 1,1,1-trichloroethane was used as a thinner in the 1980s and later associated with health concerns. Correction fluids were reformulated to remove suspected toxic solvents. | | \* Trade name (*formula found online - see note below*) | |
| **Magnesia** | magnesium oxide | MgO | Previously used as a home-remedy to treat various ailments, incl. heartburn and sore stomach, as an antacid, magnesium supplement, and as a short-term[laxative](http://www.ivy-rose.co.uk/References/glossary_entry718.htm), also to improve symptoms of indigestion - not without side effects. |
| **Marble** | calcium carbonate | CaCO3 | Used to make ornaments, bathroom or kitchen tiles, some worksurfaces and even steps e.g. outside a front door. |
| **Margarine** | partially saturated fatty acid | various | Used as an ingredient in cooking. |
| **Milk of magnesia** | magnesium hydroxide | Mg(OH)2 | Prior to availability of modern pharmaceuticals, "milk of magnesia" was used as a home-remedy, incl. as an antacid to neutralize stomach acid, and sometimes as a [laxative](http://www.ivy-rose.co.uk/References/glossary_entry718.htm). |
| **Moth balls** | *Traditionally*:naphthalene  *Modern*: 1,4-dichlorobenzene | C10H8  C6H4Cl2 | Due to flammability of naphthalene, modern mothballs use 1,4-dichlorobenzene as main ingredient. Both have the strong, pungent odour associated with mothballs. |
| **MSG** | monosodium glutamate | C5H8NNaO4 | Naturally occurring non-essential [amino acid](http://www.ivy-rose.co.uk/HumanBiology/Nutrition/Amino_Acids.php). Used as a food additive & commonly marketed as a flavour enhancer. |
| **Nutrasweet**®\* | aspartame¶ | C14H18N2O5 | |  | | --- | | ¶ Among other ingredients. | | \* Trade name (*formula found online - see note below*) | |
| **Pewter** | alloy of tin, copper, antimony, and lead | Sn, Cu, Sb & Pb | Modern uses incl. decorative objects, historically also tableware, e.g. tankards, plates etc. |
| **Plaster** | calcium hydroxide | Ca(OH)2 | Used in construction, incl. interior walls in houses. |
| **Potash** | potassium carbonate | K2CO3 | Potash is the common name for various mined and manufactured salts that contain potassium in water-soluble form. |
| **Quartz** | silicon dioxide | SiO2 | Used in jewellry and ornamental objects incl. many types of crystals, e.g. [rose quartz](http://www.ivy-rose.co.uk/Crystals-Individual/RoseQuartz.php) and [citrine](http://www.ivy-rose.co.uk/Crystals-Individual/Citrine.php). |
| **Quicklime** | calcium oxide | CaO | Quicklime (also known as slaked lime) is a white, caustic and alkaline crystalline solid at room temperature. |
| **Rolaids**®\* | dihydroxyaluminum sodium carbonate¶ | NaAl(OH)2CO3 | |  | | --- | | ¶ Among other ingredients. Rolaids is a brand of antacid previously also used for muscle soreness and stomach aches associated with constipation. | | \* Trade name (*formula found online - see note below*) | |
| **Salt** (Table Salt) | sodium chloride | NaCl | Used to season food (during food preparation and at the table), also used in the past as a method of food preservation. |
| **Sand** | silicon dioxide | SiO2 | Various uses incl. building sand, sand for "sand pits" for children to play in, and for use in ornaments e.g. to hold candles upright in suitable containers. |
| **Sani-flush**®\* | Sodium bisulphate, with sodium carbonate (and other ingredients)¶ | NaHSO4  with Na2CO3 | |  | | --- | | ¶ Among other ingredients. Brand of toilet bowl cleaner popular in USA. | | \* Trade name (*formula found online - see note below*) | |
| **Silica** | silicon dioxide | SiO4 | Silica "gel" (which is a solid) is sometimes used as beads packed in vapour-permeable plastic and used as a desiccant to control local humidity, e.g. in product packaging. It is also used in some forms of cat litter products. |
| **Smelling salts** | ammonium carbonate | (NH4)2CO3·H2O | Historic household item: Used in C19th to revive fainting women, still included in First Aid boxes in WWII. Sometimes used in sporting situations and by those feeling faint. |
| **Solder** | alloy of tin and antimony | Sn and Sb (compositions of alloys vary) | Soldered joints exist in most consumer electronics products. Solder may also be found in the home if used for home-electronics, e.g. hobby projects. |
| **Sugar** (Table Sugar) | sucrose | C12H22O11 | Used in cooking. Use as a [sweetener](http://www.ivy-rose.co.uk/References/category_index.php?id=44). |
| **Teflon**®\* | polymer of tetrafluoroethylene (PTFE) | (C2F4)n | |  | | --- | | Used as a non-stick coating for cookware and in containers and pipework for reactive and corrosive chemicals. | | \* Trade name (*formula found online - see note below*) | |
| **Toluol** (old name) | toluene | C7H8 or  C6H5CH3 | Use as a common solvent to dissolve paints, paint thinners, silicone sealants, rubber, printing ink, adhesives (glues), etc. |
| **Tums**®\* | calcium carbonate¶ | CaCO3 | |  | | --- | | ¶ Among other ingredients. Non-prescription drug for relief from acid indigestion and heartburn. Also considered a calcium supplement. | | \* Trade name (*formula found online - see note below*) | |
| **Tylenol**®\* | paracetamol (British English); acetominophen (in USA)¶ | C8H9NO2 | |  | | --- | | ¶ Main active ingredient, but other ingredients present.  North American brand of drug for relief from pain, fever, symptoms of allergies, cold, cough, and flu etc. | | \* Trade name (*formula found online - see note below*) | |
| **Vinegar** | acetic acid, ethanoic acid | C2H4O2 | Food seasoning and various household cleaning uses. |
| **Vitamin C** | ascorbic acid | C6H8O6 | Essential [vitamin](http://www.ivy-rose.co.uk/HumanBiology/Nutrition/Vitamins.php). |
| **Washing soda** | sodium carbonate decahydrate (hydrated sodium carbonate) | NaCO3⋅10H2O | Also known as "soda ash". Domestic use as a water softener. |
| **Windex**®\* | ammonia¶ plus detergents, dyes and fragrances. | NH3 | |  | | --- | | ¶ Among other ingredients. Glass and hard surface cleaner, recently reformulated to include more environmentally-friendly ingredients. | | \* Trade name (*formula found online - see note below*) | |
| |  |  | | --- | --- | | Notes about this Table: | | | 1. Spellings are in British (rather than American) English where differences exist. 2. Where there are multiple "chemical names" for the same chemical substance one or more may be included, but not necessarily all. Lists of synonyms of chemical names are included elsewhere on this website. 3. In many cases the "common name" refers to a mixture of several chemicals, of which one is present in the largest quantity (by weight or volume). Only the main ingredient or sometimes ingredients is listed. Research the substance further by searching using its common name or via offline sources for more information about other ingredients. | | | \* | Trade name. Some are more widely used in USA than in UK. Chemical names and formulae as found online in January 2011 and included in good faith, but not necessarily verified with data from producer or suppliers. Products may be reformulated at any time - always check labels for current details. | | Warning: Some of the chemicals listed above are highly dangerous and may harm health if inhaled, ingested or on contact with skin.  Always read and follow safety advice on packaging and be sure that you know how to treat or avoid chemical substances around you. | | | | | |