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] "D5501-D5580"
```

```
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	D5508	E4485	17.853
2	D5509	E4486	10.512
3	D5510	E4487	12.414
4	D5511	E4488	18.901
5	D5512	E4489	15.373
6	D5513	E4490	15.115
7	D5574	E4405	9.573
9	D5514	E4491	18.091
10	D5515	E4492	25.101
11	D5516	E4493	15.794
12	D5517	E4494	25.514
13	D5518	E4495	19.707
14	D5519	E4496	39.312
15	D5575	E4406	10.787
17	D5520	E4497	15.653
18	D5521	E4498	24.577
19	D5522	E4499	8.150
20	D5523	E4500	27.938
21	D5524	E4501	6.128
22	D5525	E4502	12.696
23	D5576	E4407	4.993
25	D5526	E4503	34.158
26	D5527	E4504	41.725
27	D5528	E4505	55.883
28	D5529	E4506	6.755
29	D5530	E4507	9.325
30	D5531	E4508	34.310
31	D5577	E4408	18.672
33	D5532	E4509	5.343
34	D5533	E4510	8.659
35	D5534	E4511	26.203
36	D5535	E4512	2.907
37	D5536	E4513	2.523
38	D5537	E4514	8.507
39	D5578	E4409	3.192
41	D5538	E4515	17.755
42	D5539	E4516	6.437
43	D5540	E4517	13.382
44	D5541	E4518	9.901
45	D5542	E4519	10.290
46	D5543	E4520	10.034
47	D5579	E4410	16.490
49	D5544	E4521	0.574
50	D5545	E4522	2.397
51	D5546	E4523	0.690
52	D5547	E4524	1.144
53	D5548	E4525	0.733
54	D5549	E4526	0.531
55	D5580	E4411	8.443
57	D5550	E4527	0.651
58	D5551	E4528	0.543
59	D5552	E4529	0.815
60	D5553	E4530	0.635
61	D5554	E4531	0.857
62	D5555	E4532	0.806
65	D5556	E4533	1.158
66	D5557	E4534	0.687

```
# %>%
#   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
57	D5501	5.342
58	D5502	11.523
59	D5503	5.754
60	D5504	1.474
61	D5505	4.175
62	D5506	6.645
63	D5507	5.689

write the group back to the database

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

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