Integration of Solids Data
with LIMS through API
ExpressWeigh

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Solids Analysis Summary

Total Suspended Solids (TSS)

- An aliquot of sample (liquid) is vacuum filtered through a pre-weighed glass-fiber filter. The filter traps particles and is dried at 104ºC for at least 1 hour. The filter is then cooled and weighed to obtain a post-weight. The drying, cooling, and weighing steps are repeated until a stable weight (+/- 0.5mg) is achieved.

Total Dissolved Solids (TDS)

- An aliquot of sample (liquid) is vacuum filtered through a prepared glass-fiber filter. The filtrate is collected and placed into a pre-weighed vessel. The liquid portion is then evaporated from the vessel and the vessel is placed into an oven at 180ºC oven. The vessel is cooled and weighed to obtain a post-weight. The drying, cooling and weighing steps are repeated until a stable weight (+/- 0.5mg) is achieved.

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Preparation of Filters for TSS

Standard Methods 2540 D requirements

- The glass-fiber filter used in the TSS analysis must be prepared and weighed to method specifications.
  - Filter is washed with under vacuum with 3 successive 20-mL portions of reagent-grade water.
  - Dry in an oven at 103 – 105ºC for 1 hour.
  - Cool in a desiccator to balance temperature and weigh.
  - Repeat the cycle of drying, cooling, desiccating, and weighing until weight change is +/- 0.5mg.

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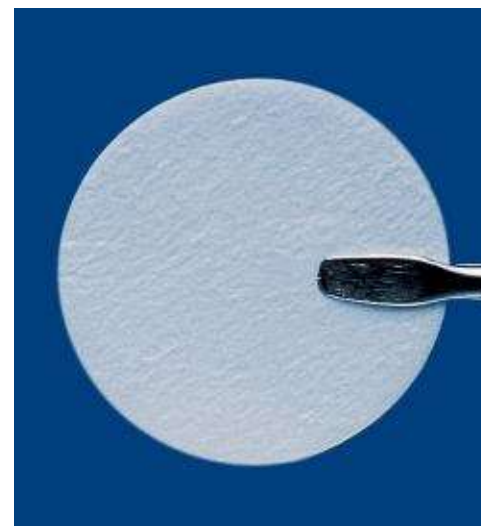
Preparation of Vessels for TDS

Standard Methods 2540 C requirements

- The vessel used in the TDS analysis must be prepared and weighed to method specifications.
    - Wash vessel to remove residue if used prior to current analysis.
    - Heat the clean vessel at 180ºC for 1 hour in an oven.
    - Cool in a desiccator to balance temperature.
    - Weigh immediately before use.

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Pre-Weighed Products

Environmental Express offers products for both the TSS and TDS analysis that are already prepared per method requirements to save the laboratory time and money.

ProWeigh
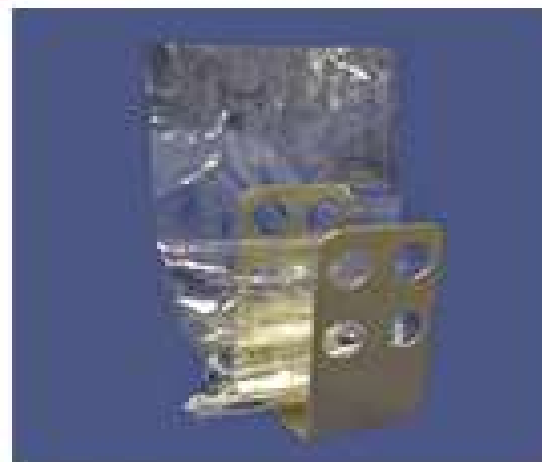
StableWeigh

Data Traceability Challenges

How does the laboratory ensure that the pre-weighed products purchased meet the method QC/QA requirements laid out in the analytical method?

Data Traceability Challenges

Environmental Express Filter Data

Enter New Box/Pan ID

Click to Download Filter Data for Box 201875

Item No.: F93447MM-X - DoubleWeigh Filters for TSS, 47mm, 100pk

Box ID	ID	Weight 1	Weight 2	Lot
201875	FG3SN	0.1202	0.1202	600014
201875	FG3SY	0.1193	0.1194	600014
201875	FG6DT	0.1143	0.1146	600014
201875	FG6DW	0.1165	0.1168	600014
201875	FG6E4	0.1143	0.1144	600014
201875	FG6E7	0.1189	0.1191	600014
201875	FG6E9	0.1083	0.1083	600014

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Data Traceability Challenges

Auditors still require traceability from the EE website through the data entry / collection process.

- Currently not a way to show this process within one contained system.
- ExpressWeigh offers a way to do just this.
  - Web-based program accessed through the EE website
  - GUI interface
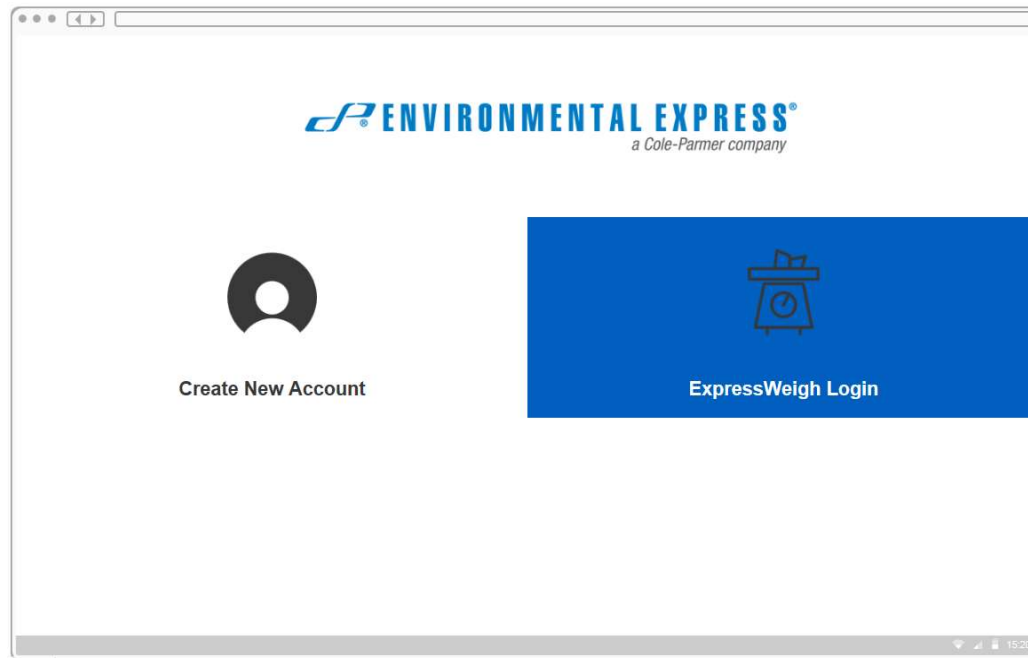
ExpressWeigh

Option to enter data manually or import data

- Data can be imported from EE website (ProWeigh and/or StableWeigh weights)
- Data can be imported from LIMS system (Sample IDs, etc)
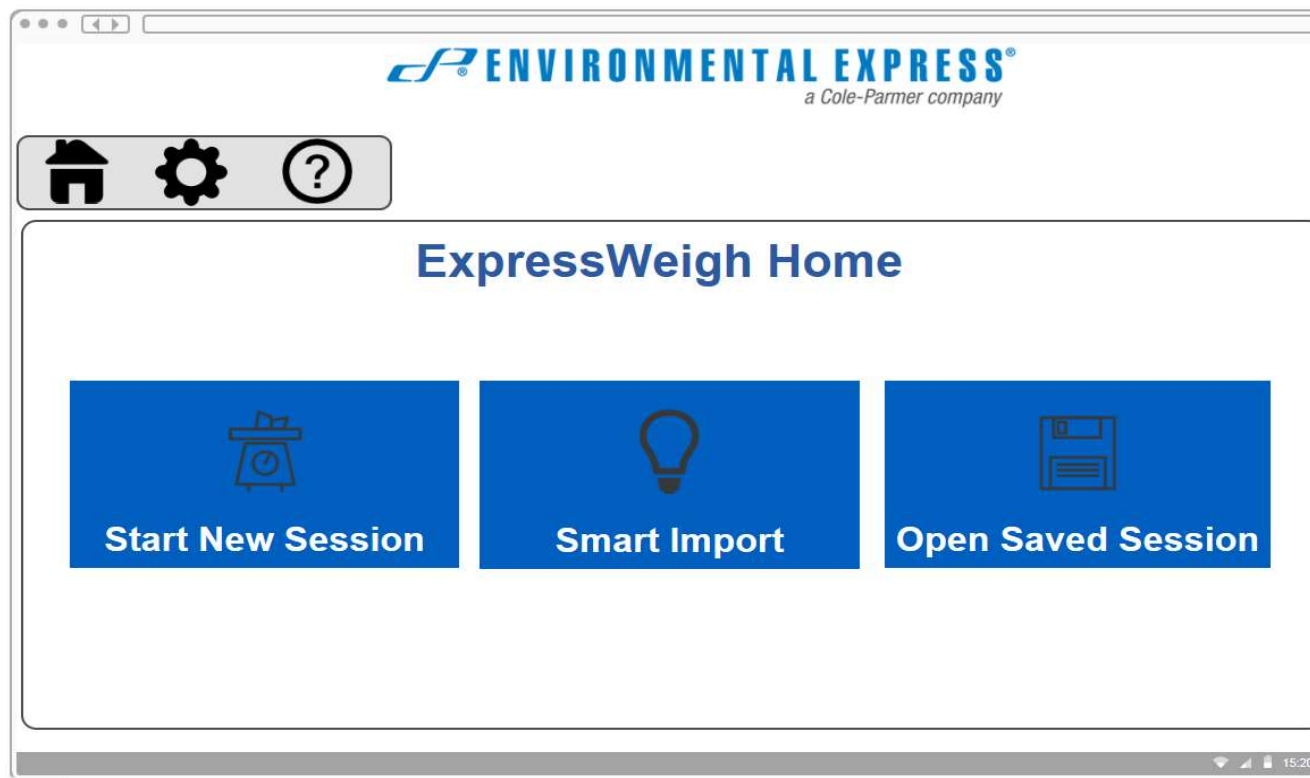
ExpressWeigh – Data Import

ExpressWeigh will import ProWeigh or StableWeigh data directly from the EE website

ExpressWeigh – QC Management

ExpressWeigh has the ability to assign limits for QC samples and other parameters.

ExpressWeigh – Data Entry

ExpressWeigh – Assigning QC Samples

ExpressWeigh – Data Results

ExpressWeigh – Viewing Data Results

ExpressWeigh Lab Results

(i) Lab Information

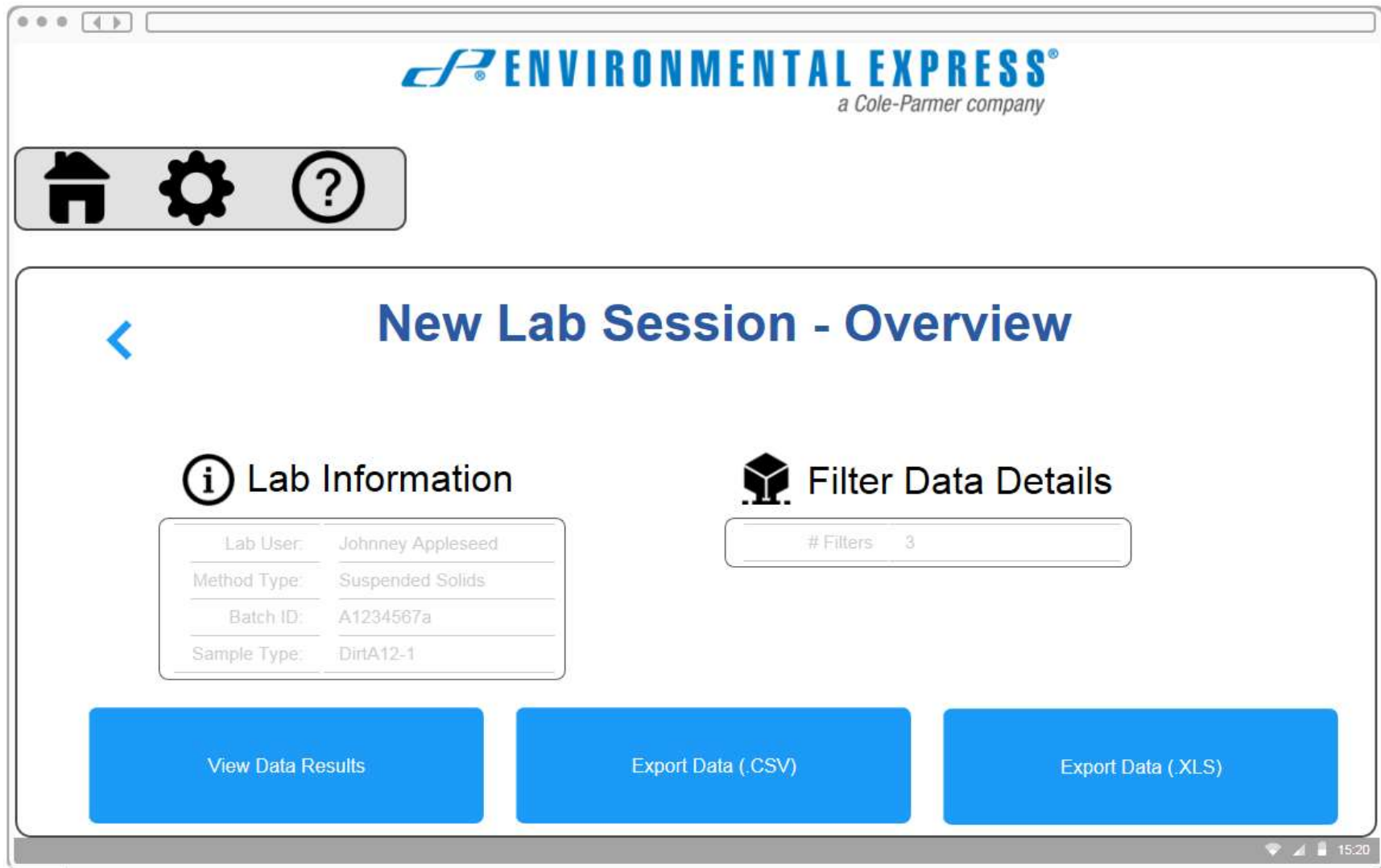|	
Lab User:	Johnney Appleseed
Method Type:	Suspended Solids
Batch ID:	A1234567a
Sample Type:	DirtA12-1

FilterData : FilterData

Filter ID	Timestamp	Pre-Weight 1	Pre-Weight 2	Sample Volume	Post-Weight 1	Post-Weight 2	Method Type	Calculated Fina
A12345	12:51:01	0.0128	0.0128	100 mL	0.0128	0.0128	TSS	0.0128
A12346	13:51:01	0.0128	0.0128	100 mL	0.0128	0.0128	TSS	0.0128
A12347	14:51:01	0.0128	0.0128	100 mL	0.0128	0.0128	TSS	0.0128
A12348	15:51:01	0.0128	0.0128	100 mL	0.0128	0.0128	TSS	0.0128
A12349	16:51:01	0.0128	0.0128	100 mL	0.0128	0.0128	TSS	0.0128
A12350	17:51:01	0.0128	0.0128	100 mL	0.0128	0.0128	TSS	0.0128
A12351	18:51:01	0.0128	0.0128	100 mL	0.0128	0.0128	TSS	0.0128

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ExpressWeigh – Data Results

ExpressWeigh – Data Export

ExpressWeigh – Demonstration

https://pr.to/L4UCBQ/

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Questions?