

MINERALS IN MEDICINE

<u>Element</u>	<u>Mineral Source</u>	<u>Medicinal Product(s):</u>	<u>Uses</u>
ALUMINUM	Corundum	Aluminum Chloride:	astringent & antiseptic. Antiperspirant and deodorants
	Emery		
	Kaolinite		
	Cryolite	Aluminum Hydroxide:	antacid, silicosis therapy, antidiarrheal, drying agent in foot powders
	Bauxite (Gibbsite, Boehmite, Diaspore)		
	Spinel		
	Gahnite		
	Chrysoberyl	Aluminum Phosphate:	antacid, astringent, demulcent
	Franklinite		
	Magnetite	Aluminum Silicates:	adsorbant, cosmetic (Bentonite & Kaolin) antidiarrheal.
	Chromite		
	Alunite	Pumice -	abrasive in dental preps
	Leucite	Aluminum Sulfate:	astringent, antiseptic, antiarthritic.
	Alum:	mild caustic, astringent, antidiarrheal, antiseptic gargle.	
	Aluminum Carbonate:	control phosphatic urinary calculi	
	Fuller's Earth;	absorbent in antidotes.	
ANTIMONY	Native antimony	Antimony Potassium Tartrate:	treatment of kala-azar, schistosomiasis and other tropical diseases. Emetic
	Stibnite		
	Cervantite		
	Senarmontite		
	Valentinite		
ARSENIC	Realgar	Arsenic Trioxide:	antileukemic, tonic
	Orpiment		
	Tennantite	Sodium Cacodylate:	anemia, psoriasis & leukemia
	Enargite	Arsphenamine:	anti-spirochete
	Arsenopyrite	Tryparsamide:	sleeping sickness
BARIUM	Barite	Barium Sulfate:	Radio-opaque medium
	Witherite		
	Psilomelane (trace)		
BISMUTH	Native Bismuth	Bismuth Potassium Tartrate:	antisyphilitic
	Bismite:	Bismuth Subcarbonate:	protective, astringents, dusting powders, antiseptics, antidiarrheal.
	Bismutite		
	Bismuthinite	Bismuth Subgallate:	antacid, antidiarrheal
	Tetradymite	Bismuth Subnitrate:	intestinal antiseptic
	Bismuth Subsalcylate:	antisyphilitic, antitreponemal	

BORON	Kernite Borax Borocalcite Tincal Colemanite	Boric Acid: antiseptic Sodium Tetraborate: antiseptic, bacteriostatic Sodium Perborate: Vincent's angina, indentifrices
CALCIUM	Calcite Aragonite Fluorite Selenite Anhydrite (chalk, marble, limestone, marl, phosphate rock)	Calcium Bromide: sedative Calcium Gluconate: calcium therapy Calcium Carbonate: antacid, antidiarrheal Calcium Chloride: calcium therapy. Calcium Glycerophosphate: calcium therapy Calcium Hydroxide: antacid, astringent protective Calcium Hypophosphite: calcium therapy Calcium Lactate: calcium therapy Calcium Levulinate: calcium therapy Calcium Oxide: scabicide Dibasic Calcium Phosphate: Cal. therapy Tribasic Calcium Phosphate: " " Chlorinated Lime: disinfectant Calcium Sulfate: surgical casts
Note: Calcium therapy aids in hemorrhagic states, nervous disorders, allergic disorders, heavy metal toxicities, inflammatory and exudative disorders.		
CARBON	Diamond Mineral carbon (Coal) Animal Bones Plants (All organic substances)	Charcoal: adsorbent in indigestion & poisoning Activated Charcoal, Animal Charcoal: same as above All carbonates and organic compounds contain carbon, include all medicinal uses.
CHROMIUM	Chromite Crocoite	Chromium trioxide: caustic, astringent antipersperant, Potassium Dichromate: anti-gastric ulcer
COBALT	Smaltite Cobaltite Linnaeite Syepoorite Erythrite Asbolite	Cobalt-cobaltic Oxide: astringent Cobalt Nitrate: antidote for cyanide poisoning Radio-cobalt 60: used in place of x-ray therapy for tissue destruction.
COPPER	Native copper Chalcopyrite Chalcocite Malachite Cuprite Chrysocolla	Cupric Sulfate: emetic, astringent, caustic, fungicide, disinfectant Cupric Citrate: caustic

GOLD	Native Gold Sylvanite Petzite Calaverite	Gold Sodium Thiosulfate:lupus erythematosus, rheumatoid arthritis. Radio-Gold 198:metastatic malignancies
IODINE	Marshite Seaweed ash	Iodine:antiseptic Hydriodic Acid:alterative, tonic Sodium Iodide, Potassium Iodide: hyperthyroidism, expectorant, antisyphilitic. Radio-Iodide:thyroid conditions, diagnostic agent for brain tumors, blood and plasma volume detn., and detn. of cardiac output.
IRON'	Native Iron in meteorites Hematite Magnetite Limonite Siderite Pyrite	Ferric Ammonium Citrate: hematinic Ferric Cacodylate:anemias, leukemia Ferric Chloride: hematinic, tonic Ferric Glycerophosphate: hematinic Ferric Hypophosphite: hematinic Ferric Phosphate: hematinic Ferrous Carbonate:hematinic Ferrous Gluconate:hematinic Ferrous Sulfate:hematinic Ferric Hydroxide:antidote in arsenic poisoning Ferric Oxide:I.V. iron therapy Ferric Pyrophosphate:hematinic Ferrous Chloride:hematinic Ferrous Fumarate:hematinic Ferrous Lactate: hematinic Radio-Iron 55 & 59: RBC research Lead Acetate:astringent
LEAD	Galena Cerussite Anglesite	
LITHIUM	Petalite Spodumene Lepidolite Amblygonite Triphyllite	Lithium Bromide:sedative Lithium carbonate:diuretic,gout Lithium chloride:salt substitute for cardiac patients
MAGNESIUM	Talc Serpentine Actinolite Tremolite Hornblende Asbestos Meerscham Magnesite Dolomite Carnallite Kieserite	Magnesium Carbonate:antacid, laxative, tooth powders Magnesium Hydroxide:antacid,laxative Magnesium Oxide:antacid, laxative Magnesium Phosphate:" " Magnesium Sulfate: laxative,depressant Magnesium Trisilicate:antacid Talc:protective agent, cosmetic

MANGANESE	Pyrolusite Pyrochroite Manganite Polianite Hausmannite Psilomelane Mallardite Alabandite Rhodochrosite Rhodonite	Manganese Citrate:tonic, anemia Manganese Glycerophosphate:tonic Manganese Hypophosphite:tonic Potassium Permanganate:antiseptic, antifungal
MERCURY	Native Mercury Cinnabar	Ammoniated Mercury:eczema,parasit- icide Mercuric Chloride:antiseptic Mercuric Iodide;stimulant to reduce external ulcers Potassium Mercuric Iodide:antiseptic Mercuric Oxide:anti-inflammatory Mercurous Chloride:cathartic,vermi- fuge Mercurous Iodide:antisyphilitic Organic Mercurials: diuretics,anti- syphilitics,antiseptics
MOLYBDENUM	Molybdenite Wulfenite Molybdite	No official preparation available, included in some hematinic preps. It may potentiate the uptake of iron by the body.
NICKEL	Native Nickel Alloy in meteorite with iron Pyrrhotite Chalcopyrite Pentlandite Garnierite Millerite Niccolite	No official preps.available. Nickel Bromide: epilepsy Nickel Carbonate:tonic,hematinic Nickel Sulfate:parasiticide Nickel Pectinate:antidiarrheal
PHOSPHORUS	Phosphorite Apatite Bone Ash	No official preps. available. Has been used in nervous exhaus- tion, sexual impotency, rickets. The Phosphates are commonly used.
POTASSIUM	Sylvite Carnallite Kainite Polyhalite Saltpeter Alunite	Potassium Acetate:diuretic, urin- ary alkalizer Potassium Bicarbonate:diuretic, antacid Potassium Bitartrate:urinary acid- ifier,diuretic,bacteriostatic Potassium Bromide: sedative,anti- convulsant Potassium Carbonate:antacid,diure- tic

Potassium Chlorate:antiseptic,
bacteriostatic
Potassium Chloride:diuretic,myas-
thenia gravis, allergies
Potassium Citrate:diuretic, expect-
orant, diaphoretic
Potassium Hydroxide:caustic
Potassium Hypophosphite: nerve toni
Potassium Iodide:hyperthyroidism,
expectorant, antisyphilitic
Potassium Nitrate:diuretic,diaphor-
etic
Potassium Permanganate: antiseptic
antifungal
Potassium Phosphate:cathartic
Potassium Sodium Tartrate: cathar-
tic
Potassium Oxalate:anticoagulant
Potassium Thiocyanate: antihyper-
tensive agent
Radio-Potassium 42:biological re-
search

RADIUM

Carnotite
Uraninite

Radium Chloride: treatment of mal-
ignancies,enlarged thyroids, cat-
aracts and hardened scar tissue.
Radon:ulcers, non-healing wounds,
dermatological conditions, arthr-
itis.

SILVER

Hessite
Petzite
Sylvanite
Argentite
Acanthite
Pyrargyrite
Proustite
Polybasite
Pearcite
Cerargyrite
Bromyrite
Iodyrite
Native Silver

Silver Nitrate:antiseptic,caustic
Mild Silver Protein:antiseptic
Strong Silver Protein:germicide
Colloidal Silver Iodide:antiseptic

SODIUM

Sea Water
Halite
Soda Niter
Soda Felspar
Thenardite
Cryolite

Sodium Acetate:urinary alkalizer,
diuretic
Sodium Bicarbonate:antacid,systemic
alkalizer
Sodium Biphosphate:urinary acidifier
Sodium Bisulfite:antiseptic in
gastric fermentation
Sodium Borate:antiseptic
Sodium Bromide:hypnotic, sedative

		Sodium Carbonate:antacid, skin conditions
		Sodium Chloride:sodium & chloride therapy, increase circulating fluids in body, diuretic
		Sodium Citrate: diuretic, coagulant
		Sodium Fluoride:dentifrices
		Sodium Glycerophosphate:tonic
		Sodium Hypochlorite: antiseptic
		Sodium Hypophosphite: tonic
		Sodium Iodide:hyperthyroidism
		Sodium Lactate:systemic alkalization
		Sodium Nitrate:vasodilator
		Sodium Perborate:dentifrices, antiseptic
		Sodium Phosphate:laxative, antidote in chronic lead poisoning
		Sodium Sulfate:laxative, diuretic
		Sodium Sulfite:ringworm
		Sodium Thiocyanate:vasodilator
		Sodium Thiosulfate: cyanide poisoning, antiseptic
STRONTIUM	Celestite Strontianite	Strontium Bromide:sedative
SULFUR	Native Sulfur Gypsum Copper Pyrites Galena Zinc Blende Cinnabar Barytes Celestite Kieserite	Precipitated Sulfur:scabicide Washed Sulfur:cathartic, stimulant in alopecia, fumigation, misc. skin diseases. Sulfides have been used as depilatories for many years.
TITANIUM	Ilmenite Rutile Brookite Anatase Titanite	Titanium Dioxide:sun-screen, cosmetic
THALLIUM	Crroksite Lorandite Vrbaite	Thallium Acetate:depilatory
VANADIUM	Patronite Vanadinite Dechenite Descloizite Carnotite	No official preparation available. Recommended for the treatment of anemia,

ZINC	Sphalerite Willemite Calamine Smithsonite Wurtzite Zincite Goslarite Franklinite Hydrozincite	Zinc Chloride: escharotic Zinc Oxide: skin disorders Zinc Peroxide: antiseptic Zinc Stearate: antiseptic, astringent Zinc Sulfate: emetic, astringent, antiseptic
ZIRCONIUM	Zircon Baddeleyite	No official preparation available. Found effective for treating poison ivy dermatitis, athlete's foot, and as an anti-perspirant.
GERMANIUM	Argyrodite	No official preparation available. Used in the treatment of anemia, but not in general use.
TANTALUM	Samarskite	Used to replace portions of the skull, after traumatic destruction of bone. Tantalum oxide used as a surgical dressing, replacing gauze.

Material Collected from:

1. Soine & Wilson, "Roger's Inorganic Pharmaceutical Chemistry"
2. Pough, "A Field Guide to Rocks and Minerals"
3. Delario, A.J., "Minerals in Medicine", Rocks & Minerals, 580 (1950)