

Revealing the consequences of processing milk

Arla Foods Ingredients are today the leading ingredient company for value added whey proteins. A further key business area is the market for micellar casein isolates (MCI) powders. During the production of MCI powders, the casein is exposed to processing conditions which may influence the integrity of the casein micelle. Neutron- and X-ray based small-angle scattering experiments (SANS and SAXS) performed under the NXUS project at international large-scale facilities has provided detailed information on the differences between the structure of MCI and regular skimmed milk casein micelles.

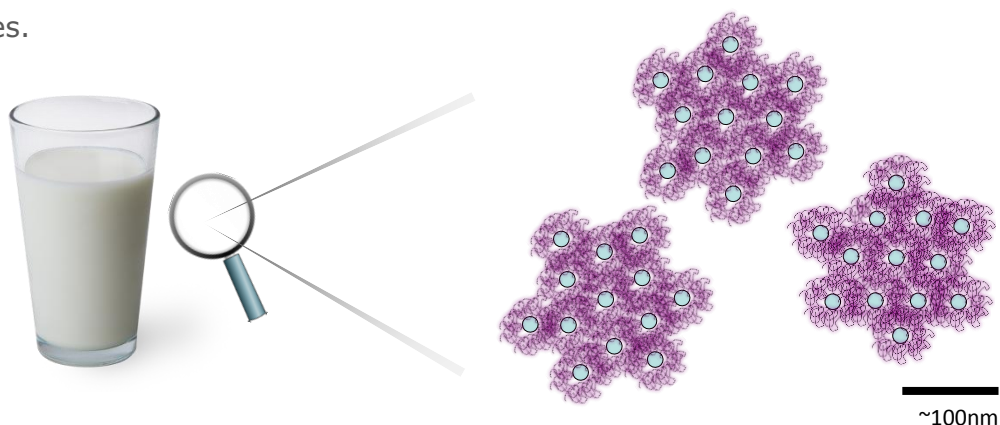


Illustration of casein micelles investigated through the NXUS project, providing information down to the nanometer level on their size and internal structure.

Utilizing the complementarity of X-rays and neutrons, NXUS scientists have characterized the different structures of the micelles. The results have enabled Arla Foods Ingredients to further understand the structural consequences of the MCI production process. Furthermore, the project has demonstrated the power and applicability of neutrons and X-rays to provide valuable knowledge for the food industry.



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