68-97

Table 1.--Modified Prior-Mason classification of the meteorites[1/]

GROUP	Class	Number in each class[2/] Fall	Find	Characteristic minerals, phases and compounds. (Ni-Fe, weight percent)[3/]
CHONDRITE	Carbonaceous	15	-	Serpentine and unresolved layer lattice silicates, water, olivine, pyroxene, pentlandite, carbon; minor nickel-iron (~0.15).
	Olivine-pigeonite[4/]	13	-	Olivine, pigeonite, nickel-iron (3.5); minor carbon and water.
	Olivine-hypersthene	315	185	Olivine, hypersthene, nickel-iron (7.4).
	Olivine-bronzite	226	183	Olivine, bronzite, nickel-iron (18.6).
	Enstatite	11	6	Enstatite, nickel-iron (21.6); minor carbon, water, and Mg-, Ca-, Ti-, Cr-bearing sulfides.
	Unclassified	42[5/]	14	
		622	388	
ACHONDRITE	Calcium-poor			
	Carbonaceous	5	-	"Bituminous clay", chlorite, water, carbon, magnesium sulfates, magnetite; minor troilite and nickel-iron.
	Chassignite	1	-	Olivine containing "nascent chondrules"[6/] nickel-iron, plagioclase, chromite.
	Ureilite	2	3	Olivine, pigeonite, nickel-iron; minor water, carbon, diamond.
	Diogenite	8	1[7/]	Hypersthene, minor nickel-iron.
	(No formal name)[8/]	(1)	-	Olivine, pyroxene of bronzite composition.
	Aubrite	8	1	Enstatite, minor nickel-iron, carbon and water.
		24	5	
	Calcium-rich			
	Nakhlite	1	1(?)[9/]	Diopside, olivine, oligoclase
	Angrite	1	-	Augite
		2	1	
	Pyroxene-plagioclase			
	Howardite	13	2	Hypersthene, pigeonite, bytownite, anorthite; minor nickel-iron, olivine.
	Eucrite	25	3	Pigeonite, hypersthene, bytownite, anorthite, labradorite; minor nickel-iron, quartz, tridymite or cristobalite
		38	5	
UNCLASSIFIED STONES[10/]		39	15	
STONY-IRON (Approximately equal silicates and metal)	Pallasitic stony-iron			
	Siderophyre	-	1	Orthopyroxene, nickel-iron
	Lodranite	1	-	Orthopyroxene, olivine, nickel-iron.
	Pallasite	4	39	Olivine, nickel-iron.
		5	40	
	Mesosideritic stony-iron			
	Calcium-poor mesosiderite	1	5	Calcium-poor silicate, nickel-iron; minor tridymite.
	Calcium-rich mesosiderite	6	12	Pyroxene, plagioclase, nickel-iron; locally olivine-bearing; minor tridymite.
	Unclassified	-	1	
		7	18	
IRON (Predominantly metal)	Hexahedrite	7	48[11/]	Kamacite
	Octahedrite	32	436	Kamacite, taenite
	Ni-rich ataxite	1	41	Taenite
	Unclassified	3	30	
		43	555	
	TOTAL	780	1027 = 1807	

1/. Adapted from Mason (1962a, table 2 and 1967a, table 3).
2/. From Hey (1966); doubtful falls and finds are not included. Includes two ureilite finds reported by McCall and Cleverly (1967).
3/. From summary table of chemical compositions of meteorites, this paper.
4/. See table in this paper for list of meteorite names.
5/. Includes one carbonaceous meteorite.
6/. Shaw meteorite, an achondritic amphoterite which appears to be a recrystallized hypersthene chondrite that has lost much of its original metal (Fredriksson and Mason, 1967).
7/. Jérémine and others (1962).
8/. Class may be represented by fragments in Breitscheid bronzite polymict(?) breccia described by Wlotzka (1963).
9/. Lafayette, known in Purdue University Museum before 1931 (Hey, 1966), may be a specimen of the Nakhla, Egypt, fall of 1911 (Carleton B. Moore, personal communication, 1967).
10/. Probably mostly chondrites.
11/. Includes Ni-poor ataxites.