

MDN DATA FIELDS

National Atmospheric Deposition Program (NRSP-3)/Mercury Deposition Network. (2004). NADP Program Office, Illinois State Water Survey, 2204 Griffith Drive, Champaign, IL 61820.

<http://nadp.sws.uiuc.edu/nadpdata/mdn/mdncodes98.htm>

SITE CODE: 2-letter state or province designator plus SAROAD county code (US) or sequential number (Canada).

START DATE: (mm/dd/yyyy)

END DATE: (mm/dd/yyyy)

SUBPPT: Rain Gauge (RG) precipitation amount in mm if available, otherwise precipitation amount in mm is calculated from the net rain volume caught in the sample bottle.

PPT: Precipitation amount in mm from the rain gauge (RG), if blank, no RG data.

HG CONC: total mercury concentration reported by the lab in ng/L.

DEPOSITION: product of SUBPPT and HG CONC, units are ng/m².

Quality rating (QR) CODE:

- A = fully qualified with no problems
- B = valid data with minor problems, used for summary statistics
- C = invalid data, not used for summary statistics
- BLANK= no sample submitted for this time period

SAMPLE TYPE:

W = wet sample, measurable precipitation (> or = 0.03 in.) on the rain gauge (RG) or net bottle catch (BC) = or > 10.0 mL if RG data are missing. Concentration and deposition data are reported unless the QR Code = C.

D = dry sample, no indication of sampler openings on the RG or net BC < 1.5 mL if RG event recorder data are missing. No concentration data are reported. Ppt, subppt, and deposition are set to zero.

T = trace sample, RG shows openings or a trace precipitation amount (<0.03 inches). If the RG data are missing, a net BC between 1.5 and 10.0 mL (inclusive) will be coded as a T sample type. Concentration data may or may not be reported depending whether the BC is 1.5 mL or higher. If BC = 1.5 mL or higher, then ppt is blank, Subppt = BC, and deposition is based on the BC. If BC < 1.5 mL, then ppt subppt and deposition are all set to zero.

Q = sampler was used for a Quality assurance (QA) sample, no ambient sample submitted. No concentration values are reported (QA values will be published in the QA report). Deposition is only reported where the value is zero (D or T samples with no measurable precipitation).

NOTES:	QR CODE	Valid for Summaries (Y/N)
s = short sample time (< 6days)	B	Y
e = extended sample time (> 8days)	B	Y
d = debris present (previously x)	B	Y
m = missing information (previously, r, no event recorder, and p missing RG precipitation record)	B	Y
z = site operations problems	B	Y
h = sample handling problems (z and h include equipment and handling problems that don't seriously compromise the sample)	B	Y
i = low volume sample (1.49mL < net BC < 10.00mL) (Hg conc data are reported but they are less certain than those for samples with a net BC of at least 10 mL)	B	Y
b = bulk sample (wet side open the whole time)	C	N
v = RG indicates precipitation occurred but BC < 1 mL or < 10% of indicated RG precipitation amount.	C	N
u = undefined sample (wet side open during dry periods)	C	N
f = serious problems in field operations that compromise sample integrity.	C	N
l = laboratory error	C	N
c = sample compromised due to contamination	C	N
p = no ppt data from either RG or BC	C	N
n = no sample submitted	--	N

Calculation of Deposition:

1. If a valid precipitation amount can be read from the rain gauge chart (RG \geq 0.03 inches), the sample type is set to "W" (wet); and the value from the RG chart is used to calculate deposition (RG amount in mm times Hg concentration in ng/mL). If the RG chart event recorder shows no sampler openings, sample type is set to "D" (dry) and precipitation amount and deposition are set to 0.
2. If the precipitation amount from the RG chart is not available, the net bottle catch (BC) will be used to calculate deposition as long as BC > 1.49mL. If the BC < 1.5 mL, the precipitation amount will be set to 0 and the sample type set to "D" (dry). If the BC is between 1.5 and 10.0 mL, the sample type will be set to "T" (trace) and the BC used to calculate deposition. These samples are also coded with an "i" in the Notes field and downgraded to a "B" Quality Rating to indicate uncertainty due to low volume. If the BC is > 10 mL, the sample type will be set to "W" (wet) and the BC will be used to calculate deposition.
3. If the RG indicates sampler openings, but the precipitation amount can't be determined accurately from the RG chart (RG < 0.03 inches) the sample type will be coded "T" (trace) and the BC will be used to calculate deposition as long as the BC is \geq 1.5mL. If the BC is < 10mL, samples will be coded for low volume as in 2. If the BC is < 1.5mL, no concentration will be reported and the ppt, subppt, and deposition will be set to 0.
4. In cases where there is a valid precipitation amount from either RG or BC but invalid or missing concentration data, seasonal or annual summary deposition values will be calculated using the site-specific, seasonal, volume-weighted average concentration. This deposition value will not be displayed for individual weeks in the WEB database, but it will be used only for the calculation seasonal and annual average concentrations and deposition amounts on maps and other summary products.