The study was focused on the extraction of pectin from Grapefruit peels. The grapefruit peels were subjected to maceration mediated extracted of pectin. The extraction of pectin from grape fruit peels was performed by using different macerating agents. Citric acid, Nitric acid, and Phosphoric acid were used for the acidic hydrolysis of pectin. For Basic hydrolysis, NaOH was used. Further, an anionic surfactant Triton-X 100 was also used. The extraction yield of pectin with all macerating agents was compared. The extraction of citrus pectin from grapefruit was performed by providing constant conditions of temperature and PH. The temperature was kept constant at 70 C and PH at 2. The comparison of yield showed that pectin extraction was highest in yield with citric acid. The citric acid is a good macerating agent for the extraction of pectin. The extraction yield was highest with citric acid which was equal to 25% of dry pectin weight. The yield of pectin with other macerating agents was lower than citric acid. Nitric acid yielded 22 % pectin and phosphoric acid yielded 20 % pectin. The extracted pectin by using NaOH as the macerating agent was not of satisfactory quality. Triton-X 100 was unable to extract pectin. After the extraction of pectin and dried pectin was stored in a polythene bag and its physiochemical evaluation was performed. Thermogravimatric analysis and FTIR analysis of extracted pectin was performed. FTIR analysis showed peaks of the different functional groups present in the pectin. TGA analysis showed the variation of the weight of pectin with temperature change.