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] "D5114-D5161"
```

```
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
2	D5118	E2555	3.399
3	D5132	E2556	6.997
4	D5141	E2557	5.542
5	D5124	E2558	9.846
8	D5160	E2561	0.642
9	D5156	E2562	3.454
18	D5159	E2571	0.897
25	D5144	E2578	14.378
26	D5149	E2579	14.136
28	D5148	E2581	94.851
33	D5147	E2586	28.150
34	D5154	E2587	36.998
38	D5131	E2591	19.498
39	D5145	E2592	29.653
41	D5143	E2594	8.089
42	D5158	E2595	1.733
43	D5138	E2596	7.532
44	D5120	E2597	38.378
46	D5125	E2599	16.048
47	D5115	E2600	17.291
48	D5114	E2601	21.462
52	D5117	E2605	15.362
53	D5161	E2606	0.590
55	D5140	E2608	2.100
56	D5116	E2609	3.581
57	D5123	E2610	16.695
61	D5121	E2614	53.764
64	D5128	E2617	42.439
65	D5153	E2618	13.305
66	D5122	E2619	7.572
72	D5129	E2625	6.876
74	D5142	E2627	9.394
75	D5119	E2628	5.674
76	D5146	E2629	2.162
78	D5137	E2631	11.453
79	D5127	E2632	26.906
80	D5139	E2633	3.070
83	D5133	E2636	6.731
84	D5152	E2637	8.559
85	D5155	E2638	2.416
87	D5151	E2640	1.516

```r
# %>%
#   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
25	D5126	44.265
27	D5136	43.086
28	D5157	13.990
29	D5134	13.001
30	D5150	22.287
31	D5135	15.853
32	D5130	75.274

write the group back to the database

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

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