



# Academic Press Dictionary of Science and Technology

Edited by  
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**Apterygota** *Invertebrate Zoology*. a subclass or group of primitively wingless Insecta whose members undergo little or no metamorphosis; includes bristletails, springtails, and silverfish. Also, **Apterygote**.

**Aptian** *Geology*. a European geologic stage of the Lower Cretaceous period, after the Barremian and before the Albian. Also, **VECTIAN**.

**aptitude** *Psychology*. the potential ability to acquire a new skill or perform a previously unlearned task.

**aptitude test** *Psychology*. a test that is intended to predict an individual's capacity to become proficient in a given activity.

**aptyalism** *Medicine*. an absence or deficiency of saliva. Also, **aptyalia**.

**APU** auxiliary power unit.

**APUD** *Oncology*. an acronym for amine precursor uptake and decarboxylation.

**APUD cells** *Oncology*. a system of apparently unrelated endocrine cells sharing a number of cytochemical and ultrastructural characteristics and found scattered throughout the body; this system synthesizes structurally related peptides that function as hormones or neurotransmitters, and produces various substances, such as epinephrine, norepinephrine, dopamine, serotonin, and neurotensin.

**apudoma** *Oncology*. any tumor composed of APUD cells that secrete one or more hormones or amines.

**Apus** [á' pəs] *Vertebrate Zoology*. a genus of Old World swifts in the bird family Apodidae. *Astronomy*. the Bird of Paradise, a small and faint constellation of the southern sky.

**apyrase** *Enzymology*. an enzyme that catalyzes the breakdown of adenosine triphosphate, releasing phosphate.

**apyrexia** *Medicine*. the absence or intermittent cessation of fever.

**AQ** *Psychology*. achievement quotient.

**aq.** or **Aq.** water. (From Latin *aqua*.)

**aq. bull.** boiling water. (From Latin *aqua bulliens*.)

**aq. dest.** distilled water. (From Latin *aqua destillata*.)

**aq. ferv.** warm water. (From Latin *aqua fervens*.)

**AQL** see ACCEPTABLE QUALITY LEVEL.

**Aql** see AQUILA.

**aq. pur.** pure water. (From Latin *aqua pura*.)

**Aqr** see AQUARIUS.

**aq. tep.** tepid water. (From Latin *aqua tepida*.)

**aqua** [ák'wə] *Science*. the Latin word for water. *Chemistry*. relating to or being an aqueous solution.

**aqua ammonia** see AMMONIUM HYDROXIDE.

**aquaculture** see AQUICULTURE.

**Aquadag** *Electronics*. a trade name for a conductive graphite material coated to the interior and exterior of some cathode-ray tubes. On the interior it serves to collect any secondary electrons emitted by the screen, while on the exterior it serves as the final capacitor of the high voltage filtering circuit. *Materials*. a trade name for a colloidal suspension of graphite in water, used as a lubricant and a conductive coating.

**aqua fortis** *Inorganic Chemistry*. another name for nitric acid, HNO<sub>3</sub>. See NITRIC ACID.

**aquagene tuff** see HYALOCLASTITE.

**Aqualf** *Geology*. a suborder of the soil order Alfisol that develops in water-saturated areas and is characterized by a gray or mottled color.

**aqualung** *Engineering*. a self-contained underwater breathing apparatus (scuba) in which the air supply is automatically regulated by a two-stage valve or by the demand regulator.

**aquamarine** *Mineralogy*. a gem variety of beryl.

**aquametry** *Analytical Chemistry*. analytical procedures such as oven drying, distillation, or Karl Fischer titration, used to measure the quantity of water present in materials.

**aquapuncture** *Surgery*. the injection of water beneath the skin.

**aqua regia** *Inorganic Chemistry*. a highly corrosive, suffocating liquid made by mixing one part nitric acid to three or four parts hydrochloric acid; used to dissolve metals, including gold and platinum.

**Aquarius** *Astronomy*. the Water Bearer, a zodiacal constellation located between Pisces and Capricornus.

**Aquaspirillum** *Bacteriology*. a genus of Gram-negative bacteria that grow in freshwater habitats as helical cells, exhibiting a distinct corkscrewlike motility by means of bipolar flagellation.

**aquatic** *Biology*. living or growing in or on water.

**aquatint** *Graphic Arts*. an etching process on a copper plate that produces halftones resembling watercolors.

**aquation** *Chemistry*. the process of forming a complex of water molecules with ions or other molecules.

**aquatone** *Graphic Arts*. an offset printing process using a gelatin-coated zinc plate.

**aqueduct** *Civil Engineering*. a conduit used for carrying water over long distances.

**Aquent** *Geology*. a suborder of the soil order Entisol that develops in areas periodically saturated with water and is characterized by a bluish- or greenish-gray color.

**aqueous** [ák'wə əs] *Science*. of or relating to water. *Chemistry*. of a solution, containing water. *Geology*. of rocks, formed of matter deposited by or in water.

**aqueous humor** *Physiology*. a clear watery fluid between the cornea and the iris of the eye that helps the cornea keep its shape.

**aqueous lava** *Volcanology*. mud lava formed as a result of the mixture of volcanic ash with water or condensing volcanic vapor.

**aqueous rock** *Petrology*. a sedimentary rock that is deposited in or by water. Also, **HYDROGENIC ROCK**.

**aqueous solution** *Chemistry*. a solution with water as the solvent.

**aqueous vapor** see WATER VAPOR.

**Aquept** *Geology*. a suborder of the soil order Inceptisol that develops in areas where restricted natural drainage results in water saturation; characterized by a dark surface horizon over a mottled or gray subsoil.

**aquiclude** *Geology*. a body of relatively impermeable rock that serves to restrict the flow of groundwater as it cannot transmit enough water to directly supply a well or spring.

**aquiculture** *Biology*. 1. the cultivation of aquatic plants and animals for human food consumption or other human use. 2. specifically, freshwater cultivation, as opposed to marine cultivation (mariculture). Also, **AQUACULTURE**.

**aquifer** [ák'wə fər] *Hydrology*. a permeable body of rock or other geologic structure that contains and conducts economically significant quantities of groundwater to supply wells and springs.

**Aquifoliaceae** *Botany*. the holly family of trees and shrubs, characterized by alternate, usually evergreen leaves; often having spiny-toothed margins, small, greenish-white flowers in axillary clusters, and red or purple berrylike drupes.

**aquifuge** [ák'wə fyoój] *Geology*. a body of rock that is incapable of absorbing or transmitting water, thus rendering it impermeable.

**aquiferbosa** *Ecology*. the herbaceous plant communities of ponds and swamps.

**Aquila** [ák' wə lə] *Astronomy*. the Eagle, a constellation lying south of Cygnus and Lyra that contains the bright star Altair.

**aquiprata** *Ecology*. the plant communities influenced by the presence of groundwater in damp meadows.

**Aquitanian** *Geology*. a European geologic stage of the lowermost Miocene epoch, occurring after the Chattian of the Oligocene and before the Burdigalian.

**aquitard** *Geology*. a leaky confining bed that transmits water at a very slow rate to or from an adjacent aquifer.

**Aquod** *Geology*. a suborder of the soil order Spodosol that develops in water-saturated areas as a result of fluctuating water tables or humid climates; characterized by a black surface horizon, a white albic horizon, or a cemented spodic horizon.

**aquo ion** *Chemistry*. a term for an ion that contains one or more water molecules.

**Aquoll** *Geology*. a suborder of the soil order Mollisol that develops in areas periodically saturated with water; characterized by a black surface horizon over a mottled or gray subsoil.

**Aquox** *Geology*. a suborder of the soil order Oxisol that develops in areas periodically saturated with water and is characterized by a mottled subsoil.

**Aquilt** *Geology*. a suborder of the soil order Ultisol that develops in areas periodically saturated with water and is characterized by a gray or mottled color.

**Ar** see ARGON.

**Ar<sub>1</sub>** *Metallurgy*. in a steel, the temperature at which the transformation of the face-centered cubic phase to the low-temperature body-centered cubic phase or to a combination of such phase and iron carbide is completed upon cooling.

**Ar<sub>2</sub>** *Metallurgy*. in the thermal treatment of steel, a formerly designated critical transformation temperature, now recognized as the temperature at which a gradual change from paramagnetic to ferromagnetic behavior begins to occur upon cooling.

**Ar<sub>3</sub>** *Metallurgy*. in a steel, the temperature at which the high-temperature body-centered cubic phase transforms to face-centered cubic during cooling.

**Ara** [á' rə] *Astronomy*. the Altar, a small southern constellation with few bright stars.