Pico Platereader Quantification

The manufacturers directions for this method describe preparing a solution that is 2mL in volume. Our plates hold a leaky maximum of 400uL so the volumes must be adusted to fit.

Prepare the reagent

Make a 200 fold dilution of pico dye. Keep this in the dark. *Units for volume of 1x TE and units for volume of pico are uL*

```
(plate <- params$plate)
```

```
## [1] "D5309-D5404"
```

```
num_samples <- (96+8)*1.1
```

num_samples	vol_1x_TE	vol_pico_conc
114.4	11382.8	57.2

Results: #####Read in quantification results ———————————————

```
# which files
file <- params$file1
# folder <- list.files("~/Downloads/drive-download-20180615T221044Z-001/", pattern = "2018-06-15")
```

Open the plate reader results file and pull in the data

```
################################################
# Special fix ####
fix <- dat %>%
  filter(plate == params$plate) %>%
  mutate(quant = NA)

dat <- change_rows(dat, fix, params$id)
##############################################
```

```
# select your desired plate
plate <- dat %>%
  select(contains("id"), well, plate) %>%
  filter(plate == params$plate) %>%
  collect()



# join the quants to the  ids
quant1 <- left_join(dat1, plate, by = "well")
quant1 <- quant1 %>%
  select(contains("id"), AdjConc) %>%
  # rename the quant column so it can be joined to the db
  rename(quant = AdjConc)
  # remove any empty wells
quant1 <- quant1[!is.na(quant1[,1]), ]
kable(quant1)
```

digest_id	extraction_id	quant
D5317	E0551	0.922
D5318	E0554	0.515
D5319	E0556	0.404
D5320	XXXX	0.404
D5321	E0557	0.420
D5322	E0558	0.368
D5323	E0559	0.437
D5324	E0561	0.496
D5325	E0563	0.527
D5326	E0566	0.404
D5327	E0567	0.435
D5328	E0568	0.447
D5329	E0569	0.828
D5330	E0571	0.506
D5331	E0572	0.509
D5332	E0575	0.456
D5333	E0578	0.436
D5334	E0580	0.447
D5335	E0581	0.538
D5336	E0582	1.039
D5337	E0590	0.647
D5338	E0593	0.757
D5339	E0639	0.587
D5340	E0677	0.464
D5341	E0683	0.794
D5342	E0686	0.439
D5343	E0687	1.008
D5344	E0703	0.736
D5345	E0713	0.460
D5346	E0725	0.414
D5347	E0741	0.513
D5348	E0743	0.898
D5349	E0745	0.698
D5350	E0763	0.498
D5351	E0793	0.770
D5352	E0795	0.534
D5353	E0797	0.452
D5354	E0801	0.434
D5355	E0804	0.527
D5356	E0806	0.913
D5357	E0851	0.644
D5358	E0885	0.650
D5359	E0887	0.928
D5360	E0888	0.557
D5361	E0891	0.556
D5362	E1036	0.638
D5363	E1212	0.495
D5364	E1214	0.412
D5365	E1215	0.483
D5366	E1219	0.504
D5367	E1222	0.394
D5368	E1224	0.430
D5369	XXXX	0.431
D5370	E1227	0.428
D5371	E1228	0.613
D5372	E1229	0.461
D5373	E1231	1.074

```
# %>%
#   kable_styling()

# the entire table was pulled in as dat above
change <- dat %>%
  filter(plate == params$plate) %>%
  select(-quant) # don't bring in the quant column, will add that here

# add in the new quants
ids <- change %>%
  select(contains("id"))
change <- left_join(change, quant1, by = c(names(ids)))

dat <- change_rows(dat, change, params$id)
```

Write these changes into the database

```
## [1] TRUE
```

```
## [1] TRUE
```

Import the values for the firsts

This is for the first column of each plate that was put onto a separate plate to make room for the standards

```
firsts <- params$firsts
```

	digest_id	quant
41	D5309	0.548
42	D5310	1.008
43	D5311	1.240
44	D5312	0.786
45	D5313	0.767
46	D5314	0.403
47	D5315	0.380
48	D5316	0.383

write the group back to the database

```
## [1] TRUE
```

```
## [1] TRUE
```