

Synoptic CB: Porewater DIC

May 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 = "06/05/23" #Date that instrument was run  
Run_by = "Instrument User" #Instrument user  
Script_run_by = "Code User" #Code user  
run_notes = " The standard curve for this run was checked manually on the instrument. " #any notes f  
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_202305.txt"  
  
#file path and name for raw all peaks file  
raw_allpeaks_name = "Raw Data/TOCTN_COMPASS_Synoptic_DIC_202305_allpeaks.txt"  
  
#file path and name of processed data file  
processed_file_name = "Processed Data/COMPASS_SynopticCB_PW_Processed_DIC_202305.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:
```

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

```
## # A tibble: 6 x 3
```

```
##   sample_name          ic_raw run_datetime  
##   <chr>              <dbl> <chr>
```

```
## 1 GCW_202305_TR_LysB_10cm 39.5 6/5/2023 3:54:24 PM
## 2 GCW_202305_TR_LysB_20cm 35.5 6/5/2023 4:18:07 PM
## 3 GCW_202305_WC_LysA_10cm 69.5 6/5/2023 4:47:05 PM
## 4 GCW_202305_WC_LysA_20cm 82.3 6/5/2023 5:18:20 PM
## 5 GCW_202305_WC_LysA_45cm 151 6/5/2023 5:43:41 PM
## 6 GCW_202305_WC_LysB_10cm 72.5 6/5/2023 6:07:36 PM
```

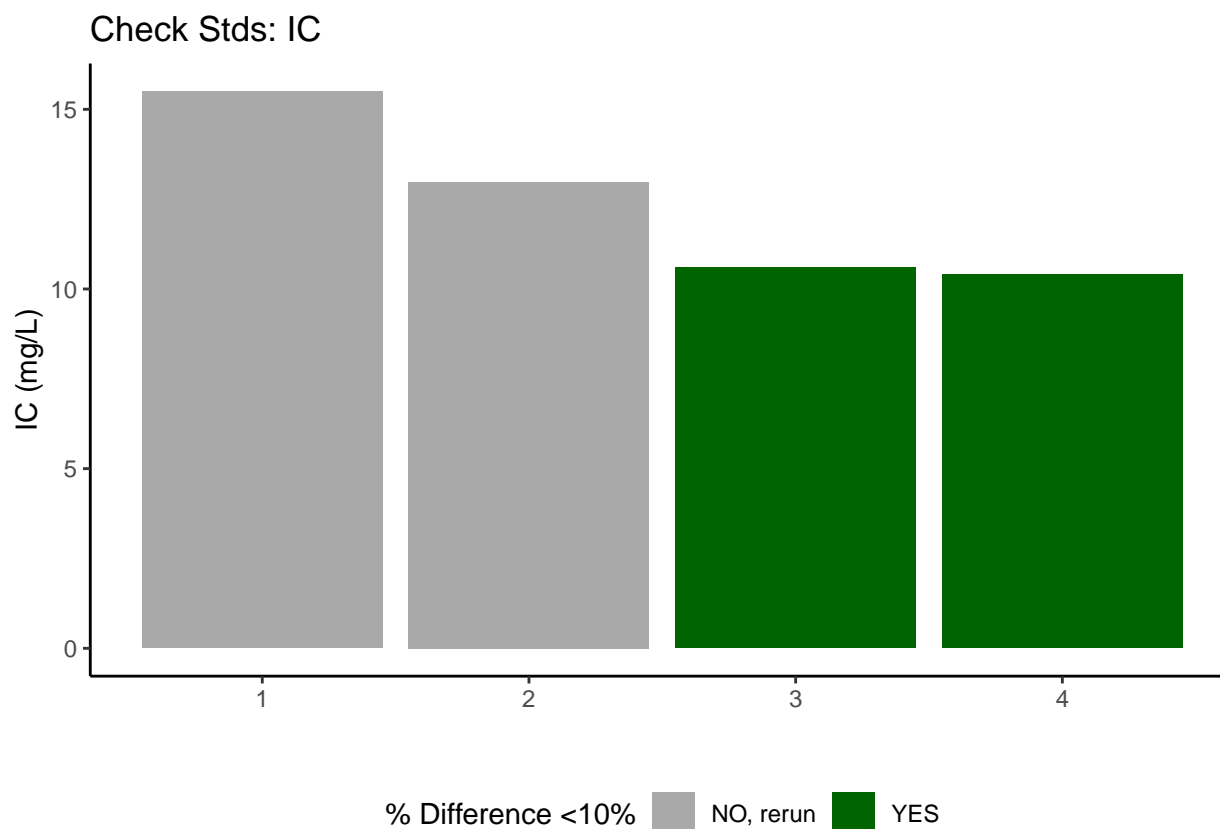
0.3 Assessing Standard Curves - this was done manually on the TOC, not included here

0.4 CRM Check - No CRMs on this run

0.5 Assess Check Standards

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

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



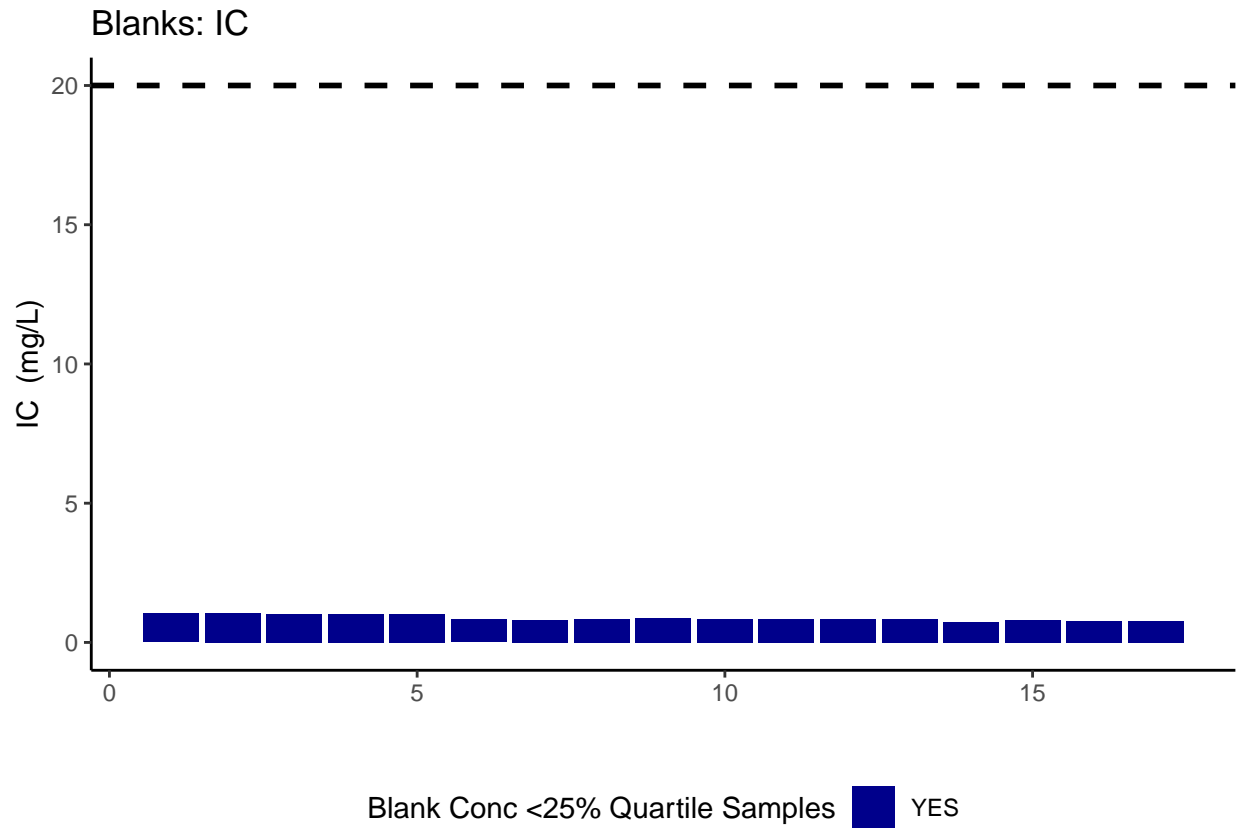
```
## [1] ">60% of IC Check Standards are within range of expected concentration"
```

0.6 Assess Blanks

```
## Assess Blanks
```

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

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

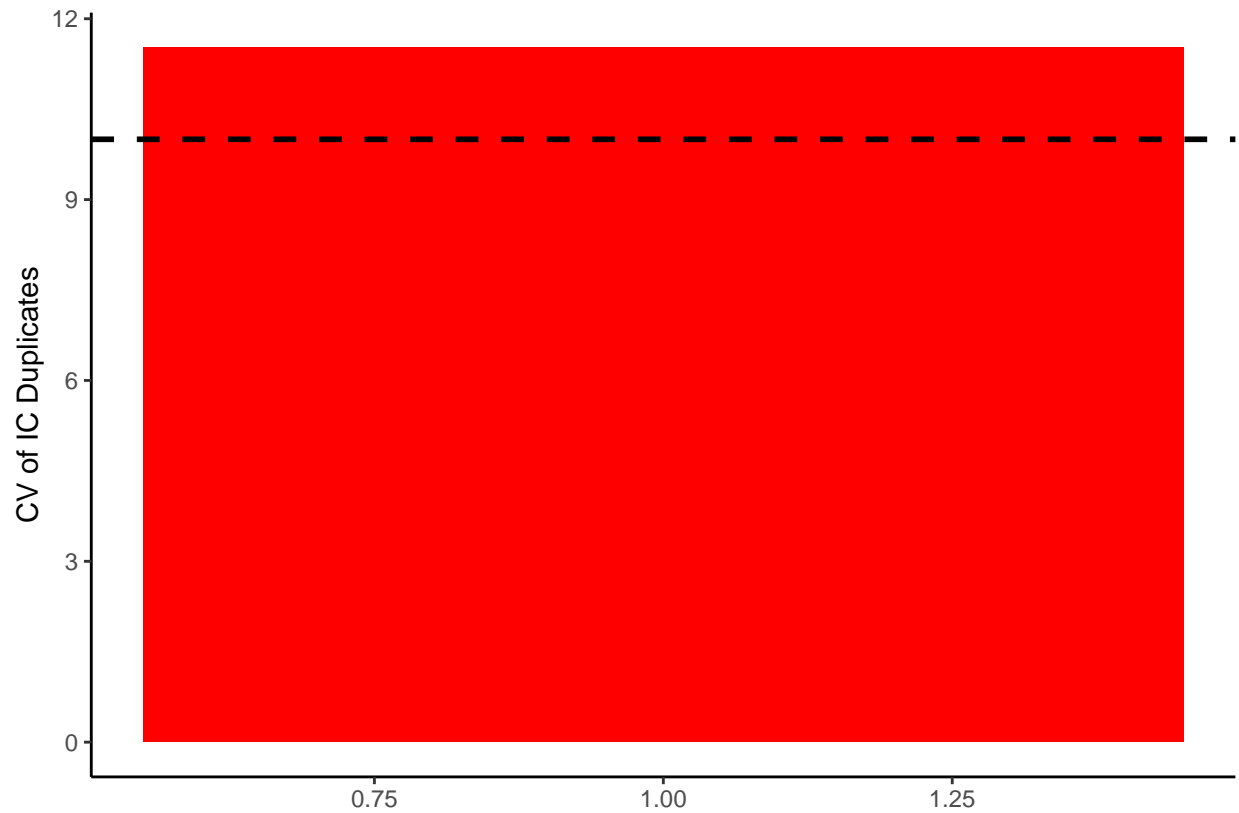


```
## carbon blanks:
```

```
## [1] 0.8814941
```

0.7 Assess Duplicates

```
## Assess Duplicates
```

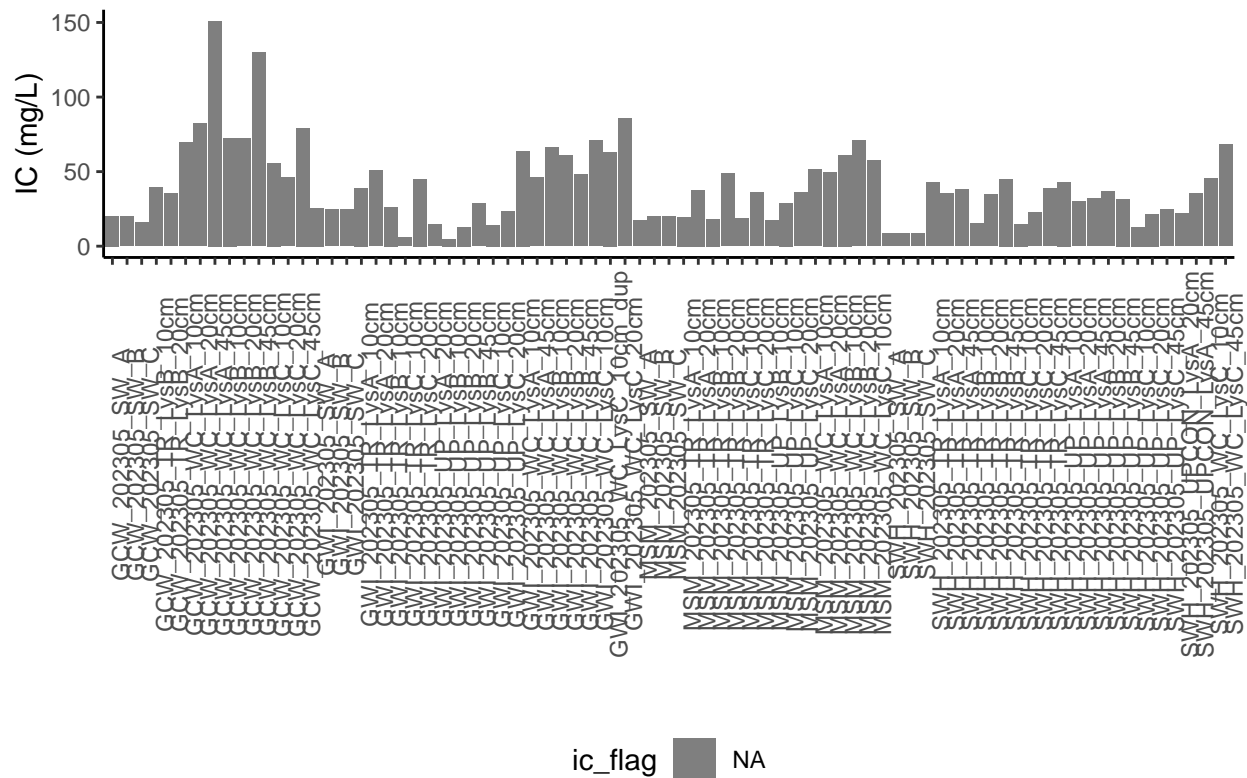


```
## [1] "<60% of Carbon Duplicates have a CV <10% - REASSESS"
```

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

```
## Sample Flagging
```

C: Grey = Within Range of Curve

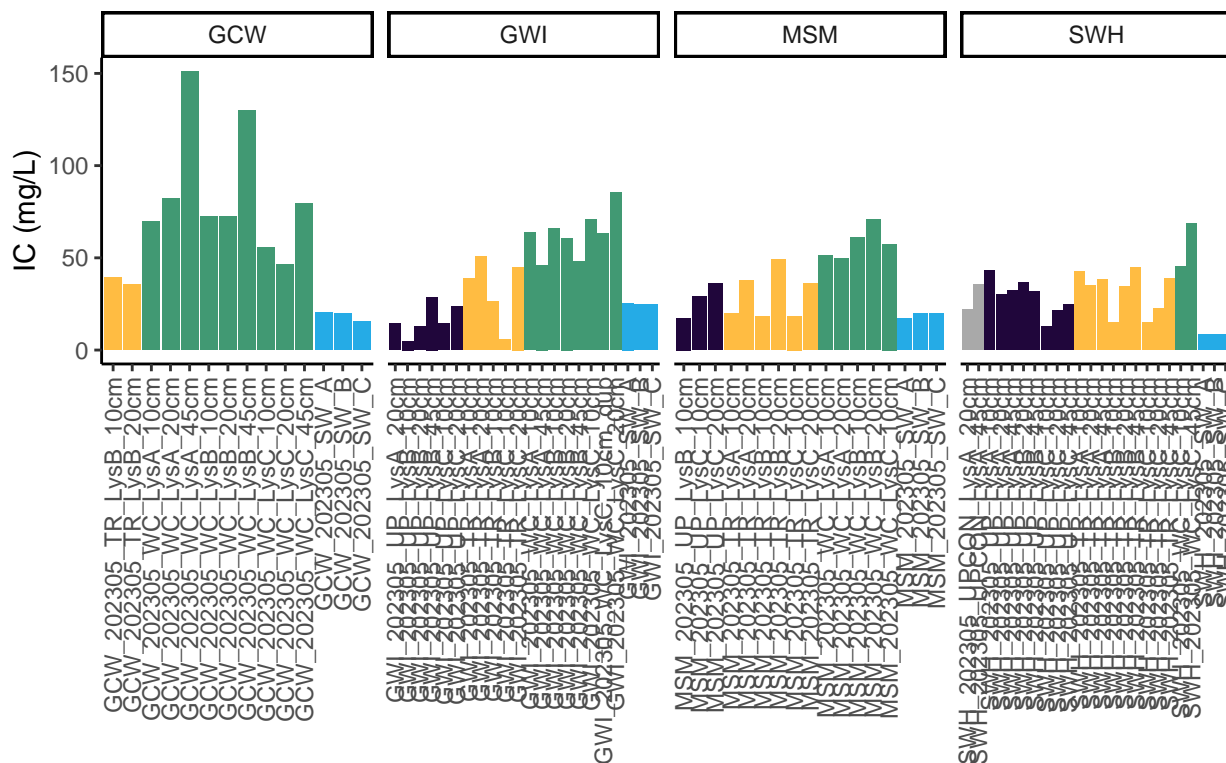


0.9 Visualize Data by Plot - in 2023 SWH Upland = UPCON and Swamp = UP

```
## Visualize Data
```

```
## Warning in rbind(c("GCW", "202305", "TR", "LysB", "10cm"), c("GCW", "202305", :
## number of columns of result is not a multiple of vector length (arg 1)
```

Samples: DIC



0.10 Convert data from mg/L to uMoles/L

0.11 Check to see if samples run match metadata & merge info - 2023 data needs entered

```
## 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	20	SWH_2023~	2023	5	24
## 2	COMPASS: Sy~	CB	SWH	UPCON	A	45	SWH_2023~	2023	5	24
## 3	COMPASS: Sy~	CB	MSM	UP	B	10	MSM_2023~	2023	5	19
## 4	COMPASS: Sy~	CB	MSM	UP	C	10	MSM_2023~	2023	5	19
## 5	COMPASS: Sy~	CB	MSM	UP	C	20	MSM_2023~	2023	5	19
## 6	COMPASS: Sy~	CB	GWI	UP	A	20	GWI_2023~	2023	5	23
## #	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