

# Synoptic CB: Porewater DIC

October 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 = "10/27/23" #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 = "Raw Data/TOCTN_COMPASS_Synoptic_DIC_202310.txt"  
  
#file path and name for raw all peaks file  
  # raw_allpeaks_name = "Raw Data/COMPASS_SynopticCB_PW_DIC_2025MM_allpeaks.txt"  
  
#file path and name of processed data file  
processed_file_name = "Processed Data/COMPASS_SynopticCB_PW_Processed_DIC_202310.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"  
  
#qac log file path for this year  
  # Log_path = "Raw Data/COMPASS_Synoptic_DIC_QAClog_2025.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 202310_MSM_UP_LysB_10cm 28.0 10/27/2023 8:18:39 PM
## 2 202310_MSM_UP_LysC_10cm 16.2 10/27/2023 8:33:39 PM
## 3 202310_MSM_UP_LysC_20cm 23.4 10/27/2023 8:48:54 PM
## 4 202310_MSM_TR_LysA_10cm 31.6 10/27/2023 9:04:28 PM
## 5 202310_MSM_TR_LysA_20cm 35.9 10/27/2023 9:26:26 PM
## 6 202310_MSM_TR_LysB_10cm 32.3 10/27/2023 9:54:27 PM
```

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

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

```
## Assess the CRMs
```

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

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

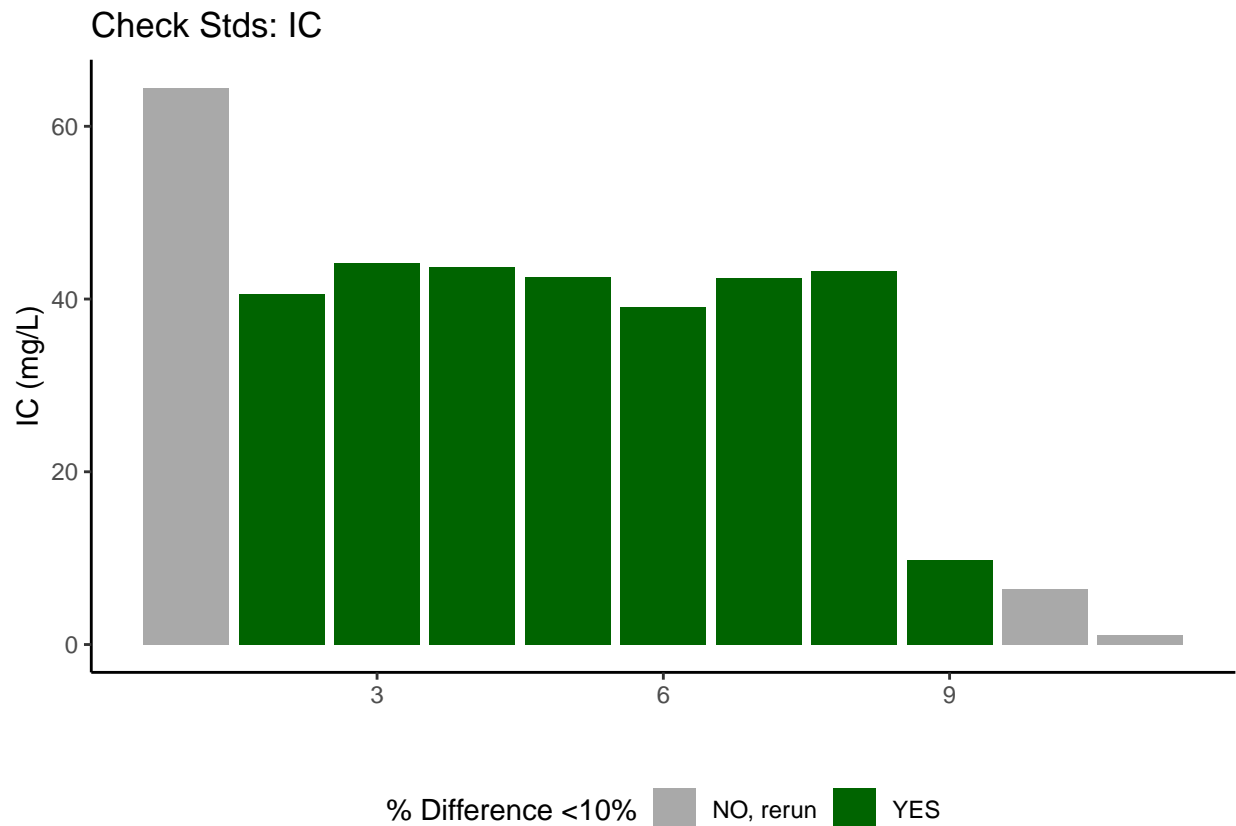
```
## Run mean = NaN
```

```
## 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"
```

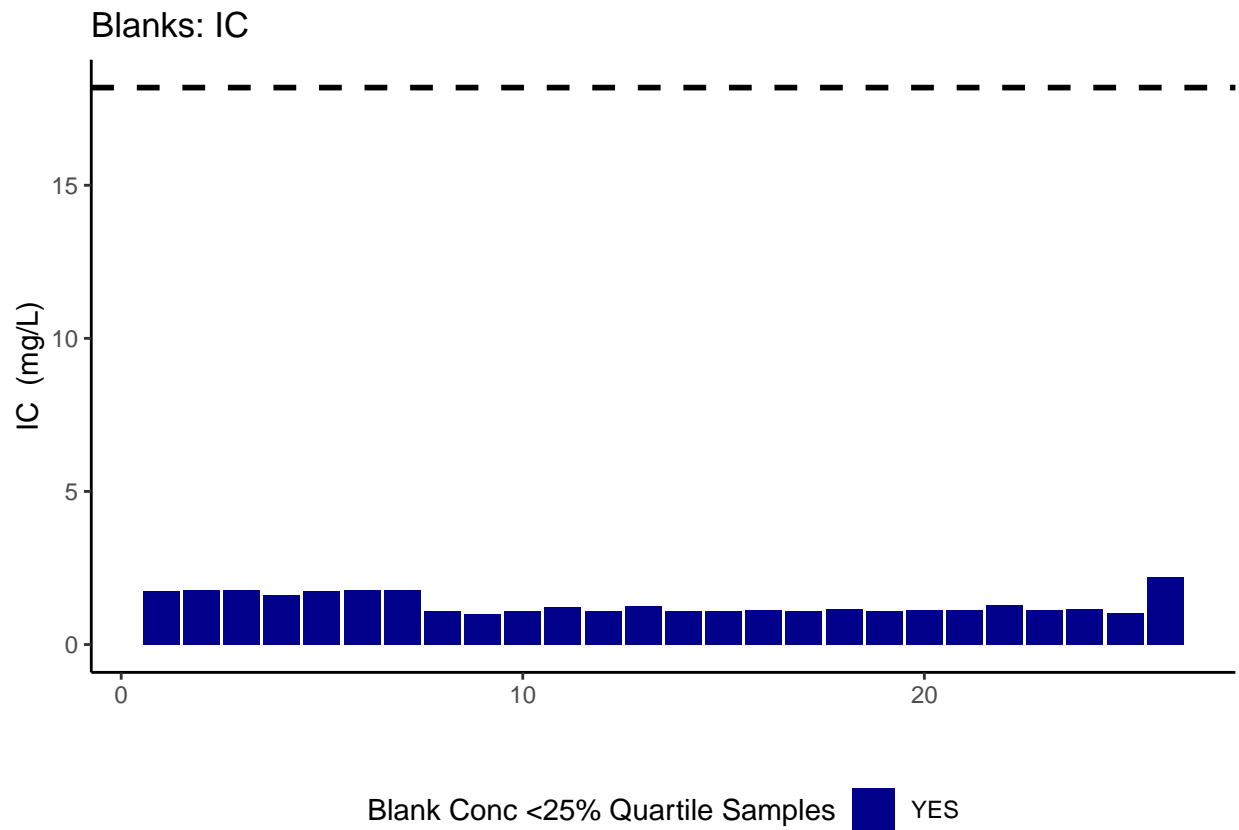
## 0.6 Assess Blanks

```
## Assess Blanks
```

```
## New names:
```

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

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

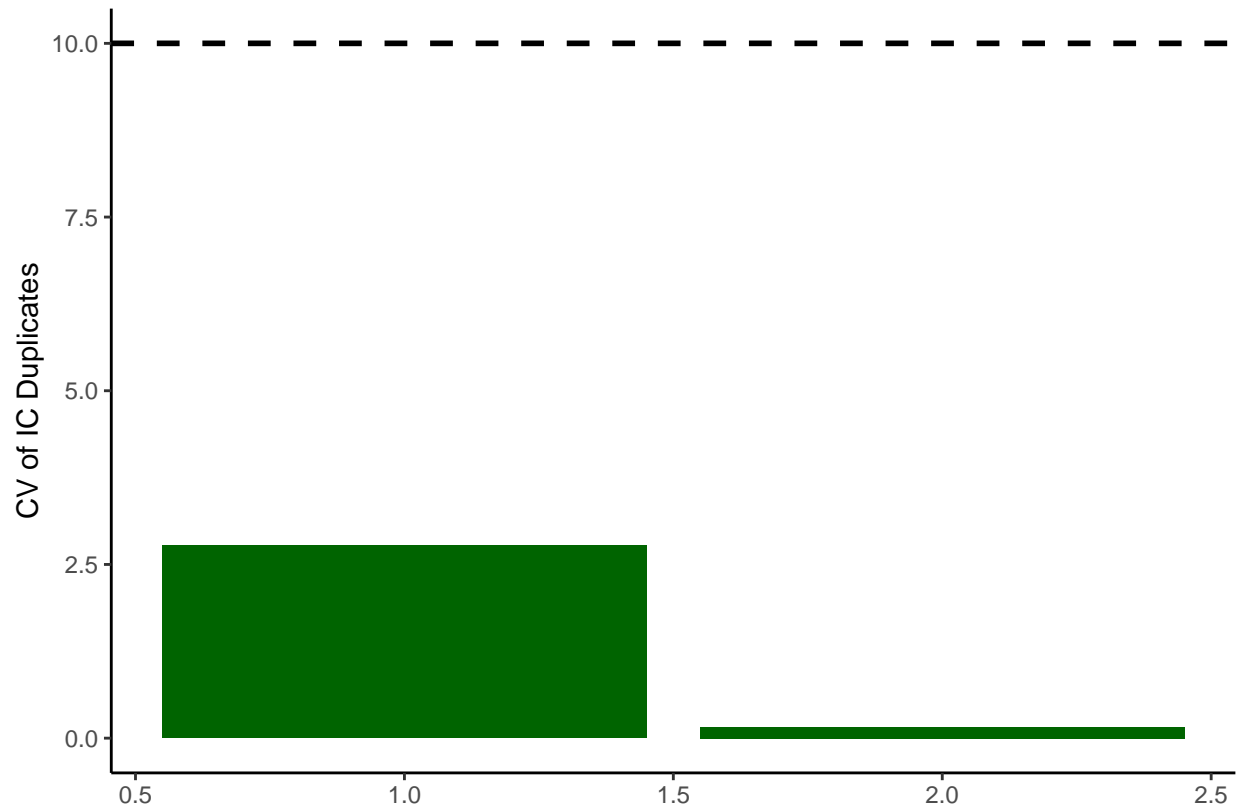


```
## carbon blanks:
```

```
## [1] 1.338454
```

## 0.7 Assess Duplicates

```
## Assess Duplicates
```

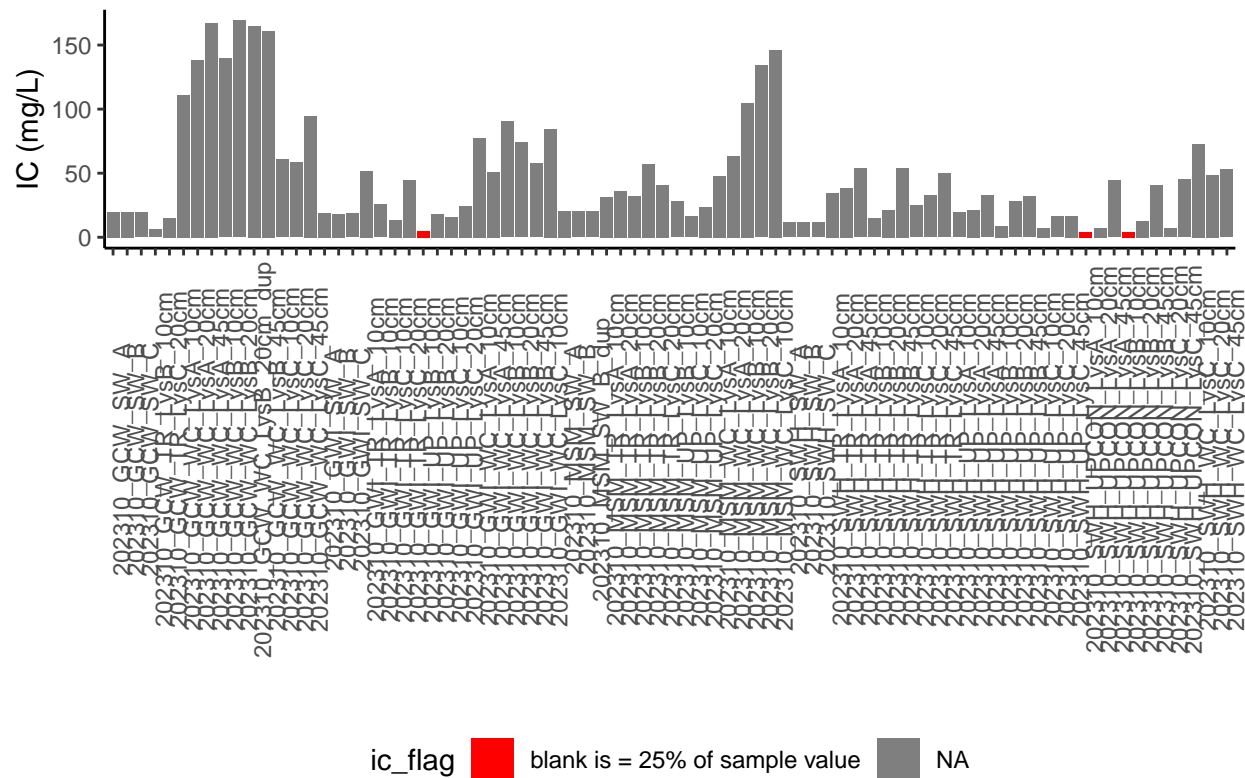


```
## [1] ">60% of Carbon Duplicates have a CV <10%"
```

## 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("202310", "MSM", "UP", "LysB", "10cm"), c("202310", "MSM", :
## number of columns of result is not a multiple of vector length (arg 1)
```

The figure consists of four bar charts labeled GCW, GWI, MSM, and SWH, each showing IC concentration (mg/L) on the y-axis (0 to 150). The x-axis for each chart lists sampling locations and dates. The locations are color-coded: orange for GCW, purple for GWI, green for MSM, and grey for SWH. The dates range from 2023 to 2023-10.

Location	Date	GCW (mg/L)	GWI (mg/L)	MSM (mg/L)	SWH (mg/L)
10cm	2023-10-20	~10	~10	~30	~10
20cm	2023-10-20	~15	~20	~20	~10
30cm	2023-10-20	~110	~20	~15	~10
40cm	2023-10-20	~140	~25	~30	~10
50cm	2023-10-20	~170	~50	~35	~10
60cm	2023-10-20	~140	~25	~35	~10
70cm	2023-10-20	~170	~45	~40	~10
80cm	2023-10-20	~165	~15	~40	~10
90cm	2023-10-20	~160	~75	~45	~10
100cm	2023-10-20	~160	~50	~45	~10
110cm	2023-10-20	~160	~85	~60	~10
120cm	2023-10-20	~160	~75	~105	~10
130cm	2023-10-20	~160	~60	~145	~10
140cm	2023-10-20	~95	~85	~15	~10
150cm	2023-10-20	~60	~20	~20	~10
160cm	2023-10-20	~60	~20	~20	~10
170cm	2023-10-20	~20	~20	~20	~10
180cm	2023-10-20	~20	~20	~20	~10
190cm	2023-10-20	~20	~20	~20	~10
200cm	2023-10-20	~20	~20	~20	~10
210cm	2023-10-20	~20	~20	~20	~10
220cm	2023-10-20	~20	~20	~20	~10
230cm	2023-10-20	~20	~20	~20	~10
240cm	2023-10-20	~20	~20	~20	~10
250cm	2023-10-20	~20	~20	~20	~10
260cm	2023-10-20	~20	~20	~20	~10
270cm	2023-10-20	~20	~20	~20	~10
280cm	2023-10-20	~20	~20	~20	~10
290cm	2023-10-20	~20	~20	~20	~10
300cm	2023-10-20	~20	~20	~20	~10
310cm	2023-10-20	~20	~20	~20	~10
320cm	2023-10-20	~20	~20	~20	~10
330cm	2023-10-20	~20	~20	~20	~10
340cm	2023-10-20	~20	~20	~20	~10
350cm	2023-10-20	~20	~20	~20	~10
360cm	2023-10-20	~20	~20	~20	~10
370cm	2023-10-20	~20	~20	~20	~10
380cm	2023-10-20	~20	~20	~20	~10
390cm	2023-10-20	~20	~20	~20	~10
400cm	2023-10-20	~20	~20	~20	~10
410cm	2023-10-20	~20	~20	~20	~10
420cm	2023-10-20	~20	~20	~20	~10
430cm	2023-10-20	~20	~20	~20	~10
440cm	2023-10-20	~20	~20	~20	~10
450cm	2023-10-20	~20	~20	~20	~10
460cm	2023-10-20	~20	~20	~20	~10
470cm	2023-10-20	~20	~20	~20	~10
480cm	2023-10-20	~20	~20	~20	~10
490cm	2023-10-20	~20	~20	~20	~10
500cm	2023-10-20	~20	~20	~20	~10
510cm	2023-10-20	~20	~20	~20	~10
520cm	2023-10-20	~20	~20	~20	~10
530cm	2023-10-20	~20	~20	~20	~10
540cm	2023-10-20	~20	~20	~20	~10
550cm	2023-10-20	~20	~20	~20	~10
560cm	2023-10-20	~20	~20	~20	~10
570cm	2023-10-20	~20	~20	~20	~10
580cm	2023-10-20	~20	~20	~20	~10
590cm	2023-10-20	~20	~20	~20	~10
600cm	2023-10-20	~20	~20	~20	~10
610cm	2023-10-20	~20	~20	~20	~10
620cm	2023-10-20	~20	~20	~20	~10
630cm	2023-10-20	~20	~20	~20	~10
640cm	2023				

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

```
## All sample IDs are present in metadata.
```

## ## Export Processed Data

#end