

ABSTRACT

The present disclosure relates to a method for continuous preparation of high bulk density methionine crystals. The process of the method is as follows: a hydrolysate solution, which is
5 obtained from a reaction of 5- (β -methylmercaptoethyl) hydantoin and a potassium carbonate solution, is mixed with an external circulation material from a DTB neutralization crystallizer having a gas phase neutralization section; after being cooled, the mixture enters a liquid distributor of a neutralization region in the upper part of the crystallizer and is sprayed in the form of liquid droplet or trickle into carbon dioxide gas for neutralization reaction, and then
10 naturally falls into a crystallization region in the lower part to be mixed with a material in the region; the obtained mixture grows on fine crystals in a system to form crystals having larger particle diameters, and meanwhile new crystal nucleuses are formed; in a deposition area in the middle part of the crystallization region, the crystals having larger particle diameters deposits into an elutriation leg, while the fine crystals circulate with the external circulation material,
15 and a part of the external circulation material is used to elutriate the crystals in the elutriation leg, while another part of the same is used to be mixed with the hydrolysate solution; and the crystals in the elutriation leg are separated, washed and dried to obtain the high bulk density methionine product.