

# Synoptic CB: Porewater DIC

September 2025 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 = "09/22/25" #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/COMPASS_SynopticCB_PW_DIC_202509.txt"  
  
#file path and name for raw all peaks file  
raw_allpeaks_name = "Raw Data/COMPASS_SynopticCB_PW_DIC_202509_allpeaks.txt"  
  
#file path and name of processed data file  
processed_file_name = "Processed Data/COMPASS_SynopticCB_PW_Processed_DIC_202509.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_2025.csv"  
  
#qaqc log file path for this year  
Log_path = "Raw Data/COMPASS_Synoptic_DIC_QAQClog_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
```

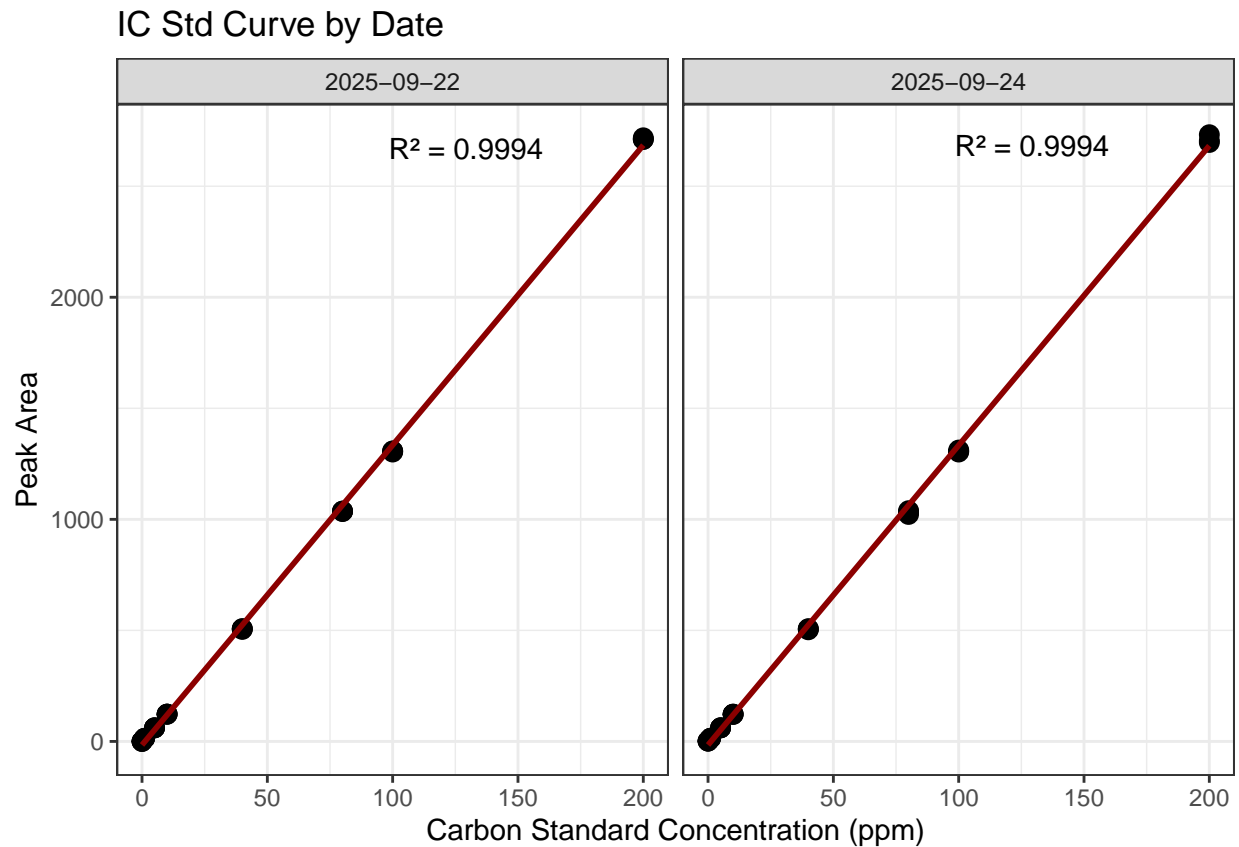
```
##   sample_name      ic_raw run_datetime  
##   <chr>          <dbl> <chr>
```

```
## 1 202509_GCW_TR_LysB_10cm 4.59 9/23/2025 2:34:07 AM
## 2 202509_GCW_WC_LysA_10cm 150 9/23/2025 2:49:08 AM
## 3 202509_GCW_WC_LysA_20cm 147. 9/23/2025 3:05:24 AM
## 4 202509_GCW_WC_LysA_45cm 182. 9/23/2025 3:26:43 AM
## 5 202509_GCW_WC_LysB_10cm 162. 9/23/2025 3:42:42 AM
## 6 202509_GCW_WC_LysB_20cm 158. 9/23/2025 4:01:13 AM
```

### 0.3 Assessing Standard Curves

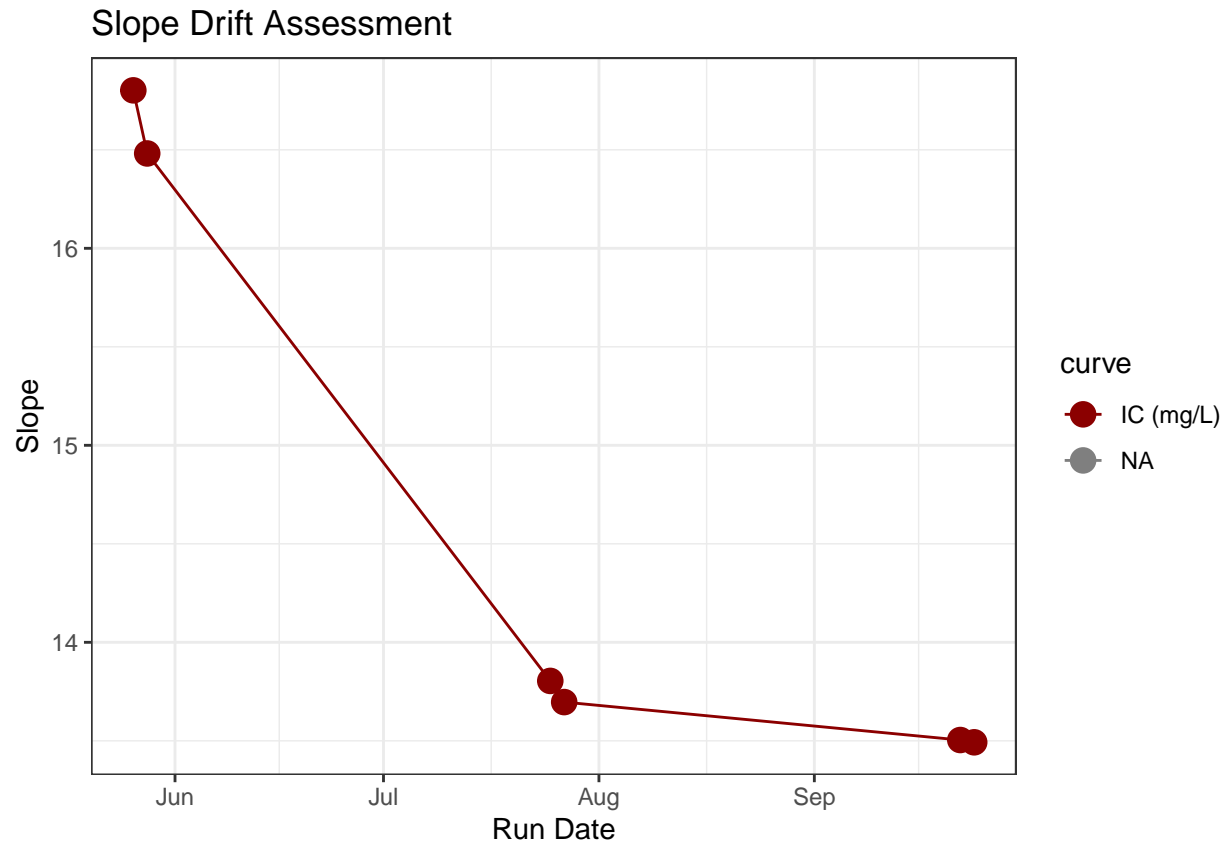
```
## Assess the Standard Curves
```

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



```
## Warning: Removed 4 rows containing missing values or values outside the scale range
## ('geom_point()').
```

```
## Warning: Removed 4 rows containing missing values or values outside the scale range
## ('geom_line()').
```



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

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

```
## Assess the CRMs
```

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

```
## [1] "IC crm has a % Difference <25% of expected - PROCEED"
```

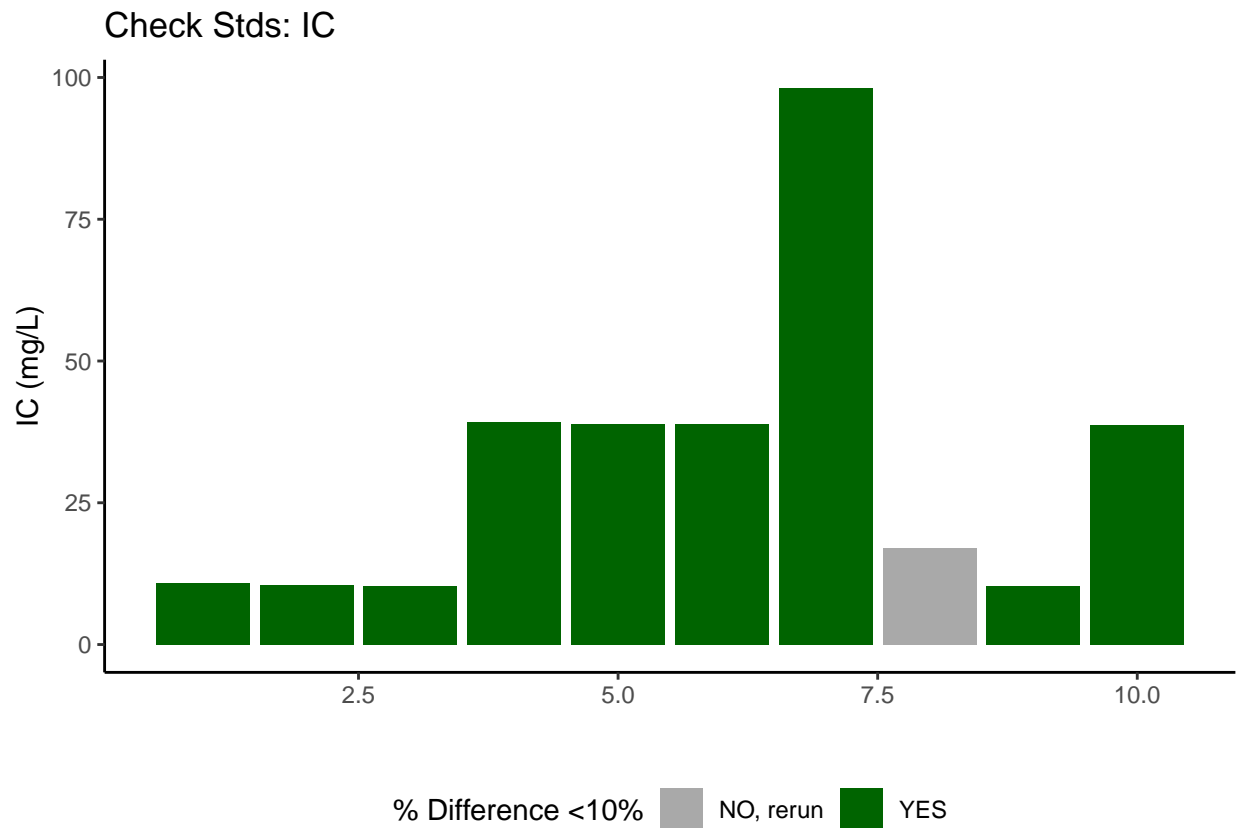
```
## Run mean = 22.68
```

```
## 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"
```

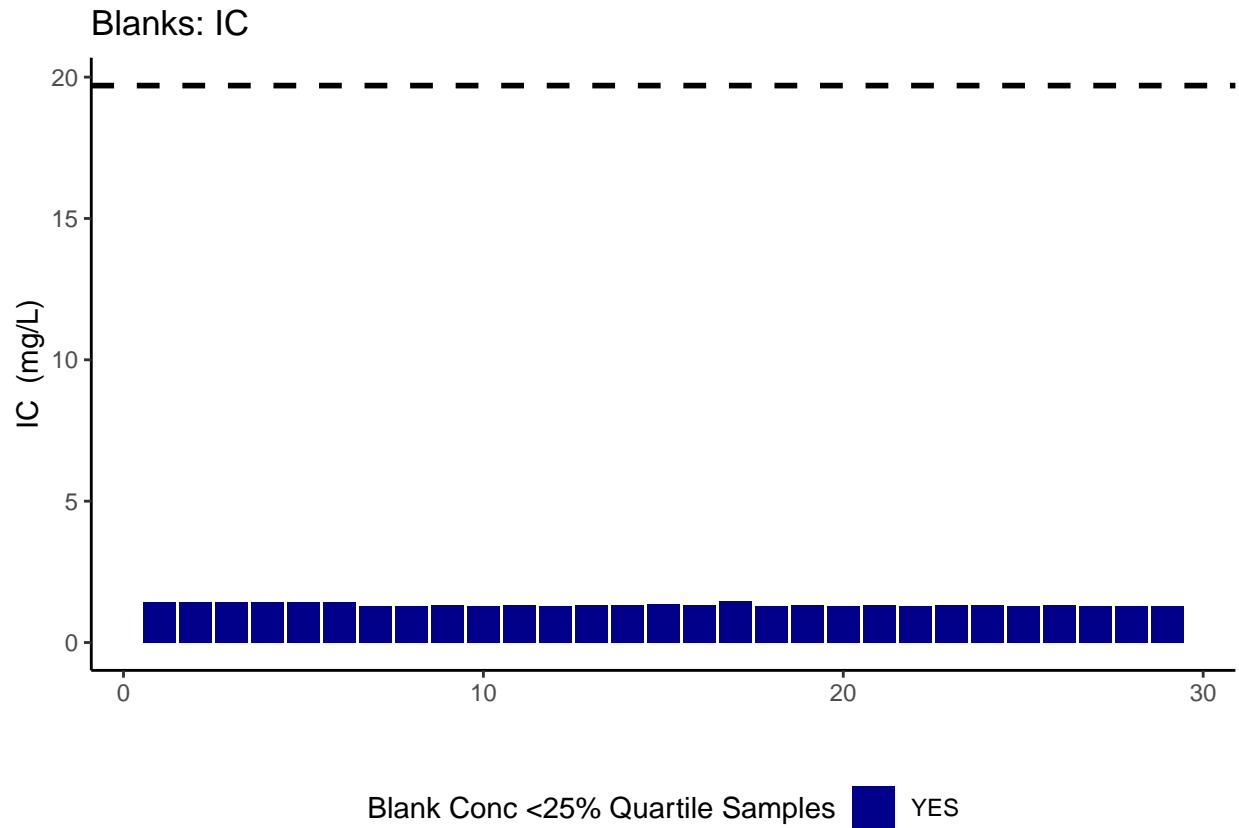
## 0.6 Assess Blanks

```
## Assess Blanks
```

```
## New names:
```

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

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



## carbon blanks:

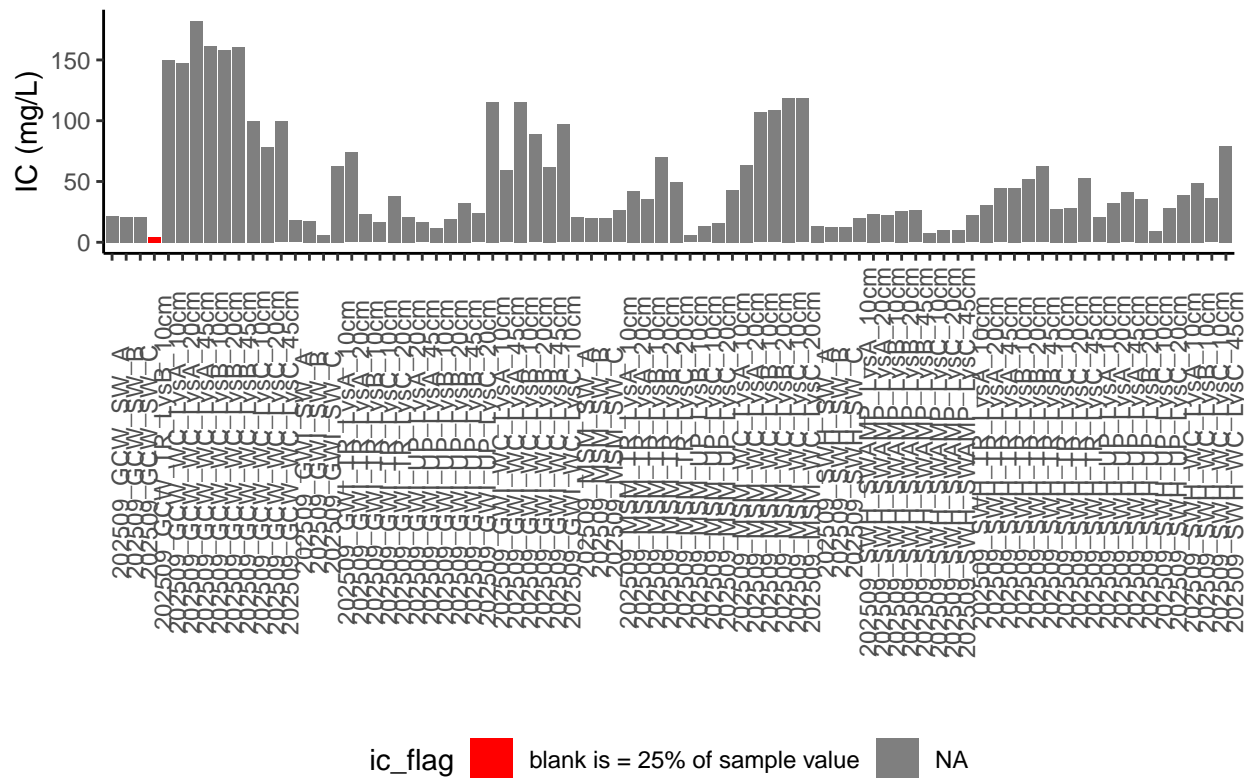
## [1] 1.34069

0.7 Assess Duplicates - No duplicates included on this run

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

## Sample Flagging

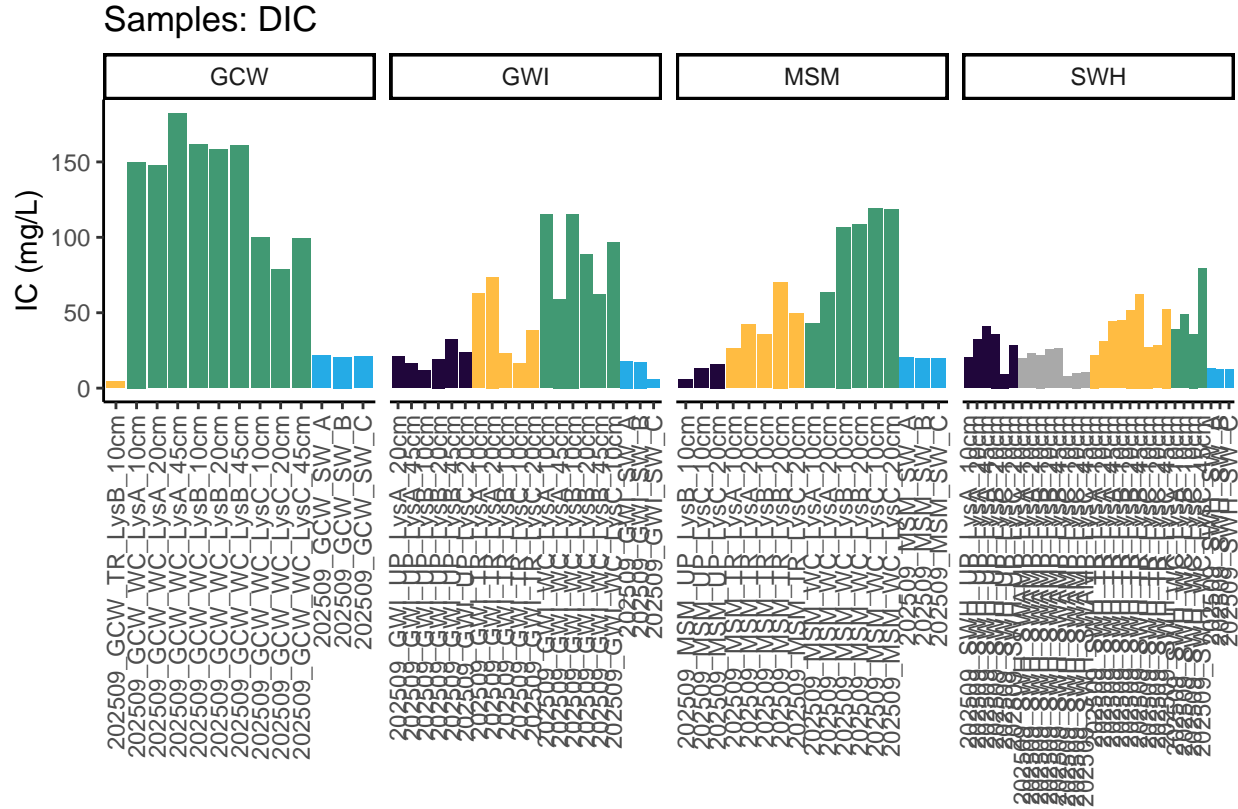
C: Grey = Within Range of Curve



## 0.9 Visualize Data by Plot

```
## Visualize Data
```

```
## Warning in rbind(c("202509", "GCW", "TR", "LysB", "10cm"), c("202509", "GCW", :
## number of columns of result is not a multiple of vector length (arg 11)
```



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    MSM  UP    B          10 202509_M~ 2025    9    11
## 2 COMPASS: Sy~ CB    MSM  UP    C          10 202509_M~ 2025    9    11
## 3 COMPASS: Sy~ CB    MSM  UP    C          20 202509_M~ 2025    9    11
## 4 COMPASS: Sy~ CB    GWI  UP    A          20 202509_G~ 2025    9    17
## 5 COMPASS: Sy~ CB    GWI  UP    A          45 202509_G~ 2025    9    17
## 6 COMPASS: Sy~ CB    GWI  UP    B          10 202509_G~ 2025    9    17
## # 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
```