

SOLUTION OF PARTICLES CONTAINING TITANIUM DIOXIDE AND
PEROXO-TITANIUM COMPLEX, AND ITS PREPARATION

ABSTRACT OF THE DISCLOSURE

[0081] A solution of titanium dioxide particles is prepared by reacting hydrous titanium oxide (HTO) and hydrogen peroxide (H_2O_2) in a solution, in the presence of a volatile base catalyst, to form a peroxo-titanium-complex (PTC). The solution is diluted by a factor of at least 2. A portion of the volatile catalyst is then removed by evaporation from the solution to form particles comprising titanium dioxide and PTC adsorbed to the particles, after which the solution has a pH of about 7 and is transparent. The particles in the solution may have a zeta potential of -60 to -80 mV, particle sizes from 10 nm to 25 nm, and a concentration higher than 4 w%, such as from 6 to 8 wt%.



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