**Extended Table 1:** Summary table of Ryugu samples compared with meteorites25,30,49-51, updated from Jaumann et al. (2019)8. Bold characters mean good matching to Ryugu, normal characters stand for moderately matches, and italic characters mean poor match.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Reflectance at 0.55 µm | CAIs (vol%) | Chondrules (vol%) | Bulk density (kg m-3) | 3 µm band adsorption |
| Ryugu  | ~0.02 | Not observed | Not observed | 1282 ± 231 | Yes |
| CI | 0.063 | **<0.01** | **0** | 2110 | **Yes** |
| Tagish Lake | **0.02** | **rare** | *<17* | 1660 | **Yes** |
| CM | 0.065 | *1.21* | *20* | 2120 | **Yes** |
| CR | - | 0.12 | *55* | *3100* | **Yes** |
| CO | *0.10-0.13* | *0.99* | *40* | *2950* | *No* |
| CV | 0.086 | *2.98* | *45* | *2950* | *No* |