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] "D5029-D5113"
```

```
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
1	D5067	E2458	26.617
2	D5046	E2459	108.565
3	D5112	E2460	43.658
4	D5113	E2461	50.039
5	D5072	E2462	18.061
7	D5061	E2464	6.738
8	D5037	E2465	12.921
10	D5058	E2467	73.206
11	D5071	E2468	18.643
13	D5050	E2470	30.791
14	D5032	E2471	16.876
15	D5107	E2472	14.481
16	D5096	E2473	23.620
17	D5086	E2474	16.443
19	D5056	E2476	15.582
20	D5059	E2477	30.527
21	D5066	E2478	36.135
22	D5042	E2479	15.186
23	D5108	E2480	19.045
24	D5110	E2481	35.404
25	D5081	E2482	51.339
28	D5069	E2485	21.243
29	D5084	E2486	76.520
30	D5100	E2487	54.672
31	D5033	E2488	18.009
32	D5079	E2489	18.906
33	D5031	E2490	26.429
34	D5101	E2491	14.383
35	D5103	E2492	26.696
36	D5049	E2493	13.649
37	D5091	E2494	20.544
38	D5095	E2495	19.760
39	D5043	E2496	23.834
40	D5089	E2497	24.193
41	D5047	E2498	30.626
42	D5104	E2499	22.429
43	D5062	E2500	29.992
44	D5038	E2501	11.976
45	D5097	E2502	9.985
46	D5054	E2503	13.398
47	D5083	E2504	101.900
48	D5065	E2505	47.778
49	D5076	E2506	10.540
50	D5044	E2507	24.800
51	D5075	E2508	26.231
52	D5070	E2509	11.746
53	D5093	E2510	18.651
54	D5036	E2511	61.845
55	D5057	E2512	15.833
56	D5082	E2513	8.900
57	D5055	E2514	79.327
58	D5099	E2515	19.332
59	D5088	E2516	38.706
60	D5080	E2517	11.353
61	D5111	E2518	25.335
63	D5094	E2520	8.839
65	D5098	E2522	53.754

```
# %>%
#   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
17	D5092	64.654
18	D5034	35.578
19	D5035	11.159
20	D5060	16.838
21	D5048	60.813
22	D5074	83.966
23	D5105	13.659

write the group back to the database

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

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