

**Table 43A-10-001.** K<sub>2</sub>Co<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub>. Lines for Raman spectra [85Rab].  $X', Y' \parallel \langle 110 \rangle$ .

| Attribution            | $Z(XX)Y$ |      |      | $Z(Y'X')Y'$ |      | $Z(YZ)Y$ |      |      | $Z(XZ)Y$ |      |      | $Z(YX)Y$ |      |      |
|------------------------|----------|------|------|-------------|------|----------|------|------|----------|------|------|----------|------|------|
|                        | A + E    |      |      | E           |      | F, x     |      |      | F, y     |      |      | F, z     |      |      |
| $T [^{\circ}\text{C}]$ | 20       | -125 | -175 | 20          | -125 | 20       | -134 | -170 | 20       | -121 | -163 | 20       | -130 | -170 |
| Lattice vibrations     |          | 28   | 29   | 29          | 28   |          | 29   | 27   |          | 28   | 28   |          | 30   | 29   |
|                        |          | 37   | 38   |             | 38   |          | 39   | 37   |          | 38   | 38   |          | 39   | 37   |
|                        |          | 44   | 45   |             | 45   |          | 45   | 44   |          | 44   | 44   |          | 46   | 46   |
|                        |          |      | 52   |             | 53   | 51       | 53   | 52   | AT       | 53   | 53   | 49       | 54   | 53   |
|                        | 61       | 61   | 62   | 61          | 61   | 65       | 62   | 60   | 64       | 61   | 61   |          | 61   | 62   |
|                        |          |      |      |             |      | AT       | 69   | 69   | AT       | 68   | 68   | 68       | 69   | 72   |
|                        | 80       | 78   | 80   | 79          | 78   |          | 77   | 76   |          | 76   | 76   | AT       | 78   | 78   |
|                        |          |      | 94   |             |      |          | 84   | 82   |          |      |      |          | 85   | 85   |
|                        | 99       | 100  | 102  |             |      |          | 97   |      |          | 98   | 103  |          | 95   | 95   |
|                        | 110      |      | 112  | 108         | 112  | 108      | 110  |      | 105      | 110  | 118  | 108      | 109  |      |
|                        | 123      | 123  | 123  |             |      |          |      |      |          |      |      |          |      |      |
|                        | 134      | 136  | 131  |             |      |          |      |      |          |      |      |          | 132  |      |
|                        | 142      | 142  | 141  | 143         | 142  |          |      |      |          |      |      |          | 147  |      |
|                        | 167      | 168  | 172  | 164         | 164  | 164      | 170  | 172  | 160      | 166  | 172  | 169      |      | 155  |
|                        |          |      |      |             | 183  | 184      | 187  | 191  |          | 242  | 186  |          | 188  | 183  |
|                        |          |      |      |             |      |          |      |      |          | 223  |      |          |      |      |
|                        | 233      | 236  | 240  |             |      | 245      |      | 237  | 230      |      | 242  |          |      | 239  |
|                        |          |      |      |             |      |          | 250  | 256  |          | 263  | 263  |          | 261  | 261  |
| $\nu_2(\text{SO}_4)$   | 443      |      | 439  |             |      | AT       | AT   | AT   | AT       | AT   | 440  | AT       | AT   | 440  |
|                        |          | 449  | 451  | 454         | 454  | 453      | 455  | 451  | 453      | 454  | 453  | 453      | 455  | 458  |
|                        |          |      | 458  |             |      |          |      | 455  |          |      | 458  |          |      |      |
|                        | 467      | 467  | 468  | 468         | 467  | 469      | 468  | 466  | 469      | 468  | 467  | 470      | 468  | 467  |
|                        | 476      | 476  | 477  |             |      |          |      | AT   |          |      | AT   |          |      | AT   |
| $\nu_4(\text{SO}_4)$   | 597      | 597  | 596  | 599         | 598  | 602      | 601  | 597  | 601      | 600  | 603  | 602      | 600  | 600  |
|                        |          |      | AT   |             |      | 609      | 609  | 609  | 609      | 608  | 609  | 609      | 608  | 610  |
|                        | 624      | 623  | 625  | 624         | 624  | AT       | AT   | 625  | AT       | AT   | 629  | AT       | AT   | 621  |
|                        | 631      | 631  | 631  |             |      | 633      | 634  | 635  | 633      | 634  | 635  | 633      | 634  | 635  |
|                        | 649      | 651  | 652  | 652         | 653  | AT       |      | 651  | AT       | AT   | 653  | AT       | AT   | 654  |
|                        |          |      |      |             |      | 653      | 655  | 655  | 654      | 656  | 657  | 654      | 657  | 658  |
| $\nu_1(\text{SO}_4)$   |          |      | AT   |             |      |          |      |      |          |      |      |          |      |      |
|                        | 1040     | 1041 | 1041 | 1040        | 1040 | 1040     | 1040 | 1040 | 1040     | 1040 | 1041 | 1041     | 1041 | 1041 |
|                        |          |      | 1043 |             |      |          |      |      |          |      |      |          |      |      |
| $\nu_3(\text{SO}_4)$   | AT       |      |      | 1116        | 1120 | 1118     | AT   | 1116 | 1117     | AT   | 1113 | 1117     | AT   | 1116 |
|                        | 1126     | 1127 | 1130 |             | 1128 |          |      |      |          |      |      |          |      |      |
|                        |          |      |      |             |      | 1134     | 1134 | 1133 | 1135     | 1134 | 1131 | 1135     | 1134 | 1134 |
|                        | 1159     | 1164 | 1166 | 1161        | 1167 | 1165     | 1167 | 1169 | 1164     | 1168 | 1169 | 1165     | 1168 | 1170 |
|                        |          |      |      |             |      |          |      | 1226 |          |      | AT   |          |      | 1226 |
|                        |          |      |      |             |      | 1240     | 1246 | 1246 | 1240     | 1247 | 1248 | 1243     | 1247 | 1248 |

AT: asymmetric tail.