Contents: Supplemental Data for:
Abundance, Sizes, and Major Element Compositions of Components in CR and LL Chondrites: Formation from Single Reservoirs
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Figure S1: Renazzo section 4905A-t1-ps1B, Mg-Ca-Fe composite X-ray mosaic map. A 1225-point grid at 300 µm spacing superposed (white lines) on the map. Outlines of inclusions (chondrules etc.) are shown in yellow. This grid is similar in coverage to that reported by Patzer et al. (2022) who measured clast modal abundances in Renazzo by point-counting on BSE images using a 1054-point at 300µm spacing (text, Table 3).
file: Fig_S1_Ren4905A-t1-ps1B-MCF-outline-grid.png

Figures S2: X-ray element mosaic maps, 8-bit, xx is the mask layer. Semarkona and Renazzo data are in separate folders (zipped).
Renazzo:
Ren4905A-t1-ps1A_*nn*.tif for *nn*=Al, Ca, Fe, Mg, Ni, S, Si, Ti, BSE, xx
Ren4905A-t1-ps1B_*nn*.tif for *nn*=Al, Ca, Fe, Mg, Ni, S, Si, Ti, BSE, xx
Ren-588-t1-sA1-ps1A_ *nn*.tif for *nn*=Al, Ca, Fe, Mg, Si, BSE, xx
For this sample, Ti, Ni, and S maps were not obtained.
...FeNiS, ...MgCaAl, ...MgCaFe.tif are 3-element composites (32-bit)
Semarkona:
Sem-4128-t1-ps1B_*nn*.tif for *nn*=Al, Ca, Fe, Mg, Ni, S, Si, Ti, BSE, xx
Semarkona_4128-5_*nn*.tif for *nn*=Al, Ca, Fe, Mg, Ni, S, Si, Ti, BSE, xx
...FeNiS, ...MgCaAl, ...MgCaFe.tif are 3-element composites (32-bit)

Figures S3: Image analysis maps. Rim thickness of 0 or 1 pixel is indicated. Rims may be applied to avoid overlap between outlines (see Ebel et al., 2016, methods). Semarkona and Renazzo data are in separate folders (zipped). Semarkona analysis was done separately for opaques and silicate clasts.
name-IJdraw.tif: Output of ImageJ with each object numbered.
name-rgbClasts.tif: Output of code with each object colored.

Figure S4: Detail of shear texture in "butterfly" type 1 (FeO-poor) barred olivine chondrule ch1.
file: Fig_S4_Ren-588-t1-ps1A-ch1-detail1.png

Figure S5: Comparison of chondrule size and Mg-Si composition. No apparent bimodal size distribution was observed, nor necessarily expected, that might correlate with the ^{16}O-based conclusions of Marrocchi et al. (2022).
file: Fig_S5_Renazzo_MgSi_areapxl_hist_olopx.png

Figure S6: Alternative classification of apparently isolated metal grains, for comparison with Figures 7 and 8. Here, isolated metal has been combined with chondrules rather than matrix for both meteorites.
file: Fig_S6a_Fig7_alternative.png

file: Fig_S6b_Fig8_alternative.png

Tables S1: Image analysis tables (.txt are tab-separated values). Semarkona and Renazzo data are in separate folders (zipped). Semarkona analysis was done separately for opaques and silicate clasts.

name-rgbTab.txt: Table of R-G-B code, bounding box, etc. for each clast.

IJn corresponds to the clast number in ImageJ maps "IJdraw".

"typeN" is a code for clast type. "IJgs" is the grayscale of output from AI work.

Xcm, Ycm is the center of mass location for each clast.

Red, green, blue colors are ad hoc, to give every object its own in the RGB map.

Each clast has a discrete R-G-B color and x-y limts (box) allowing each clast's pixels to be addressed individually in every element map.

X-Y min and max are the bounding rectangle for the clast.

The errFlag indicates if the center of mass of a clast is in the matrix

(e.g., the object is C-shaped).

Only RP, BO, and porphyritic chondrule types were considered in analysis.

Tables S2: Image analysis results (.txt are tab-separated values). Semarkona and Renazzo data are in separate folders(zipped). Semarkona analysis was done separately for opaques and silicate clasts.

name-Histo1.txt: Table histogram of clast type areas, the basis for abundances.

name-ClastEls.txt: Table of element intensity total for each individual clast.

Table S3: Data on clast and matrix abundances across eight chondrite types, including the current data for CR (Renazzo) and LL (Semarkona). This data is plotted as Figure 9 of the main text.

file: Tab_S3_Component_abundances.xlsx table and supporting information in 2 sheets

file: Tab_S3_Component_abundances.txt tab-separated single sheet