

# Synoptic CB: Porewater DIC

September 2023 Samples

2025-10-25

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```
##Setup - Change things here & write any notes
```

```
#identify section  
cat("Setup Information")
```

```
## Setup Information
```

```
##### Run information - PLEASE CHANGE  
Date_Run = "09/15/23" #Date that instrument was run  
Run_by = "Stephanie J. Wilson" #Instrument user  
Script_run_by = "Stephanie J. Wilson" #Code user  
run_notes = " " #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 = c("Raw Data/TOCTN_COMPASS_Synoptic_DIC_202309_1.txt",  
                  "Raw Data/TOCTN_COMPASS_Synoptic_DIC_202309_2.txt")  
  
#file path and name for raw all peaks file  
# raw_allpeaks_name = c("Raw Data/COMPASS_SynopticCB_PW_DIC_202308_1_allpeaks.txt",  
#                        "Raw Data/COMPASS_SynopticCB_PW_DIC_202308_2_allpeaks.txt")  
  
#file path and name of processed data file  
processed_file_name = "Processed Data/COMPASS_SynopticCB_PW_Processed_DIC_202309.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_2023.csv"  
  
#qaqc log file path for this year  
#Log_path = "Raw Data/COMPASS_Synoptic_DIC_QAQClog_2023.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:  
## New names:  
## * ' ' -> '...14'
```

```
## # A tibble: 6 x 3
##   sample_name          ic_raw run_datetime
##   <chr>              <dbl> <chr>
## 1 202309_GCW_TR_LysA_45cm 46.1 9/15/2023 8:54:24 PM
## 2 202309_GCW_TR_LysB_10cm  9.52 9/15/2023 9:06:07 PM
## 3 202309_GCW_TR_LysB_20cm 21.2 9/15/2023 9:18:30 PM
## 4 202309_GCW_WC_LysA_10cm 115. 9/15/2023 9:34:05 PM
## 5 202309_GCW_WC_LysA_20cm 158. 9/15/2023 9:51:26 PM
## 6 202309_GCW_WC_LysA_45cm 163 9/15/2023 10:15:14 PM
```

### 0.3 Assessing Standard Curves - assessed on the instrument manually

### 0.4 CRM Check - No CRMs run on this run

```
## Assess the CRMs
```

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

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

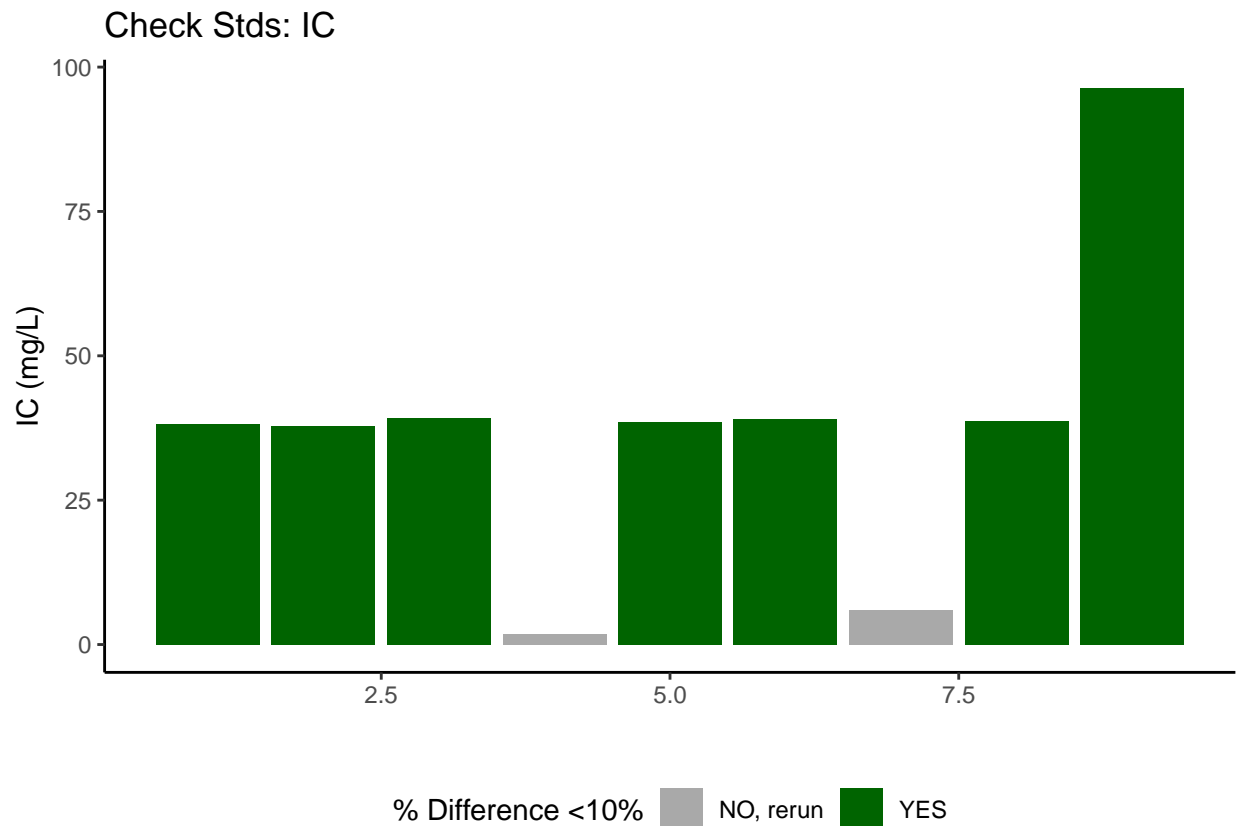
```
## Run mean = NaN
```

```
## Expected = 22.19
```

### 0.5 Assess Check Standards

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

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



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

## 0.6 Assess Blanks

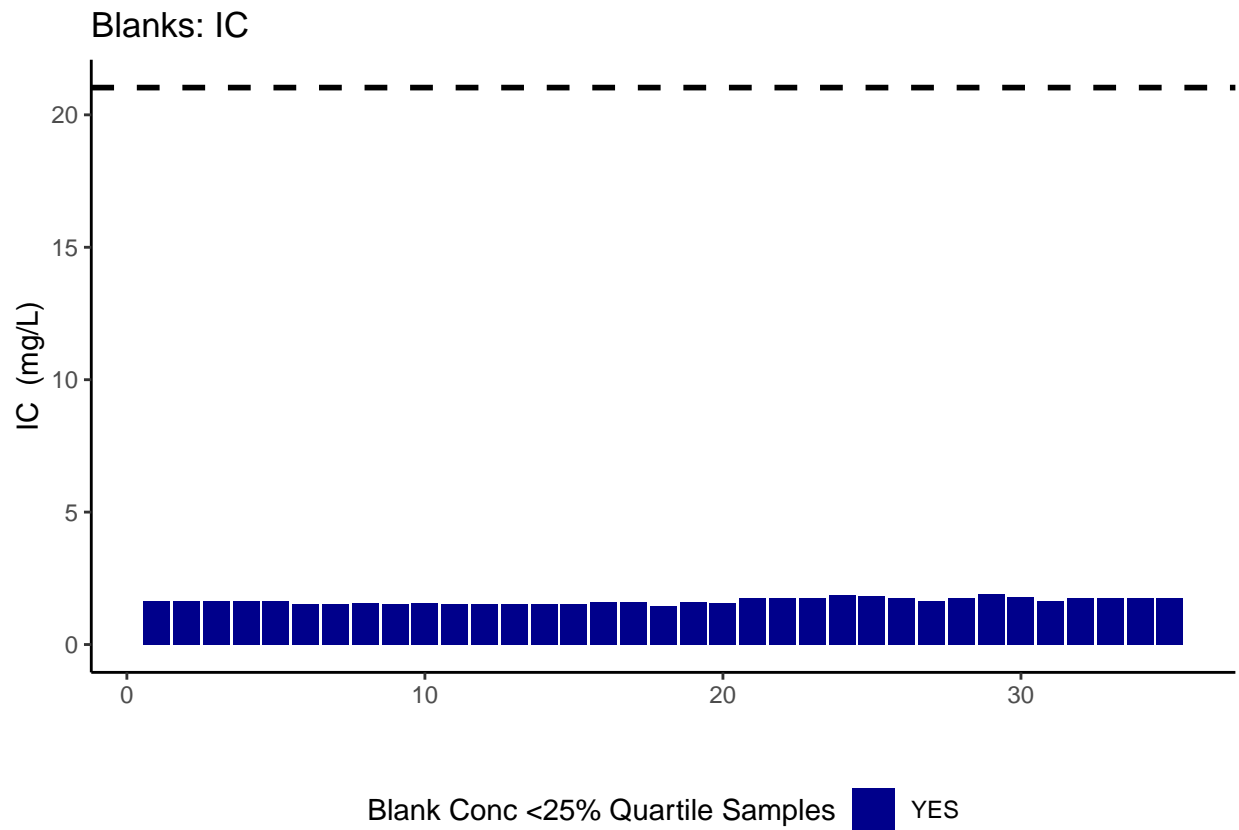
```
## Assess Blanks
```

```
## New names:
```

```
## New names:
```

```
## * ' ' -> '...14'
```

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

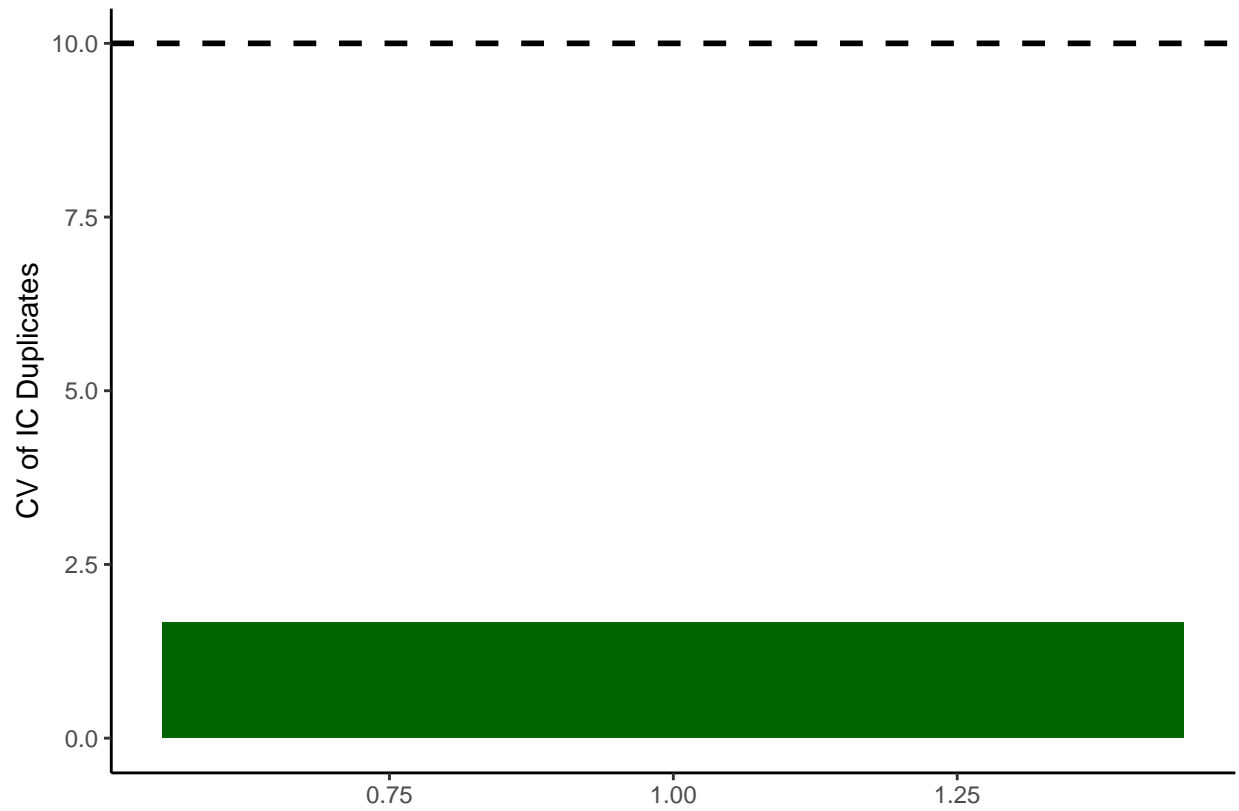


```
## carbon blanks:
```

```
## [1] 1.652571
```

## 0.7 Assess Duplicates

```
## Assess Duplicates
```

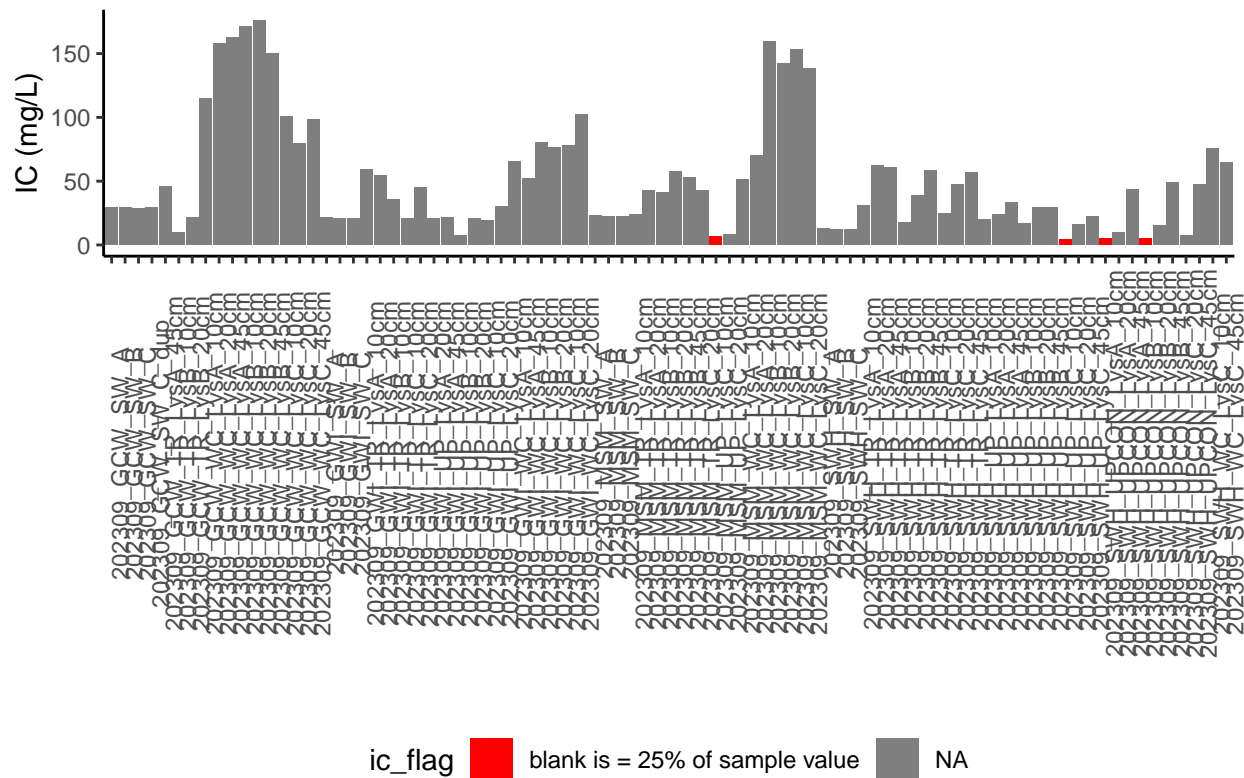


```
## [1] ">60% of Carbon Duplicates have a CV <10%"
```

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

```
## Sample Flagging
```

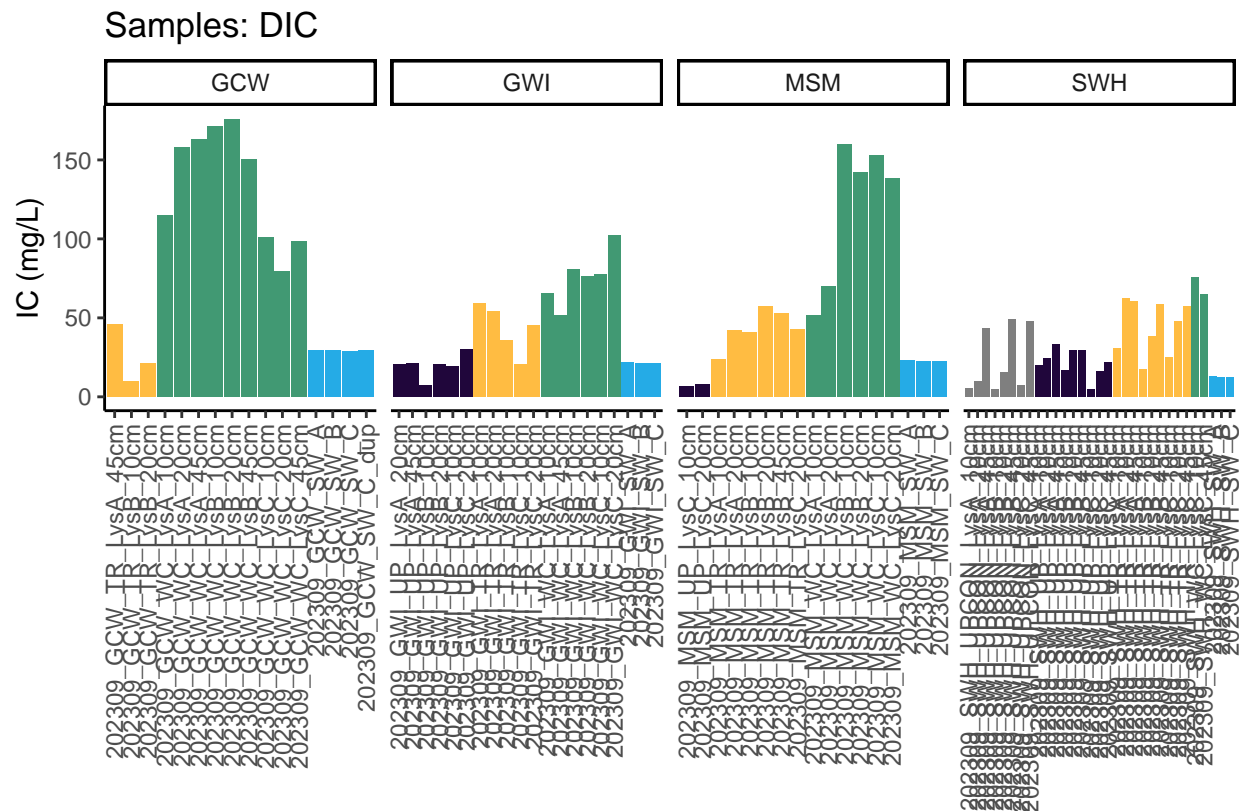
C: Grey = Within Range of Curve



## 0.9 Visualize Data by Plot

```
## Visualize Data
```

```
## Warning in rbind(c("202309", "GCW", "TR", "LysA", "45cm"), c("202309", "GCW", :
## number of columns of result is not a multiple of vector length (arg 13)
```



## 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 UPCON A          10 202309_S~ 2023 9 20
## 2 COMPASS: Sy~ CB SWH UPCON A          20 202309_S~ 2023 9 20
## 3 COMPASS: Sy~ CB SWH UPCON A          45 202309_S~ 2023 9 20
## 4 COMPASS: Sy~ CB SWH UPCON B          10 202309_S~ 2023 9 20
## 5 COMPASS: Sy~ CB SWH UPCON B          20 202309_S~ 2023 9 20
## 6 COMPASS: Sy~ CB SWH UPCON B          45 202309_S~ 2023 9 20
## # i 8 more variables: Time <lgl>, Time_Zone <lgl>, ic_mgL <dbl>, ic_uM <dbl>,
## # ic_flag <chr>, Analysis_runtime <chr>, Run_notes <chr>, Field_notes <chr>

#end
```