```r
## Get file list of all data within directory
setwd("E:/DrugHits/HTS1_Analysis/R/Preswesk/")
directory <- getwd()
output_dir <- "E:/DrugHits/HTS1_Analysis/Analysis/Preswesk/"
##MUST EDIT FILES SO THAT TOP TWO LINES ARE DELETED
##USE NOTEPAD SO AS NOT TO LOSS ANY DATA
files_full <- list.files(directory, full.names = T)

quantile_mean75 <- function(data, q75, q99){
  results <- vector()
  for (k in floor(q75):floor(q99)){
    holder <- data[floor(k)]+((k-floor(k))*(data[floor(k)+1]- data[floor(k)]))
    results <- c(results, holder)
  }
  well_mean = mean(results)
  return (well_mean)}
quantile_std75 <- function(data, q75, q99){
  output <- vector()
  for (n in floor(q75):floor(q99)){
    holder2 <- data[floor(n)]+((n-floor(n))*(data[floor(n)+1]- data[floor(n)]))
    output <- c(output, holder2)
  }
  well_std = sd(output)
  return (well_std)}

for (i in seq_along(files_full)){## Read all files into variable
  files <- read.csv(files_full[i])
  well_unique <- unique(files$Section)
  tmp <- seq_along(files_full)
  plate_number <- paste("Plate_", tmp[i], "_", sep="")
  output <- vector()
  output2 <- vector()
  for (j in seq_along(well_unique)){
    wells <- subset(files, Section==well_unique[j])##Seperates each well
    well_density <- wells[, 3] ##pulls out mean density
    tmp1 <- sort(well_density)
    h1 <- ((length(tmp1)-1)*0.75)+1
    h2 <- ((length(tmp1)-1)*0.99)+1
    well_median <- median(tmp1,na.rm=T)
    ##Output vector of values between 75% and 99% percentile
    output <- c(output, quantile_mean75(tmp1, h1, h2))
    output2 <- c(output2, quantile_std75(tmp1, h1, h2))
  }
  plate <- data.frame(Well = well_unique, Mean_q75 = output, Std_q75 = output2)
  plate_name <- paste(output_dir, plate_number, sep="")
  write.table(plate, file = paste(plate_name, Sys.Date(), "_Upper_Quartile_Analysis_Prestwick.csv",
sep=""),
              sep = ",", append=FALSE, row.names = FALSE, col.names=TRUE)
}
```