

Abstract

The invention relates to a process for the preparation of alkanesulfonic acids, comprising the following steps:

- (a) oxidation of alkylmercaptans and/or dialkyl disulfides and/or dialkyl polysulfides having from three to nine sulfur atoms with nitric acid to form alkanesulfonic acids, water, nitrogen oxides and other byproducts,
- (b) regeneration of the nitrogen oxides obtained from step (a) with oxygen to give nitric acid and recycling of the nitric acid to step (a),

where steps (a) and (b) are carried out in reaction chambers separate from one another.