Appendix A

Wavenumbers in Raman Spectroscopy

Table A.1: Wavenumbers in Raman spectroscopy of calcareous deposits

Name	Formula	Raman Wavenumbers (cm^{-1})	Reference
Calcite	$CaCO_3$	284, 712, 1086, 1434	[1]
		151, 701, 853, 1085, 1460	[1]
Aragonite	$CaCO_3$	206, 704, 910, 1570	[1]
		267, 668, 874, 1074, 1445	[1]
Vaterite	$CaCO_3$	300, 682, 1090, 1485	[1]
		220, 694, 873, 1066, 1403	[2]
Hydrocalcite	$CaCO_3 \cdot H_2O$	719, 1480	[2]
Ikaite	$CaCO_3 \cdot 6H_2O$	718, 1070, 1410	[2]
Brucite	$Mg(OH)_2$	280, 444, 3654	[3]

Table A.2: Wavenumbers in Raman spectroscopy of the possible aluminium corrosion products

Name	Formula	Raman Wavenumbers (cm^{-1})	Reference
Gibbsite	γ-Al$(OH)_3$	412, 428, 444, 816, 844, 892, 1018, 1051, 3617	[4]
		306, 322, 371, 380, 396, 710, 751, 788, 924, 979, 3522	[4]
		242, 255, 264, 290, 602, 617, 3433	[4]
		506, 538, 569, 3364	[4]
		242, 255, 322, 380, 538, 569, 979	[5]
		117, 243, 321, 383, 545, 568, 896, 980	[5]
Bayerite	α-Al$(OH)_3$	435, 446, 484, 818, 866, 899, 1005, 1068, 1080, 3652, 3664	[4]
		322, 358, 388, 716, 771, 977, 3542, 3552	[4]
		205, 237, 250, 282, 296, 525, 545, 569, 3420, 3483, 3450	[4]
Diaspore	α-AlO(OH)	436, 446, 466, 495, 812, 837, 1186, 3445	[4]
		329, 364, 381, 394, 705, 790, 1018, 1045, 1067, 3363	[4]
		207, 216, 260, 287, 609, 664, 918, 956, 3226	[4]
		552, 580, 3119	[4]
		159, 337, 452, 501, 558, 667, 793, 1050, 1190	[5]
		331, 448	[5]
Boehmite	γ-AlO(OH)	451, 495, 732, 1072, 3371	[4]
		360, 674, 3220	[4]
		228, 3085	[4]
Aluminite	$Al_2SO_4(OH)_4{\cdot}7H_2O$	440, 494, 575, 607, 631, 642, 680, 993, 1069, 1094, 1136, 1442 -1470	[6]
Alunogen	$Al_2(SO_4)_3{\cdot}17H_2O$	138, 155, 180, 310, 338, 415, 445, 470, 528, 614, 992, 1066, 1089, 1124, 1132	[7]
Aluminium sulphate	$Al_2(SO_4)_3{\cdot}18H_2O$	617, 972, 988, 1127	[5]
Dawsonite	$NaAlCO_3(OH)_2$	152, 191, 389, 519, 590, 824, 897, 1091, 1506, 3252, 3283	[5]
		151, 189, 218, 260, 360, 386, 517, 588, 729, 746, 822, 897, 934, 1066, 1090, 1483, 1505, 1690, 3250, 3282, 3466	[8]
Hydrotalcite	$Mg_6Al_2CO_3(OH)_{16}{\cdot}4H_2O$	463–483, 547–562, 680, 698, 717, 1040, 1047–1050, 1062, 1068, 1305, 1400-1480	[9]
Hydromagnesite	$Mg_5(CO_3)_4(OH)_2{\cdot}4H_2O$	184, 202, 232, 1119, 1487	[5]

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