

# 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] "D4947-D5028"
```

```
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	D4960	E2362	2.160
2	D4965	E2363	2.992
3	D4956	E2364	13.805
4	D4978	E2365	4.886
5	D5009	E2366	18.634
6	D5005	E2367	6.587
7	D5021	E2368	14.503
8	D4984	E2369	3.615
9	D5018	E2370	30.158
10	D4994	E2371	22.785
12	D4962	E2373	0.218
14	D5017	E2375	11.268
15	D4969	E2376	4.092
16	D4954	E2377	8.003
17	D4996	E2378	35.368
18	D5013	E2379	9.257
19	D4987	E2380	42.074
20	D4979	E2381	15.419
21	D4963	E2382	20.365
22	D4967	E2383	79.441
23	D4949	E2384	17.901
24	D4973	E2385	19.252
25	D5004	E2386	19.979
26	D4990	E2387	8.660
27	D4971	E2388	19.451
28	D4976	E2389	6.933
29	D5003	E2390	28.852
32	D5006	E2393	39.530
33	D4992	E2394	14.851
34	D4970	E2395	9.703
35	D5002	E2396	2.862
36	D5024	E2397	14.212
37	D5010	E2398	22.265
40	D5023	E2401	16.566
41	D4958	E2402	123.264
42	D5011	E2403	15.129
43	D4972	E2404	40.500
44	D4981	E2405	25.594
45	D4986	E2406	37.092
46	D5008	E2407	122.354
47	D5028	E2408	32.346
48	D4991	E2409	25.781
49	D5007	E2410	5.099
50	D4948	E2411	11.510
51	D4968	E2412	9.112
52	D5026	E2413	16.917
54	D5020	E2415	3.080
55	D5014	E2416	6.066
56	D4980	E2417	13.215
57	D4997	E2418	5.529
58	D4947	E2419	7.447
60	D4977	E2421	9.315
61	D5027	E2422	14.561
62	D4951	E2423	90.679
63	D4964	E2424	22.389
65	D4952	E2426	1.730
67	D4957	E2428	2.053
68	D4988	E2429	2.222

```

# %>%
#   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
9	D5001	25.319
10	D4988	18.157
11	D5025	49.665
12	D5019	18.979
13	D4998	9.589
14	D5012	52.723
15	D4974	57.627
16	D4983	74.164

write the group back to the database

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

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