Check completeness of datasets

Import `colony_id` from each dataset

```r
coral_metadata <- read_csv("../metadata/coral_metadata.csv") %>%
  pull(colony_id)

homog_vols <- read_csv("data/2_homogenate_vols/2_homogenate_vols.csv") %>%
  pull(colony_id)

surface_area <- read_csv("data/2_surface_area/2_surface_area_data.csv") %>%
  filter(!grepl("Standard", Sample)) %>%
  pull(colony_id)

chl <- list.files("data/2_chlorophyll/", "platemap", full.names = TRUE) %>%
  map_df(read_csv) %>%
  drop_na() %>%
  filter(!colony_id == "BK") %>%
  pull(colony_id)

afdw <- read_csv("data/2_biomass/2_biomass_data.csv") %>%
  drop_na() %>%
  pull(colony_id)

molec <- read_csv("data/2_molecular_backups/2_molecular_backups.csv") %>%
  distinct(colony_id) %>%
  pull()

picurve <- list.files("data/2_pi_curves/", "*.csv") %>%
  gsub("_.*.csv", "", .) %>%
  subset(!grepl("BK", .))

sym_counts <- read_csv("data/2_sym_counts/2_sym_counts_data.csv") %>%
  pull(colony_id)

#tac

tac <- list.files("data/2_antioxidant_capacity/", "platemap", full.names = TRUE) %>%
  map_df(read_csv) %>%
  drop_na() %>%
  filter(!colony_id == "BK") %>%
  pull(colony_id)

#protein

protein <- list.files("data/2_protein/", "platemap", full.names = TRUE) %>%
  map_df(read_csv) %>%
  drop_na() %>%
  filter(!colony_id == "BK") %>%
  pull(colony_id)
```

Filter out `colony_id` of any corals we know were *not collected*

```
coral_metadata <- coral_metadata %>%
  .[!. %in% c("POC-215", "POC-232", "ACR-360", "ACR-370", "ACR-376", "ACR-178", "ACR-347")]
```

Are there mystery samples in any of the datasets that are not part of the metadata? (data entry error?)

```
mysteries <- list(molec = molec, homog_vols = homog_vols,
                  surface_area = surface_area, chl = chl,
                  afdw = afdw, picurve = picurve, sym_counts = sym_counts,
                  tac = tac, protein = protein) %>%
  map(~ .[!. %in% coral_metadata])

mysteries
```

```
## $molec
## [1] NA         "POC-215" "POR-206" "ACR-347" "ACR-360" "ACR-178" "POR-387"
##
## $homog_vols
## [1] "ACR-360" "POR-206" "POC-215" "ACR-347" "ACR-178"
##
## $surface_area
## [1] "ACR-178" "ACR-347" "ACR-360" "POC-215" "POC-69"  "POR-206"
##
## $chl
##  [1] "Blank"   "Blank"   "ACR-360" "ACR-360" "POC-215" "POC-215" "POR-206"
##  [8] "POR-206" "ACR-347" "ACR-347" "Blank"   "Blank"   "ACR-391" "ACR-391"
## [15] "Blank"   "Blank"   "ACR-178" "ACR-178"
##
## $afdw
##  [1] "ACR-178" "ACR-360" "ACR-347" "POC-341" "POR-206" "ACR-347" "POC-215"
##  [8] "POC-215" "ACR-360" "POC-385" "POR-50"  "ACR-178" "POR-206"
##
## $picurve
## [1] "2"       "2"       "ACR-178" "ACR-347" "ACR-360" "Blank-9" "POC-215"
## [8] "POR-206"
##
## $sym_counts
## character(0)
##
## $tac
##  [1] "Standard1"  "Standard1"  "Standard2"  "Standard2"  "Standard3"
##  [6] "Standard3"  "Standard4"  "Standard4"  "Standard5"  "Standard5"
## [11] "Standard6"  "Standard6"  "Standard7"  "Standard7"  "Standard8"
## [16] "Standard8"  "Standard9"  "Standard9"  "Standard10" "Standard10"
## [21] "ACR-360"    "ACR-360"    "POC-215"    "POC-215"    "POR-206"
## [26] "POR-206"    "ACR-347"    "ACR-347"    "ACR-178"    "ACR-178"
##
## $protein
##  [1] "StandardA" "StandardA" "StandardB" "StandardB" "StandardC"
##  [6] "StandardC" "StandardD" "StandardD" "StandardE" "StandardE"
```

```
## [11] "StandardF" "StandardF" "StandardG" "StandardG" "StandardH"
## [16] "StandardH" "StandardI" "StandardI" "Blank1"    "Blank1"
## [21] "ACR-360"   "ACR-360"   "POC-215"   "POC-215"   "POR-206"
## [26] "POR-206"   "POR-265"   "POR-265"   "POR-258"   "POR-258"
## [31] "Blank-1"   "Blank-2"   "ACR-347"   "ACR-347"   "Blank-1"
## [36] "Blank-2"   "ACR-178"   "ACR-178"
```

Which samples in metadata are missing from each dataset?

```r
completeness <- list(molec = molec, homog_vols = homog_vols,
                     surface_area = surface_area, chl = chl,
                     afdw = afdw, picurve = picurve, sym_counts = sym_counts,
                     tac = tac, protein = protein) %>%
  map(~ coral_metadata %in% .) %>%
  as_tibble() %>%
  mutate(colony_id = coral_metadata) %>%
  select(colony_id, everything())

completeness %>%
  select(-1) %>%
  map(~ coral_metadata[. == FALSE])
```

```
## $molec
##  [1] "ACR-165" "ACR-176" "ACR-187" "ACR-185" "ACR-193" "ACR-180" "ACR-175"
##  [8] "ACR-267" "ACR-231" "ACR-243" "ACR-234" "ACR-228" "ACR-256" "ACR-246"
## [15] "ACR-247" "ACR-390" "ACR-389" "ACR-379" "ACR-374" "ACR-345" "ACR-363"
## [22] "POR-251" "POR-362" "POR-385"
##
## $homog_vols
##  [1] "ACR-165" "ACR-176" "ACR-187" "ACR-185" "ACR-193" "ACR-180" "ACR-175"
##  [8] "ACR-267" "ACR-231" "ACR-243" "ACR-234" "ACR-228" "ACR-256" "ACR-246"
## [15] "ACR-247" "ACR-390" "ACR-389" "ACR-379" "ACR-374" "ACR-345" "ACR-363"
## [22] "POC-358" "POR-251" "POR-362"
##
## $surface_area
##  [1] "ACR-165" "ACR-176" "ACR-187" "ACR-185" "ACR-193" "ACR-180" "ACR-175"
##  [8] "ACR-267" "ACR-231" "ACR-243" "ACR-234" "ACR-228" "ACR-256" "ACR-246"
## [15] "ACR-247" "ACR-390" "ACR-389" "ACR-379" "ACR-374" "ACR-345" "ACR-363"
## [22] "POC-56"  "POC-358" "POR-251" "POR-362"
##
## $chl
##  [1] "ACR-165" "ACR-176" "ACR-187" "ACR-185" "ACR-193" "ACR-180" "ACR-175"
##  [8] "ACR-267" "ACR-231" "ACR-243" "ACR-234" "ACR-228" "ACR-256" "ACR-246"
## [15] "ACR-247" "ACR-390" "ACR-389" "ACR-379" "ACR-374" "ACR-345" "ACR-363"
## [22] "POC-358" "POC-391" "POR-251" "POR-362"
##
## $afdw
##  [1] "ACR-165" "ACR-176" "ACR-187" "ACR-185" "ACR-193" "ACR-180" "ACR-175"
##  [8] "ACR-267" "ACR-231" "ACR-243" "ACR-234" "ACR-228" "ACR-256" "ACR-246"
## [15] "ACR-247" "ACR-390" "ACR-389" "ACR-379" "ACR-374" "ACR-345" "ACR-363"
## [22] "POC-358" "POR-251" "POR-362"
##
## $picurve
```

```
##   [1] "ACR-165" "ACR-176" "ACR-187" "ACR-185" "ACR-193" "ACR-180" "ACR-175"
##   [8] "ACR-51"  "ACR-140" "ACR-267" "ACR-231" "ACR-243" "ACR-234" "ACR-228"
##  [15] "ACR-256" "ACR-246" "ACR-247" "ACR-390" "ACR-389" "ACR-379" "ACR-374"
##  [22] "ACR-345" "ACR-363" "POC-41"  "POC-43"  "POC-47"  "POC-52"  "POC-53"
##  [29] "POC-57"  "POC-358" "POR-72"  "POR-74"  "POR-75"  "POR-76"  "POR-82"
##  [36] "POR-83"  "POR-251" "POR-362"
##
## $sym_counts
##   [1] "ACR-165" "ACR-176" "ACR-187" "ACR-185" "ACR-193" "ACR-180" "ACR-139"
##   [8] "ACR-175" "ACR-51"  "ACR-145" "ACR-186" "ACR-173" "ACR-140" "ACR-190"
##  [15] "ACR-150" "ACR-267" "ACR-231" "ACR-243" "ACR-234" "ACR-228" "ACR-256"
##  [22] "ACR-246" "ACR-265" "ACR-229" "ACR-247" "ACR-237" "ACR-225" "ACR-244"
##  [29] "ACR-258" "ACR-390" "ACR-389" "ACR-379" "ACR-374" "ACR-345" "ACR-364"
##  [36] "ACR-396" "ACR-368" "ACR-350" "ACR-351" "ACR-363" "ACR-343" "ACR-393"
##  [43] "POC-40"  "POC-41"  "POC-42"  "POC-43"  "POC-44"  "POC-45"  "POC-47"
##  [50] "POC-48"  "POC-50"  "POC-52"  "POC-53"  "POC-55"  "POC-56"  "POC-57"
##  [57] "POC-68"  "POC-200" "POC-201" "POC-205" "POC-207" "POC-217" "POC-219"
##  [64] "POC-222" "POC-238" "POC-239" "POC-248" "POC-254" "POC-255" "POC-257"
##  [71] "POC-259" "POC-346" "POC-358" "POC-359" "POC-366" "POC-369" "POC-371"
##  [78] "POC-372" "POC-373" "POC-375" "POC-377" "POC-378" "POC-386" "POC-391"
##  [85] "POC-394" "POC-395" "POR-69"  "POR-70"  "POR-71"  "POR-72"  "POR-73"
##  [92] "POR-74"  "POR-75"  "POR-76"  "POR-77"  "POR-78"  "POR-79"  "POR-80"
##  [99] "POR-81"  "POR-82"  "POR-83"  "POR-209" "POR-214" "POR-216" "POR-221"
## [106] "POR-224" "POR-235" "POR-236" "POR-240" "POR-242" "POR-245" "POR-251"
## [113] "POR-253" "POR-260" "POR-262" "POR-266" "POR-338" "POR-340" "POR-341"
## [120] "POR-349" "POR-353" "POR-354" "POR-355" "POR-357" "POR-362" "POR-365"
## [127] "POR-367" "POR-381" "POR-383" "POR-384" "POR-385"
##
## $tac
##   [1] "ACR-165" "ACR-176" "ACR-187" "ACR-185" "ACR-193" "ACR-180" "ACR-175"
##   [8] "ACR-267" "ACR-231" "ACR-243" "ACR-234" "ACR-228" "ACR-256" "ACR-246"
##  [15] "ACR-247" "ACR-390" "ACR-389" "ACR-379" "ACR-374" "ACR-345" "ACR-363"
##  [22] "POC-358" "POR-251" "POR-362"
##
## $protein
##   [1] "ACR-165" "ACR-176" "ACR-187" "ACR-185" "ACR-193" "ACR-180" "ACR-175"
##   [8] "ACR-267" "ACR-231" "ACR-243" "ACR-234" "ACR-228" "ACR-256" "ACR-246"
##  [15] "ACR-265" "ACR-247" "ACR-258" "ACR-390" "ACR-389" "ACR-379" "ACR-374"
##  [22] "ACR-345" "ACR-363" "POC-358" "POR-251" "POR-355" "POR-362"
```

Full completeness table

```
completeness %>% print(n = nrow(.))
```

```
## # A tibble: 131 x 10
##     colony_id molec homog_vols surface_area chl   afdw  picurve sym_counts
##     <chr>     <lgl> <lgl>      <lgl>        <lgl> <lgl> <lgl>   <lgl>
##   1 ACR-165   FALSE FALSE      FALSE        FALSE FALSE FALSE   FALSE
##   2 ACR-176   FALSE FALSE      FALSE        FALSE FALSE FALSE   FALSE
##   3 ACR-187   FALSE FALSE      FALSE        FALSE FALSE FALSE   FALSE
##   4 ACR-185   FALSE FALSE      FALSE        FALSE FALSE FALSE   FALSE
##   5 ACR-193   FALSE FALSE      FALSE        FALSE FALSE FALSE   FALSE
```

```
##  6 ACR-180  FALSE FALSE  FALSE   FALSE FALSE FALSE  FALSE
##  7 ACR-139  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
##  8 ACR-175  FALSE FALSE  FALSE   FALSE FALSE FALSE  FALSE
##  9 ACR-51   TRUE  TRUE   TRUE    TRUE  TRUE  FALSE  FALSE
## 10 ACR-145  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
## 11 ACR-186  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
## 12 ACR-173  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
## 13 ACR-140  TRUE  TRUE   TRUE    TRUE  TRUE  FALSE  FALSE
## 14 ACR-190  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
## 15 ACR-150  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
## 16 ACR-267  FALSE FALSE  FALSE   FALSE FALSE FALSE  FALSE
## 17 ACR-231  FALSE FALSE  FALSE   FALSE FALSE FALSE  FALSE
## 18 ACR-243  FALSE FALSE  FALSE   FALSE FALSE FALSE  FALSE
## 19 ACR-234  FALSE FALSE  FALSE   FALSE FALSE FALSE  FALSE
## 20 ACR-228  FALSE FALSE  FALSE   FALSE FALSE FALSE  FALSE
## 21 ACR-256  FALSE FALSE  FALSE   FALSE FALSE FALSE  FALSE
## 22 ACR-246  FALSE FALSE  FALSE   FALSE FALSE FALSE  FALSE
## 23 ACR-265  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
## 24 ACR-229  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
## 25 ACR-247  FALSE FALSE  FALSE   FALSE FALSE FALSE  FALSE
## 26 ACR-237  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
## 27 ACR-225  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
## 28 ACR-244  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
## 29 ACR-258  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
## 30 ACR-390  FALSE FALSE  FALSE   FALSE FALSE FALSE  FALSE
## 31 ACR-389  FALSE FALSE  FALSE   FALSE FALSE FALSE  FALSE
## 32 ACR-379  FALSE FALSE  FALSE   FALSE FALSE FALSE  FALSE
## 33 ACR-374  FALSE FALSE  FALSE   FALSE FALSE FALSE  FALSE
## 34 ACR-345  FALSE FALSE  FALSE   FALSE FALSE FALSE  FALSE
## 35 ACR-364  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
## 36 ACR-396  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
## 37 ACR-368  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
## 38 ACR-350  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
## 39 ACR-351  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
## 40 ACR-363  FALSE FALSE  FALSE   FALSE FALSE FALSE  FALSE
## 41 ACR-343  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
## 42 ACR-393  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
## 43 POC-40   TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
## 44 POC-41   TRUE  TRUE   TRUE    TRUE  TRUE  FALSE  FALSE
## 45 POC-42   TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
## 46 POC-43   TRUE  TRUE   TRUE    TRUE  TRUE  FALSE  FALSE
## 47 POC-44   TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
## 48 POC-45   TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
## 49 POC-47   TRUE  TRUE   TRUE    TRUE  TRUE  FALSE  FALSE
## 50 POC-48   TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
## 51 POC-50   TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
## 52 POC-52   TRUE  TRUE   TRUE    TRUE  TRUE  FALSE  FALSE
## 53 POC-53   TRUE  TRUE   TRUE    TRUE  TRUE  FALSE  FALSE
## 54 POC-55   TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
## 55 POC-56   TRUE  TRUE   FALSE   TRUE  TRUE  TRUE   FALSE
## 56 POC-57   TRUE  TRUE   TRUE    TRUE  TRUE  FALSE  FALSE
## 57 POC-68   TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
## 58 POC-200  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
## 59 POC-201  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
```

```
##  60 POC-205  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
##  61 POC-207  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
##  62 POC-217  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
##  63 POC-219  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
##  64 POC-222  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
##  65 POC-238  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
##  66 POC-239  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
##  67 POC-248  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
##  68 POC-254  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
##  69 POC-255  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
##  70 POC-257  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
##  71 POC-259  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
##  72 POC-346  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
##  73 POC-358  TRUE  FALSE  FALSE   FALSE FALSE FALSE  FALSE
##  74 POC-359  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
##  75 POC-366  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
##  76 POC-369  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
##  77 POC-371  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
##  78 POC-372  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
##  79 POC-373  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
##  80 POC-375  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
##  81 POC-377  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
##  82 POC-378  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
##  83 POC-386  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
##  84 POC-391  TRUE  TRUE   TRUE    FALSE TRUE  TRUE   FALSE
##  85 POC-394  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
##  86 POC-395  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
##  87 POR-69   TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
##  88 POR-70   TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
##  89 POR-71   TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
##  90 POR-72   TRUE  TRUE   TRUE    TRUE  TRUE  FALSE  FALSE
##  91 POR-73   TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
##  92 POR-74   TRUE  TRUE   TRUE    TRUE  TRUE  FALSE  FALSE
##  93 POR-75   TRUE  TRUE   TRUE    TRUE  TRUE  FALSE  FALSE
##  94 POR-76   TRUE  TRUE   TRUE    TRUE  TRUE  FALSE  FALSE
##  95 POR-77   TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
##  96 POR-78   TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
##  97 POR-79   TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
##  98 POR-80   TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
##  99 POR-81   TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
## 100 POR-82   TRUE  TRUE   TRUE    TRUE  TRUE  FALSE  FALSE
## 101 POR-83   TRUE  TRUE   TRUE    TRUE  TRUE  FALSE  FALSE
## 102 POR-209  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
## 103 POR-214  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
## 104 POR-216  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
## 105 POR-221  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
## 106 POR-224  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
## 107 POR-235  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
## 108 POR-236  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
## 109 POR-240  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
## 110 POR-242  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
## 111 POR-245  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
## 112 POR-251  FALSE FALSE  FALSE   FALSE FALSE FALSE  FALSE
## 113 POR-253  TRUE  TRUE   TRUE    TRUE  TRUE  TRUE   FALSE
```

```
## 114 POR-260    TRUE  TRUE     TRUE        TRUE  TRUE  TRUE     FALSE
## 115 POR-262    TRUE  TRUE     TRUE        TRUE  TRUE  TRUE     FALSE
## 116 POR-266    TRUE  TRUE     TRUE        TRUE  TRUE  TRUE     FALSE
## 117 POR-338    TRUE  TRUE     TRUE        TRUE  TRUE  TRUE     FALSE
## 118 POR-340    TRUE  TRUE     TRUE        TRUE  TRUE  TRUE     FALSE
## 119 POR-341    TRUE  TRUE     TRUE        TRUE  TRUE  TRUE     FALSE
## 120 POR-349    TRUE  TRUE     TRUE        TRUE  TRUE  TRUE     FALSE
## 121 POR-353    TRUE  TRUE     TRUE        TRUE  TRUE  TRUE     FALSE
## 122 POR-354    TRUE  TRUE     TRUE        TRUE  TRUE  TRUE     FALSE
## 123 POR-355    TRUE  TRUE     TRUE        TRUE  TRUE  TRUE     FALSE
## 124 POR-357    TRUE  TRUE     TRUE        TRUE  TRUE  TRUE     FALSE
## 125 POR-362    FALSE FALSE    FALSE       FALSE FALSE FALSE    FALSE
## 126 POR-365    TRUE  TRUE     TRUE        TRUE  TRUE  TRUE     FALSE
## 127 POR-367    TRUE  TRUE     TRUE        TRUE  TRUE  TRUE     FALSE
## 128 POR-381    TRUE  TRUE     TRUE        TRUE  TRUE  TRUE     FALSE
## 129 POR-383    TRUE  TRUE     TRUE        TRUE  TRUE  TRUE     FALSE
## 130 POR-384    TRUE  TRUE     TRUE        TRUE  TRUE  TRUE     FALSE
## 131 POR-385    FALSE TRUE     TRUE        TRUE  TRUE  TRUE     FALSE
## # ... with 2 more variables: tac <lgl>, protein <lgl>
```