

APPENDIX A

HANAWALT INDEX FOR POWDER DIFFRACTION DATA

2.64-2.60

2.64x	1.52 ₁	1.00 ₁	0.79 ₁	1.86 ₁	0.88 ₁	1.18 ₁	0.83 ₁	(CdY) ₂ C	18- 270
2.63x	1.52 ₁	1.86 ₁	0.99 ₁	1.17 ₁	0.88 ₁	1.31 ₁	0.79 ₁	(NdAg) ₂ C	18- 861
o 2.61x	1.52 ₁	1.66 ₁	1.00 ₁	3.67 ₁	2.13 ₁	1.85 ₁	1.31 ₁	SmAlO ₃	17- 492
2.62x	1.51 ₁	3.70 ₁	1.85 ₁	0.99 ₁	1.17 ₁	0.87 ₁	1.31 ₁	(CeZn) ₂ C	18- 324
2.60x	1.51 ₁	10.00 ₁	5.01 ₁	4.52 ₁	3.61 ₁	3.11 ₁	2.40 ₁	KLiMg ₂ Si ₃ O ₁₀ F ₂	12- 236
2.59x	1.61 ₁	2.49 ₁	1.65 ₁	5.01 ₁	3.03 ₁	2.17 ₁	1.76 ₁	Zn ₂ SnO ₄	14- 381
2.62x	1.51 ₁	1.00 ₁	1.85 ₁	3.71 ₁	1.80 ₁	1.17 ₁	1.03 ₁	DyAlO ₃	13- 255
2.63x	1.51 ₁	0.87 ₁	1.17 ₁	0.99 ₁	0.83 ₁	1.85 ₁	1.31 ₁	CeZn	2- 974
2.60x	1.51 ₁	2.22x	1.42 ₁	1.30 ₁	0.96 ₁	1.17 ₁	0.99 ₁	(HfV) ₂ 24F	15- 190
* 2.60x	1.51 ₁	2.04 ₁	1.63 ₁	1.21 ₁	1.11 ₁	0.94 ₁	1.38 ₁	(AlB) ₂ 3H	9- 154
2.61x	1.50 ₁	3.68 ₁	0.98 ₁	1.16 ₁	1.84 ₁	1.30 ₁	1.64 ₁	(MgY) ₂ C	18- 833
2.60x	1.50 ₁	3.68 ₁	1.84 ₁	0.98 ₁	1.16 ₁	0.87 ₁	1.30 ₁	(PrZn) ₂ C	18-1081
2.60x	1.50 ₁	1.84 ₁	0.98 ₁	1.16 ₁	0.87 ₁	1.30 ₁	0.82 ₁	(SmAg) ₂ C	2- 994
2.61x	1.50 ₁	1.30 ₁	1.16 ₁	1.84 ₁	1.06 ₁	0.92 ₁	0.89 ₁	PrZn	2- 717
2.61x	1.50 ₁	4.23 ₁	1.69 ₁	2.13 ₁	1.30 ₁	1.42 ₁	1.24 ₁	NaAlSiO ₄ (at 750 deg C)	2- 259
2.61x	1.50 ₁	4.23x	2.11 ₁	1.68 ₁	1.83 ₁	1.41 ₁	2.21 ₁	NaAlSiO ₄	11- 221
2.59x	1.49 ₁	0.98 ₁	4.22 ₁	2.20 ₁	1.16 ₁	1.83 ₁	1.68 ₁	InNa	4- 741
2.59x	1.48 ₁	0.97 ₁	3.65 ₁	1.63 ₁	1.15 ₁	0.88 ₁	0.86 ₁	MgTi	3- 846
2.63x	1.48 ₁	1.43 ₁	2.17 ₁	3.10 ₁	2.85 ₁	1.68 ₁	2.48 ₁	Al ₂ Fe ₂ O ₄	11- 562
2.59x	1.44 ₁	2.32x	1.30 ₁	1.83 ₁	0.96 ₁	0.92 ₁	0.85 ₁	(YAu) ₂ 6U	18- 578
o 2.60x	1.44 ₁	2.28 ₁	1.38 ₁	2.45 ₁	2.08 ₁	1.67 ₁	1.49 ₁	(Zr _{0.9} Y _{0.1} Sn _{0.9} Fe _{0.1}) ₂ O ₈	17- 905
2.62x	1.42 ₁	2.23x	1.31 ₁	1.51 ₁	2.13 ₁	0.96 ₁	4.25 ₁	(GdFe) ₂ 24F	15- 424
2.62x	1.42 ₁	2.73x	1.30 ₁	1.68 ₁	2.13 ₁	1.90 ₁	3.01 ₁	(CeCuAl ₃) ₁₀ U	18- 9
2.62x	1.41 ₁	2.37x	1.76 ₁	1.07 ₁	1.01 ₁	1.95 ₁	1.19 ₁	(AuTh) ₂ 3H	13- 517
2.61x	1.40 ₁	1.63 ₁	1.65 ₁	2.73 ₁	2.53 ₁	1.96 ₁	2.86 ₁	(ZrTh) ₂ O (22 at pc Th)	18-1374
2.62x	1.40x	2.13 ₁	1.12 ₁	1.03 ₁	1.65 ₁	1.23 ₁	1.17 ₁	K ₂ BaFe(NO ₂) ₂	2-1423
2.61x	1.39x	3.21 ₁	2.16 ₁	2.13 ₁	1.64 ₁	1.02 ₁	0.87 ₁	6-Ta ₂ B ₄ (57 at. pc B)	5- 744
* 2.62x	1.38 ₁	1.63 ₁	2.46 ₁	2.10 ₁	2.00 ₁	1.57 ₁	1.30 ₁	CaAl ₂ O ₇ 5F ₂	6- 717
2.65x	1.38 ₁	2.21x	1.08 ₁	2.11 ₁	1.63 ₁	1.56 ₁	2.24 ₁	(RbNd) ₂ 2U	8- 433
2.62x	1.32x	1.18 ₁	1.87 ₁	1.31 ₁	1.16 ₁	3.75 ₁	1.40 ₁	(Ba ₂ YHf ₂)H	16- 186
* 2.63x	1.32 ₁	1.19 ₁	3.44 ₁	1.64 ₁	2.05 ₁	1.62 ₁	1.38 ₁	CrBO ₃	17- 553
2.64x	1.32 ₁	1.19 ₁	3.45 ₁	2.06 ₁	1.65 ₁	1.63 ₁	1.91 ₁	VBO ₃	17- 311
2.60x	1.30 ₁	2.07x	1.68 ₁	1.17 ₁	2.91 ₁	1.63 ₁	1.47 ₁	((Ti _{0.9} Cr _{0.1}) ₂) ₂ 4H	18- 398
2.59x	1.29 ₁	1.19 ₁	1.49 ₁	1.22 ₁	1.64 ₁	1.83 ₁	2.99 ₁	(Mg ₂ Pr) ₂ 26U	17- 400
2.59x	1.29 ₁	1.22 ₁	3.64 ₁	1.84 ₁	1.18 ₁	3.00 ₁	1.63 ₁	(Mg ₂ Ce) ₂ 38H	17- 400
2.59x	1.29 ₁	1.16 ₁	1.17 ₁	1.21 ₁	3.64 ₁	1.82 ₁	1.18 ₁	(Mg ₂ La) ₂ 38H	18-1470
2.63x	1.23 ₁	1.97 ₁	1.28 ₁	1.58 ₁	1.32 ₁	2.07 ₁	3.40 ₁	(Y ₂ Ge ₂)H	14- 289
2.64x	1.23x	1.37 ₁	1.54 ₁	1.21 ₁	1.43 ₁	1.34 ₁	2.14 ₁	(AlHf) ₂ 12U	18- 484
2.60x	1.21 ₁	1.94 ₁	1.41 ₁	3.37 ₁	1.56 ₁	1.26 ₁	2.04 ₁	(ErGe) ₂ 35H	18- 239
2.59x	1.21x	2.24 ₁	1.38 ₁	1.22 ₁	1.56 ₁	1.47 ₁	2.55 ₁	(Zr(Sn _{0.9} Y _{0.1} Sb _{0.9} Ge _{0.1}) ₂) ₂ 9H	18- 138
2.65x	1.21 ₁	1.19 ₁	1.18 ₁	1.17 ₁	2.56 ₁	1.39 ₁	3.02 ₁	(Ce ₂ Ge ₂)16H	18- 208
2.59x	1.21x	3.88 ₁	1.65 ₁	1.40 ₁	1.16 ₁	2.70 ₁	2.09 ₁	(Ce ₂ Be ₂ Al ₂) ₂ 10U	18- 2
* 2.63x	1.18 ₁	1.52 ₁	1.38 ₁	3.71 ₁	1.86 ₁	1.67 ₁	2.16 ₁	GdAlO ₃ 2U	9- 85
2.63x	1.18 ₁	1.19 ₁	1.16 ₁	1.23 ₁	1.67 ₁	1.52 ₁	1.50 ₁	(Sr ₂ Mg ₁₇) ₂ 8H	18-1275
2.64x	1.17 ₁	1.14 ₁	1.79x	1.60 ₁	1.45x	1.40x	2.89 ₁	CoSb ₂	4- 890
2.63x	1.15x	2.94 ₁	2.89 ₁	2.87 ₁	1.75 ₁	1.73 ₁	1.21 ₁	PdS	3-1098
2.61x	1.07 ₁	1.85x	0.83 ₁	1.17 ₁	0.87 ₁	1.51 ₁	1.30 ₁	BeNi (14.5 wt. pc Be)	2-1419
2.63x	1.03 ₁	1.41x	2.34 ₁	2.14 ₁	1.12 ₁	1.85 ₁	1.66 ₁	(NH ₄) ₂ BaFe(NO ₂) ₂	9- 94
2.59x	0.96 ₁	1.97x	2.55 ₁	1.05 ₁	1.00 ₁	0.93 ₁	2.06 ₁	(CoAs) ₂ 8D	1- 93
2.63x	0.88x	2.15 ₁	1.86 ₁	1.67 ₁	1.52 ₁	3.72 ₁	1.18 ₁	(SmAl) ₂ C	4- 738
2.61x	0.79x	1.55 ₁	1.02 ₁	0.90 ₁	0.88 ₁	0.82 ₁	2.11 ₁	MnSn ₂	

2.59-2.55

2.56x	15.70x	4.58x	1.53x	1.63x	2.95x	2.44x	1.73x	6MgO.2/3Al ₂ O ₃ .7SiO ₂ .2H ₂ O	10- 426
2.54x	14.00x	7.08x	3.55x	1.54x	2.44x	4.73x	4.59x	Mg-Fe-Al-Si-Al-O-OH	7- 165
* 2.55x	12.30x	4.16x	2.69x	3.12x	1.57x	6.26x	2.35x	(FeMg)(FeAl)(SiAl) ₂ O(OH) ₂	18- 634
2.56x	11.90x	4.45x	1.49x	2.97x	1.69x	1.29x	1.24x	AlSi ₃ O ₈ (OH) ₂	2- 37
2.60x	10.50x	3.32x	3.47x	2.87x	5.64x	5.12x	2.40x	SrBaO ₂ .2H ₂ O	12- 312
2.59x	10.40x	3.31x	5.64x	3.46x	3.38x	2.85x	5.10x	SrBaO ₂ .2H ₂ O	12- 712
* 2.56x	10.00x	3.35x	2.01x	4.46x	5.02x	4.48x	2.59x	KAl ₂ Si ₂ AlO ₁₀ (OH) ₂	7- 32
2.58x	10.00x	3.32x	4.98x	4.47x	3.85x	3.59x	3.10x	K(Li,Al) ₂ (Al,Si) ₃ O ₁₀ (F,OH) ₂	10- 484
2.56x	9.98x	4.48x	3.31x	1.50x	3.62x	3.07x	2.14x	(Ba,K)Al ₂ (Si ₃ AlO ₁₀)(OH) ₂	10- 490
2.58x	9.90x	3.30x	3.62x	3.09x	2.40x	1.98x	4.51x	K-Al-Fe-Li-Si-Al-O-F-OH	14- 565
o 2.54x	9.69x	5.56x	3.85x	3.44x	4.94x	2.88x	2.74x	Calcium Silicoaluminate	14- 81
2.54x	7.97x	3.42x	1.82x	2.37x	1.52x	2.06x	1.89x	VOCl ₃	17- 110
* 2.60x	7.92x	3.13x	7.24x	3.77x	3.22x	2.89x	2.86x	Ta ₂ I ₄	18-1299
2.60x	7.80x	3.91x	2.32x	1.97x	1.54x	1.51x	4.30x	Mg ₂ Cr ₂ CO ₃ (OH) ₂ .4H ₂ O	14- 330
* 2.56x	7.70x	3.85x	2.31x	2.03x	1.53x	1.50x	2.63x	4Ni(OH) ₂ -NiOOH	6- 44
2.58x	7.69x	3.88x	2.30x	1.96x	1.53x	1.50x	1.85x	Mg ₂ Al ₂ CO ₃ (OH) ₂ .4H ₂ O	14- 191
2.60x	7.67x	3.84x	2.34x	2.17x	2.00x	2.49x	1.52x	Mg ₂ CO ₃ (OH) ₂ .4H ₂ O	14- 525
* 2.54x	7.62x	3.02x	1.94x	2.37x	2.88x	3.36x	2.96x	Ca ₂ Pb ₂ (ZnSiO ₄) ₂	16- 373
2.55x	7.57x	3.77x	1.92x	2.26x	1.51x	1.48x	1.71x	Ni ₂ Al ₂ O ₇ (OH) ₂ .6H ₂ O	15- 87
o 2.55x	7.55x	2.89x	2.47x	2.30x	2.24x	1.84x	1.81x	TaBr ₂ 5	18-1291
2.60x	7.50x	2.67x	6.00x	5.30x	5.00x	3.47x	3.25x	Zn(H ₂ PO ₄) ₂ .H ₂ O	1- 93
2.57x	7.50x	2.74x	3.65x	1.58x	4.19x	3.30x	2.20x	Si ₂ N ₂ .CrO ₃ .4H ₂ O	11- 277
2.54x	7.49x	3.68x	4.62x	1.56x	2.69x	0.00x	0.00x	Ni ₂ Ge ₂ O ₇ (OH) ₂	11- 97
* 2.60x	7.28x	2.12x	4.06x	4.89x	2.71x	2.44x	1.70x	CuSiO ₃ .H ₂ O	7- 172
2.56x	7.26x	2.87x	2.38x	1.50x	2.98x	3.08x	2.21x	Ca ₂ (VO ₄) ₂ .3H ₂ O	12- 523
2.56x	7.17x	3.60x	2.86x	1.68x	2.12x	2.41x	1.73x	(Mn,Fe) ₂ (Si ₂ O ₇) ₂ (OH,Cl) ₂	12- 550
2.55x	7.15x	1.54x	14.10x	2.45x	3.58x	4.77x	4.59x	(MgFeAl)(SiCrAl) ₂ O(OH) ₂	7- 160
2.57x	7.12x	3.56x	1.59x	2.18x	1.55x	2.85x	2.74x	Fe ₂ Si ₂ O ₇ (OH) ₂	2- 1012
2.54x	7.11x	14.10x	1.54x	4.75x	3.56x	2.44x	4.58x	Mg-Fe-Al-Si-Al-O-OH	7- 77
2.54x	7.10x	3.59x	1.80x	1.98x	2.36x	2.66x	2.17x	Cu-Al-Cl-SO-OH.H ₂ O	5- 142
2.54x	7.10x	3.28x	2.74x	2.69x	2.62x	2.30x	2.95x	MgCuCrF ₆ (OH) ₂	6- 151
2.54x	6.66x	3.64x	7.00x	4.16x	1.06x	1.61x	0.83x	KCl	13- 559
* 2.60x	6.51x	3.41x	2.03x	2.01x	1.81x	1.59x	1.49x	γ-SCOOH	17- 941

APPENDIX B

INDEX TO PUBLISHED INFRARED SPECTRAL DATA

C	H	Br	Cl	F	I	N	O	S	SI	COMPOUND NAME	NUMBER
7	11		1				3			ACRYLIC ACID, 2-/2-CHLOROETHOXY/- ETHYL ESTER	14042CA
5	7					1	3			ACRYLIC ACID, 2-ACETAMIDO-	19465CA
12	12						3			ACRYLIC ACID, 2-BENZOYL-, ETHYL EST	15282CA
5	7	1					2			ACRYLIC ACID, 2-BROMO-, ETHYL ESTER	14572CA
4	5	1					2			ACRYLIC ACID, 2-BROMO-, METHYL ESTER	14573CA
3	2	1	1				2			ACRYLIC ACID, 2-BROMO-3-CHLORO-	26554CA
5	7	1					2			ACRYLIC ACID, 2-BROMOETHYL ESTER	14037CA
9	16						3			ACRYLIC ACID, 2-BUTOXYETHYL ESTER	14039CA
5	7		1				2			ACRYLIC ACID, 2-CHLORO-, ETHYL ESTER	14574CA
6	9		1				2			ACRYLIC ACID, 2-CHLORO-, ISOPROPYL ESTER	15365CA
5	7		1				2			ACRYLIC ACID, 2-CHLOROETHYL ESTER	14043CA
5	5					1	2			ACRYLIC ACID, 2-CYANO-, METHYL ESTER	1520GA
12	13					3	2			ACRYLIC ACID, 2-CYANO-3-//3-METHYL- 2-PYRIDYL/AMINO/-, ETHYL ESTER	14248CA
8	11					1	3			ACRYLIC ACID, 2-CYANO-3-ETHOXY-, ETHYL ESTER	6266CA
18	15					1	2			ACRYLIC ACID, 2-CYANO-3,3-DIPHENYL- ETHYL ESTER	1517GA
6	7					1	2			ACRYLIC ACID, 2-CYANOETHYL ESTER	14521CA
7	13					1	2			ACRYLIC ACID, 2-DIMETHYL AMINO- ETHYL ESTER	1846GA
7	13					1	2			ACRYLIC ACID, 2-DIMETHYLAMINO- ETHYL ESTER	14565CA
7	12						3			ACRYLIC ACID, 2-ETHOXY-, ETHYL ESTER	26736CA
7	12						3			ACRYLIC ACID, 2-ETHOXYETHYL ESTER	14567CA
9	16						2			ACRYLIC ACID, 2-ETHYLBUTYL ESTER	11014CA
11	20						2			ACRYLIC ACID, 2-ETHYLHEXYL ESTER	2248GA
11	20						2			ACRYLIC ACID, 2-ETHYLHEXYL ESTER	4695CA
7	12						2			ACRYLIC ACID, 2-ISOPROPYL-, METHYL TER	3160JA
6	10						3			ACRYLIC ACID, 2-METHOXY ETHYL ESTER	D 1702CA
6	10						3			ACRYLIC ACID, 2-METHOXYETHYL ESTER	14571CA
7	10						2			ACRYLIC ACID, 2-METHYL- ALLYL ESTER	11403CA
11	12						2			ACRYLIC ACID, 2-METHYL-, BENZYL ESTER	4353JA
8	8						2	1		ACRYLIC ACID, 2-METHYL-3-/2-THIEN- YL/-	3468JA
11	12						3			ACRYLIC ACID, 2-PHENOXYETHYL ESTER	15097CA
11	12						3			ACRYLIC ACID, 2-PHENOXYETHYL ESTER	15097CG
5	5			3			2			ACRYLIC ACID, 2,2,2-TRIFLUOROETHYL ESTER	15100CA
9	16						2	2		ACRYLIC ACID, 2,3-BIS/ETHYPTHD/-, ETHYL ESTER	28640CA
3	2	2					2			ACRYLIC ACID, 2,3-DIBROMO-	26556CA
4	4	2					2			ACRYLIC ACID, 2,3-DIBROMO-, METHYL ESTER	28756CA
3	2		2				2			ACRYLIC ACID, 2,3-DICHLORO-	26553CA
9	16						4			ACRYLIC ACID, 2,3-DIETHOXY-, ETHYL ESTER	28637CA
7	12						4			ACRYLIC ACID, 2,3-DIMETHOXY-, ETHYL ESTER	28639CA
15	12						2			ACRYLIC ACID, 2,3-DIPHENYL-	12487CA
6	8						3			ACRYLIC ACID, 2,3-EPOXYPROPYL ESTER	11402CA
13	12		3			1	2			ACRYLIC ACID, 2,3,3-TRICHLORO-, DIETHYLAMINE SALT	22672CA
21	14		2				2			ACRYLIC ACID, 2,4-DICHLOROPHENYL ESTER, 3,3-DIPHENYL-,	11112CA
23	18		2				2			ACRYLIC ACID, 2,4-DICHLOROPHENYL- ESTER, 3,3-DI-P-TOLYL-,	11119CA

APPENDIX C

INDEX FOR GAS CHROMATOGRAPHIC DATA

GAS CHROMATOGRAPHIC DATA TABULATED ON BASIS OF LIQUID PHASE

LP	SS	REF	REL-RET	T	A	TENNESSEE FASTMAN-ASTM SYSTEM		COMPOUND NAME	SER NO
						I	GLP		
539	80	11	1.25	110	1132.	17.6		ANISOLE	1957005
539	80	11	1.29	110	1137.	17.6		O-CHLOROTOLUENE	1898005
539	80	11	1.29	110	1138.	17.6		BENZENE, 1,3,5-TRIMETHYL-	2839005
539	80	11	1.31	110	1139.	17.6		BENZENE, BROMO-	1277005
539	80	11	1.34	110	1142.	17.6		BENZENE, 1-METHYL-2-ETHYL-	2841005
539	80	12	.72	110	1152.	17.6		M-CHLOROTOLUENE	1899005
539	80	12	.74	110	1155.	17.6		P-CHLOROTOLUENE	1898025
539	80	12	.76	110	1160.	17.6		BENZENE, 1,2,4-TRIMETHYL-	2838005
539	80	12	.99	110	1198.	17.6		BENZENE, N-BUTYL	3197005
539	80	12	1.09	110	1212.	17.6		BENZENE, 1,2,3-TRIMETHYL	2837005
539	80	12	1.10	110	1214.	17.6		BENZENE, M-DICHLORO-	1246505
539	80	12	1.19	110	1225.	17.6		BENZENE, 1,4-DICHLORO-	1247005
539	80	13	.78	110	R 1280.	17.6		BENZENE, 1,2-DICHLORO-	1246005
539	80	13	.98	110	R 1282.	17.6		BENZENE, 1000-	1303005
539	80	13	1.19	110	R 1326.	17.6		BENZENE, M-BROMOCHLORO-	1220005
539	80	13	1.27	110	R 1335.	17.6		BENZENE, P-BROMOCHLORO-	1219505
539	80	14	.81	110	R 1370.	17.6		BENZENE, O-BROMOCHLORO-	1219005
539	80	15	.78	110	R 1464.	17.6		BENZENE, P-DIBROMO-	1230005
539	1	V	31.000	111		25.		BENZENE	1322005
540								1-CHLORONAPHTHALENE	
540	1	5	.67	20	466.			BUTANE, 2-METHYL-	1118005
540	1	5	1.23	20	517.			BUTANE, 2,2-DIMETHYL-	1672005
540	1	6	.56	20	552.			BUTANE, 2,3-DIMETHYL-	1673005
540	1	6	.64	20	563.			PENTANE, 2-METHYL-	1670005
540	1	6	.74	20	575.			PENTANE, 3-METHYL-	1671005
540	1	6	.79	20	580.			CYCLOPENTANE	1012005
540	1	6	1.00	20	600.	42.67		N-HEXANE	1669005
540	1	6	1.08	20	606.			1-HEXENE	1545005
540	1	6	1.14	20	611.			PENTANE, 2,2-DIMETHYL-	2175005
540	1	6	1.22	20	617.			BUTANE, 2,2,3-TRIMETHYL-	2179005
540	1	7	.61	20	659.			CYCLOHEXANE	1562005
540	1	7	.62	20	660.			HEXANE, 2-METHYL-	2172005
540	1	7	.62	20	660.			PENTANE, 2,3-DIMETHYL-	2176005
540	1	7	.69	20	669.			PENTANE, 2,2,4-TRIMETHYL-	2677005
540	1	7	1.09	20	707.			1-HEPTYNE	2076005
540	1	7	1.25	20	719.			CYCLOHEXANE, METHYL-	2099005
540	1	7	1.76	20	719.			BENZENE	1322005
553								POTASSIUM OLEATE	
553	1	126	1.010	80				P-CYME	3205005
553	1	126	1.220	80				TERPINENE, GAMMA-	3282505
553	1	126	.400	80				TRICYCLENE	3286005
553	1	126	.440	80				PINENE	3295005
553	1	126	1.490	80				TERPINOLENE	3283005
553	1	126	1.490	80				P-MENTHA-2,4/8/-DIENE	3283605
553	1	126	.510	80				CAMPENE	3285005
553	1	126	.630	80				PINENE, BETA-	3295505
553	1	126	.780	80				PHELLANDRENE, ALPHA-	3289505
553	1	126	.810	80				A-TERPINENE	3282005
553	1	126	1.000	80				1,8-CINEOLE	3361505
555								1-METHYL-5/2-METHOXYETHYL/TETRAZOLE	
555	72	149	1.000	40		2.81		METHANOL	62005
555	72	149	1.430	40		2.81		ETHYL ALCOHOL	193005
556								OINITRODIPHENIC ACID, ESTER	
556	1	126	.390	80				PINENE	3295005
560								AROMATIC TYPE LUBRICATING OIL EXTRAC	
560								T	
560	1	113	.015	197				VALERIC ACID, METHYL ESTER	1614505
560	1	113	.024	197				N-HEXANOIC ACID, METHYL ESTER	2139005
560	1	113	.035	197				4-METHYLCAPROIC ACID, METHYL ESTER	2640505
560	1	113	.052	197				6-METHYLENANTHIC ACID, METHYL ESTER	2990505
560	1	113	.064	197				CAPRYLIC ACID, METHYL ESTER	2989005
560	1	113	.086	197				6-METHYLCAPRYLIC ACID, METHYL ESTER	3428505
560	1	113	.100	197				N-NONANOIC ACID, METHYL ESTER	3431005
560	1	113	.130	197				9-METHYLPALARGONIC ACID, METHYL ESTER	3606505
560	1	113	.170	197				N-DECANOIC ACID, METHYL ESTER	3606005
560	1	113	.230	197				8-METHYLCAPRIC ACID, METHYL ESTER	3867505
560	1	113	.340	197				10-METHYLHENDECANOIC ACID, METHYL ESTE	4084005
560	1	113	.400	197				LAURIC ACID, METHYL ESTER	4065005
560	1	113	.550	197				10-METHYLDODECANOIC ACID, METHYL ESTER	4236505
560	1	113	1.000	197				MYRISTIC ACID, METHYL ESTER	4370005
560	1	113	1.370	197				12-METHYLTETRADECANOIC ACID, METHYL ES	4488505
560	1	113	2.090	197				14-METHYLPENTADECANOIC ACID, METHYL ES	4557505
560	1	113	2.210	197				CIS-PALMITOLEIC ACID, METHYL ESTER	4552305
560	1	113	2.260	197				PALMITOLEIC ACID, METHYL ESTER,TRAN	4552405
560	1	113	2.450	197				PALMITIC ACID, METHYL ESTER	4556005

APPENDIX D

CODEN FOR PERIODICAL TITLES

American Institute Of Mining And Metallurgical Engineers Bulletin (New York) (Formerly BUAI-A) (Changed To MGMT-A)	BAIM-B
American Institute Of Mining, Metallurgical And Petroleum Engineers, Institute Of Metal Division, Special Report Series (New York)	IMDS-A
American Institute Of Mining, Metallurgical And Petroleum Engineers, Transactions, Annual Volume (New York)	AMTA-B
American Institute Of Physics, Information Division, I. D. (New York)	AIID-A
American Institute Of Physics Information Program Newsletter (New York) (Supersedes AIDM-B)	AINL-B
American Institute Of Professional Geologists, Texas Section Proceedings Of The Annual Meeting	AGTP-B
American Iron And Steel Institute, Proceedings (New York) (Changed To YAIS-A)	AIPO-B
American Library Association, Adult Services Division, Newsletter (Chicago)	AASN-B
American Journal Of Agricultural Economics (Ithaca, N.Y.) (Formerly JOPE-A)	AJAE-B
American Journal Of Dermatology And Genito-urinary Diseases (St. Louis) (Changed To UCNE-A)	AJDG-A
American Journal Of Electrotherapeutics And Radiology (New York) (Formerly JATH-A) (Changed To PETH-A)	AJER-B
American Journal Of Orthodontics And Oral Surgery, Oral Surgery Section (St. Louis) (Formerly AJOO-A) (Changed To AJOH-A)	AJOO-B
American Journal Of Orthodontics And Oral Surgery, Orthodontics Section (St. Louis) (Formerly AJOO-A) (Changed To AJOH-A)	AJOR-B
American Journal Of Orthopedic Surgery (Houston) (Formerly AJOC-A)	AOBS-A
American Journal Of School Hygiene (Worcester, Mass.) (Changed To SHYR-A)	AJSH-B
American Journal Of Science And Arts (New Haven, Conn.) (Formerly AJSC-A) (Changed To AJSC-A)	AJSA-B
American Lecture Series (Springfield, Ill.)	AMLS-B
American Library Association, Library Technology Program, L.T.P. Publications (Chicago) (Formerly ALL-A)	ALLP-B
American Library Association, Library Technology Program, Report (Chicago) (Formerly ALLR-A)	ALTR-B
American Library Association, Library Technology Project, L.T.P. Publications (Chicago) (Changed To ALLP-B)	ALLL-A
American Library Association, Library Technology Project, Report (Chicago) (Changed To ALTR-B)	ALLR-A
American Management Association, Executive Compensation Service, Top Management Report (New York) (Title Varies With AETH-A)	AMET-B
American Management Association, Executive Compensation Service, Top Management Survey (New York) (Title Varies With AMET-B)	AETH-A
American Management Association, International Conference And Exhibit, Program (New York)	AMEP-B
American Manufacturer And Iron World (Pittsburgh) (Changed To IDWO-A)	AMIW-B
American Marketing Association, Geographic Listing Of Marketing Consulting And Research Agencies (New York) (Changed To AMGL-B)	AMGL-A
American Marketing Association, Marketing Research Consultants, Agencies & Services, Geographical Listings (New York) (Formerly AMGL-A)	AMGL-B
American Material Handling Society Journal (Boston) (Formerly MHEN-A) (Issued In MMHA-A)	AMHJ-B
American Mathematical Society, New Publications (Providence)	AMNP-B
American Mathematical Society, Report (Providence)	AMTS-B

DEFINITIONS

A list of some of the common terms and definitions used in data retrieval are given below. The bibliography at the end of this manual contains a number of reference works which will further clarify terminology in the field.

ABSTRACT: A precis or summary of a document.

ACCESS: A way or means of approach or retrieval.

ACETATE FILM JACKETS: Clear sheets of acetate separated into storage chambers used for the storage of short strips of microfilm (also referred to as Film Jackets).

APERTURE CARD: A standard-size tabulating card into which a rectangular hole has been cut. A special adhesive is then applied around the cutout area and is used to hold a microfilm image securely in place. The aperture card may be key-punched to permit mechanical retrieval of the microfilm image.

ARRANGEMENT: The organization of items and terms in the system. Arrangement may be alphabetical, numerical, chronological, etc.

BIBLIOGRAPHY: (1) An annotated catalog of documents. (2) An enumerative list of books. (3) A list of documents pertaining to a given subject or author.

BIT: (1) (Information Theory) a binary digit. (2) An element of information. In machine language, a single unit of a word.

BROWSING: The ability of an indexing system to lend itself to unsystematic or random searches. This ability is of interest or use to the searcher even though it may not produce a logical answer to the search question.

CHARACTERISTIC: A qualitative or quantitative descriptor used to index an item. For documents, the characteristics are uniterms, unit concepts, etc. For data systems, they are the qualitative and quantitative descriptors describing raw materials, synthesis, properties, etc.

CLASS: (1) A group having the same or similar characteristics. (2) A major subdivision of a category.

CODE: (1) A communication system for information. (2) A system of symbols used in transmitting or storing information. (3) A representation of a term or item; employed to reduce the bulk of storage in at least one portion of a storage and retrieval system or to improve the ability to manipulate system components.

COINCIDENCE: A denumerable relation between entities, character or subject of documents. A precisely congruent relation demonstrated by superimposition.

COLLATE: (1) To compare or examine critically, particularly to verify the presence or absence of specific items in a text; for example, to assemble the pages of a document in correct order, hence also, to interleave.

COMMUNICATION: (1) Means of transmitting information through a channel. (2) Access to information. (3) An act of making known - hence, sometimes, publishing.

CONCEPT COORDINATION: An indexing principle where information is broken down on input into the smallest unit concepts and retrieved by coordination of these concepts on output.

CONVENTIONAL GROUPING: Method of grouping characteristics, items, and their codes employing a card or section of tape per item.

DECK: A collection of cards, commonly a complete set of cards, which has been punched for a definite service (in Great Britain, the more common term is Pack).

DEDICATED SPACE: The assigned position for each item on each superimposable card. The principle of dedicated space combined with the principles of drilling a hole in the dedicated space to show that the item has the characters represented by the card is the basis for superimposable card systems.

DOCUMENT: Any recorded information, regardless of its physical form or characteristics, which includes, but is not limited to, the following: (1) all written material, whether handwritten, printed, or typed; (2) all painted, drawn or engraved material; (3) all sound of voice recordings; (4) all printed photographs and exposed or printed film - still and motion pictures; (5) all products.

DOCUMENTATION: The science of generating, recording, collecting, disseminating, storing, retrieving, and correlating information and data to render them useful with an optimum expenditure of time, money, and effort.

EDITING: As applied to the indexing of technical information, it may be defined as the intellectual evaluation and refinement, by a group of three to five indexers, of the combined and tabulated results of the individual indexing efforts of a number of indexers.

ENTRY: A record of a document in a catalog, list, or index - sometimes called a posting.

FALSE-DROP: A reference citation that does not pertain to the subject sought; an alien, usually in a manipulative index; a nonpertinent reference, sometimes referred to as noise.

FIELD: In punch cards, a set of card columns fixed as to number and position. The total area of a punched card available for information storage.

FILM JACKETS: See Acetate Film Jackets.

FRAME: A single microfilm exposure.

GROUPING: The relation of items (or item codes) to terms (or term codes) within a particular storage block. For example, item codes are grouped in term blocks in a Uniterm index, and term codes are grouped in item blocks in a Minicard system.

HARD COPY: The original document or reproduced paper copy made from microfilm. It can also refer to a printout from such data processing media as magnetic tape or tabulating cards.

INDEX: That which specifies, indicates, or designates the information, contents or topics of a document or group of documents.

INDEXING: To prepare an organized or systematic list which specifies, indicates, or designates the information, contents, or topics in a document or group of documents.

INVERTED GROUPING: Method of grouping characteristics, items, and their codes employing a card or section of tape for each characteristic; the opposite of conventional grouping.

ITEM: An item is a physical object, such as a document, record, book, map, patent, report, photograph, etc., which is the record of information and is the ultimate object of search in a storage and retrieval system.

KEYWORD IN CONTEXT INDEX: A listing of titles, each in its original word order, but permuted to allow various alphabetic searches of their keywords.

KWIC INDEX: Abbreviation for Keyword in Context Index.

MICROFICHE: A unitized microform in which a group of related images is arranged on a transparent sheet of film in the same manner that dates appear on a calendar.

MICROFORM: A generic term for any form, either film or paper, that contains microimages.

OPEN-ENDED: Being possessed of the quality by which the addition of new terms, subject headings, or classifications does not disturb the pre-existing system.

PLANETARY CAMERA: A camera in which the film unit is suspended over a flat copyboard. The documents are placed on the copyboard and are photographed while remaining motionless.

POST: (1) To transfer an initial notation from a parent or main entry to individual analytic entries, e.g., to type the proper catalog entry and number at the top of a group of catalog cards.
(2) (Coordinate indexing) To put the accession number of a document under each entry representing a coordination term.

RANDOM ACCESS: The ability to retrieve an item or term directly without going through the process of sequential search.

READERS: Equipment capable of enlarging microimages to a size that can be read with the naked eye. The images are projected on a ground-glass screen.

READER-PRINTERS: Equipment that in addition to enlarging microimages to readable size can also make paper copies of selected images.

RETRIEVAL: The act of finding again; recovery; retrospective searching and securing of documents. The act of going to a specific location or area and returning therefrom with an object or document.

ROTARY CAMERA: A camera in which the documents are transported by a moving belt before the film where they are photographed.

SEQUENTIAL SEARCH: A retrieval technique whereby each item is examined to determine if it contains the term or combination of terms in question.

SUPERIMPOSITION: The condition of one being laid upon another for the purposes of comparison.

TAPE: (Data Processing) (1) A plastic strip coated or impregnated with magnetic or optically-sensitive substances, used for data input, memory or output. (2) A paper or plastic strip with punches or other arbitrary signs representing alphabetic or numeric data.

TERM: That which is used to characterize an item for the purpose of storing it in or retrieving it from a storage and retrieval system. Whether or not we restrict the concept of "term" to a single word or to signify a phrase, a set of words, or even an abstract, is arbitrary. The words descriptors, uniterms, characteristics, aspects, and locators are essentially synonymous.

UNITERM CARDS: A ten column card representing a term in an information system. On each such card are listed the uniterm numbers for the items characterized by that term. The item identification numbers are entered on a card in ascending order in any one of ten columns according to the final digit of the identification number. Uniterm cards provide a manual method of coordinating the concepts in an information system.