Torvane and Penetrometer Quick Start Guide

Introduction

-The Torvane shear device (ELE International model 26-2261; Figure 13) enables the user to quickly determine the shear strength of cohesive soils. Three sizes of vanes are supplied with torvane. The standard vane has a stress from 0 to 1 kg/cm2, this is also the approximate range of torque that can be easily applied by finger pressure.
It is used for fully saturated cohesive soils with undrained strength independent of normal pressure. The stress range permits it to be used for clays varying in consistency from very soft to stiff. A large vane is provided for use with remolded samples, and has a ratio of 0.2. A smaller vane with a ratio of 2.5 is used with stiffer clays
-The pocket penetrometer was develop by Soiltest Inc. for use for field engineers to check the visual classification of soils. The readings of the penetrometer were compiled from several thousand unconfined compression tests of silty and clay-like soils

Measuring the Sample

Torvane

1. Select the appropriate vane size and fit to vane driver (0.2, 1.0, 0.2 ratio)

0.22.51.0

1. Make sure zero on dial is aligned with index mark on knob, rotating a counter-clockwise the dial face

1. Test the surface should be reasonably flat and least two inches in diameter. Press torvane into soil to depth of blades and maintain a constant vertical pressure while turning knob. A rate of rotation such that failure develops in five to ten seconds is recommended

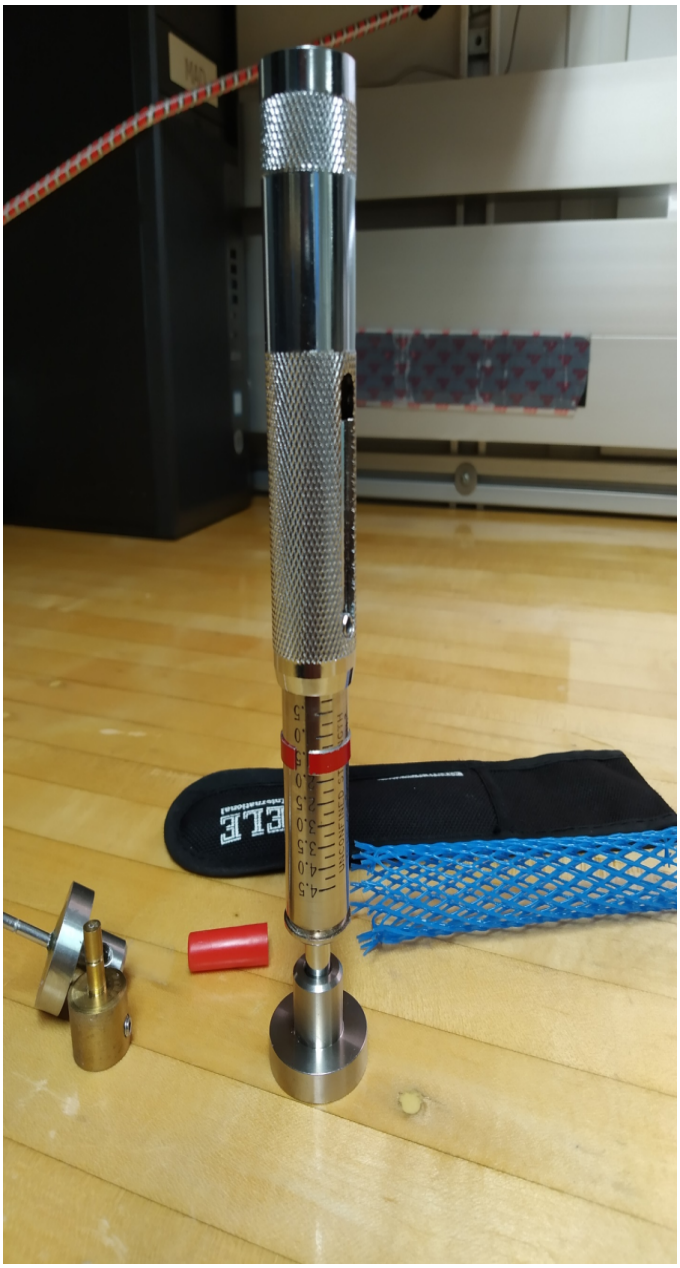
1. After failure develops, release the remaining spring tension slowly and the index mark on the knob will indicate the maximum shear value

Penetrometer

The red ring on the barrel of penetrometer hold the maximum reading of the scale for esy reading

1. Slide the ring down against the instrument handle
2. Grip the knurled portion of the handle and push the tip of the penetrometer into the soil to the grove located ¼" from the tip

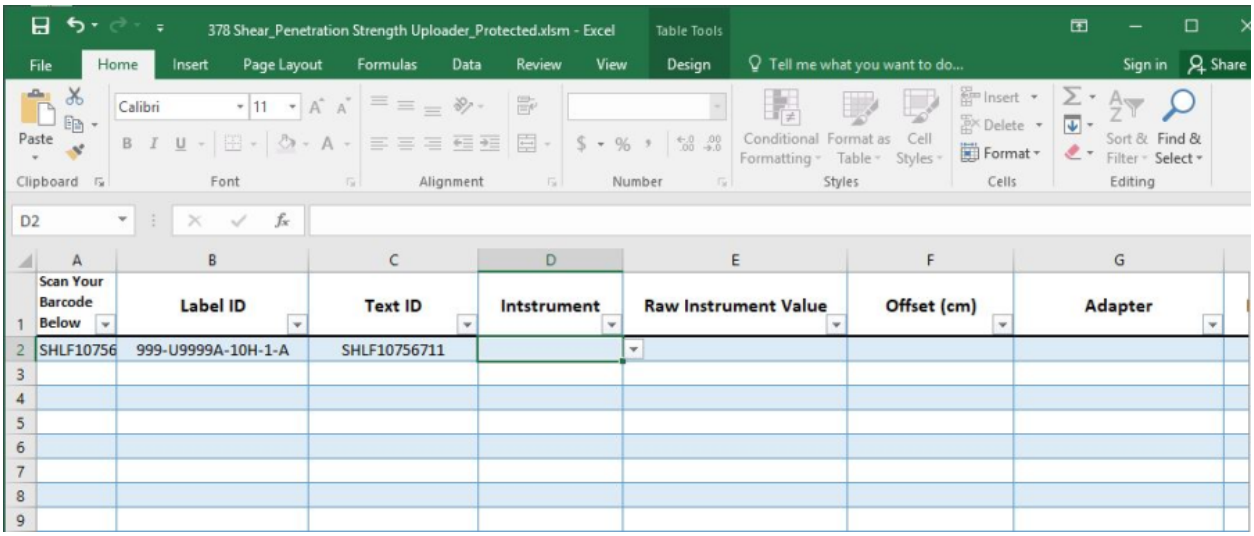
1. Read the unconfined compression strength directly in tons per square foot (TSF) or kilograms per square centimeter (kg/cm2) from the scale. The reading is located in the red ring, side closest to the knurled handle



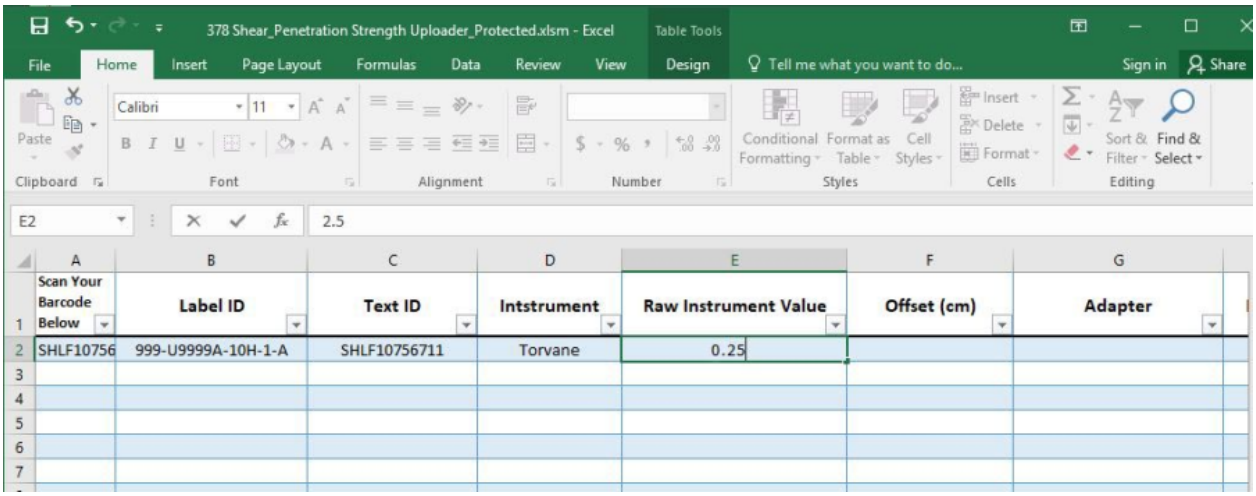
Uploading the data

1. Open the spreadsheet for to enter the data

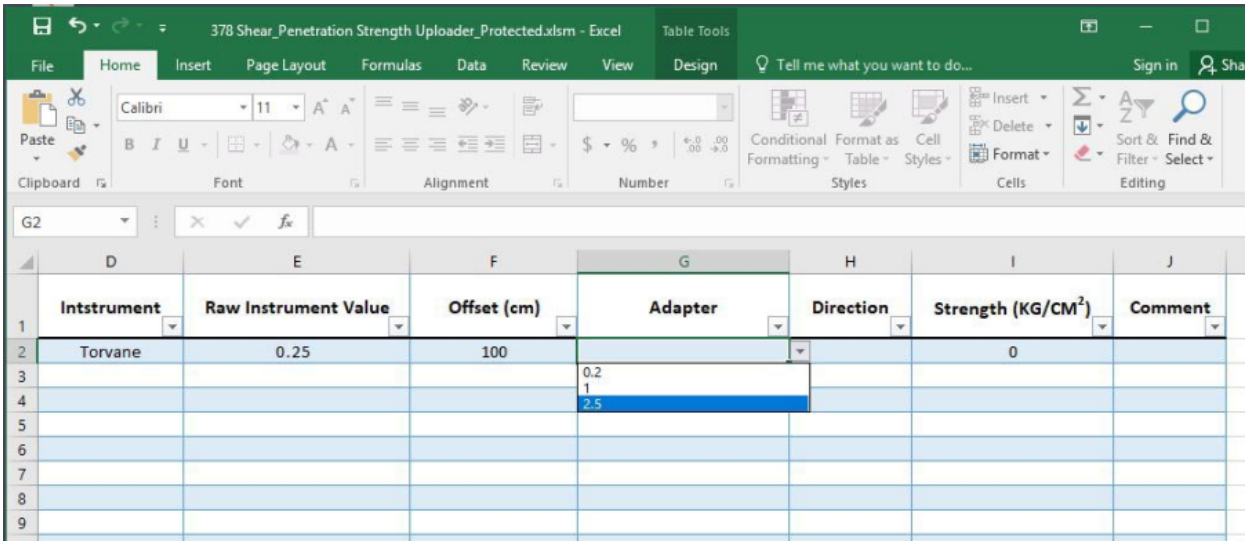
1. Scan the label of your sample



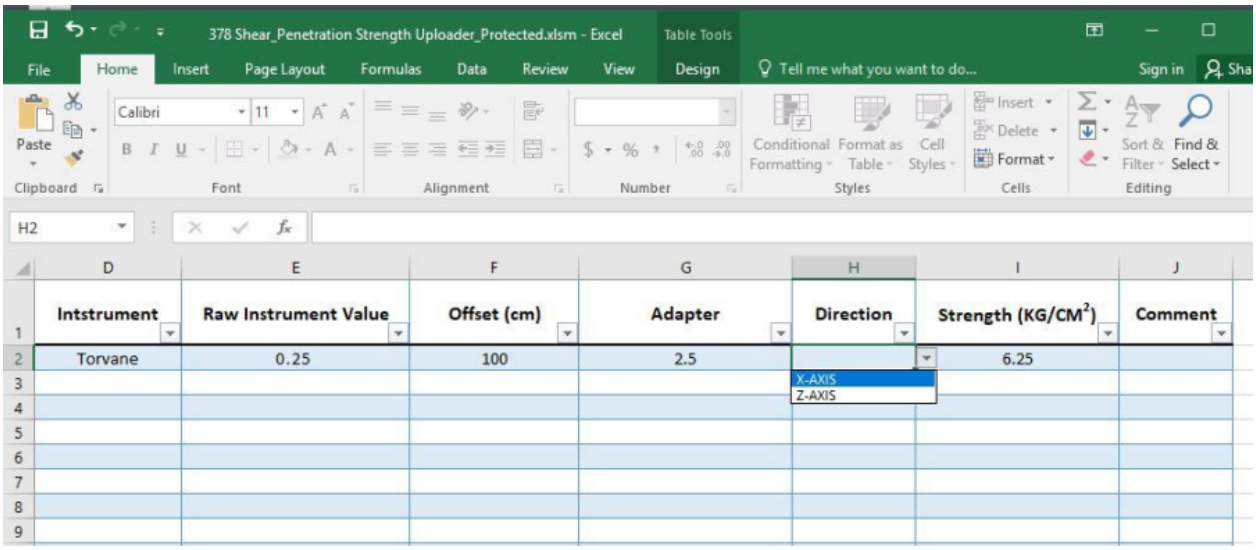
1. Select the instrument on cell (torvane or penetrometer), and write the value



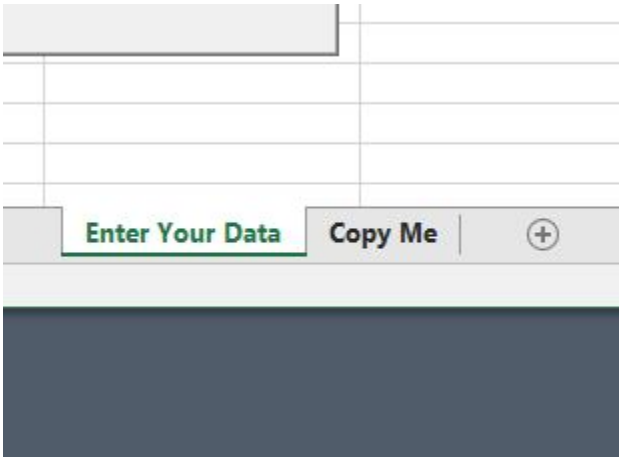
1. Write the offset and select the adapter number (torvane) or if you use it or no (penetrometer)

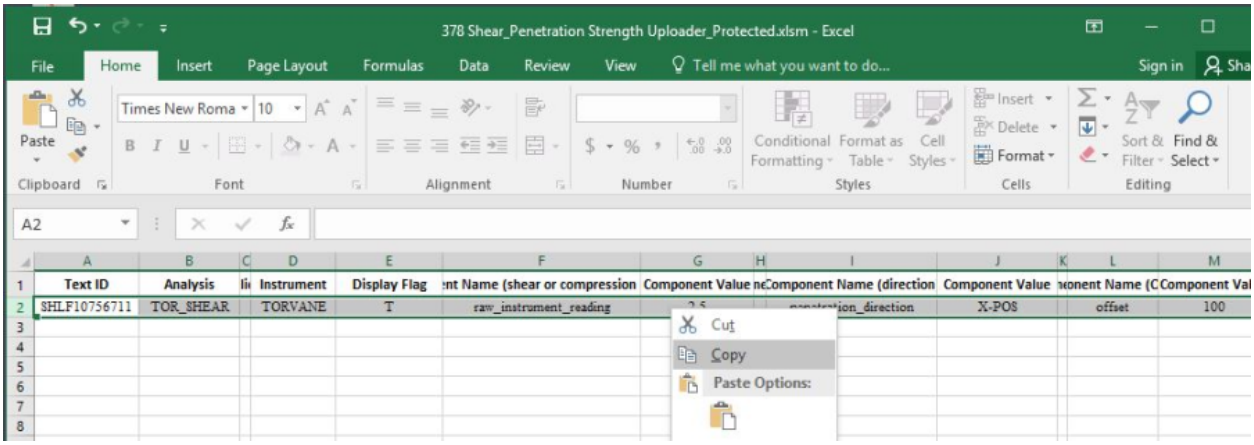


1. Select the direction in which you realize the measurement



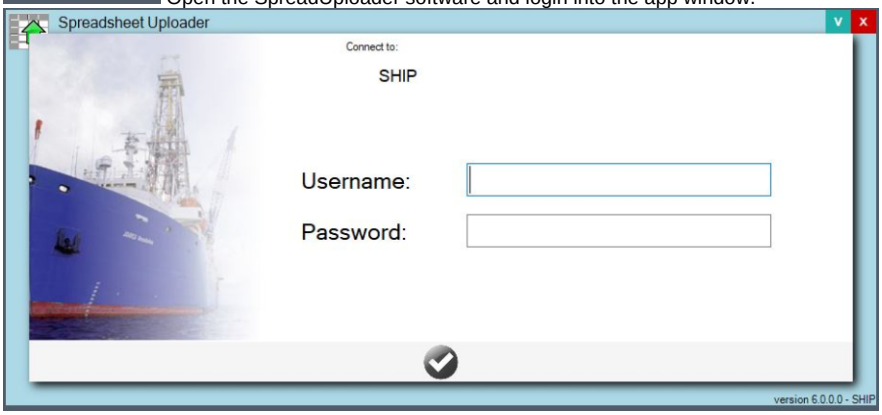
1. Select the "copy me" tab, down on spreadsheet and copy the rows with your sample data



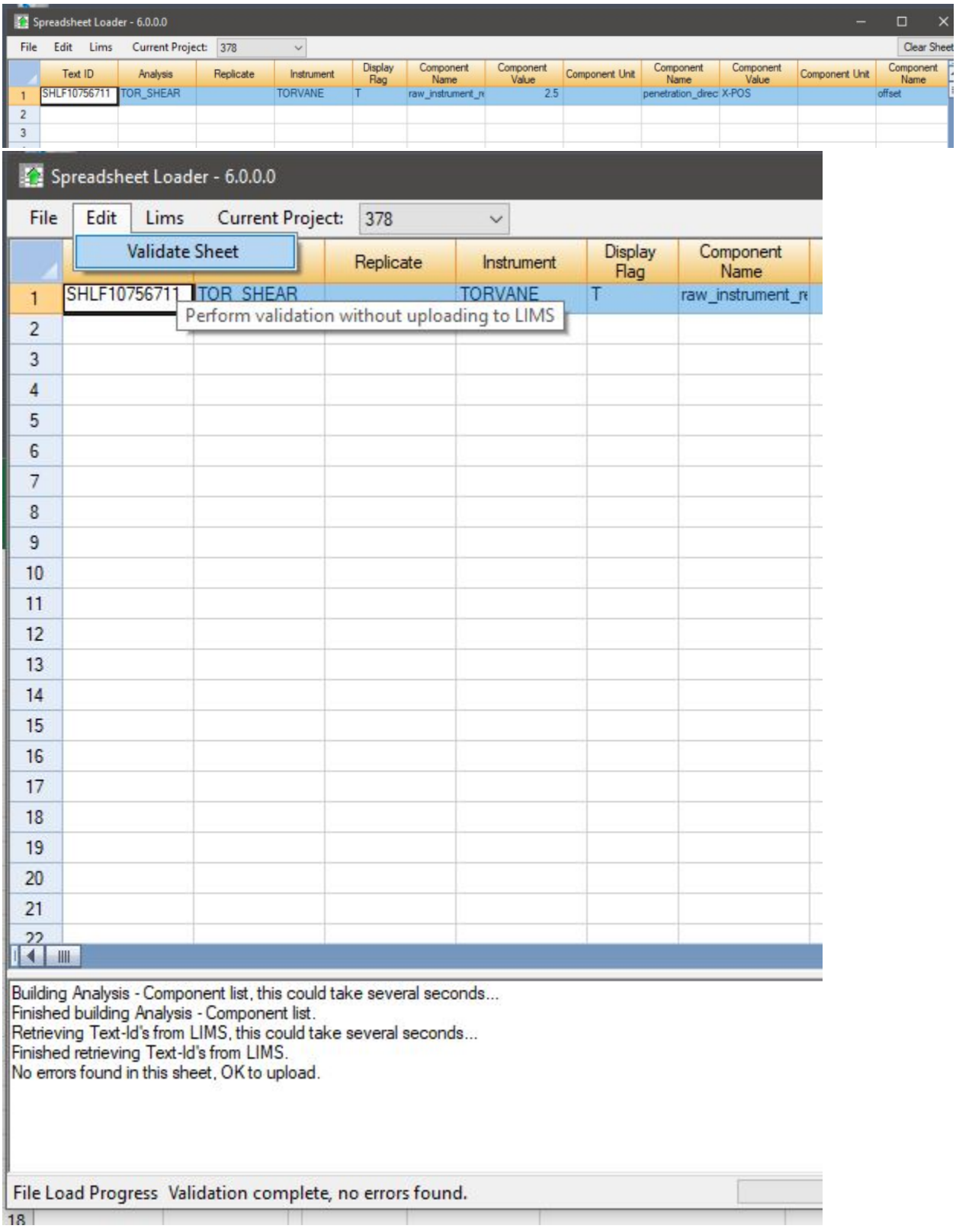


1. 

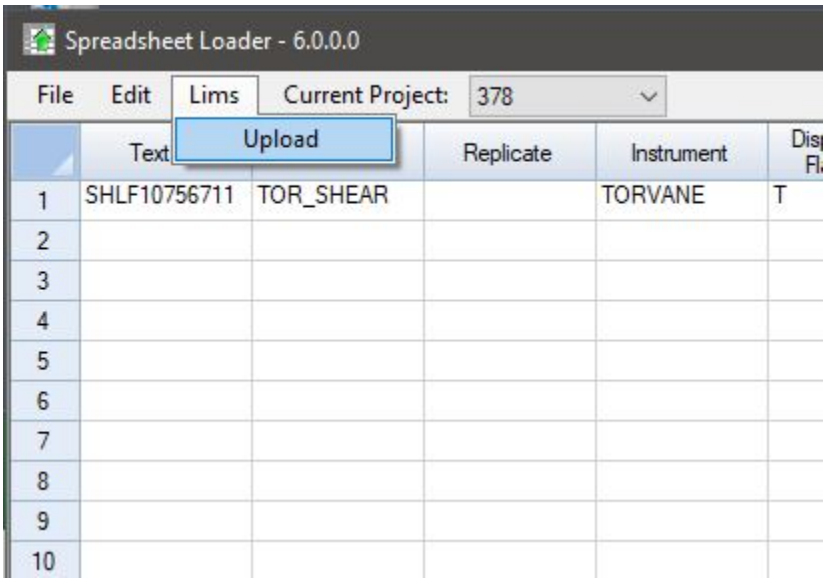
Open the SpreadUploader software and login into the app window.

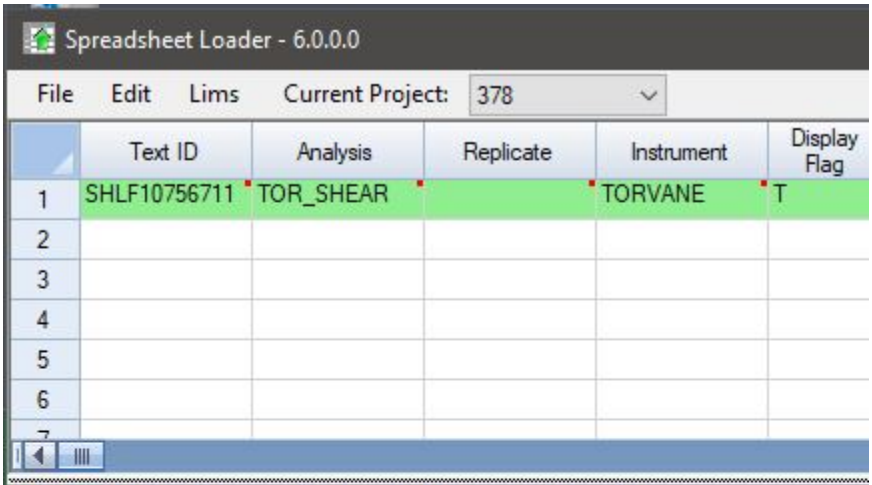


1. Paste the copied rows data and validate the sheet. A message will appear at the bottom if everything is fine.



1. Select Upload in the Lims button. A message will appear at the bottom when it is done





Building Analysis - Component list, this could take several seconds...
Finished building Analysis - Component list.
Retrieving Text-Id's from LIMS, this could take several seconds...
Finished retrieving Text-Id's from LIMS.
No errors found in this sheet, OK to upload.
Building Analysis - Component list, this could take several seconds...
Finished building Analysis - Component list.
Retrieving Text-Id's from LIMS, this could take several seconds...
Finished retrieving Text-Id's from LIMS.
No errors found in this sheet, OK to upload.
Sample: 10756711 found
Analysis: 118654971 logged
Logged row: 1 successfully.
Finished processing row 1
Finished processing 1 rows; Total Elapsed Time: 00:00:02

That is all !!