

MIURA
DSP systems
The missing link in your laboratory!



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Item	Units	GO-2EHT	GO-4EHT	GO-6EHT
Installation method	-	Table top / Fumehood		
System component	-	Controller x 1	Controller x 1	Controller x 1
	-	Processing Module x 1	Processing Module x 2	Processing Module x 3
	-	A processing module consists of two processing units.		
Sample preparation capacity	sample	up to 2	up to 4	up to 6
Solvent consumption (Hexane)	mL/sample	90 (+ 20 for substitution in the tubing)		
Solvent consumption (Toluene)	mL/sample	5 (+ 10 for substitution in the tubing)		
Controller weight	kg	22.3		
Processing module weight	kg	46.3	92.6	138.9
External dimensions of controller [W x D x H]	mm	9" x 23" x 20"		
External dimensions of processing module [W x D x H]	mm	17" x 22" x 33"	33" x 22" x 33"	49" x 22" x 33"
Electric requirements	100 V–240 V AC ± 10%, 50/60 Hz			
				

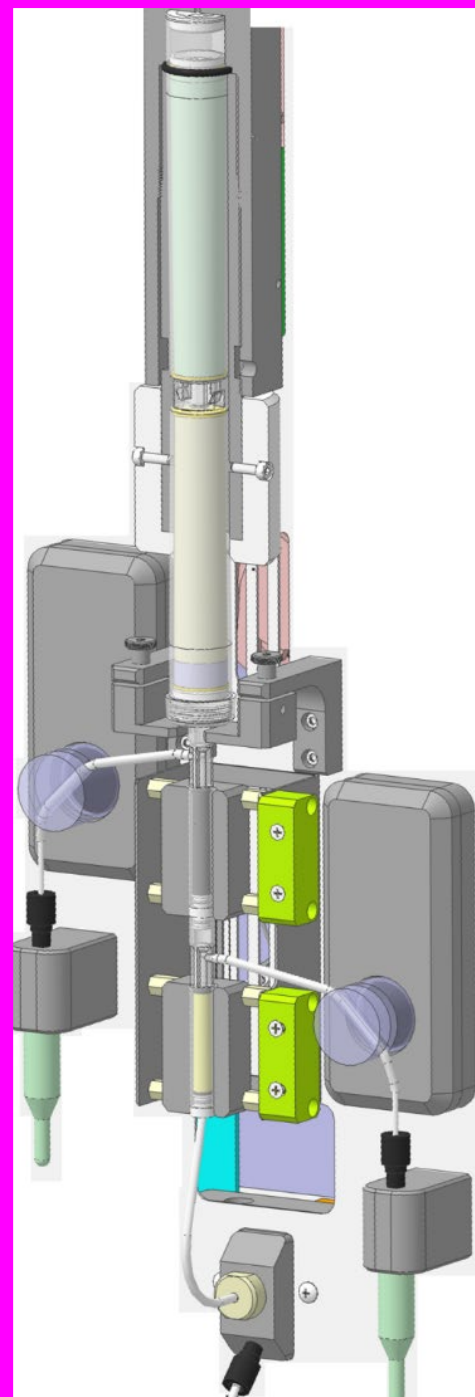
Benefits

- **Fast**
 - 2 purified extracts within 90 minutes
- **Easy**
 - Unattended operation with one click of a button
 - Fractions directly in GC vials containing only 1ml toluene
- **Ecological and economical**
 - Hexane ~110ml
 - Toluene ~15ml ml
 - Methylene chloride 0ml
- **Durable**
 - No washing, no contact of sample with system, no risk of cross contamination
 - No valves which can get clogged or dirty



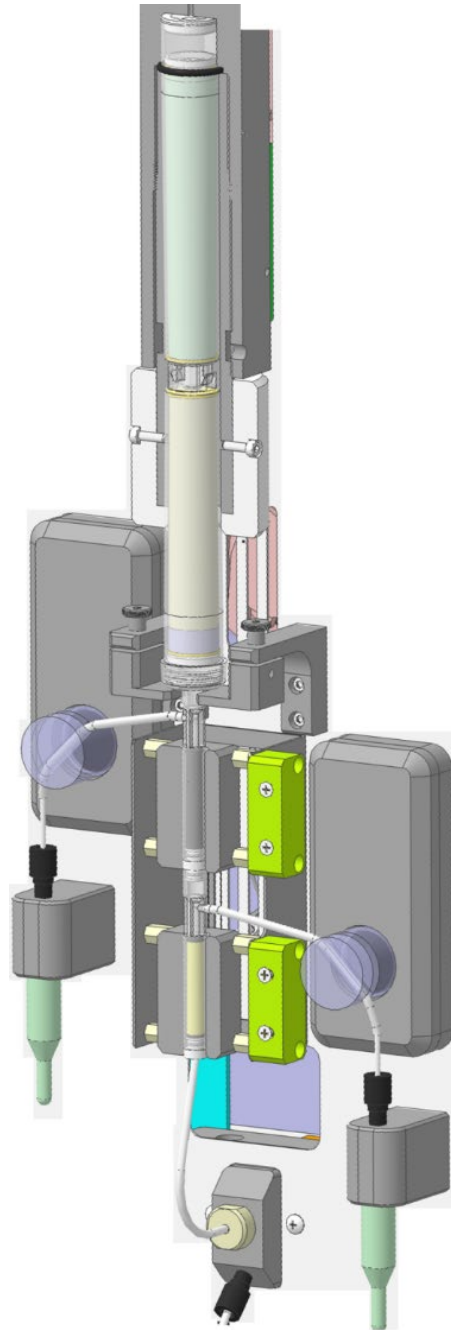
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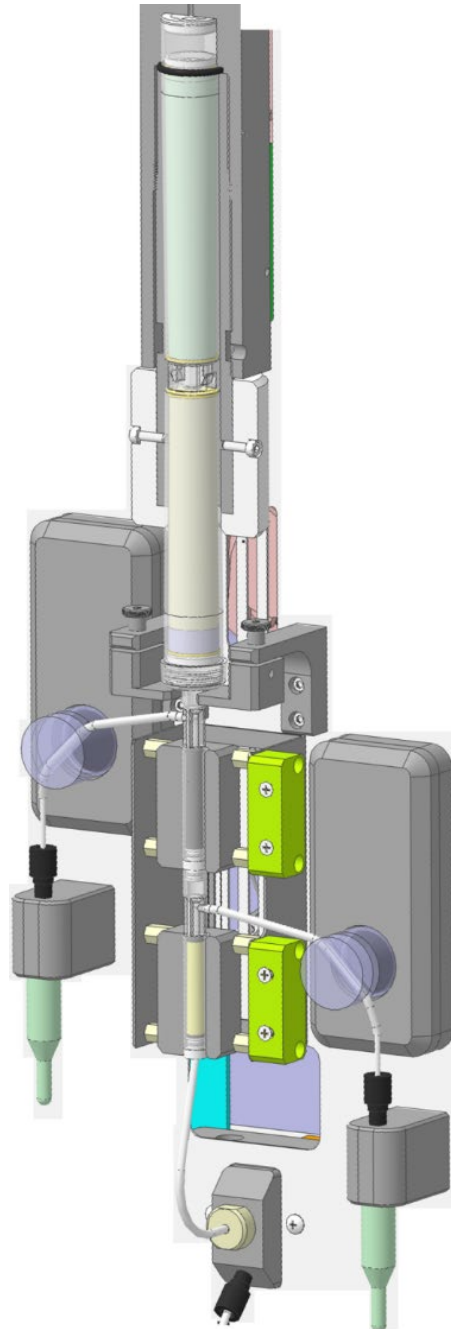
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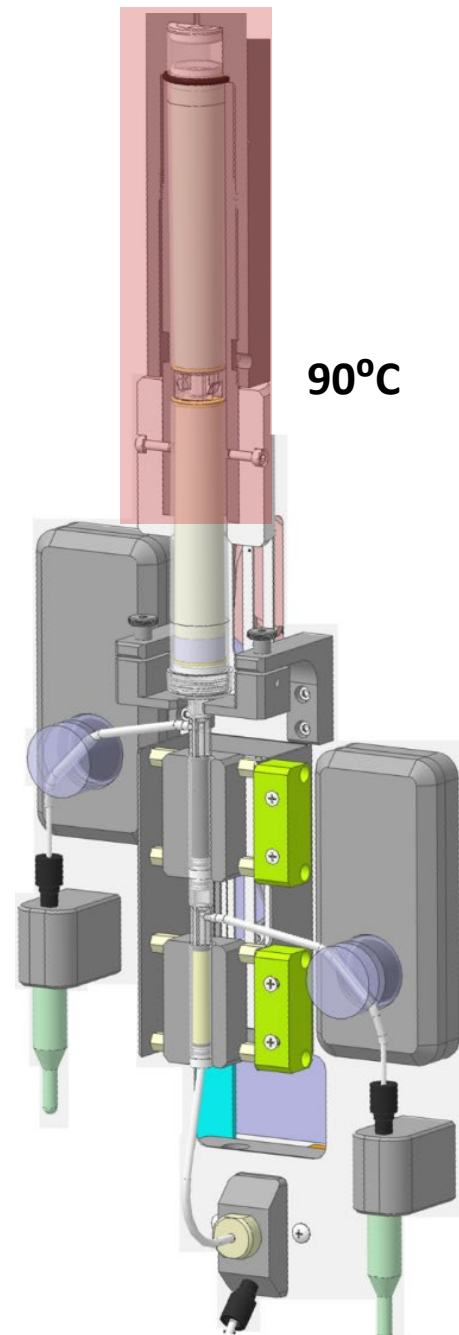
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Columns:

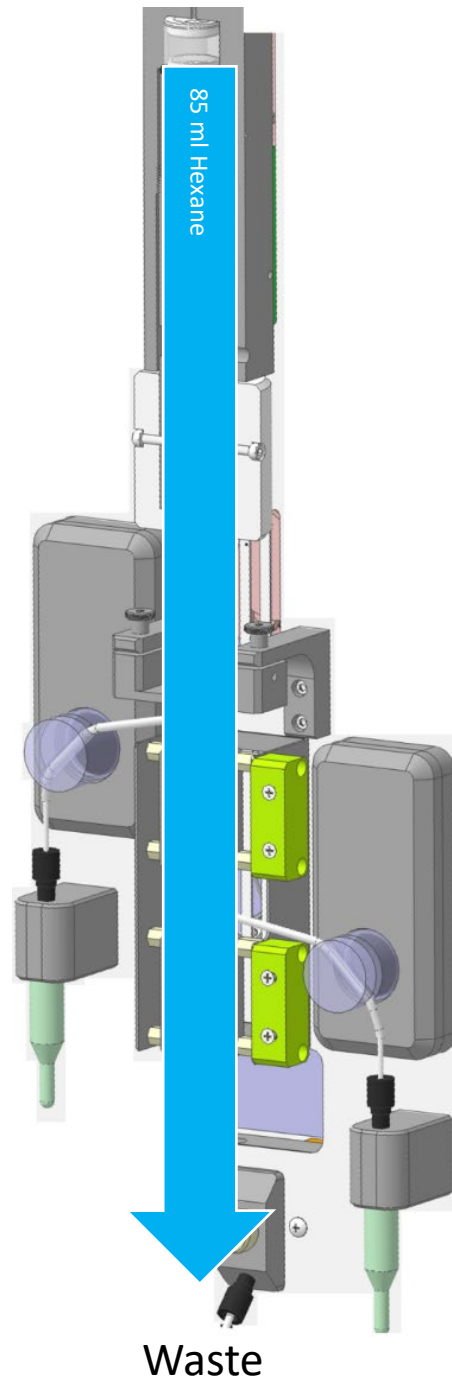
- AgNO_3
- H_2SO_4
- Carbon
- Transition Metal Oxide





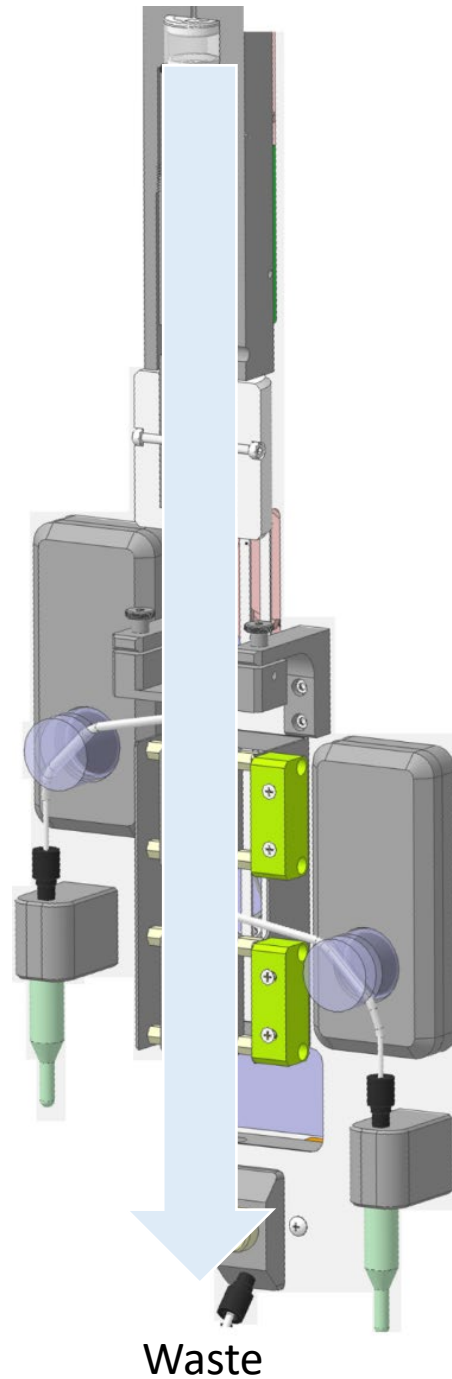
Elution and trapping:

- Hexane 90ml



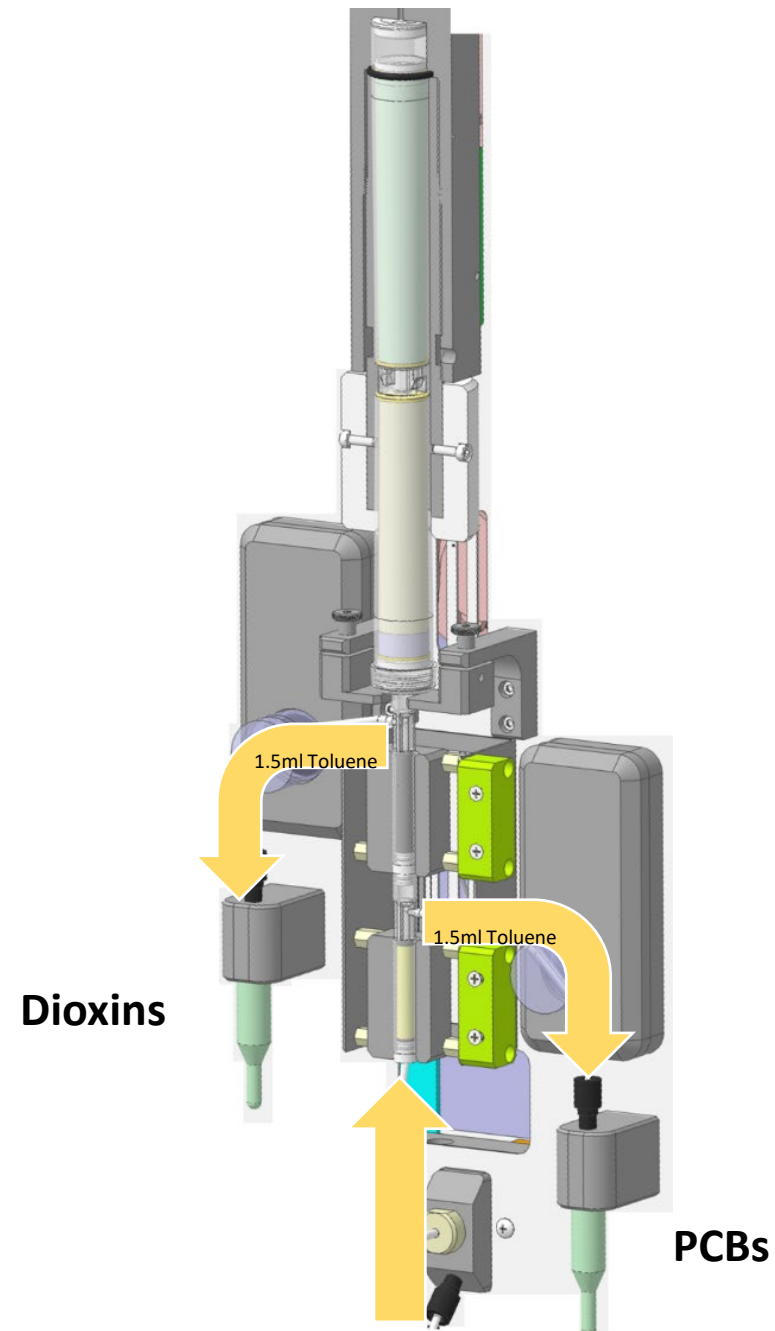
Drying:

- **Air purge 30ml**



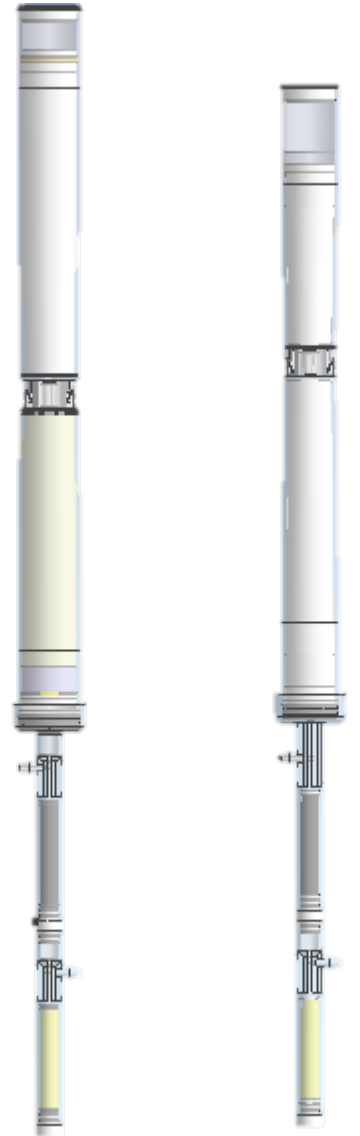
Elution:

- Toluene 2 times ~1ml



Columns:

- EPA
 - 18mm 1,5g lipid capacity
 - Fraction 1: Dioxins
 - Fraction 2: PCBs (all 209)
- EU
 - 18mm and 20mm 1.5g and 5g lipid capacity
 - Fraction 1: Dioxins and no-PCB
 - Fraction 2: Mono-orhto-PCB and NDL-PCB



Data evaluation

Extraction
Combined
Liquid and
Soxhlet
SER-158

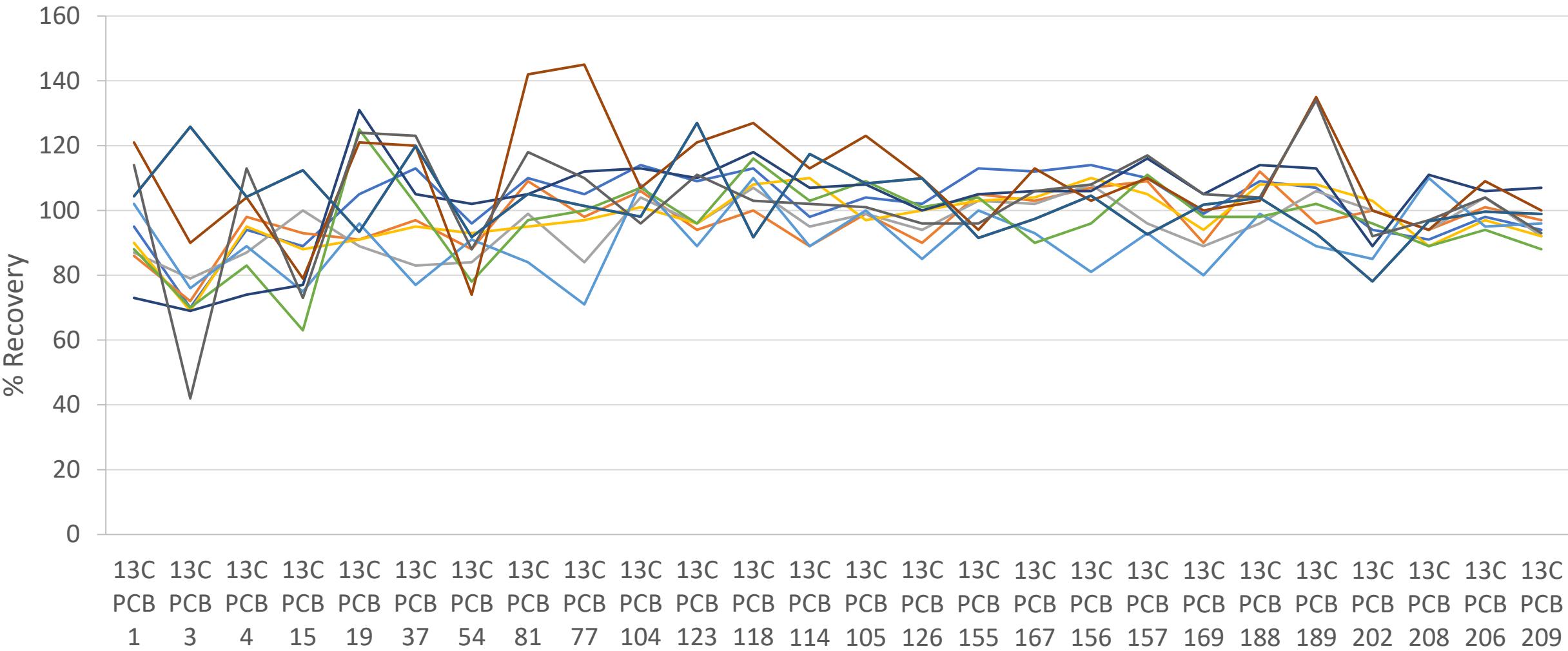
Add standards
¹³C Dioxins,
Furans and PCBs

GO-EHT
Purification
EPA1613/1668
column set

Concentration
Carbon:
0.1 mL
TMO:
0.1 mL

APGC-MSMS
HT8-PCB
60x0.25x0.1
2 µl injected

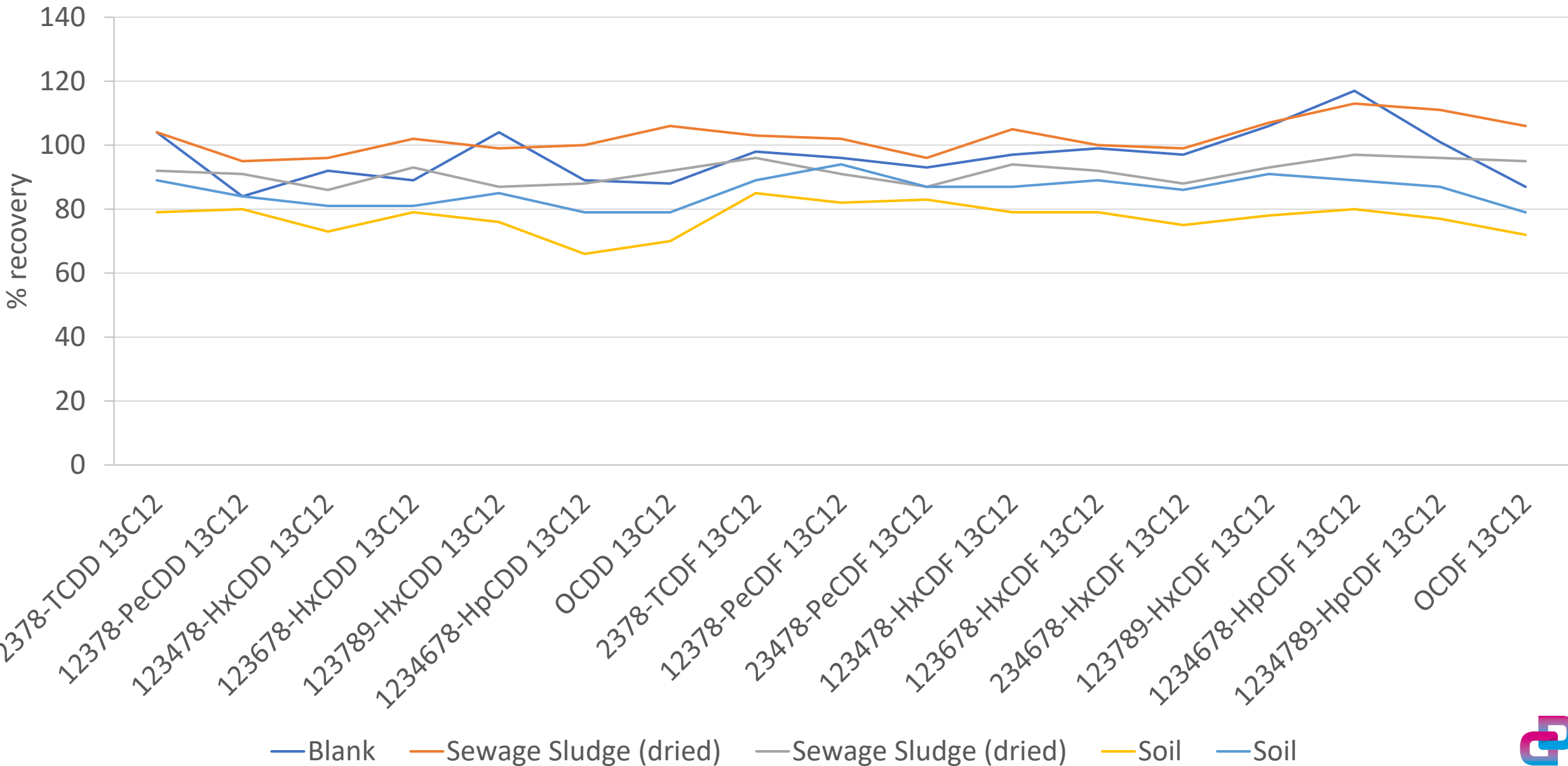
Recovery of ¹³C-PCBs



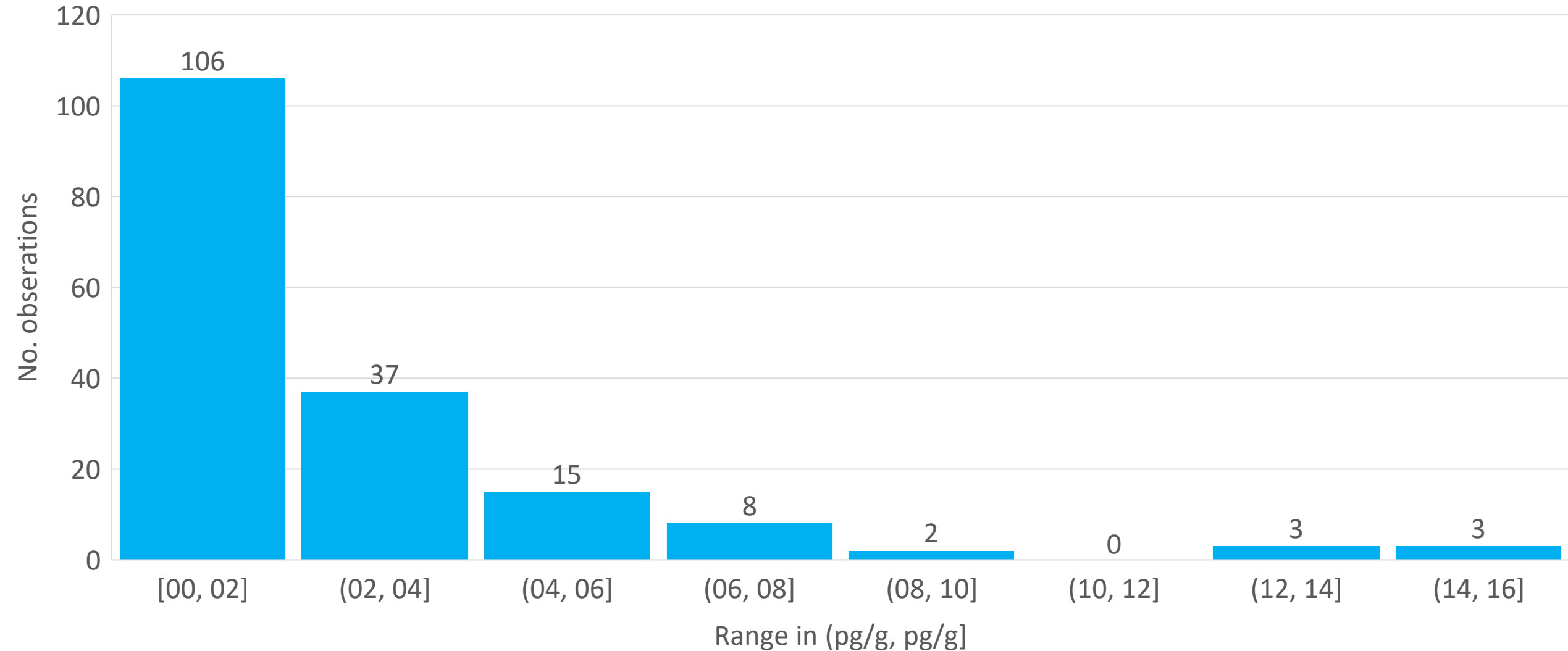
- Sewage Sludge (dried) 5g dry matter
- Soil 5g wet weight
- Ash 5g dry matter
- House dust 5g dry matter
- Blank -
- Sewage Sludge (dried) 5g dry matter
- Sewage Sludge (dried) 5g dry matter
- Soil 5g wet weight
- Soil 5g wet weight
- Fish oil 1g



Recoveries for ¹³C-Dioxins and Furans



PCBs – Histogram of blank values (expressed on 1 gram sample)



Column set	<i>EPA 1613 & 1668</i>	<i>Dioxin only</i>	<i>EU High capacity</i>	<i>EU standard</i>	<i>PCB only</i>
Cat. No.	P10000270467-00	X300-002-1330-7	X300-002-2420-7	X300-002-1320-7	Trial batch
Diameter	18mm	18mm	20mm	18mm	18mm
Capacity	Up to 1.5g oil/fat	Up to 1.5g oil/fat	Up to 5g oil/fat	Up to 1.5g oil/fat	Up to 1.5g oil/fat
Fraction 1 Carbon ~1ml volume	Dioxins & Furans	Dioxins, Furans & non-ortho PCB 77,81,126,169	Dioxins, Furans & non-ortho PCB 77,81,126,169	Dioxins, Furans & non-ortho PCB 77,81,126,169	n/a
Fraction 2 Alumina / TMO ~1ml volume	PCBs All 209PCB	n/a	Mono-ortho & non-dioxin-like PCB 105,114,118,123,156,157,167,189 28,52,101,138,153,180	Mono-ortho & non-dioxin-like PCB 105,114,118,123,156,157,167,189 28,52,101,138,153,180	PCBs All 209PCB
Time	91min	75min	80 / 93min	78min / 91min	n/a
Elution	80mL hexane	80mL hexane	85mL hexane	80mL hexane	80mL hexane
Backflush	4.4ml Toluene	2.9ml Toluene	4.4ml Toluene	4.4ml Toluene	2.9ml Toluene
Columns (top to bottom)	Silica gel with AgNO ₃ Silica gel with H ₂ SO ₄ Mg silicate and Carbon Transition metal oxide	Silica gel with AgNO ₃ Silica gel with H ₂ SO ₄ Carbon	Silica gel with AgNO ₃ Silica gel with H ₂ SO ₄ Carbon Alumina	Silica gel with AgNO ₃ Silica gel with H ₂ SO ₄ Carbon Alumina	Silica gel with AgNO ₃ Silica gel with H ₂ SO ₄ Transition Metal Oxide
Sample Volume	5mL	5mL	10mL	5mL	5mL
Method	18D.COOL	18D.DXNfr	20D<3gfat / 20D.COOL	18D<1gfat / 18D.COOL	18D.DXNfr (COOL)
Column set	