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Structure of Artificial Casein Micelles Composed of Deuterated -Casein and Native -Casein: A Contrast Variation SANS and SAXS Study.

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Milk is one of the most important commodities is the world and yet the colloidal protein structure, the casein micelle, that gives rise to many of the unique properties of milk is still not well defined due to its complex and dynamic structure. To gain a detailed picture of the structure of the casein micelle, we produced a world-first model artificial casein micelle comprising recombinant deuterated, phosphorylated, -casein and native -casein, a micelle composition not dissimilar to "human"casein micelles. Using contrast variation SANS and SAXS, a detailed structure of the casein micelle will be presented.

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