

Synoptic CB: Porewater DIC

June 2024 Samples

2025-10-21

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```

##Setup - Change things here & write any notes

#identify section
cat("Setup Information")

## Setup Information

##### Run information - PLEASE CHANGE
Date_Run = "06/28/2024" #Date that instrument was run
Run_by = "Stephanie Wilson" #Instrument user
Script_run_by = "Stephanie Wilson" #Code user
run_notes = "On this run I accidentally labeled samples as 2023 instead of
2024, so this is changed in the code that reads in the raw data.
No duplicates were included in this run." #any notes from the run
samples <- c("GCW", "GWI", "MSM", "SWH") #whatever identifies your samples within the same names
samples_pattern <- paste(samples, collapse = "|")
#samples_pattern <- "GCW" #use this instead of the line above if you have only one site code
chks_name = "Chk_Std_" #what did you name your check standards?
crm_name = "CRM|crm" #what did you name your CRMS?

##### File Names - PLEASE CHANGE
#file path and name for raw summary data file
raw_file_name = "Raw Data/TOCTN_COMPASS_Synoptic_DIC_202406.txt"

#file path and name for raw all peaks file
raw_allpeaks_name = "Raw Data/TOCTN_COMPASS_Synoptic_DIC_202406_allpeaks.txt"

#file path and name of processed data file
processed_file_name = "Processed Data/COMPASS_SynopticCB_PW_Processed_DIC_202406.csv"

##### Log Files - PLEASE CHECK
#downloaded metadata csv - downloaded from Google drive as csv for this year
Raw_Metadata = "Raw Data/COMPASS_SynopticCB_PW_SampleLog_2024.csv"

#qaqc log file path for this year
Log_path = "Raw Data/COMPASS_Synoptic_DIC_QAQClog_2024.csv"

##Set Up Code
##Read in metadata and create similar sample IDs for matching to samples

```

0.1 Import Data Functions

0.2 Import Sample Data

```
## Import Sample Data
```

```
## New names:
## * ' ' -> '...14'
```

```

## # A tibble: 6 x 3
##   sample_name          ic_raw run_datetime
##   <chr>                <dbl> <chr>
## 1 202406_SWH_UP_LysA_10cm  8.90 6/28/2024 1:40:36 PM
## 2 202406_SWH_UP_LysA_20cm 12.2  6/28/2024 1:51:52 PM
## 3 202406_SWH_UP_LysA_45cm 35.0  6/28/2024 2:04:41 PM
## 4 202406_SWH_UP_LysB_10cm  8.18  6/28/2024 2:15:48 PM
## 5 202406_SWH_UP_LysB_20cm 34.0  6/28/2024 2:28:34 PM
## 6 202406_SWH_UP_LysB_45cm 44.5  6/28/2024 2:41:29 PM

```

0.3 Assessing Standard Curves

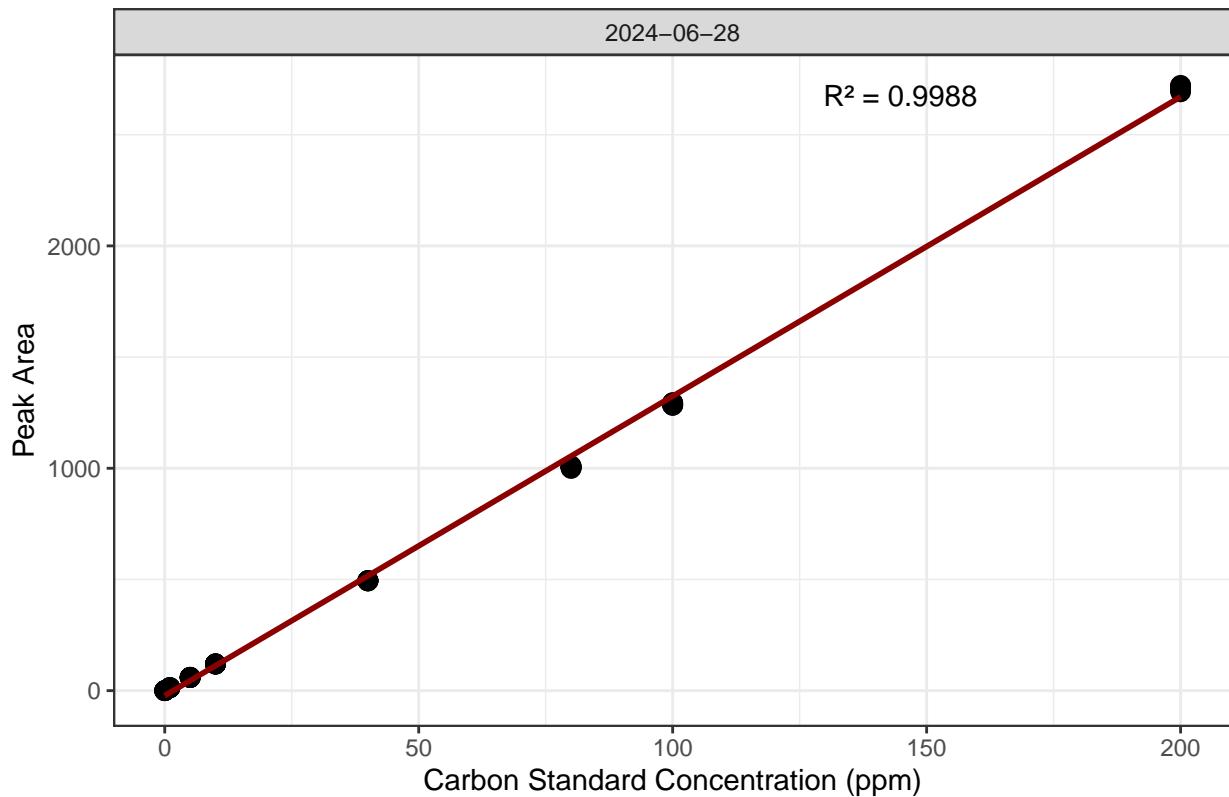
```
## Assess the Standard Curves
```

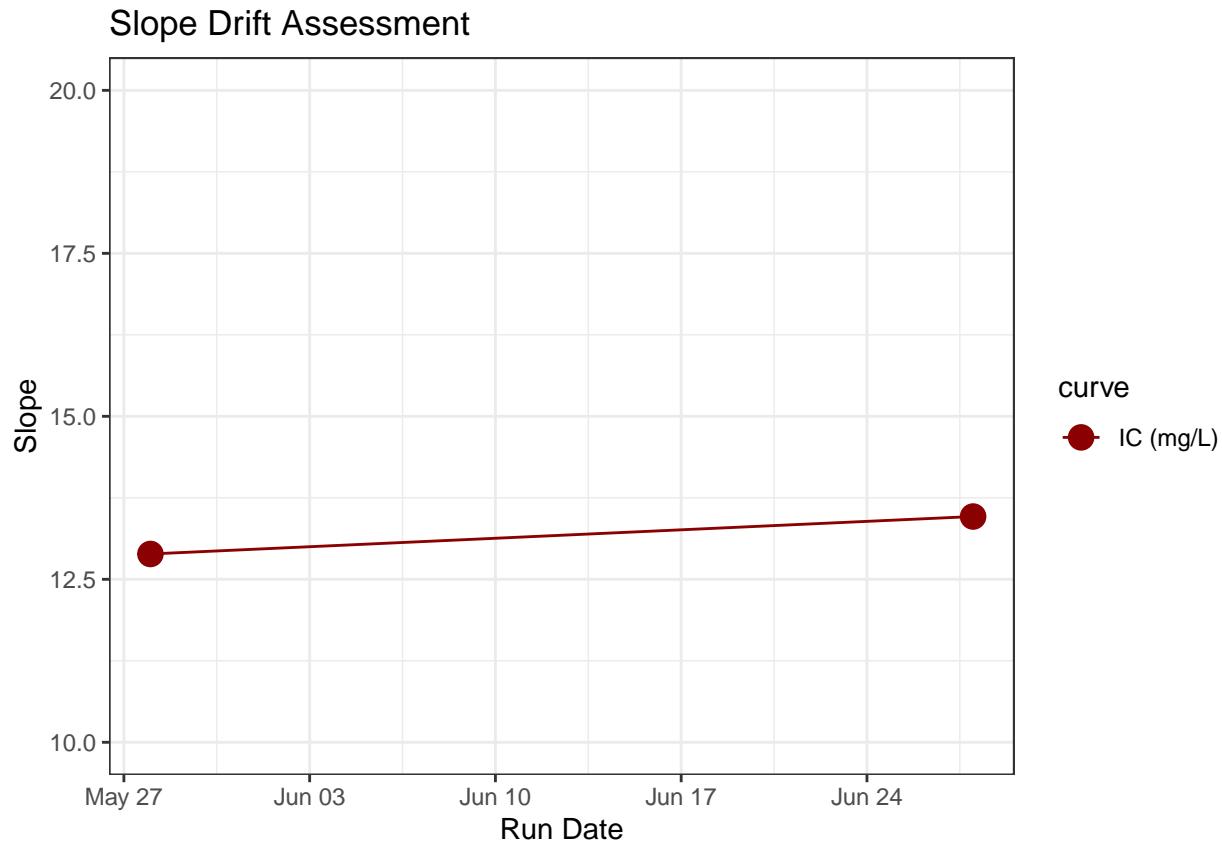
```

## New names:
## `geom_smooth()` using formula = 'y ~ x'
## * ` ` -> '...18'

```

IC Std Curve by Date





```
## [1] "IC Curve r2 GOOD"
```

0.4 CRM Check - Don't run chunk if no CRMs run

```
## Assess the CRMs
```

```
## New names:
## * ` ` -> `...14`
```

```
## [1] NA
```

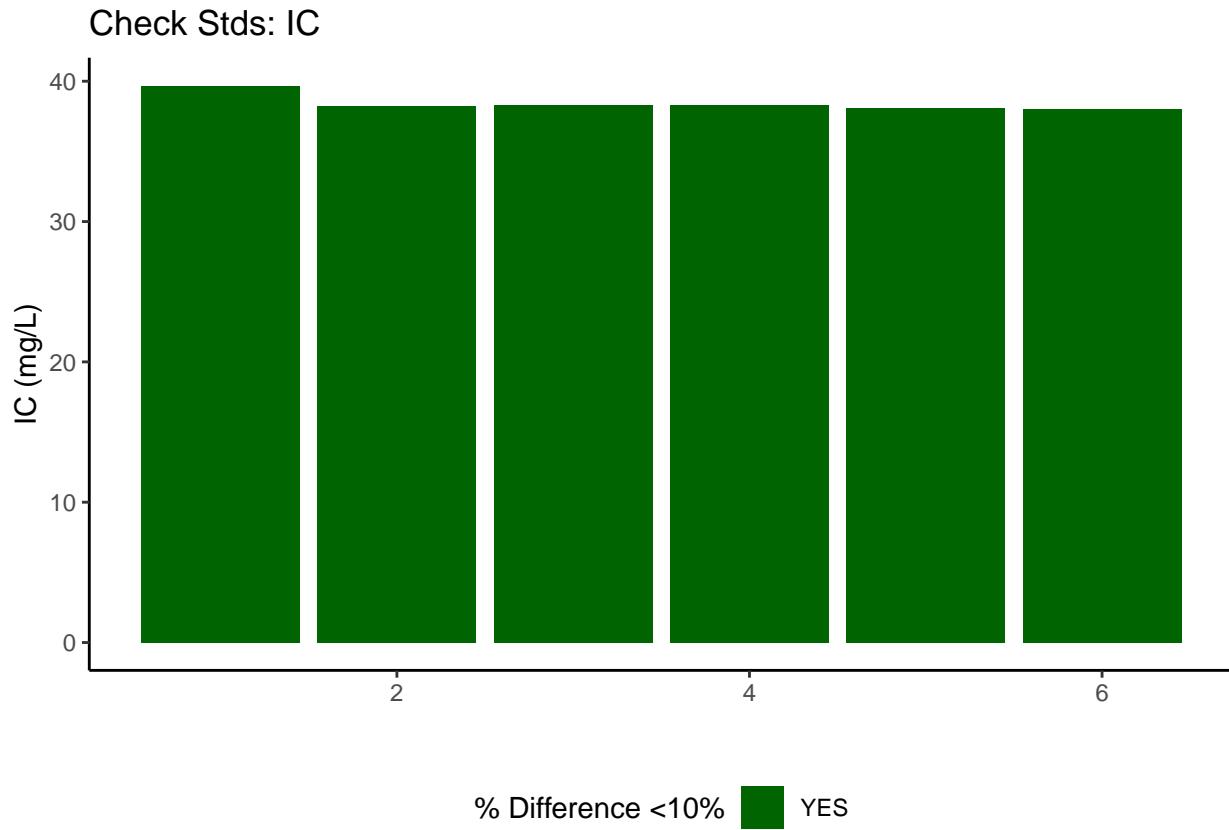
```
## Run mean = NaN
```

```
## Expected = 22.19
```

0.5 Assess Check Standards

```
## Assess the Check Standards
```

```
## New names:
## * ` ` -> `...14`
```



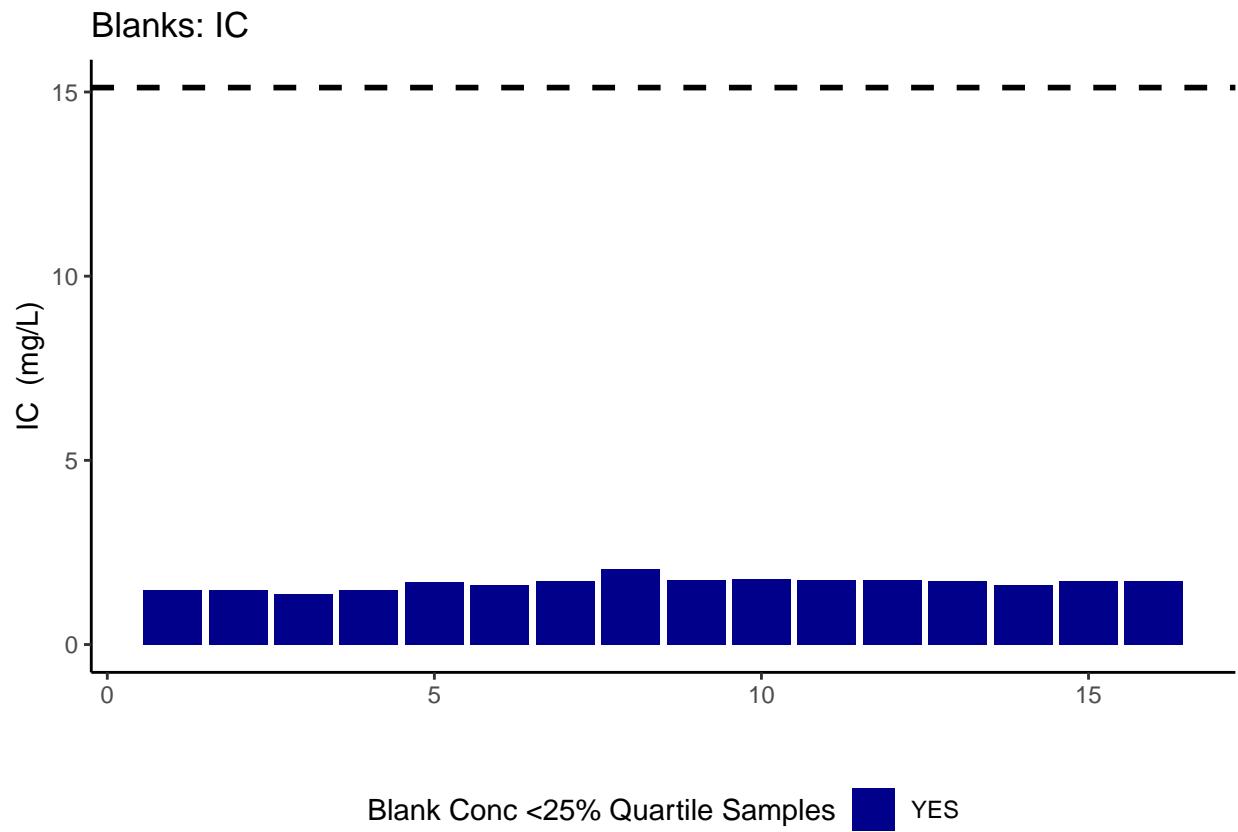
```
## [1] ">60% of IC Check Standards are within range of expected concentration"
```

0.6 Assess Blanks

```
## Assess Blanks
```

```
## New names:  
## * ' ' -> '...14'
```

```
## [1] ">60% of Carbon Blank concentrations are lower 25% quartile of samples"
```



```
## carbon blanks:
```

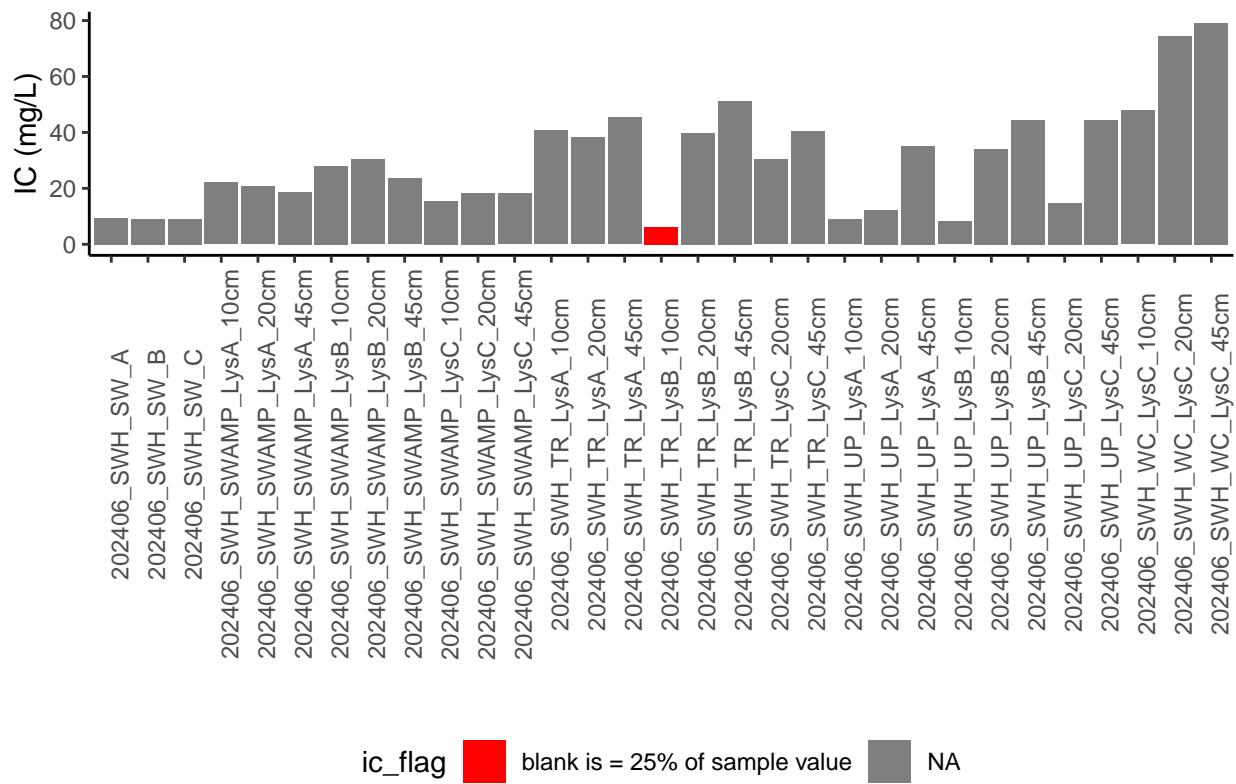
```
## [1] 1.671188
```

0.7 Assess Duplicates - No duplicates on this run

0.8 Sample Flagging - Are samples Within the range of the curve?

```
## Sample Flagging
```

C: Grey = Within Range of Curve

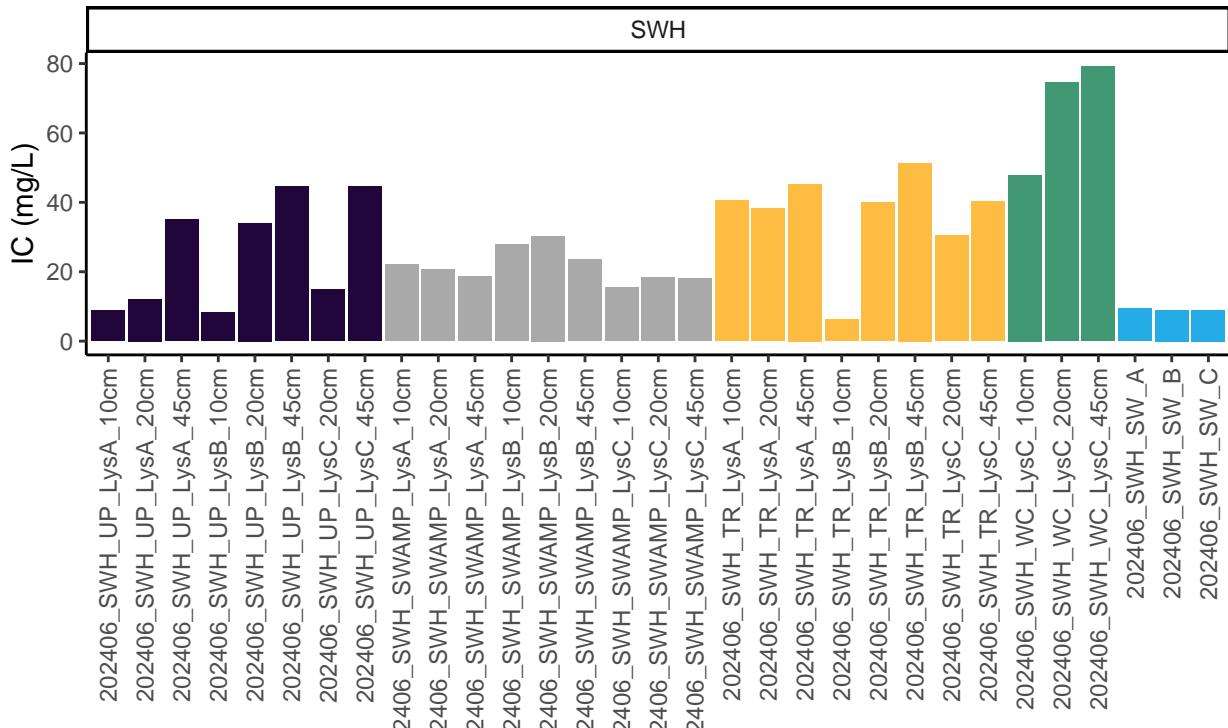


0.9 Visualize Data by Plot

```
## Visualize Data

## Warning in rbind(c("202406", "SWH", "UP", "LysA", "10cm"), c("202406", "SWH", :
## number of columns of result is not a multiple of vector length (arg 29)
```

Samples: DIC



0.10 Convert data from mg/L to uMoles/L

0.11 Check to see if samples run match metadata & merge info

```
## Check Sample IDs with Metadata
## All sample IDs are present in metadata.
```

0.12 Export Processed Data

```
## Export Processed Data
## # A tibble: 6 x 18
##   Project      Region Site  Zone  Replicate Depth_cm Sample_ID Year Month Day
##   <chr>        <chr>  <chr> <fct> <chr>       <int> <chr>    <int> <int> <int>
## 1 COMPASS: Sy~ CB     SWH   UP    A           10  202406_S~ 2024    6    26
## 2 COMPASS: Sy~ CB     SWH   UP    A           20  202406_S~ 2024    6    26
## 3 COMPASS: Sy~ CB     SWH   UP    A           45  202406_S~ 2024    6    26
## 4 COMPASS: Sy~ CB     SWH   UP    B           10  202406_S~ 2024    6    26
## 5 COMPASS: Sy~ CB     SWH   UP    B           20  202406_S~ 2024    6    26
## 6 COMPASS: Sy~ CB     SWH   UP    B           45  202406_S~ 2024    6    26
## # i 8 more variables: Time <chr>, Time_Zone <chr>, ic_mgL <dbl>, ic_uM <dbl>,
## #   ic_flag <chr>, Analysis_runtime <chr>, Run_notes <chr>, Field_notes <chr>
#end
```