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] "D5405-D5500"
```

```
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
D5413	E2722	0.900
D5414	E2721	0.509
D5415	E2720	1.650
D5416	XXXX	0.503
D5417	E2719	1.377
D5418	E2718	1.165
D5419	E2717	0.688
D5420	E2716	1.261
D5421	E2715	1.643
D5422	E2714	4.480
D5423	E2712	1.640
D5424	E2711	0.861
D5425	E2710	0.670
D5426	E2709	1.069
D5427	E2707	3.181
D5428	E2706	3.613
D5429	E2704	0.908
D5430	E2703	1.615
D5431	E2702	0.895
D5432	E2701	0.762
D5433	E2700	0.617
D5434	E2699	2.608
D5435	E2698	1.235
D5436	E2695	1.288
D5437	E2694	1.793
D5438	E2693	0.621
D5439	E2692	0.623
D5440	E2691	0.691
D5441	E2690	2.030
D5442	E2689	0.906
D5443	E2686	0.902
D5444	E2685	1.436
D5445	E2684	1.198
D5446	E2683	1.002
D5447	E2682	0.973
D5448	E2681	0.815
D5449	E2680	0.545
D5450	E2677	0.764
D5451	E2676	0.505
D5452	E2675	1.432
D5453	E2674	1.821
D5454	E2673	1.547
D5455	E2672	1.592
D5456	E2670	2.862
D5457	E2669	0.674
D5458	E2668	0.961
D5459	E2667	0.809
D5460	E2666	1.148
D5461	E2665	0.842
D5462	E2664	0.650
D5463	E2648	0.973
D5464	E2646	0.617
D5465	XXXX	0.543
D5466	E2642	1.999
D5467	E2641	0.630
D5468	E2634	0.707
D5469	E2626	0.765

```
# %>%
#   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
49	D5405	0.810
50	D5406	1.463
51	D5407	1.413
52	D5408	1.542
53	D5409	0.443
54	D5410	1.020
55	D5411	0.682
56	D5412	0.386

write the group back to the database

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

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