

SOIL LEAD SCREENING:

UNDERSTANDING YOUR RESULTS AND NEXT STEPS

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CONGRATULATIONS ON TAKING THE FIRST STEP BY HAVING YOUR SOIL SCREENED FOR LEAD!

Understanding your results and taking appropriate actions are crucial for safe gardening or other land use. While lead occurs naturally in soils at low levels, urban soils and areas impacted by human activities often have higher levels due to historic practices (e.g., leaded gasoline and lead paint).

Gardening offers numerous benefits, but it's essential to minimize potential risks. An estimate of your soil lead levels can help you make more informed decisions about changes to your current land use, gardening practices, or other behaviors. **Important Considerations:**

1. COLLECT ACCURATE SAMPLES

- Ensure your soil sample accurately represents your gardening area. Levels of lead can vary across a site or even in a small area.
- Please refer to the [Collecting a Single Soil Sample \(XRF screening\)](#) sheet for guidance on correctly collecting a sample.

2. COMPARE TESTING METHODS

- **Home Soil Lead Test Kits:** Quick results but provide a wide range of estimated lead levels. Use as a screening tool only.
- **X-Ray Fluorescence (XRF):** Quick results, done by a trained professional, but can be affected by soil conditions. Also, for screening purposes.
- **Certified or university laboratories:** Provide the most accurate results but may take longer. Recommended if screening methods suggest high lead levels.

Note: Soil lead levels are reported in parts per million (ppm) or milligrams/kilogram (mg/kg). They both show the concentration of lead in the soil, just in different units. A value of 1 ppm means that for every million parts of soil, there is 1 part of lead contaminant.

TESTING METHOD COMPARISON

Testing Method	Speed	Accuracy	Type
Home Soil Lead Test Kits	Quick	Wide range	Screening
X-Ray Fluorescence (XRF)	Quick	Moderate	Screening
Certified Laboratories	Slower	High	Laboratory



3. FOLLOW UPDATED FEDERAL GUIDANCE

In **January 2024**, the US Environmental Protection Agency issued new guidelines regarding soil lead contamination. These guidelines are not regulatory but serve as regional screening levels (RSL) for residential areas.

Key Changes:

Lowered RSL: The recommended threshold for soil lead contamination in residential areas has been reduced from 400ppm to 200ppm.

Stricter Standards: In areas with additional lead sources like housing or drinking water contamination, a more stringent limit of 100ppm is advised. This is particularly crucial in locations where children might face elevated risks.

This change reflects updated science and assessments of health and environmental risks, particularly for children, from exposure to soil contaminants in various settings.

4. REVIEW LEAD LEVEL RESULTS AND TAKE NEXT STEPS

It's important to take appropriate actions based on your estimated soil lead levels. Follow the suggested actions in this table, along with the list of additional health and safety practices:

Estimated Soil Lead Levels	Category	Suggested Action <i>(In all cases, follow Healthy Gardening Practices)</i>
Less than 63 ppm	Within typical background levels*	No additional precautions necessary. No restrictions to crops grown.
63-99 ppm	Levels are above background levels	Increase use of soil amendments and barriers. Consider not growing root crops.
100-199 ppm	Levels suggest lead contamination	Increase use of soil amendments and barriers. Utilize raised beds with clean soil . Consider not growing leafy greens or root crops but focus on fruiting vegetable crops.
200-399 ppm	Levels are above the US EPA Jan 2024 regional screening level guidance. Suggests significant contamination.	Only grow crops in raised beds with clean soil . Keep all other soil covered.
400–1,200 ppm	Designated as a 'soil lead hazard' by US EPA for bare soil in residential or child-occupied play areas, or if the average soil lead level in surrounding areas is 1,200 ppm.	Only grow crops in raised beds with clean soil . Keep all other soil covered. In some cases, physical removal and replacement may be required. Note: Certain states and countries may have lower threshold levels.

*Based on NY Dept. of Environmental Conservation 2006 [Technical Support Document](#).

Note: “Clean soil” refers to soil with lead levels below 63 ppm, which is within typical background levels. For soil above this level, follow the actions listed in this chart.

ADDITIONAL HEALTH & SAFETY PRACTICES

Regardless of your soil lead test results, follow these practices to keep lead from being ingested and minimize contact with contaminants:



Take steps to avoid ingesting lead:

- **Minimize contact** with soil dust.
- **Wash hands** thoroughly after gardening.
- **Wash produce**, especially root and leafy vegetables, before eating.



Healthy garden bed guidelines:

- **Use raised beds** with clean soil and compost, adding clean organic materials regularly.
- **Avoid treated or painted wood**, railroad ties, or telephone poles to prevent chemical migration.
- **Cover garden beds** with organic materials (compost, straw, bark mulch) to reduced dust and soil splash onto vegetables.
- **Use stones or woodchips in pathways** and non-growing areas for added protection.



Remember children are more affected by lead:

- **Supervise children** closely while gardening.
- **Encourage regular handwashing** after outdoor activities.
- **Consider routine blood lead testing** for children, especially if lead exposure is suspected.



Balance Soil Nutrients and pH

- **Maintain a good soil nutrient balance** and a pH near neutral (6.5-7).
- **Test soil pH** regularly using a soil pH test.
- **Adjust pH levels** as needed by adding amendments.

For additional resources and references, please scan the QR code or visit lead.newyorksoilhealth.org

