

# Thermal Treatability Test

– A validation tool to support decisions

KRÜGER  VEOLIA



## Standard test package

- Heating of the contaminated soil following a predefined temperature profile
- Before and after treatment soil analysis
- Analysis of condensate collected in a separating funnel to split aqueous and non-aqueous phase
- Sampling and analysis of extracted air on sorbent tubes
- A test report including temperature curves, analysis results and mass flux/mass balance calculations
- Disposal of all excess material

The treatability test can be customized and add-on services to the standard test can be chosen individually.

## Why Perform Thermal Treatability Tests?

Treatability testing is a fast inexpensive tool for assessing “new” contaminants or mixtures, when behavior of the contamination is not already well known.

By heating contaminated soil samples, and analyzing before and after concentrations, it is possible to determine if full scale thermal treatment is feasible for a specific contamination.

Besides representing a decision tool for choosing the right technology, the test designates what temperature is sufficient to reach defined remediation targets, and provides a mass balance indication.

By this, a thermal treatability test supports decision making but also provides knowledge to validate and strengthen the thermal design for a specific site.

Krüger performs treatability tests in our own lab facilities which enable us to design, improve and develop our tests according to client needs.

Analysis of soil, condensate and extracted air are made by certified laboratories and can be chosen by the client.

# Results from Selected Treatability Studies

## Mercury treatment @ 350 °C (average concentrations based on 3 samples)

Contaminants	Pre treatment	Post treatment
Mercury - Total Hg (mg/kg DM)	144	0.49

## Pesticide treatment @ 350 °C (average concentrations based on 3 samples)

Contaminants	Pre treatment	Post treatment
Parathion (mg/kg DM)	3462	<0.01
Methylparathion (mg/kg DM)	382	<0.01
Malathion (mg/kg DM)	82	<0.01
Sulfotep (mg/kg DM)	55	<0.01

## Lindane treatment @ 325 °C (one sample)

Contaminants	Pre treatment	Post treatment
Alpha-HCH (mg/kg DM)	42	<0.0015
Beta-HCH (mg/kg DM)	1.3	<0.0013
Delta-HCH (mg/kg DM)	100	0.006
Gamma-HCH/Lindane (mg/kg DM)	310	0.004



## How can we help you?

Enhance environmental safety and value of your land property by contacting us today:

- experience thermal in situ remediation live
- get a conceptual design and price estimate for your site
- learn about the technology from our detailed case studies
- meet our thermal experts and be inspired by our presentation

Krüger designs and executes robust and transparent solutions with the base in thermal remediation. We have an unbeaten track record of our clean-ups with respect to remedial goals, timely manner, budget and safety.



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