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] "D5581-D5675"
```

```
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
D5589	E0522	2.411
D5590	E0526	2.101
D5591	E1793	11.325
D5592	XXXX	0.637
D5593	E2844	20.490
D5594	E2751	4.404
D5595	E2752	5.369
D5596	E1357	9.602
D5597	E1356	36.723
D5598	E1355	40.464
D5599	E2756	6.717
D5600	E1351	32.807
D5601	E0459	1.496
D5602	E0460	2.561
D5603	E2760	6.177
D5604	E1348	33.396
D5605	E1337	18.163
D5606	E0395	6.983
D5607	E2572	9.579
D5608	E0396	21.510
D5609	E1331	2.391
D5610	E0468	0.656
D5611	E0398	10.802
D5612	E1334	10.560
D5613	E0399	11.659
D5614	E0404	1.810
D5615	E3002	31.792
D5616	E0422	4.366
D5617	E2948	12.451
D5618	E2583	5.763
D5619	E1341	12.235
D5620	E3007	48.676
D5621	E3858	8.098
D5622	E3859	6.178
D5623	E3010	12.201
D5624	E3861	86.593
D5625	E3862	22.255
D5626	E0484	3.232
D5627	E3864	12.570
D5628	E3015	21.430
D5629	E3016	18.060
D5630	E2938	27.206
D5631	E3018	9.264
D5632	E0394	8.873
D5633	E3020	17.797
D5634	E3021	72.900
D5635	E3022	12.183
D5636	E3023	76.624
D5637	E3024	75.749
D5638	E3025	44.181
D5639	E3026	11.874
D5640	E3027	66.893
D5641	XXXX	0.622
D5642	E3029	15.245
D5643	E3030	9.144
D5644	E3031	28.688
D5645	E3032	16.458

```
# %>%
#    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
65	D5581	6.097
66	D5582	147.726
68	D5584	1.553
70	D5586	1.477
71	D5587	1.351
72	D5588	1.083

write the group back to the database

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

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