BBC Dilution Sampling

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10/17/2016

Background

- Question: Can the vortexing step in the BBC Dilution SOP be omitted, and the solution be mixed directly with the plunger?
- D05 conducted a test to determine whether there is a significant difference at their site with this simplification.
- Goal: Perform simple t-test analysis to determine if there is a significant difference between methods.

```
if (file.exists(
  '/Users/cmeier/Documents/neonScienceDocs/gitRepositories')){
  wdir <- "~/Documents/neonScienceDocs/gitRepositories/neonPlantSampling/bbcProtocolDev"
}

setwd(wdir)

rootDil <- read.csv("D05_dilutionSOPmethodTesting.csv", header=T, stringsAsFactors = F)
```

Analysis

```
m1 <- t.test(dryMass~type, data = rootDil)
m1
```

```
##
##  Welch Two Sample t-test
##
## data:  dryMass by type
## t = -1.4994, df = 13.246, p-value = 0.1572
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.023795513  0.004275513
## sample estimates:
## mean in group DP  mean in group V
##          0.07191          0.08167
```

Summary

- No `dryMass` difference between two groups.
- Slightly more mass in those subsamples that were vortexed.
  - Likely that heavier particles were not brought up into suspension as easily sans vortexing.
- Continue to use vortexing method.