

Empa.QATool CSV Import file format specification and Compare live data

Introduction

The QATool used for ACTRIS, provided by Empa, supports the import of custom csv files. This import can be used to import custom datasets for visualization and flagging in the @VOC@, without having to go through the EBAS submission process.

These CSV files can contain any type of data (does not necessarily have to be VOC's listed as valid by EBAS).

With the 'Compare live data' there is a possibility to upload the VOC data from the current year. As soon as there are new data from your station they can be uploaded as well. @VOC@ will put the files together in one file and the new data are shown in a different color.

This document will explain how such a CSV file has to look like, for it to be imported into @VOC@ and how to use the 'Compare live data'.

CSV Format

The CSV Importer of QATool will use “;” as delimiter between columns, so make sure your file uses this delimiter!

There are 2 main parts in the csv file: A mandatory part and an optional part

Mandatory part

The mandatory part includes these two columns:

- Starttime
- Endtime

Dates have to be in the format “yyyy-MM-dd HH:mm:ss”, for example “2018-09-04 14:30:00”

These two columns are used to describe during which timeframe the data has been taken. If the measurement is a punctual (with just one date time, and no time range), just leave Endtime empty and enter your date in Starttime. However, both columns should always be at the beginning of each row.

Also, mandatory of course is the header of the dataset, containing stuff like substance names, etc. For example (more further down in this document):

```
Start;End;CO-Value;CO-Flag;CO-Precision;CO-Accuracy;NO-Value;
```

Optional part

The optional part includes all the data. There are 4 types of data:

- **Value**
- **Precision**
- **Accuracy**
- **Flag**

These are represented as 4 columns each, per measured substance / object:

- [Substance]-Value (mandatory)
- [Substance]-Precision (optional)
- [Substance]-Accuracy (optional)
- [Substance]-Flag (optional)

So each substance has 1-4 columns. The measured value is obviously mandatory, while the others are optional and will be stored as NULL in the internal database when not provided.

Examples

Some CO2 and NOX data without end-time

Let's make an example. Lets assume we want to import a dataset containing CO2 measurements (with a flag column) and NOX measurements with no other optional columns: Where the data is a punctual measurement (End always empty)

```
Start;End;CO2-Value;CO2-Flag;NOX-Value;  
2018-09-07 00:00:00;;234;1.000;42;  
2018-09-08 00:00:00;;232;1.000;45;  
2018-09-09 00:00:00;;242;1.000;37;
```

Some simple data with only mandatory fields, containing an end time

Lets assume one wants to import just some simple data, with start and end time defined for these substances:

```
Start;End;CO2-Value;NOX-Value;Wind-Speed-alue  
2018-09-07 00:00:00; 2018-09-07 01:00:00;234;42;34  
2018-09-08 00:00:00; 2018-09-07 02:00:00;232;45;36  
2018-09-09 00:00:00; 2018-09-07 03:00:00;242;37;25
```

File name

The file name has to include station name, start date and revision date e.g.:

CH0005R_20170101_20180831.csv. This file can be imported with the module ['Import data'](#)

Compare live data

This module is used for quality check of near real-time data. One can compare a new dataset with an older one of the running year. One of the advantages is that you don't have to create a NASA AMES file. You can import a simple .csv file formatted as described above. This can be done in 4 steps.

Import of the first dataset

Example of a correct formatted .csv-file

	A	B	C	D	E	F	G	H
1	Start	End	ethane-Value	ethane-Flag	ethene-Value	ethene-Flag	propane-Value	propane-Flag
2	2019-01-01 00:04:00	2019-01-01 00:24:00	1951	0	561	0	835	0
3	2019-01-01 01:04:00	2019-01-01 01:24:00	1890	0	479	0	787	0
4	2019-01-01 02:04:00	2019-01-01 02:24:00	1897	0	537	0	795	0
5	2019-01-01 03:04:00	2019-01-01 03:24:00	1834	0	483	0	786	0
6	2019-01-01 04:05:00	2019-01-01 04:25:00	1850	0	603	0	780	0
7	2019-01-01 05:05:00	2019-01-01 05:25:00	1854	0	591	0	777	0

As soon as you have created your file, login in @VOC@ and click on 'Compare live data'

Empa
Home QA Tools **Compare live data** Export Data Import data Delete Data
Logged in as: admin (Sign out)

View and compare live datasets

Select existing live dataset:

StationDataset
[v] [v]

Or [create a new one](#) ← **1.**

Reference station: HPB ([change](#))

Import new data: [Import](#) ← **2.**

Plot substance versus ← **3.**

← **4.**

© 2018 - Empa

1. First of all you have to [create](#) a new live dataset for your station (e.g. BRM) and a dataset start date. The station name has to be identical with the station name in your .csv-file!

Create a new live dataset ✕

Station

Dataset start date

Create

There will be a message which confirms the creation of the new dataset.

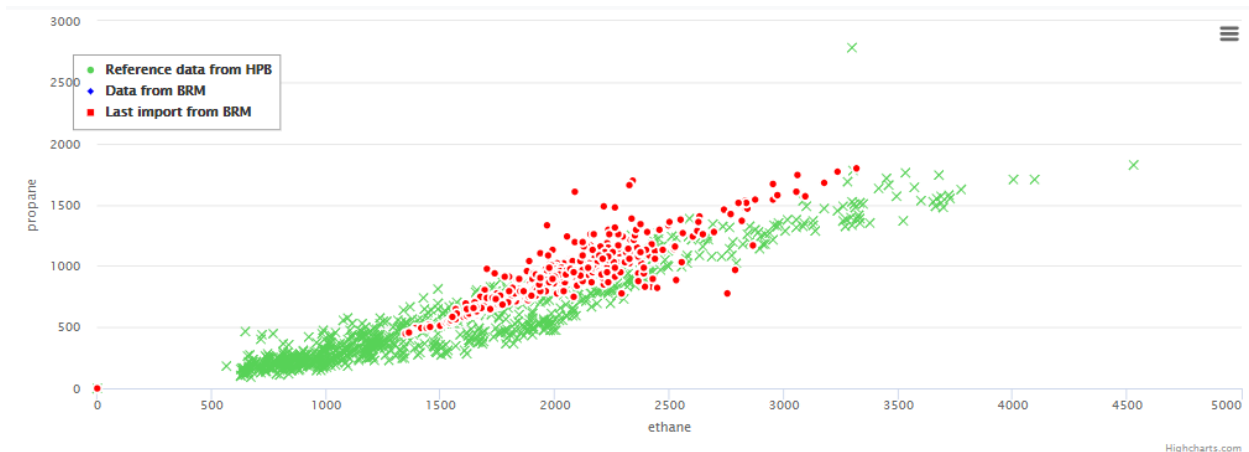
2. In a second step one has to select the file which has to be uploaded by using the 'Import' link.

Import new data ✕

Select file to import: Datei auswählen BRM_20190...0124.csv

Import

3. Choose two substances from the pull-down menu you are interested in.
4. Press 'Render scatter plot'. @VOC@ shows the scatter plot of your first dataset.



Because this is your first dataset all points are shown in red.

Adding a new dataset

As soon as there are new data available one can upload them by using the 'Import' link. **Important:** You can only import a file with newer data points. Make sure that there is no time overlap with the old file. Before uploading the new dataset choose your station and dataset.

View and compare live datasets

Select existing live dataset:

Station Dataset

BRM 31.12.2018

Or [create](#) a new one

Reference station: HPB ([change](#))

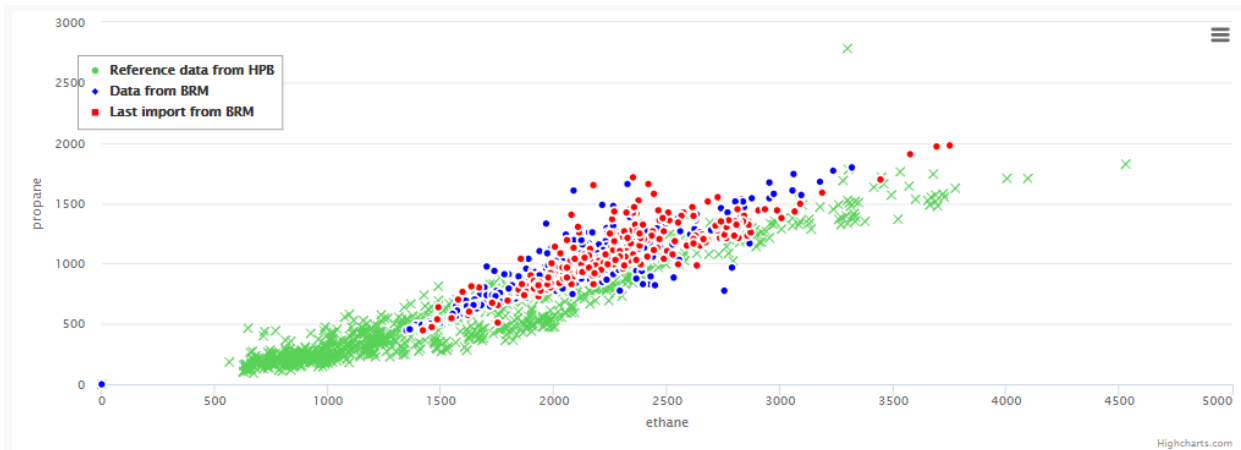
Import new data: [Import](#)

Plot substance versus

Render scatter plots

Choose two substances you are interested in and press 'Render scatter plot'.

@VOC@ now shows the result of the second data import.



The results of the first import are shown in blue the freshly imported dataset is in red. In the background @VOC@ has merged the two files together in one file to prevent unnecessary files from being stored on the server.

The new merged file can also be seen and used in QA Tool of @VOC@ with all its advantages

