

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] "D4888-D4946"
```

```
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 <- "~/Downloads/drive-download-20180615T221044Z-001/2018-06-15-plate1b.txt"
```

```
# 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	D4901	E1791	5.917
2	D4890	E1792	6.910
4	D4891	E1794	5.718
5	D4892	E1795	6.107
6	D4888	E1796	4.787
7	D4942	E1797	9.522
8	D4928	E1798	6.194
9	D4922	E1799	2.851
13	D4918	E1803	6.950
14	D4929	E1804	6.054
15	D4936	E1805	3.842
16	D4937	E1806	9.783
18	D4904	E1808	0.803
19	D4889	E1809	5.285
21	D4915	E1811	0.821
22	D4898	E1812	1.095
24	D4899	E1814	2.314
25	D4895	E1815	1.799
26	D4893	E1816	1.482
28	D4919	E1818	0.798
30	D4930	E1820	2.328
33	D4939	E1823	13.944
35	D4943	E1825	7.441
37	D4906	E1827	7.495
38	D4913	E1828	8.907
39	D4912	E1829	14.393
40	D4935	E1830	0.171
41	D4897	E1831	17.917
43	D4941	E1833	7.007
45	D4921	E1835	14.417
48	D4938	E1838	15.395
49	D4908	E1839	22.335
56	D4945	E1846	1.841
59	D4925	E1849	19.205
67	D4927	E1857	3.677
68	D4910	E1858	6.091
70	D4933	E1860	2.450
71	D4931	E1861	9.441
72	D4934	E1862	8.810
73	D4924	E1863	0.101
74	D4903	E1864	5.108
75	D4917	E1865	11.158
77	D4907	E1867	1.829
78	D4900	E1868	2.951
79	D4923	E1869	9.959
80	D4894	E1870	3.348
81	D4940	E1871	10.374
82	D4914	E1872	15.791
83	D4909	E1873	34.680
84	D4920	E1874	17.960
85	D4902	E1875	10.258
86	D4932	E1876	19.968
87	D4944	E1877	4.400
88	D4905	E1878	45.688

```

# %>%
#   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 <- "~/Downloads/drive-download-20180615T221044Z-001/2018-06-15-platefirsts.txt"
```

	digest_id	quant
2	D4916	7.670
5	D4896	4.372
6	D4946	13.938
7	D4911	6.728
8	D4926	21.244

write the group back to the database

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

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