

# Soil Splitting Procedure

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## Introduction

Homogeneity in laboratory samples is a necessary step in order to create an accurate representation of a soil subset. In the study "A Comparison of Soil Sample Homogenization Techniques" by Schumacher et al. discusses five soil splitting techniques which states that the most effective process that consistently retains fine particulates and best represent the original sample is the riffle splitter. In this procedure the riffle splitter will be utilized to divide large soil samples into smaller well represented samples.

## Equipment and Supplies

Riffle Splitter with three metal buckets  
Compressed air  
Ziploc bags  
Sharpie or pen  
Isopropanol (isopropyl alcohol)  
Dust mask

## Preparation

For best results, samples should be dried at 60 degrees Celsius for 12 hours and sample should be sieved through a 2mm sieve.

Riffle Splitter should be cleaned with isopropanol to rid instrument of any residual organics or particles.

## Procedure

1. Place Riffle Splitter over two metal buckets, see Appendix.
2. With two hands, take sample in a closed container and vigorously shake to homogenize sample as best as possible.
3. Pour sample across open grate of the Riffle Splitter, perpendicular to the grate, evenly until all sample has been poured through the splitter.
4. Either collect sample from one of the metal buckets and place it in a Ziploc bag with correct label or repeat steps 1 through 3 until desired amount is obtained.
5. Between each sample, compressed air is used to clean the Riffle Splitter to cut down on contamination. If soil remains on the instrument, isopropanol may be used.

## Appendix

Example of a Riffle Splitter

