

Fluorescent Minerals of Franklin and Sterling Hill, N.J.

A 2008 CHECK-LIST BASED ON OBSERVATIONS BY RICHARD C. BOSTWICK

FL = fluoresces

PH = phosphoresces;

SW = shortwave ultraviolet radiation/UVC

MW = midwave ultraviolet radiation/UVB;

LW = longwave ultraviolet radiation/UVA

These descriptions are necessarily brief. Where more than one fluorescent color is given for a mineral, the first listed is the most common. The UV wavelength or wavelengths listed for a mineral are those under which its fluorescence is brighter. ("FL red SW" means that the mineral typically fluoresces red in shortwave UV, but may fluoresce less brightly under MW and/or LW.) A fluorescence listed in parentheses is uncommon, but of interest; not all fluorescent responses can be listed here. Likewise, there is no room on these pages to list mineral descriptions and assemblages, or, with a few exceptions, details of fluorescent hue, saturation, and intensity.

CAVEAT: while mineral fluorescence can be a powerful tool for mineral identification, it should be used in conjunction with other identification techniques. Misidentifications based on fluorescence alone are common.

Albite: FL red SW

Anorthite: FL pale yellow SW; rare

Apatite-(CaF): FL bright to weak orange, "peach" SW in ore, FL blue MW in marble

Apophyllite-(KF): FL, PHwhite SW

Apophyllite-(KOH): FL, PH weak white SW; rare

Aragonite: FL, PH white/"cream" LW (FL green SW)

Axinite-(Mn): FL bright to weak red SW, faint PH

Barite: FL bright "cream" SW (FL yellow SW, MW, LW, can also PH)

Barylite: FL violet SW, best seen under iron arc; rare

Bassanite: FL, PH violet SW; rare

Bustamite: FL cherry red LW

Cahnite: FL, PH "cream" SW

Calcite: typically FL bright orange-red SW with brief red-orange PH (also FL white, "cream," yellow, orange, green, cherry red, blue, violet; can change FL with UV wavelength; often PH)

Canavesite: FL, PH violet LW; rare

Celestine: FL, PH "cream" LW (FL violet SW)

Cerussite: FL yellow LW

Chabazite: FL green SW

Charlesite: FL pale blue SW, usually coated with cream-FL gypsum

Chondrodite: FL yellow to orange-yellow to yellow-orange SW
Clinochrysoilite: FL "tan" (orange-yellow) SW
Clinohedrite: FL, PH bright orange SW
Corundum: FL cherry-red LW
Cuspidine: FL bright orange-yellow SW with brief orange-red PH; MW FL has violet tint.
Datolite: FL "cream" SW
Diopside: FL blue SW, FL pale yellow MW, LW
Dolomite: FL red SW (in "crazy calcite")
Dundasite: FL pale yellow SW, MW, LW; rare
Dyppingite: FL, PH blue SW, MW, LW
Epsomite: FL "cream" LW, violet MW
Esperite: FL bright lemon-yellow SW, weak PH
Fluoborite: FL "cream" SW
Fluorite: typically FL, PH blue-green SW, MW, LW (can FL, PH white, pale yellow, greenish-yellow, green, violet-blue, blue-violet)
Genthelvite: FL green LW, SW, MW, (rarely FL yellow to orange MW)
Guerinite: FL, PH pale yellow SW, MW, LW; rare
Gypsum: FL, PH white, pale yellow, blue SW, MW, LW
Hardystonite: FL violet to violet-blue SW, MW, LW
Hedyphane: FL "tan," "cream" SW, rarely bright orange SW
Hemimorphite: FL, PH white to pale yellow SW, MW, LW, rarely FL green, blue
Hexahydrite: FL, PH white SW, MW, LW
Hodgkinsonite: FL weak cherry-red LW, MW
Humite: FL pale yellow SW; rare
Hydrotalcite: FL "cream" LW; rare
Hydrozincite: FL bright blue SW (PH pale yellow SW; FL, PH pale yellow MW, LW)
Johnbaumite: FL bright to weak orange SW
Junitoite: FL pale yellow LW; rare
Magnesiohornblende: FL greenish-blue SW
Margarite: FL weak white("gray") SW, MW, LW
Margarosanite: FL bright blue, red SW; red, orange MW; weak red, orange LW
Marialite: FL orange SW, pink LW; rare
McAllisterite: FL "cream" SW
Meionite: FL pinkish red, orange-yellow SW, MW; FL orange-yellow LW
Meta-ankoleite: FL green SW; rare
Metalodèveite: FL green SW, rare
Microcline: FL blue, weak red SW
Minehillite: FL fairly bright violet-blue MW, violet SW, weak pale yellow LW
Monohydrocalcite: FL green SW, PH white
Nasonite: FL pale yellow SW, MW
Newberyite: FL "cream" SW, rare
Norbergite: FL bright to weak yellow SW, less bright MW
Pargasite: FL greenish-blue SW
Pectolite: FL, PH orange SW, less bright MW
Pharmacolite: FL, PH white SW, MW, LW; rare
Phlogopite: FL yellow SW

Picropharmacolite: FL, PH white LW
Powellite: FL yellow SW, MW
Prehnite: FL variable orangeish pink SW
Quartz: FL yellow, pale orange SW, MW; FL green SW
Roebingite: FL red SW with brief red-orange PH
Samfowlerite: FL weak red SW; rare
Scheelite: FL orange-yellow, pale yellow SW, MW, (blue SW)
Smithsonite: FL, PH pale yellow SW, MW, LW; rare
Sphalerite: FL, PH orange, blue, orange-yellow, yellow-orange, green LW, MW, SW
Spinel: FL cherry red LW
Starkeyite: FL, PH white SW, MW, LW
Strontianite: FL violet SW; rare
Talc: FL yellow SW, MW, LW
Thomsonite: FL pale yellow SW; rare
Tilasite: FL yellow SW; rare
Titanite: FL yellow-orange SW
Tremolite: FL blue SW (yellow LW)
Turneaureite: FL bright orange SW
Uranospinite: FL green SW; rare
Uvite: FL orange-yellow SW
Willemite: typically FL bright yellowish green SW, with occasional vivid PH; also can FL green MW, LW. More rarely FL, PH yellow, greenish yellow, orange-yellow, and (!) pale blue.
Wollastonite: FL bright to moderate orange, yellow-orange, orange-yellow, yellow, best under SW; PH is often "redder" than FL
Xonotlite: FL, PH violet SW, MW, LW
Zincite: FL yellow LW, MW, SW
Zircon: FL orange SW, MW
Znucalite: FL green SW, MW