

### Agglomeration of L-Ornithine-L-Aspartate in drowning out crystallization

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Spherical agglomeration mechanism of L-ornithine-L-aspartate (LOLA) was investigated in the semibatch crystallizer. The needle-like LOLA crystals were formed and spherically agglomerated during precipitation. The primary crystal size in the agglomerate remains unchanged after completion of the crystallization. Therefore, the agglomeration process of primary crystals played an important role for controlling LOLA crystal size. The agglomerate quantity and feed concentration were found to be main parameters for the agglomeration of LOLA. As soon as the aqueous LOLA solution was introduced to the semibatch crystallizer with the suspended LOLA crystals, the agglomeration began immediately. In this system, the precipitated crystals were directly agglomerated into spherical form without any other binder during the crystallization process. The size distribution change of agglomerates may give us an interesting insight into the agglomeration mechanism. From the agglomeration kinetics, it was found that agglomeration occurred more frequently when the number of seed crystals was larger and its size was smaller.