

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] "D5162-D5219"
```

```
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
3	D5205	E2748	43.204
5	D5199	E2750	32.015
12	D5214	E2757	8.464
19	D5176	E2764	10.788
20	D5219	E2765	2.000
21	D5184	E2766	50.540
23	D5211	E2768	22.040
25	D5166	E2770	1.626
26	D5217	E2771	5.070
27	D5179	E2772	1.292
32	D5182	E2777	8.706
33	D5218	E2778	1.466
34	D5186	E2779	2.272
35	D5185	E2780	2.014
37	D5177	E2782	4.511
40	D5210	E2785	9.523
41	D5173	E2786	17.027
42	D5165	E2787	2.932
43	D5206	E2788	8.654
44	D5181	E2789	19.439
45	D5191	E2790	2.352
47	D5201	E2792	6.422
48	D5209	E2793	7.465
49	D5192	E2794	7.305
50	D5194	E2795	1.395
51	D5189	E2796	2.272
52	D5187	E2797	5.102
53	D5196	E2798	4.242
55	D5183	E2800	2.045
56	D5207	E2801	2.038
57	D5169	E2802	9.277
58	D5212	E2803	4.287
59	D5164	E2804	16.127
60	D5171	E2805	1.882
61	D5175	E2806	1.688
64	D5208	E2809	3.689
65	D5190	E2810	6.833
68	D5170	E2813	6.626
69	D5197	E2814	4.868
70	D5203	E2815	4.492
72	D5204	E2817	19.038
73	D5180	E2818	8.240
74	D5216	E2819	2.559
76	D5167	E2821	9.018
79	D5202	E2824	2.731
80	D5213	E2825	6.751
82	D5168	E2827	9.889
83	D5172	E2828	5.633
84	D5178	E2829	9.071
85	D5174	E2830	38.148
88	D5163	E2833	33.538

```

# %>%
#   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
34	D5195	29.636
35	D5188	12.068
36	D5198	5.431
37	D5200	6.976
38	D5162	7.991
39	D5193	6.638
40	D5215	3.361

write the group back to the database

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

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