



## Frequently Asked Questions about Soil Testing

### **Why does KaBOOM! require a soil test for lead and arsenic?**

The presence of high levels of heavy metals in soil is a health hazard to everyone, but especially to children age 6 and younger, who are more likely to ingest it during their time in the playspace. Lead in particular has been linked to nervous system damage, behavior and learning problems, and slow growth. The ingestion, absorption or inhalation of a hazardous toxin over a period of time is more likely to have a long-term permanent effect. KaBOOM! intends to build playspaces in as safe and conscientious a manner as possible.

### **Where do I go to get my soil tested?**

The Environmental Protection Agency (EPA) posts a list of Accredited Laboratories that conduct tests for the presence of lead in soil. You can contact the lab in your area to see if they also test for arsenic in the soil. The list of accredited laboratories is updated monthly and can be found at <http://www.epa.gov/lead/pubs/nllap.htm>

You can also reach out to your local land grant university that will have an environmental or agricultural department or Cooperative Extension that may be able to conduct the tests. They may also be able to assist with getting the results analyzed.

### **How much do soil tests cost?**

When approaching the testing companies or local university, explain to them that you are planning to build a playground with your community and ask if they could donate their services or provide them at a reduced cost. The cost for the soil test varies greatly depending on the laboratory, but on average they can be \$45 to \$100 per sample.

### **How long will it take to get the test results back?**

You will need to check with the testing company, but it can take anywhere from two days to two weeks to get the results back.

### **How many samples of soil do we need to send in from the playground site?**

You should be collecting at least two samples. These samples need to be taken from two different locations within the area so that you are getting a good representation of the whole site.

### **How much soil do I need to collect in each sample?**

When making arrangements with the testing entity, ask them how much soil is needed for each sample, what type of container needs to be used and how it needs to be delivered to the testing facility.

### **Where should we collect the soil sample?**

The soil needs to be collected in the space where the playground will be located.

### **What do I do if there is concrete or asphalt covering the area and we aren't scheduled to excavate until 6 weeks into planning?**

Regardless of the timeline for excavation, you will still need to collect your soil sample in time for the test to be completed within two weeks of the Design Day. Otherwise, if there is a delay in getting the soil test done and it turns out there is a problem with the soil, there may not be enough time to remediate the site before the Build Day. The asphalt or concrete can be taken out in a couple of places on the site to expose the soil so that a sample can be taken. This can be done in conjunction with the test hole that you will dig to get a sense of the scope of your site preparation needs.

### **What depth should the soil sample come from?**

When you are doing your test hole, take a sample from a depth 4" below the surface.

### **How do I know if my soil test results are within safe limits?**

KaBOOM! does not set the standards for safe levels of lead and arsenic. It is the responsibility of the community to make sure that they are within the standards for their geographic area. The test results that you get from the testing company need to be reviewed against the limits that are established by your state or local Department of Environment or Health Department. It is important to make sure the limits that are used to check against are for recreational use for soil and not for water.

### **Who do I contact to see if my soil test results meet the local standards?**

The soil testing company that you use will most likely not be able to interpret the results of the soil test. You will need to check with your state or local Department of Environment or Health Department. The local Cooperative Extension or local University may also be able to help with the interpretation of the results.

### **What standards need to be used for analyzing the soil?**

The local Department of Health or Environment will have established limits for recreational land use. It is important to make sure that results are not compared to the acceptable limits for drinking water.

### **My soil test results from the lab report amounts in milligrams per kilogram (mg/kg) but our local standard is in parts per million (ppm).**

Mg/kg is equivalent to parts per million (ppm), so the results can be compared to your local standards in this format.

### **Is the reporting limit that's listed on the test results my local standard?**

No, the reporting limit is what the lab uses when doing the analysis.

### **Do I have to adhere to the local environmental quality standards?**

You will need to make sure the soil test results are within the local standards.

### **If my soil has unsafe levels of arsenic or lead what should I do?**

If the test results show dangerous levels of contamination, then a remediation plan must be developed, implemented and paid for at least two weeks prior to Build Day. Once you have completed the plan, a subsequent soil test will need to be conducted and results provided to KaBOOM! at least seven days before the scheduled Build Day. KaBOOM! does not prescribe what the remediation plan needs to include, but will need to be kept informed of the progress of the plan.

### **Who needs to sign off on the soil test form?**

The main point of contact from the community needs to sign off on the form after verifying that the levels of lead and arsenic in the soil are within acceptable levels. In addition, the name of the lab along with a copy of the lab results needs to be submitted.

### **If we got a soil test a year ago can we use those results?**

You may not use test results from a year ago or earlier. Soil tests dated less than 12 months prior to the Build Day are acceptable in most cases, but may not be permitted if there were significant environmental changes (such as flooding) in your area during the intervening period. Over the course of a year, there is a possibility that there may have been changes to the site that could impact the soil.

### **Does the safety surfacing we'll put in count as remediation?**

While the safety surfacing will provide a barrier between the soil and the playing surface, it can not serve as the remediation measure when there are unacceptable levels of lead or arsenic in the soil. Your state or local Department of Environment or Health Department can share with you the existing remediation plan requirements in your area. At a minimum it must include a plan to take out the contaminated soil, dispose of it properly as hazardous waste, and replace it with clean soil.

### **When are my results and the form due back to KaBOOM!?**

The results and the form are due back within 2 weeks of the Design Day. This requirement is stipulated in the Letter of Agreement. There are a few cities that require soil tests as part of the competitive application process. Your Client Services Coordinator will inform you if your city is one these.

### **If I'm doing a surface mount playground on asphalt or concrete, do I need to do a soil test?**

You will still need to do a soil test around the periphery of the asphalt or concrete, since children will still come into contact with the soil throughout the wider playspace area. In addition, there is a possibility that holes will need to be dug for play enhancement projects such as permanent benches or posts for shade structures.

### **Can we use a home test kit instead of working with a laboratory?**

You will need to work with a laboratory to perform your soil test. Most home test kits are designed to test surfaces, not soil, and do not give reliable results.

## **Resources for Additional Questions**

### **KaBOOM!**

Please feel free to contact your Client Services Coordinator or Project Manager if you have any questions about the testing process.

### **Helpful EPA Websites**

<http://www.epa.gov>

<http://www.epa.gov/lead/>

<http://www.epa.gov/enviro>

### **EPA List of Accredited Laboratories**

The list of accredited laboratories is updated monthly. A link to the most recent list in PDF format can be found on this web page: <http://www.epa.gov/lead/pubs/nllap.htm>

*It is located about halfway down the page, in the third paragraph of the section entitled "How does NLLAP work?" and is called the "monthly NLLAP list."*

### **Microbac**

[www.microbac.com/](http://www.microbac.com/)

### **The National Lead Information Center**

<http://www.epa.gov/lead/pubs/nlic.htm>

1-800-424-LEAD

### **Your Local University**