

TABLE 2

This table classifies by anionic groups the new minerals listed in Table 1 that are considered to be valid species plus many of doubtful validity plus some old minerals, for which new data have appreciably changed the composition accepted. Synonyms and discredited minerals and valid species described before 1916 are not listed.

The anionic groupings used are as follows:

Antimonates and Antimonites	Organic Compounds
Arsenates	Oxides
Arsenites	Phosphates
Borates	Silicates
Carbonates	Sulfates
Chromates	Sulfides (including Arsenides,
Elements and Alloys	Selenides, Tellurides)
Halides	Sulfosalts
Iodates	Tellurites
Molybdates	Tungstates
Nitrates	Vanadates

Minerals containing more than one anionic group are listed under both; for example, carboborite,  $\text{Ca}_2\text{Mg}(\text{CO}_3)(\text{B}_2\text{O}_5) \cdot 10\text{H}_2\text{O}$ , is listed under both Borates and Carbonates.

TABLE 2

*Antimonates and Antimonites*

Byströmite	Ordonezite	Swedenborgite
Katoptrite	Schafarzkitite	

*Arsenates*

Abernathyite	Duftite	Manganese-hoernesite
Aerugite	Dussertite	Mansfieldite
Akrochordite	Ferrisymplesite	Metaheinrichite
Angelellite	Fornacite	Metakahlerite
Arsenobismite	Guerinite	Metakirchheimerite
Arsenoclasite	Hallimondite	Metanovacekite
Arsenuranylite	Hidalgoite	Meta-uranospinite
Arthurite	Heinrichite	Metazeunerite
Austinite	Holdenite	Novacekite
Bearsite	Hügelite	Paradamite
Belovite (of Nefedov)	Kahlerite	Parasymplesite
Betpakdalite	Lavendulan	Rauenthalite
Cahnite	Legrandite	Rooseveltite
Chlorophoenicite	Macgovernite	beta-Roselite
Chudobaite	Magnesium-chlorophoeni-	Sahlinite
Cornubite	cite	Sainfeldite

Santafeite	Shubnikovite	Vladimirite
Sarmientite	Smolianinovite	Weillite
Schallerite	Sodium uranospinite	Xanthiosite
Schultenite	Stranskiite	

see also Unnamed Minerals 79–82

*Arsenites*

Armangite	Fornacite	Reinerite
Dixenite	Macgovernite	Trigonite
Finnemanite	Magnussonite	

*Borates*

Aksaite	Hungchaoite	Preobrazhenskite
Ammonioborite	Hydrochlorborite	Probertite
Bandyite	Inderborite	Roweite
Behierite	Inderite	Sborgite
Biringucite	Ivanovite	Seamanite
Borcarite	Jimboite	Sibirskite
Cahnite	Johachidolite	Sinhalite
Calciborite	Kernite	Strontioborite
Carboborite	Korzhinskite	Strontioginorite
Chambersite	Kotoite	Suanite
Ericaite	Kurgantaite	Teepleite
Ezcurrite	Kurnakovite	Tertschite
Fabianite	Macallisterite	Tunellite
Fluoborite	Metaborite	Uralborite
Frolovite	Nasinite	Veatchite
Gaufroyite	Nifontovite	p-Veatchite
Ginorite	Nobleite	Volkovite
Gowerite	Orthopinakiolite	Vonsenite
Halurgite	Parahilgardite	Wightmanite
Heidornite	Pentahydroborite	Wiserite
Hilgardite		

see also Unnamed Minerals 55, 56

*Carbonates*

Alumohydrocalcite	Burkeite	Gaufroyite
Andersonite	Calkinsite	Harkerite
Barbertonite	Callaghanite	Hellyerite
Barringtonite	Carboborite	Huanghoite
Bayleyite	Carbocernaite	Huntite
Benstonite	Carbonate-cyanotrichite	Hydroscarbroite
Beyerite	Chalconatrite	Hydroxyl-bastnaesite
Bismutite	Coalingite	Ikaite
Borcarite	Doverite	Jouravskite
Bradleyite	Eardleyite	Kettnerite
Buetschliite	Eitelite	Knipovichite
Burbankite	Fairchildite	Loseyite

Mackelveyite	Scarbroite	Tatarskite
Manasseite	Scawtite	Thorbastnaesite
Monohydrocalcite	Schuilingite	Tilleyite
Nahcolite	Sharpite	Vaterite
Nasledovite	Shortite	Wegscheiderite
Norsethite	Sjögrenite	Widenmannite
Rabbittite	Stenonite	Wyartite
Röntgenite	Studdite	Zellerite
Sahamalite	Swartzite	Zincrosasite

see also Unnamed Minerals 52-54

#### *Chromates*

Chromatite	Iranite	Lopezite
Fornacite		

#### *Elements and Alloys*

Arsenolamprite	Moschellandsbergite	Sinoite
Aurostibite	Niggliite (?)	Stannopalladinite
Froodite	Osbornite	Stibiopalladinite
Geversite	Potarite	Wairauite
Michenerite	Rosickyite	

see also Unnamed Minerals 1-11

#### *Halides*

Antarcticite	Ericaite	Malladrite
Anthonyite	Ferruccite	Matlockite
Avogadrite	Finnemanite	Mitscherlichite
Bandyite	Fluoborite	Neighborite
Bararite	Gagarinite	Norbergite
Bismoclite	Galeite	Parahilgardite
Blixite	Heidornite	Perite
Bøggildite	Hilgardite	Röntgenite
Botallackite	Hsianghualite	Sahlinite
Buttgenbachite	Huanghoite	Schairerite
Cadwaladerite	Hydrochlorborite	Shubnikovite
Calclacite	Hydroxyl-bastnaesite	Stenonite
Calumetite	Isokite	Tatarskite
Carobbiite	Ivanovite	Teepleite
Chloroxiphite	Jarlite	Thorbastnaesite
Chukhrovite	Johachidolite	Tikhonenkovite
Creedite	Kempite	Trudellite
D'Ansite	Kettnerite	Weberite
Diaboleite	Lorettoite	Zavaritskite
Doverite	Magniotriplite	Zirklerite
Elpasolite		

see also Unnamed Minerals 48-51

*Iodates*

Bellingerite Salesite

*Molybdates*

Betpakdalite	Irginite	Mourite
Calcurmolite	Lindgrenite	Umohoite
Cousinite	Moluranite	

see also Unnamed Mineral 85

*Nitrates*

Buttgenbachite Likasite

*Organic Compounds*

Ajkaite	Idrialite	Scharizerite
Calcacite	Julienite	Simonellite
Earlandite	Karpatite	Stepanovite
Evenkite	Kladnoite	Telegdite
Flagstaffite	Kratochvilite	Weddellite
Graebite	Minguzzite	Zhemchuzhnikovite
Hoelite		

*Oxides**Note—The forms of silica are listed under Silicates*

Akaganeite	Crichtonite	Hydrotungstite
Amakinite	Cryptomelane	Ianthinite
Avicennite	Curite	Ishikawaite
Barbertonite	Doloresite	Ixiolite
Bayerite	Duttonite	Karelianite
Becquerelite	Dzhalindite	Kennedyite
Belyankinite	Eardleyite	Khlopinite
Billietite	Eskolaite	Kobeite
Birnessite	Feitknechtite	Latrappite
Bismutotantalite	Fersmite	Litharge
Boehmite	Formanite	Lodochnikovite
Brannerite	Fourmarierite	Loparite
Bromellite	Freudenbergite	Lueshite
Brownmillerite	Galaxite	Maghemite
Cafetite	Gerasimovskite	Magnetoplumbite
Calzirtite	Groutite	Magnocolumbite
Cerianite	Häggite	Manasseite
Cervantite	Hematophanite	Manganbelyankinite
Cesarolite	Heterogenite	Marokite
Clarkeite	Hibonite	Masuyite
Coalingite	Hochschildite	Mayenite
Compreignacite	Högbomite	Merumite
Coronadite	Högbomite -4H, -5H,	Metaschoepite
Corvusite	-6H, -15H, -15R, -18R	Metavandriesscheite
Coulsonite	Hydrocalumite	Molybdite

Monteponite	Quenselite	Taaffeite
Montroseite	Ramsdellite	Tanteuxenite
Murdochite	Redledgeite	Thoreaulite
Natroniobite	Rhombomagnojacobsite	Thorutite
Navajoite	Richetite	Todorokite
Nigerite	Rijkeboerite	Trevorite
Niobo-aeschynite	Russellite	Ulvöspinel
Nordstrandite	Schafarzikite	Vandenbrandeite
Nsutite	Scheteligite	Vandendriesscheite
Obruchevite	Schoepite	Vanoxite
Painite	Sillenite	Varlamoffite
Pandaite	Simpsonite	Westgrenite
Paramontroseite	Sinicite	Wodginite
Paraschoepite	Sinoite	Wölsendorfite
Paratellurite	Sjögrenite	Woodruffite
Portlandite	Stottite	Zirconolite
Priderite		

see also Unnamed Minerals 35-47

*Phosphates*

Abukumalite	Englishite	Likasite
Ardealite	Faheyite	Lipscombite
Arrojadite	Farringtonite	Lithiophosphate
Azovskite	Faustite	Lomonosovite
Barbosalite	Ferrazite	Lusungite
Bassettite	Ferrisicklerite	Magniotriplite
Belovite (of Borodin and Kazakova)	Frondelite	Merrillite
Bergenite	Glucine	Messelite
Bermanite	Gordonite	Metaschoderite
Bialite	Grayite	Metatorbernite
Bøggildite	Gutsevichite	Metavariscite
Bolivarite	Hagendorfite	Millisite
Bradleyite	Hühnerkobelite	Minyulite
Brazilianite	Hurlbutite	Montgomeryite
Brockite	Huttonite	Moraesite
Calcium ferri-phosphate	Hydroxylapatite	Ningyoite
Chavesite	Isokite	Overite
Cheralite	Karnasurtite	Palermoite
Coeruleolactite	Kehoeite	Paravauxite
Collinsite	Kingite	Parsonsite
Coronetite	Kolbeckite	Phosphoferrite
Crandallite	Kribergite	Phosphophyllite
Cyrilovite	Kryzhanovskite	Phosphorrösslerite
Davisonite	Landesite	Przhevalskite
Dehrnite	Laueite	Pseudo-autunite
Dewindtite	Lehiite	Pseudolaueite
Dumontite	Lermontovite	Renardite
Ellestadite	Leucophosphite	Rockbridgeite
	Lewistonite	Rusakovite

Sabugalite	Smirnovskite	Varulite
Saleeite	Sodium autunite	Vauxite
Salmoite	Souzalite	Väyrynenite
Sampleite	Spencerite	Viseite
Saryarkite	Strontium-apatite	Waylandite
Schoderite	Strunzite	Weinschenkite
Scholzite	Tavorite	Whitlockite
Scorzalite	Tinticite	Wolfeite
Seamanite	Trolleite	Woodhouseite
Sigloite	Uralolite	Xanthoxenite
Sincosite	Uramphite	Yoshimuraite

see also Unnamed Minerals 68-78

*Selenates and Selenites*

Ahlfeldite	Molybdomenite	Schmeiderite
Guilleminite		

*Silicates*

Abukumalite	Clinoptilolite	Fraipontite
Afwillite	Coesite	Fresnoite
Ajoite	Coffinite	Garrelsite
Alleghanyite	Combeite	Garronite
Aminoffite	Corrensite	Genthelvite
Arandisite	Cronstedtite-1H, -2H, -3R, -6H, -9R	Gillespite
Armenite	Cuprorivaite	Goldmanite
Ashcroftine	Cuprosklodowskite	Gonyerite
Bafertisite	Curite	Götzenite
Banalsite	Cymrite	Greenalite
Baotite	Dalyite	Grovesite
Barium uranophane	Deerite	Haiweeite
Batisite	Delhayelite	Harkerite
Beidellite	Dellaite	Hectorite
Beryllite	Dickite	Howeite
Bikitaite	Dixenite	Hsianghualite
Bismutoferrite	Ekanite	Huttonite
Boltwoodite	Ellestadite	Hydrogrossular
Brammallite	Endellite	Hydrougrandite
Bredigite	Ephesite	Illite group
Buddingtonite	Erionite	Indialite
Bultfonteinite	Esperite	Innelite
Calcitralc	Falkensteinite	Iron cordierite
Calcium catapleite	Fenaksite	Jagoite
Canasite	Ferrierite	Joaquinite
Caryopilite	Ferrocapholite	Johannsenite
Chapmanite	Fersmanite	Juanite
Chinglusuite	Foshagite	Jusite
Chkalovite	Foshallassite	Kalsilite
Clinoferrosilite		Karnasurtite

Karpinskite	Nenadkevichite	Stishovite
Karpinskyite	Niobophyllite	Sudoite
Kasolite	Niocalite	Sursassite
Katoprite	Norbergite	Tacharanite
Keldyshite	Nordite	Taramellite
Kilchoanite	Offretite	Tetrakalsilite
Kimzeyite	Orientite	Thorosteenstrupine
Kirschsteinite	Orlite	Thortveitite
Krauskopfit	Ortho-antigorite	Tilleyite
Kupletskite	Orthochamosite	Tinaksite
Kurumsakite	Orthochrysotile	Tobermorite
Labuntsovite	Osumilite	Törnebohmite
Larnite	Pabstite	Tosudite
Larsenite	Papagoite	Traskite
Latiumite	Parachrysotile	Trikalsilite
Liberite	Parsettensite	Tugtupite
Lizardite	Paulingite	Tuhualite
Lombaardite	Pennantite	Tynite
Lomonosovite	Perrierite	beta-Uranophane
Loughlinite	Pumpellyite	Ureyite
Lovozerite	Rankinite	Ursilite
Macdonaldite	Ranquillite	Verplanckite
Macgovernite	Reedmergnerite	Vinogradovite
Malayaite	Rhodesite	Viseite
Mangan-neptunite	Rilandite	Vlasovite
Manganosteenstrupine	Riversideite	Wadeite
Manganpyrosmalite	Rustumite	Wairakite
Margarosanite	Sanbornite	Walstromite
Mboziite	Saryarkite	Waylandite
Medmontite	Scawtite	Weeksite
Melanophlogite	Schallerite	Wenkite
Merrihueite	Seidozerite	Yamatoite
Merwinite	Serandite	Yeatmanite
Metahaiweeite	Shattuckite	Yoderite
Minnesotait	Shcherbakovite	Yoshimuraite
Miserite	Sklodowskite	Yugarawalite
Mountainite	Smirnovskite	Yuksporite
Muirite	Soddyite	Zinalsite
Mullite	Sonolite	Zincsilite
Naujakasite	Spencite	Zussmanite
Nekoite	Stillwellite	

see also Unnamed Minerals 86-104

#### *Sulfates*

Aluminocopiapite	Argentojarosite	Butlerite
Amarillite	Basaluminite	Calciocopiapite
Ammoniojarosite	Bianchite	Carbonate-cyanotrichite
Aplowite	Bonattite	Chalcoalumite
Ardealite	Burkeite	Chalcocyanite

Chukhrovite	Krausite	Poitevinite
Clino-ungemachite	Kribergite	Ransomite
Creedite	Ktenasite	Retgersite
Cuprocopiapite	Lapparentite	Rozenite
D'Ansite	Latiumite	Sanderite
Ellestadite	Lausenite	Sarmientite
Ferricopiapite	Leightonite	Schairerite
Ferrocopiapite	Letovicite	Schroeckingerite
Ferrohexahydrate	Magnesiocopiapite	Schuetteite
Fleischerite	Manganolangbeinite	Siderotil
Galeite	Matteuccite	Slavikite
Glaucokerinite	Mercallite	Starkeyite
Goldichite	Meta-alunogen	Tatarskite
Görgeyite	Metahohmannite	Torreyite
Guildite	Metasideronatrite	Trudellite
Gunningite	Meta-uranopilite	Uklonskovite
Heidornite	Mohrite	Ungemachite
Hidalgoite	Mooreite	Wenkite
Honessite	Moorhouseite	Woodhouseite
Hydrobasaluminite	Nasledovite	Yavapaiite
Hydronium jarosite	Osarizawaite	Yoshimuraite
Innelite	Palmierite	Zincfauserite
Itoite	Parabutlerite	Zinc-melanterite
Jouravskite	Paracoquimbite	Zincobotryogen
Kalistrontite	Pentahydrate	Zincocopiapite
Koktaite		

see also Unnamed Minerals 57-62

*Sulfides (including Arsenides, Selenides, Tellurides)*

Aurostibite	Galenobornite	Käserite
Betekhtinite	Gallite	Kitkaite
Bornhardtite	Genthelvite	Klockmannite
Braggite	Getchellite	Kotulskite
Cadmoselite	Geversite	Koutekite
Castaingite	Greigite	Kullerudite
Cattierite	Gudmundite	Laitakarite
Cobalt pentlandite	Hastite	Mackinawite
Cooperite	Hawleyite	Mäkinenite
Csiklovaite	Heazlewoodite	Matraite
Dienierite	Hedleyite	Mawsonite
Digenite	Herzenbergite	Michenerite
Djurleite	Hexastannite	Molybdenite-3R
Dzhezkazganite	Hollingworthite	Moncheite
Empressite	Idaite	Montbrayite
Eskebornite	Ikunolite	Niggliite (?)
Femolite	Imgreite	Novakite
Ferroselite	Indite	Orcelite
Freboldite	Iron-alabandite	Oregonite
Frohbergite	Jalpaite	Paraguanajuatite
Froodite	Jeromite	Pararammelsbergite



Paxite	Trogtalite	Vulcanite
Penroseite	Trüstedtite	Vysotskite
Roquesite	Tungstenite	Weissite
Sederholmite	Tyrrellite	Wilkmanite
Shandite	Unnamed $\text{SnS}_2$ and $\text{Sn}_2\text{S}_3$	Wurtzite-4H, -6H, -8H,
Smythite	Vaesite	-9R, -10H, -12R, -15R,
Stibiopalladinite	Villamaninite	-21R
Stilleite	Violarite	

see also Unnamed Minerals 12-34

*Sulfosalts*

Antimonpearceite	Germanite	Parajamesonite
Aramayoite	Gerstleyite	Parkerite
Arsenosulvanite	Giessenite	Pavonite
Arsenopolybasite	Gladite	Ramdohrite
Benjaminite	Gratonite	Renierite
Bursaitite	Hammarite	Robinsonite
Cannizzarite	Hatchite	Sakharovaitite
Colusite	Lindstromite	Sinnerite
Cuprobismutite	Marrite	Sollyite
Fizelyite	Montesite	Ustarasite
Fülöppite	Owyheeite	Wittite

see also Unnamed Minerals 30-34

*Tellurites*

Blakeite	Mackayite	Spiroffite
Denningite	Moctezumite	Teineite

see also Unnamed Minerals 63-67

*Tungstates*

Anthoinite	Hydrotungstite	Sanmartinite
Ferritungstite	Russellite	Yttrotungstite

*Vanadates*

Alvanite	Kolovratite	Satpaveite
Barnesite	Melanovanadite	Schoderite
Bokite	Metarossite	Sengierite
Chervetite	Metaschoderite	Sherwoodite
Delrioite	Metatyuyamunitite	Simplotite
Fervanite	Nolanite	Sincosite
Francevillite	Pyrobelonite	Steigerite
Gamagarite	Rauvite	Tangeite
Grantsite	Rossite	Vanalite
Gutsevichite	Rusakovite	Vanuralite
Hendersonite	Santafeite	Vesigneite
Hummerite		

see also Unnamed Minerals 83, 84