

Abstract

The present invention discloses a method for the treatment of silicon-containing wastewater from the preparation of a molecular sieve or a catalyst, comprising
5 contacting the silicon-containing wastewater with at least one acid or at least one alkali, so that at least a part of the silicon elements in the silicon-containing wastewater form a colloid. A mixture containing a colloid is thus obtained. A silicon-containing solid phase and a first liquid phase are produced by a solid-liquid separation. A solid phase and a second liquid phase are produced by a
10 solid-liquid separation after at least a part of the metal elements in the first liquid phase form a precipitate. At least a part of the second liquid phase is subjected to electrodialysis to produce an acid liquor and/or an alkali liquor. The silicon-containing solid phase can be used as the raw material for a molecular sieve synthesis. The second liquid phase can be used as washing water in the
15 washing process of the molecular sieve. The acid liquor can be used in the ion exchange process of the molecular sieve. The alkali liquor can be used as the alkali source in the molecular sieve synthesis. The method of the present invention can achieve a relatively high silicon recovery rate and a higher wastewater utilization rate. Basically no wastewater or an extremely low volume
20 of wastewater is discharged. In the meanwhile, the discharged solid wastes are in a very low amount.

FIG.5