

A B S T R A C T

5           The invention relates to a process for the  
preparation and processing of a hydroxylammonium salt  
solution, wherein an aqueous acid reaction medium is kept in  
circulation between a hydroxylammonium salt synthesis zone  
and an oxime synthesis zone and wherein nitrate ions or  
10 nitrogen oxides to be converted into nitrate are  
continuously supplied, by way of nitrogen source for the  
formation of the hydroxylammonium salt, to the liquid being  
kept in circulation, which nitrate ions are catalytically  
reduced with hydrogen to hydroxylamine, and wherein ammonium  
15 ions, formed as a by-product in the reduction of the nitrate  
ions, are removed by contacting the circulating liquid with  
a gas flow consisting of nitrogen oxides generated in  
catalytic combustion of ammonia, 0.01 to 5 wt.% of the  
nitrogen oxides formed in the combustion being used to  
20 reduce the ammonium ions to nitrogen, and the rest of the  
nitrogen oxides being used for the preparation of nitric  
acid.

