

thermo scientific



Chemicals

Thermo Scientific gold products

an exceptional precious metal

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Thermo Scientific gold products

79

Au

Probably the first pure metal known to man, gold has been highly valued from earliest times. It is a yellow, malleable, ductile, and soft metal, often alloyed to give it more strength. Gold is a good conductor of heat and electricity and is resistant to oxidation and most reagents. Extremely light reflective, it is an excellent reflector particularly of infrared. The freezing point of gold serves as a calibration point for the International Temperature Scales.

Our specialized gold compounds are available in catalog sizes to bulk quantities. We offer the capability to produce batch sizes up to 200 kg. Bulk packing sizes are customized to meet our customers' requirements.

Key Features

- Large selection of gold compounds can be manufactured up to a purity of 99.999%
- Most other gold products are manufactured to 99.9% purity as standard
- A batch specific certificate of analysis is produced for each product
- Each gold product batch has:
 - Full metallic impurities typically measured by ICP-MS to ppm
 - Measured gold content
- Specialized gold compounds outside our catalog range can be manufactured on request





Application highlights

Gold nanoparticles (GNP) in medicine

Headline-making applications of gold nanoparticles include: diagnosis of cancers, heart diseases, and infections; medical procedures and treatments such as drug delivery, gene therapy, photodynamic therapy and radiotherapy dose enhancement.

Gold in medical devices

Small amounts of gold are used in surgical instruments, electronic equipment, and life-support devices. Radioactive gold can be implanted in tissues as a radiation source to treat specific cancers, and when injected with a colloidal solution, it functions as a beta emitter that travels through the body to aid in diagnosis.

Gold nanoparticles (GNP) in drug discovery

Gold nanoparticles are being used in the development of a new generation of broad-spectrum antiviral drugs and as an antibiotic, antifungal, and antimicrobial agent when added in plastics, coatings, nanofibers and textiles. Nanoparticles cross-linked with collagen gels are also being developed to treat ageing or damaged skin.

Gold in chemistry

Supported gold catalysts are used in a wide range of chemical reactions, including: carbonmonoxide oxidation, catalytic combustion of hydrocarbons, hydrochlorination of ethyne, hydrogen peroxide formation, oxidation of glucose to gluconic acid, oxidative decomposition of dioxins, ozone decomposition, NO_x reduction, epoxidation of olefins, and hydrogenation of alkynes. Gold alloy catalysts are used in the commercial production of vinyl acetate monomer (VAM).

Gold in technology

Gold in one or the other elemental form is used in the mounting of microprocessors, in memory chips, as connectors used to attach cables, as well as in GPS systems, calculators, and fuel cell applications. Gold nanoparticles are being explored for use as sensory probes, electronic conductors, and organic photovoltaics.

Gold in space

Pure gold in one or the other form is used in space vehicle circuitry, as a lubricant between vehicle parts, and as a radiation reflector for stabilizing the temperature inside the space vehicle.

The Thermo Scientific™ portfolio includes an extensive range of specialized gold products, with over 70 products available and the capability to produce large batch sizes. Below is a listing of some of our products. The full product listing is available online.



Thermo Scientific gold products

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Au

Pure gold products

Fisher Scientific Cat. No.	Description	Size
AA11519	Gold foil, 0.025mm (0.001in) thick, 99.95% (metals basis)	25 × 25 mm, 50 × 50 mm, 100 × 100 mm
AA00133	Gold foil, 0.025mm (0.001in) thick, Premion™, 99.985% (metals basis)	25 × 25 mm, 50 × 50 mm
AA43071	Gold foil, 0.05mm (0.002in) thick, 99.95% (metals basis)	25 × 25 mm, 50 × 50 mm, 100 × 100 mm
AA11391	Gold foil, 0.1mm (0.004in) thick, Premion™, 99.9975+% (metals basis)	25 × 25 mm, 50 × 50 mm, 100 × 100 mm
AA44164	Gold foil, 0.5mm (0.02in) thick, Premion™, 99.999% (metals basis)	25 × 25 mm, 50 × 50 mm
AA11388	Gold foil, 1.0mm (0.04in) thick, Premion™, 99.9985% (metals basis)	25 × 25 mm
AA40586	Gold gauze, 82 mesh woven from 0.06mm (0.0025in) dia wire, 99.9% (metals basis)	25 × 25 mm, 50 × 50 mm
AA36451	Gold Nickel wire, 0.5mm (0.02in) dia, annealed, 99.85% (metals basis)	10 cm, 50 cm, 1 m
AA41206	Gold Palladium wire, 0.2mm (0.008in) dia, annealed, 99.9% (metals basis)	25 cm, 50 cm, 1 m
AA42307	Gold plating solution, electroless, metal content ≈3.7g/l	250 mL, 1 L
AA10612	Gold powder, -20 mesh, Premion™, 99.99% (metals basis)	1 g, 5 g
AA00136	Gold powder, -20+100 mesh, Premion™, 99.995% (metals basis)	1 g, 5 g
AA14641	Gold powder, -60 mesh, Premion™, 99.99% (metals basis)	1 g, 5 g
AA00765	Gold powder, spherical, <5 micron, 99.95% (metals basis)	1 g, 5 g
AA43901	Gold powder, spherical, -200 mesh, 99.9% (metals basis)	1 g, 5 g
AA44636	Gold powder, spherical, APS 0.5-0.8 micron, 99.96+% (metals basis)	1 g, 5 g, 250 mg
AA39817	Gold powder, spherical, APS 0.8-1.5 micron, 99.96+% (metals basis)	1 g, 5 g, 250 mg
AA39818	Gold powder, spherical, APS 1.5-3.0 micron, 99.96+% (metals basis)	1 g, 5 g, 250 mg
AA42674	Gold powder, spherical, APS 3.0-5.5 micron, 99.96+% (metals basis)	1 g, 5 g
AA42675	Gold powder, spherical, APS 5.5-9.0 micron, 99.96+% (metals basis)	1 g, 5 g
AA11355	Gold shot, 0.8-6mm (0.03-0.2in), Premion™, 99.999% (metals basis)	1 g, 5 g
AA12233	Gold shot, semi-spherical, 6.35mm (0.25in) & down, 99.95% (metals basis)	1 g, 5 g
AA13394	Gold slug, 3.175mm (0.125in) dia × 6.35mm (0.25in) length, Premion™, 99.99% (metals basis)	1 pc, 5 pc, 25 pc
AA44139	Gold Thinfoil, 0.007mm (0.00028in) thick, 99.9% (metals basis)	25 × 25 mm, 50 × 50 mm
AA11518	Gold Thinfoil, 0.01mm (0.0004in) thick, 99.9% (metals basis)	25 × 25 mm, 50 × 50 mm, 100 × 100 mm
AA43149	Gold Ultrathin foil, 1.0 micron thick, 99.9% (metals basis)	25 × 25 mm
AA14353	Gold wire, 0.0127mm (0.0005in) dia, 4.88m (16ft), 99.9% (metals basis)	1 each
AA40585	Gold wire, 0.025mm (0.001in) dia, annealed, 99.95% (metals basis)	1 m, 5 m, 20 m
AA10969	Gold wire, 0.05mm (0.002in) dia, Premion™, 99.995% (metals basis)	5 m, 25 m, 100 m
AA00130	Gold wire, 0.127mm (0.005in) dia, Premion™, 99.99% (metals basis)	0.5 m, 2 m, 10 m
AA14727	Gold wire, 0.1mm (0.004in) dia, 99.95% (metals basis)	1 m, 5 m, 25 m
AA10968	Gold wire, 0.1mm (0.004in) dia, Premion™, 99.998% (metals basis)	1 m, 5 m, 25 m
AA00725	Gold wire, 0.25mm (0.01in) dia, 99.9% (metals basis)	1 m, 5 m
AA14724	Gold wire, 0.25mm (0.01in) dia, 99.95% (metals basis)	25 cm, 100 cm, 500 cm
AA45567	Gold wire, 0.25mm (0.01in) dia, annealed, Premion™, 99.999% (metals basis)	25 cm, 100 cm, 500 cm
AA10967	Gold wire, 0.25mm (0.01in) dia, Premion™, 99.998% (metals basis)	25 cm, 100 cm, 500 cm
AA14730	Gold wire, 0.25mm (0.01in) dia, Premion™, 99.999% (metals basis)	25 cm, 100 cm, 500 cm



Fisher Scientific Cat. No.	Description	Size
AA10195	Gold wire, 0.2mm (0.008in) dia, 99.9% (metals basis)	1 m, 5 m
AA45084	Gold wire, 0.35mm (0.0138in) dia, Premion™, 99.999% (metals basis)	25 cm, 100 cm, 500 cm
AA14728	Gold wire, 0.5mm (0.02in) dia, 99.95% (metals basis)	10 cm, 50 cm, 250 cm
AA47160	Gold wire, 0.5mm (0.02in) dia, annealed, Premion™, 99.999% (metals basis)	10 cm, 50 cm, 250 cm
AA10966	Gold wire, 0.5mm (0.02in) dia, Premion™, 99.9985% (metals basis)	5 cm, 25 cm, 100 cm, 250 cm
AA14725	Gold wire, 0.5mm (0.02in) dia, Premion™, 99.999% (metals basis)	10 cm, 50 cm, 250 cm
AA38379	Gold wire, 0.762mm (0.030in) dia, Premion™, 99.999% (metals basis)	10 cm, 50 cm
AA14731	Gold wire, 1.0mm (0.04in) dia, 99.95% (metals basis)	2 cm, 10 cm, 50 cm
AA10965	Gold wire, 1.0mm (0.04in) dia, Premion™, 99.9985% (metals basis)	2 cm, 10 cm, 50 cm
AA14726	Gold wire, 1.0mm (0.04in) dia, Premion™, 99.999% (metals basis)	2 cm, 10 cm, 50 cm
AA40329	Gold wire, 14kt, yellow, 1.63mm (0.064in) dia, Au 58.3% min	10 cm, 25 cm, 50 cm
AA14729	Gold wire, 2.0mm (0.08in) dia, 99.95% (metals basis)	1 cm, 5 cm, 25 cm
AA14733	Gold wire, 2.0mm (0.08in) dia, Premion™, 99.999% (metals basis)	1 cm, 5 cm, 25 cm

Full product listing is available online.

Gold compounds

Fisher Scientific Cat. No.	Description	Size
AA41002	Bromo(triphenylphosphine)gold(I), Premion™, 99.99% (metals basis)	1 g, 5 g
AAH28235	4-tert-Butylthiophenol gold nanoparticles, 2% (w/v) soln. in toluene, 2-5nm particles	5 mL
AA41007	Chloro(triphenylphosphine)gold(I), Premion™, 99.99% (metals basis), Au 39.3% min	0.5 g, 1 g, 5 g
AAH29045	n-Dodecanethiol gold nanoparticles, 2% (w/v) soln. in toluene, 2-5nm particles	5 mL
AA43365	Gold(I) chloride, 99.9% (metals basis)	1 g, 5 g
AA40432	Gold(I) chloride, Premion™, 99.99% (metals basis), Au 84.2% min	0.25 g, 1 g, 5 g
AA16617	Gold(I) iodide, 99%	1 g, 5 g
AA12552	Gold(I) potassium cyanide, Premion™, 99.96% (metals basis), Au 67.6% min	1 g, 5 g
AA39741	Gold(I) sodium thiosulfate hydrate, 99.9% (metals basis)	1 g, 5 g, 25 g
AA39742	Gold(III) acetate, 99.9% (metals basis)	0.5 g, 1 g, 5 g
AAA19514	Gold(III) bromide, 99%	1 g, 5 g
AA12162	Gold(III) bromide, Premion™, 99.99% (metals basis), Au 44.6% min	1 g
AA12163	Gold(III) chloride, Au 64.4% min	0.25 g, 1 g, 5 g
AA43360	Gold(III) chloride, Premion™, 99.99% (metals basis), Au 64.4% min	1 g, 5 g
AA12159	Gold(III) hydroxide, Au 79% min	1 g, 5 g, 10 g
AA12161	Gold(III) oxide, Premion™, 99.99% (metals basis), Au 88.6% min	0.25 g, 1 g, 5 g

Full product listing is available online.

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