

# SHL Private Well Reporting and Bottle Changes

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# Nitrate Reporting Change

- **Coralville changing nitrate reporting format effective April 16**
  - The nitrate + nitrite test will be reported “as N” (referred to as nitrogen) instead of “as NO<sub>3</sub>” (referred to as nitrate)
  - The values will be ~4.4X lower than what you are used to seeing
  - For interpretation, the corresponding maximum contaminant level (MCL) will be “10 mg/L” instead of “45 mg/L.”



# Nitrate Conversion Math (for comparison purposes)

Nitrate+nitrite as  $\text{NO}_3$  X **0.2259** = Nitrate+nitrite as N

Nitrate+nitrite as N X **4.4268** = Nitrate+nitrite as  $\text{NO}_3$

EPA Maximum Contaminant Level (MCL)

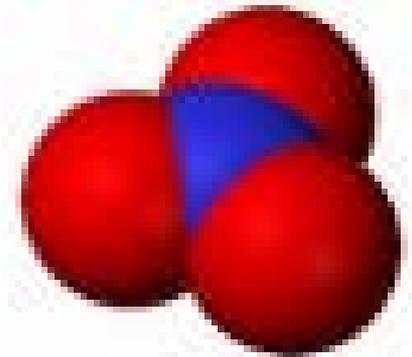
45 mg/L nitrate+nitrite or nitrate as  $\text{NO}_3$

10 mg/L nitrate+nitrite or nitrate as N

Molar mass of nitrate anion (62.0 g/mole)

Atomic weight of nitrogen (14.0) = 4.4268

$\text{NO}_3$





# Nitrate Drinking Water Interpretation for Private Wells

- Nitrate+nitrite (or nitrate) result  $\leq 10$  mg/L: does not exceed infant health advisory
- Nitrate+nitrite (or nitrate) result  $>10$  mg/L: EXCEEDS infant health advisory; should not be used to prepare formula or used for drinking by infants less than six months of age
- **What about adults?** More studies are showing adverse health outcomes with long term consumption of levels above  $\frac{1}{2}$  MCL (e.g. certain cancers, birth defects and reproductive and thyroid problems)



# IPHA's Iowa's Water Quality: A Public Health Perspective

- <https://www.iowapha.org/Water-Quality-and-Public-Health>

## Resources:

- Nitrate in Your Drinking Water: What You Need to Know (UI IWQ&PHC March 2017)
- Nitrate in Drinking Water: A Public Health Concern for All Iowans (IEC Sept 2016)
- Contaminants in Drinking Water and Health Effects (CHEEC Nov 2016)



# IDNR PWTS Nitrate Screen Shot

## Well Testing Record

Date Sampled: \*  /  /

Sample Collector: \*

Nitrate Tested:

Yes  No

If "Yes" provide details:

As Nitrate  As Nitrogen

[Add Rows](#)

[Add Rows](#)

Other Contaminants or Parameters Tested:

Contaminant		Level	Reported as:*
-- Contaminant List --	=	<input type="text"/>	mg/L or ppm

**According to Russ, the radio button is programmed to default "as Nitrogen" so counties will not have to change this button.**



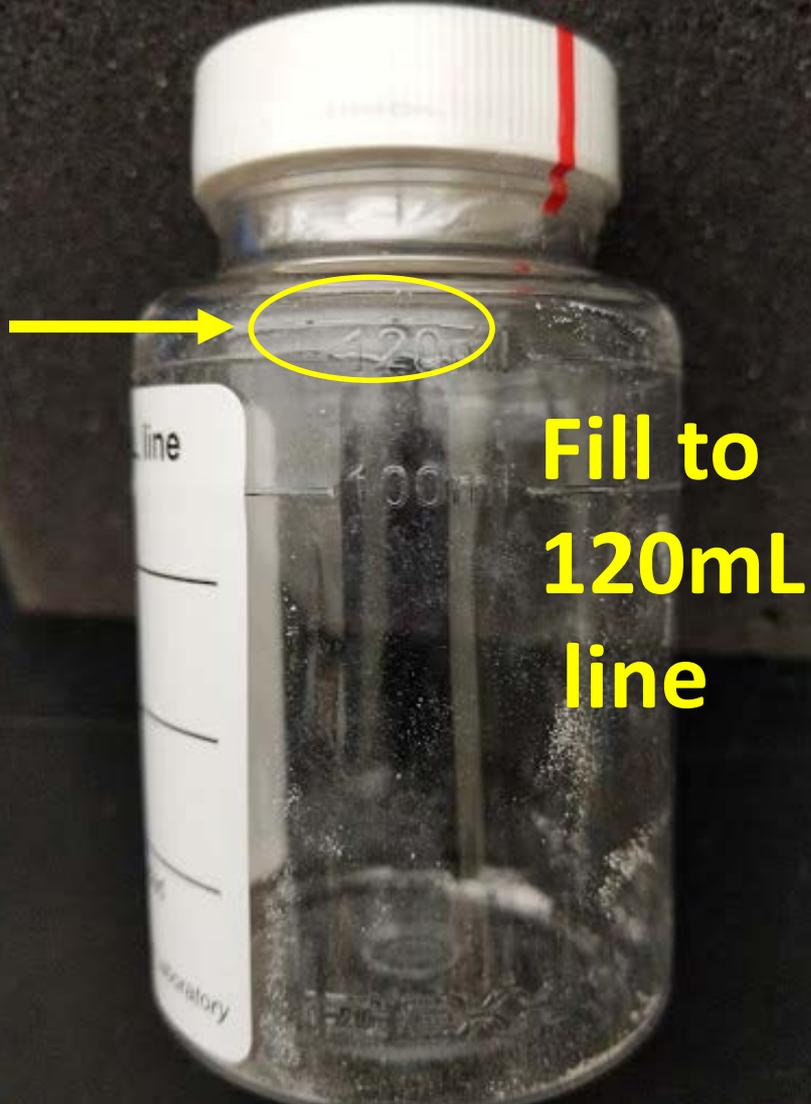


# Coliform Bottle Change

- Total coliform bottle changing to a larger bottle; 4 oz to 5 oz
  - need a 1” head space for mixing
  - hard to achieve with current bottle
- More user friendly label
- Transition to this new bottle will occur throughout this summer



## NEW Bottle



## Current Bottle





# New Label

(please fill in; must be unique identifier for each sample)

Fill to 120mL line

---

Name

---

Location

---

Date/time collected

*Property of State Hygienic Laboratory*

Owner name

e.g. kitchen sink or address

The diagram shows a rectangular label for a sample bottle. At the top, it says 'Fill to 120mL line'. Below this are three horizontal lines for text entry. The first line is labeled 'Name', the second 'Location', and the third 'Date/time collected'. At the bottom of the label, it reads 'Property of State Hygienic Laboratory'. To the right of the label, there are two callout boxes. The top one, labeled 'Owner name', has an arrow pointing to the 'Name' line. The bottom one, labeled 'e.g. kitchen sink or address', has an arrow pointing to the 'Location' line.

**Most important that this label matches the form so we can match the bottle to the form.**



# SHL Web Access (obtain results online)

- Highly encourage web access for results and stop mailing paper copies (saves a lot of trees and postage costs for SHL)
- Forms online
  - <http://www.shl.uiowa.edu/results/>

## About the SHL

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Questions about web access may be directed to [ask-shl@uiowa.edu](mailto:ask-shl@uiowa.edu) or to 319.335.4358.

### [OpenELIS](#)

The Open Enterprise Laboratory Information System (OpenELIS) web portal contains environmental, safe drinking water, clinical, rabies, and maternal screen test results.

### [Neonatal Screening](#)

### Forms

- ▶ [Obtain your results online](#)
- ▶ [Stop mailing all paper results](#)
- ▶ [Fax all results](#)

### Web Portal User Guides

- ▶ [OpenELIS](#)
- ▶ [Neonatal Screening](#)

### Legacy Web Portals