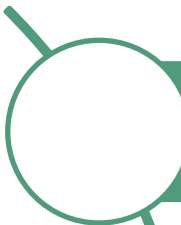




# Development of a worker's exposure data collection tool and database system for metals and metalloids

Steven Verpaele, MSc, CIH

# Workplace Exposure Database - Background

A green circle icon with a green line extending from its top-left, connected to the first text box.

Matrix for sample data collection from NI (and other metal) producers and downstream users, including also REACH and cost data

A blue circle icon with a blue line extending from its top-left, connected to the second text box.

Uniform data collection; availability of monitoring trends; improved information about health implications of exposure cf EN 689 and EN 482 criteria

An orange circle icon with an orange line extending from its top-left, connected to the third text box.

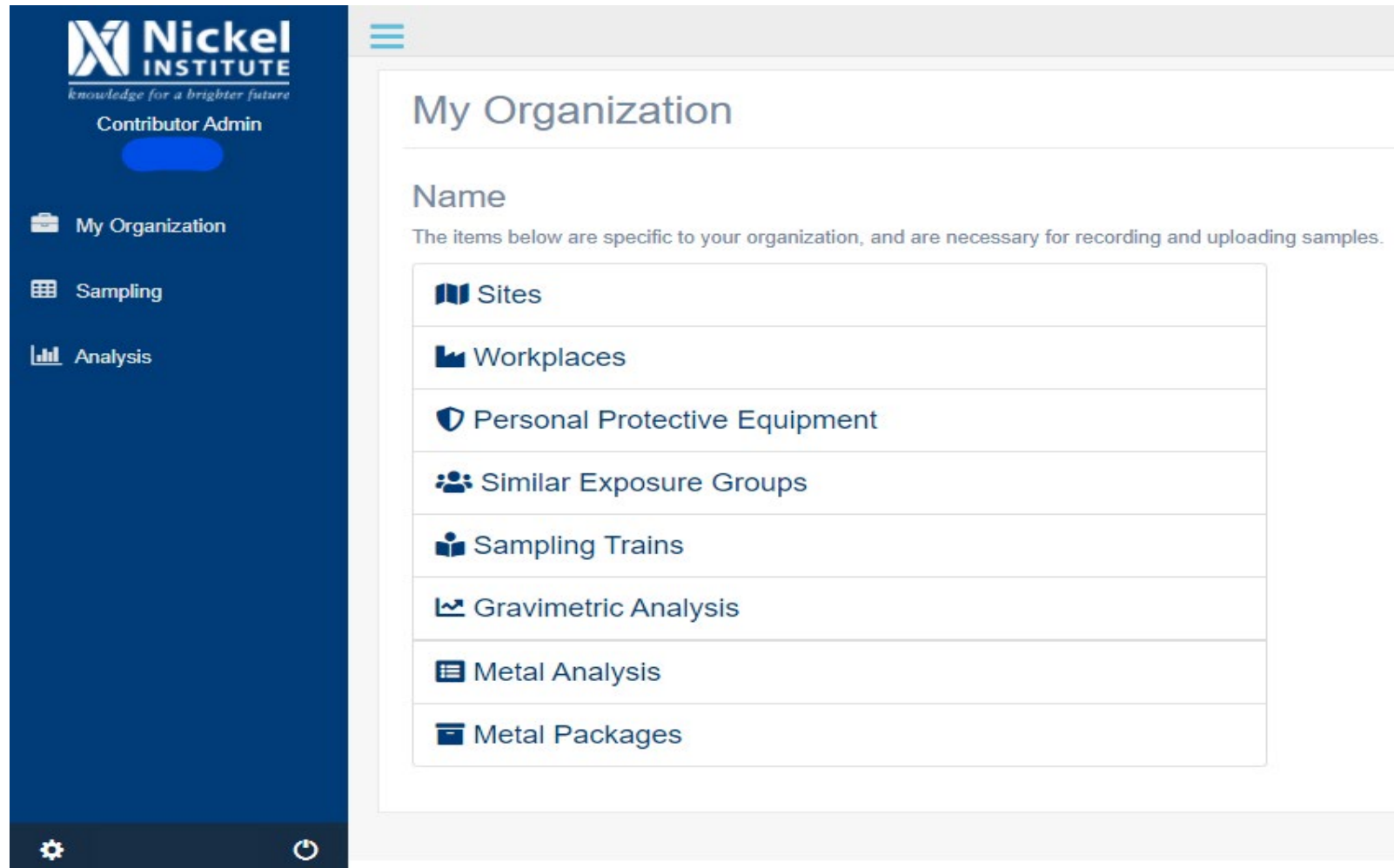
Availability of data for risk assessment and management; exposure model validation (MEASE); OELV setting process; socio-economic assessments; benchmarking; BAT

A dark blue circle icon with a dark blue line extending from its top-left, connected to the fourth text box.

Other metals will also be included in the database; anonymity of samples is guaranteed; the database is on a secure server with encrypted log-in credentials

NI members agreed for the NI to develop this database which is included as a project in the BP since 2019

# Workplace Exposure data collection tool & Database



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Contributor Admin

- My Organization
- Sampling
- Analysis

## My Organization


The items below are specific to your organization, and are necessary for recording and uploading samples.

- Sites
- Workplaces
- Personal Protective Equipment
- Similar Exposure Groups
- Sampling Trains
- Gravimetric Analysis
- Metal Analysis
- Metal Packages

**One-Time Submissions of main workplace and contextual information** – updates only necessary when site information changes over time


# Workplace Exposure data collection tool & Database








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 Users

 Invite Users

## Sampling

### Upload Dataset

Uploaded data must be within an Excel document created from the most recent template: [Exposure Sampling Template 1.13.xlsx](#)

Select sheet to upload:

Geen bestand gekozen

Show  entries Search:

Date Submitted	Uploaded By	Task	Metal Analysis	
04-08-2021 3:39 pm	Contributor Admin			<input type="button" value="View"/> <input type="button" value="Delete"/>

Showing 1 to 1 of 1 entries Previous 1 Next

**Regular submissions of exposure data and workplace contextual information related to the specific measurements. Excel file can be linked with other systems, such as Cority, SAP, etc., through for example CSV exports**



**Sample data information to be uploaded every time workplace air samples are taken**  
**Information to be collected during sampling**  
**Sampling information; Personal sampling information and analysis information (results)**



**Fixed online data information automatically coupled with the sheet**  
**Will appear in drop down lists thorough the sheets**  
**Helps to categorize the exposure results**



# Workplace Exposure data collection tool & Database



## Sampling

Show 10 entries

Search:

↓↑		Status	Reference Number	Sample Date	Organization	Contributor
+	Approve ✓ Reject ✗ View All Data 🔍	Unreviewed	i5rx1PV	2008	InterStrand	Contributor1 Test Update Profile
+	Approve ✓ Reject ✗ View All Data 🔍	Unreviewed	DjcKIOhC	2011	InterStrand	Contributor1 Test Update Profile
+	Approve ✓ Reject ✗ View All Data 🔍	Unreviewed	0ChXxe9h	2011	InterStrand	Contributor1 Test Update Profile
+	Approve ✓ Reject ✗ View All Data 🔍	Unreviewed	tnAM3qrV	2013	InterStrand	Contributor1 Test Update Profile
+	Approve ✓ Reject ✗ View All Data 🔍	Unreviewed	X8PZXKcS	2013	InterStrand	Contributor1 Test Update Profile
+	Approve ✓ Reject ✗ View All Data 🔍	Unreviewed	EY08XMvv	2013	InterStrand	Contributor1 Test Update Profile
+	Approve ✓ Reject ✗ View All Data 🔍	Unreviewed	IgWslbEy	2013	InterStrand	Contributor1 Test Update Profile
+	Approve ✓ Reject ✗ View All Data 🔍	Unreviewed	I70E3jgg	2013	InterStrand	Contributor1 Test Update Profile
+	Approve ✓ Reject ✗ View All Data 🔍	Unreviewed	7NCyGqxK	2014	InterStrand	Contributor1 Test Update Profile
+	Approve ✓ Reject ✗ View All Data 🔍	Unreviewed	LoLNMZhv	2014	InterStrand	Contributor1 Test Update Profile

Showing 1 to 10 of 66 entries


Previous 1 2 3 4 5 6 7 Next

Each submitted dataset is quality checked  
Sampling and analysis method requirements  
Key contextual information

IF NOT OK – additional information on the fields missing will be asked after rejection

# Workplace Exposure data collection tool & Database





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test

- My Organization
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Upload your generated analysis file here

## Workplace Exposure Analyser

Enter occupational exposure limit (OELV)  
(microgram/m3):

Enter substance name

Choose imputation method:

None, use original measurements

Choose CSV File

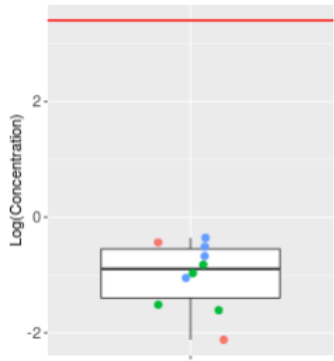
analysisitest.csv

Upload complete

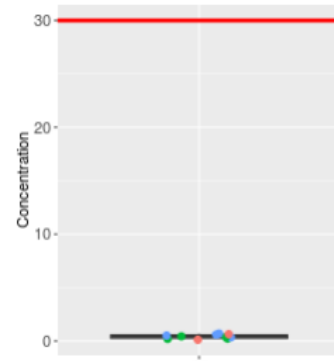
Graphical results

IHStat BWStat Summary ReportHTML Transformed data

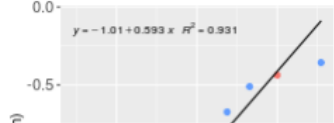
Log normal boxplot



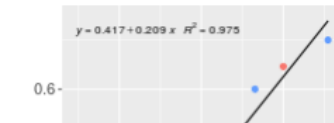
Normal boxplot



Log normal probability plot

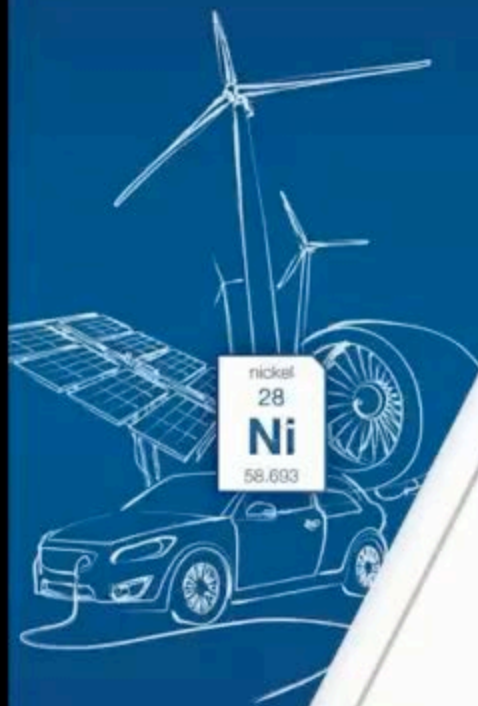


Normal probability plot



**Generate a CSV file with your data available in the database**  
**Perform statistical analysis on the data according to international approved IH methods (EN 689 – AIHA IH STAT)**  
**Download reports to be used in internal exposure reporting**





WELCOME

# Webinar Nickel Institute Workplace Exposure Database



Steven Verpaele

**TRAINING VIDEO - [LINK](#)**

For more information:  
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