Aim of the present study, examination of enamel roughness in palatal aspect of extracted premolars by using aluminum oxide (25%, 27% and 28% µm and phosphoric acid 37%. Twenty of all samples contoured with cylindrical shape forming wax and poured with stone to form cylindrical shape and palatal surface remain fully visible and this surface cleaned and polished with plastic cup and pumice and rinsed with distal water and dried with air. Data divided to 4 group each one is 5 extracted teeth and variable assessed by picture captured before and after adding conditioning material by using camera, light microscope,analyzed by Autocad 3D max and electronic microscope with its three dimensional software. The result of this article clearly there is significant difference between groups with different conditioning materials also the pattern of enamel surface showing highly significant difference. This study approved that the palatal animal conditioned with aluminum oxide particles of 25%, 27%, and 28% µm before conditioned by acid etch result in greater scratched and introduce more regular pattern than that using of phosphoric acid only.