

Supplementary Read-Me File: Instructions for Supplementary Table 3

An evolutionary system of mineralogy, Part VIII: The evolution of the metamorphic minerals

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Supplementary Table 3 is an xlsx file that tabulates the occurrences of 94 of the most common metamorphic minerals (Columns F to CU), as recorded in modal information for 2785 varied metamorphic rocks (Rows 3 to 2787) from several references (see below).

Column A, Rows 3 to 2787 provides the source of information for each rock, as follows:

“Augustithus, 1-4” indicates Figures 1 to 4 on pages 149-150 in Augustithus (1985). [156 rocks]

“Botha, 103” indicates page 103 of Botha (1983). [95 rocks]

“C&C, 152” indicates page 152 of Carswell and Compagnoni (2003). [49 rocks]

“Carswell 178” indicates page 178 of Carswell (1990). [198 rocks]

“Coleman-Table 1” indicates Table 1 in Coleman et al. (1965). [13 rocks]

“Grapes, 118” indicates page 118 of Grapes (2006). [218 rocks]

“H-Meta, 110A” indicates Figure 43A on page 110 of Harker (1950). [285 rocks]

“Harker, 255A” indicates Figure 124A on page 255 of Tilley et al. (1964). [50 rocks]

“Harley-2021-530” indicates page 530 of Harley (2021). [121 rocks]

“Joplin, 64-2” indicates the second mode listed on page 64 of Joplin (1968). [345 rocks]

“P&A, 421A” indicates Figure 16.7A on page 421 of Philpotts and Ague (2009). [71 rocks]

“R&S, 100” indicates page 100 of Reverdatto and Sobolev (1973). [885 rocks]

In addition, 299 rocks were extracted from contributions by Ferry and colleagues (Davis and Ferry 1983; Ferry 1976, 1984, 1988, 1989, 1992, 1994, 1995, 1996, 2007; Ferry and Rumble 1997; Ferry et al. 1987, 2001, 2002, 2005; Léger and Ferry 1993; Penniston-Dorland and Ferry 2006).

Column B indicates the given name and locality of the metamorphic rock.

Column C indicates the facies of the metamorphic rock, with abbreviations, as follows: AEhn = albite-epidote hornfels; Amph = amphibolite facies; Blue = blueschist facies; Eclo = eclogite facies; Gran = granulite facies; Gree = greenschist facies; HbHn = hornblende hornfels; MuHn = muscovite hornfels; PP = prehnite-pumpellyite facies; PyHn = pyroxene hornfels; San = sanidinite facies; UHP = ultra-high-pressure facies; Zeol = zeolite facies.

Column D assigns a code to each rock type, most of which are based on paragenetic modes in Hazen and Morrison (2022). Abbreviations indicate: BAM = metamorphosed barium/manganese deposit; CON = contact metamorphism; HPM = high-pressure metamorphism; MET = metasomatized; OPH = ophiolite; REG = regional metamorphism; SHE = shear zone metamorphism; XEN = pyrometamorphosed xenolith. See text for more details.

Column E indicates the presumed protolith of the metamorphic rock, as follows: ACI = acidic volcanics; AGP = agpaitic rocks; ALM = almandine; BAU = bauxite; BFE = banded iron formation; BIO = biotite; CAR = carbonate; CHL = chlorite; CHR = chromitite; CHT = chert; COR = cordierite; CSI = calc-silicate; FEB = iron-manganese-barium deposit; FEM = iron-manganese deposit; FET = iron-titanium deposit; GRE = pyrometamorphism of greenschist facies protolith; HNB = hornblende; INT = intermediate igneous; LAT = laterite; MAF = mafic igneous rock; MUS = muscovite; PEL = pelite; REG = pyrometamorphism of regional metamorphic protolith; SST = sandstone; STA = staurolite; SUB = subsilicic igneous rock (e.g., nepheline syenite); UMA = ultramafic igneous rock; ZEO = pyrometamorphism of zeolite facies protolith.

Columns F to CU denote 94 of the most common metamorphic mineral kinds, arranged alphabetically.

Row 1 indicates the names of the mineral kinds in Columns F to CU.

Row 2 indicates the total number of occurrences of the minerals in Columns F to CU.

Rows 3 to 2787 record whether a mineral in Columns F to CU is present in the corresponding rock. A blank indicates that the mineral was not recorded in that rock.

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