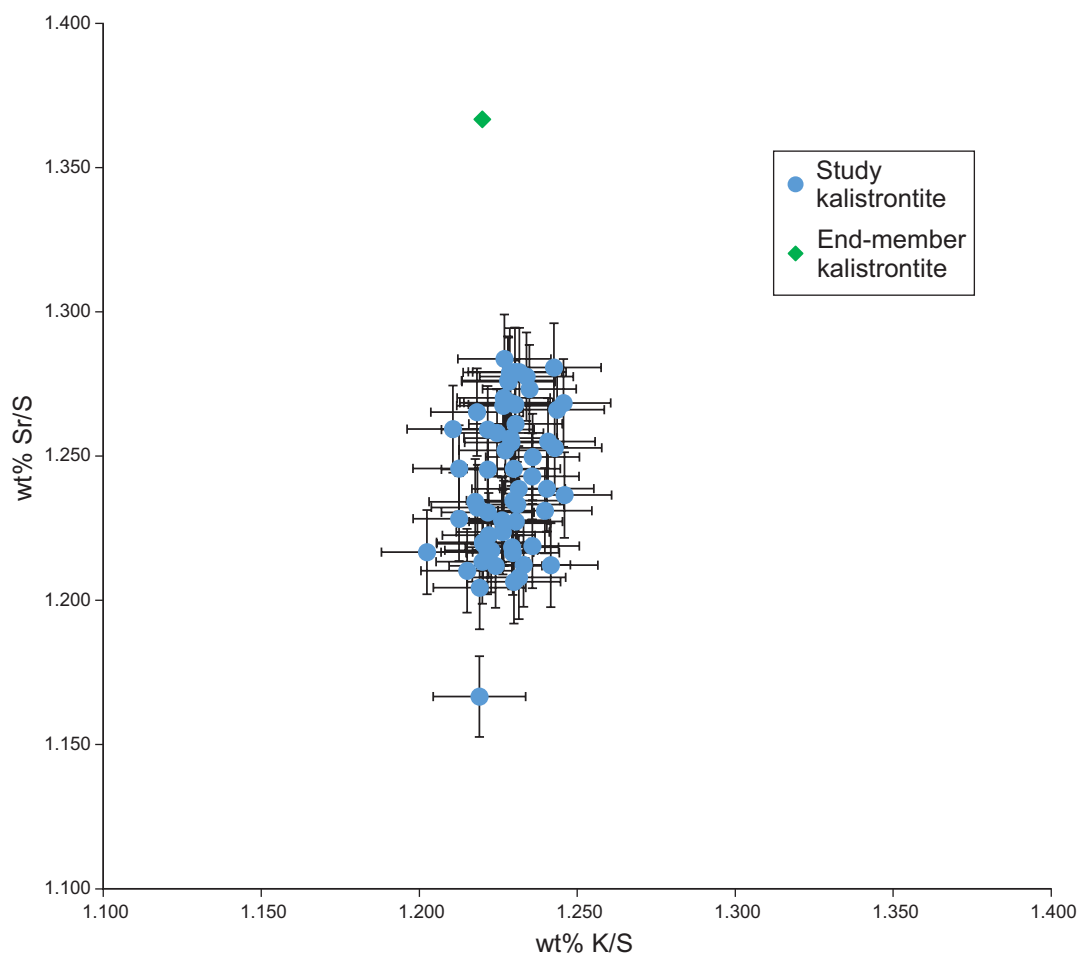


**SUPPLEMENTAL FIGURE 1.** Comparison of North Yorkshire kalistrontite geochemistry with analyses for previous occurrences. S.D. for the North Yorkshire data shown by the whisker plot.



**SUPPLEMENTAL FIGURE 2.** Plot of North Yorkshire kalistrontite EDX-derived weight % data, showing the ratio of K to S (X axis) plotted against the ratio of Sr to S (Y axis). Error bars are  $1 \times$  quantification S.D. The K/S ratio shows no particular trend and is within quantification error of the end-member, stoichiometric kalistrontite value. The Sr/S values are all significantly below and forming a clear trend, independent of the K/S ratio, away from that expected of end-member kalistrontite.