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**Effect of elaboration parameters of a membrane ceramic on the filtration process  
efficacy**

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**Abstract:**

The formation of the flat membrane from kaolin and potassium phosphate was investigated with a particular focus on the appropriate elaboration parameters and the effect of their separation performance. The first step consisted in the fabrication of flat ceramic membrane supports from mechanochemically-treated kaolin (K) and starch (S). The mechanical properties, permeability and porosity of these supports were studied as a function of the milling time of kaolin, the starch content, the sintering temperature and time. The optimization of the elaboration parameters led to the fabrication of supports from kaolin milled for 30 min and 5% starch at sintering temperature of 1100 °C and sintering time of 1 hour. In the second step, the potassium phosphate was added as a binder in the kaolin- 5% starch mixture. In this case, we noted the improvement of the permeability without reduction of the mechanical strength and porosity. Also, the separation performances and the fouling of

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