This study aimed to determine the antimicrobial efficacy of NaOCl, cetrimide, and Glycyrrhiza glabra L. extract against Enterococcus faecalis biofilms on dentine discs. Broth microdilution method was used to determine minimal bactericidal concentrations (MBCs) of the agents. A biofilm susceptibility assay was performed using E. faecalis biofilms grown on dentine discs. Minimal bactericidal concentrations (MBCs) of NaOCl (0.5%), cetrimide (0.015%), and G. glabra L. extract (0.25%) were applied for 1, 3, and 5 min, and the mean viable cell counts were recorded and statistically analyzed. There was no significant difference between cetrimide and NaOCl at 1 min (p>0.05). NaOCl was the most effective agent at 3 and 5 min (p<0.05) while G. glabra L. extract was the least (p<0.05). The MBCs of NaOCl, cetrimide, and G. glabra that eliminated the planktonic E. faecalis did not eradicate the biofilms grown on dentin discs. Keywords: Biofilm, Cetrimide, Enterococcus faecalis, Glycyrrhiza glabra L., Sodium hypochlorite