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# Modal abundances of coarse-grained components within CI-chondrites and their individual clasts.

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The CI chondrites are complex breccias and their degree of brecciation among the rocks is decreasing in the sequence: Orgueil > Ivuna > Alais ~ Tonk. Considering the CI chondrite bulk rocks in general various values for the modal abundance of matrix (95-100 vol%) and the accompanied mineral constituents are given in literature. We determined The modal abundance of phases >5 µm in the CI chondrites Orgueil, Ivuna, Alais, and Tonk. If this cut-off grain-size is used to distinguish between matrix and coarse-grained constituents, the modal abundance of the minor phases magnetite, pyrrhotite, carbonate, olivine, and pyroxene is 6 vol% in total [1]. These phases are embedded within the fine-grained, phyllosilicate-rich matrix making up 94 vol%. In Orgueil we further detected a phosphate-rich fragment having 31.8 vol% phosphate, whereas in Ivuna an individual clast with 21.5 vol% carbonates was detected [1].

[1] Alfing, J. et al. (2019) Geochemistry-Chemie der Erde, https://doi.org/10.1016/j.chemer.2019.08.004

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