

Empirical Mode Decomposition (EMD) is widely used in biomedical field for biomedical signal processing and especially for electrocardiogram (ECG) processing. Removal of artifacts that corrupt ECG, is carried out by proper selection of Intrinsic Mode Functions (IMF) for the partial signal reconstruction. In this paper a study of the influence of White Gaussian Noise in synthetic electrocardiograms of various Signal to Noise ratios (SNR) in terms of total number of Intrinsic Mode Functions is presented. Simulations reveal that a pre-processing stage, prior to the application of EMD, optimizes processing time by reducing the total number of IMFs without significant loss of information content.