



# Interlaboratory Assessments 3<sup>rd</sup> Round (2016)

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# Invitation to 3rd round

My laboratory is interested in analyzing the following matrices and POPs and provide the analytical results according to the reporting scheme and timetable (latest submission of results on 9 September 2016). Please tick the boxes:

## Standard solution

OCP	PCB <sub>6</sub>	PCDD/PCDF	dl-PCB	PBDE	HxBB	Toxaphene	HBCD	PFAS
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## Sediment

OCP	PCB <sub>6</sub>	PCDD/PCDF	dl-PCB	PBDE	HxBB	Toxaphene	HBCD	PFAS
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## Fish

OCP	PCB <sub>6</sub>	PCDD/PCDF	dl-PCB	PBDE	HxBB	Toxaphene	HBCD	PFAS
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## Human milk

OCP	PCB <sub>6</sub>	PCDD/PCDF	dl-PCB	PBDE	HxBB	Toxaphene	HBCD	PFAS
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## Air extract

OCP	PCB <sub>6</sub>	PCDD/PCDF	dl-PCB	PBDE	HxBB	Toxaphene	HBCD	PFAS
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## Human blood

PFOS	PFAS							
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## Water

PFOS								
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# Shipment of the test samples



Dear Participants,

Two packages of test samples will be sent from the coordinators of the **Bi-ennial Global Interlaboratory Assessment on Persistent Organic Pollutants, 3<sup>rd</sup> Round – IL2016-POP** according to your registration (therefore, not all of you will receive all samples): The package of samples distributed by the VU University Amsterdam contains the standard solutions of OCPs, PCB<sub>6</sub>, HxBB, or toxaphene, and the test samples sediment, fish, or water) y. The package of samples sent out by the MTM Research Centre, Örebro University contains the standard solutions PCDD/ PCDF, dl-PCB, PBDE, HBCD or PFAS and the test samples human milk, human blood or air extract) .

Please confirm the arrival of your samples from the VU University to Ike van der Veen ([ike.vander.veen@vu.nl](mailto:ike.vander.veen@vu.nl)) and from Örebro University to Heidi Fiedler ([Heidelore.Fiedler@oru.se](mailto:Heidelore.Fiedler@oru.se)) or Sofie Björklund ([sofie.bjorklund@oru.se](mailto:sofie.bjorklund@oru.se)) or contact us if these samples have not arrived in your laboratory by the end of July.




For the analysis consider the samples as routine samples and use your own sample extraction, clean up and spiking protocols.



# Reporting back results (1)

Participant code:					
Name:					
Organisation:					
Address:					
<b>Interlaboratory Assessment, 3rd Round</b>					
	<b>Standard solution</b>	<b>Sediment</b>	<b>Fish</b>	<b>Human milk</b>	<b>Air extract</b>
Code:	(ng/g)	(ng/g)	(ng/g)*	(ng/g)	(ng/g)
Sample Code:					
Date Received:					
Date Analyzed:					
(Wet) Weight Received:					
Sample Intake (g):					
Final Volume (µL)					
Injection Volume (µL)					
% Extracted Lipids:					
<b>Indicator PCB</b>					
PCB 28					
PCB 52					
PCB 101					
PCB 138					
PCB 153					
PCB 180					
<b>Sum Indicator PCB Lower Bound (ND = 0)</b>					
<b>Sum Indicator PCB Upper Bound (ND = LOD)</b>					

- 1 reporting sheet for each test sample (MsExcel)
- Note: Units for dl-POPs are three orders of magnitude lower;
- Note: fish results to be reported on fresh weight
- Note: human milk results to be reported on lipid basis

Additional Information PCB						
	Standard solution	Sediment	Fish	Mothers' milk	Air extract	
<b>Sample pretreatment:</b>						
<b>Extraction</b>						
Extraction technique:						(Soxhlet, SFE, PLE,...)
Extraction solvent(s):						(Toluene,.....)
<b>Clean Up:</b>						
Silica column:						
Al <sub>2</sub> O <sub>3</sub> column:						
Carbon column:						
other						
<b>Detection system:</b>						(ECD, MS,...)
<b>GC/MS system:</b>						
High Res/Low Res:						
Type :						(MS/MS, Ion Trap, TOF,...)
Resolution :						(Estimation)
<b>GC column:</b>						
Type:						(DB-5, BP-5MS,...)
Specifications:						(30 m x 0.25 mm x 0.25 µm, ...)
<b>Internal Standard</b>						
Number:						(Number used)
Which:						(Which compounds)
<b>Recovery Standards</b>						
Number:						(Number used)
Which:						(Which compounds)
<b>Recovery correction</b>						
yes/no						
If yes, which method?						<sup>13</sup> C Int.std., external recovery,...
<b>Standard Method used</b>						
yes/no						
If yes, which method?						(EPA, EU, CEN, JIS, ...)
Blank corrected (yes/no)						
<b>Comments:</b>						

# Reporting back results (2)

- Additional information to be provided in a separate sheet to allow for troubleshooting and assess analytical procedures used

# Registrations

Standard solution											
No.	OCP	PCB	PCDD/F	dl-PCB	PBDE	HxBB	Toxaph	HBCD	PFAS		
160	124	123	67	72	69	38	37	33	41		
Sediment											
No.	OCP	PCB	PCDD/F	dl-PCB	PBDE	HxBB	Toxaph	HBCD	PFOS		
134	101	100	54	60	55	27	27	21	31		
Fish											
No.	OCP	PCB	PCDD/F	dl-PCB	PBDE	HxBB	Toxaph	HBCD	PFOS		
101	74	81	44	54	45	25	23	22	29		
Human milk											
No.	OCP	PCB	PCDD/F	dl-PCB	PBDE	HxBB	Toxaph	HBCD	PFOS		
78	59	70	38	46	40	24	18	17	15		
Air extract											
No.	OCP	PCB	PCDD/F	dl-PCB	PBDE	HxBB	Toxaph	HBCD	PFAS		
89	63	76	53	57	48	25	17	18	18		
Human blood										Water	
No.	PFOS	PFAS								No.	PFOS
25	22	20								42	42
<b>Total Registrations</b>										<b>171</b>	
<b>Total samples</b>										<b>666</b>	

# Geographic and regional distributions

Region	No. of Labs
Africa	16
Asia-Pacific	67
CEE	23
GRULAC	39
WEOG	27
<b>Total</b>	<b>171</b>

Country	No Labs
China (HKG)	26 (2)
Vietnam	13
Colombia	8
Canada	6
Russia	6
Croatia	6

African Laboratories	16
Cameroon	1
Egypt	1
Ethiopia	1
Ghana	2
Madagascar	1
Mali	1
Morocco	1
Nigeria	3
South Africa	4
Uganda	1

Name Laboratorium	Contact person	Country
Ministry of Public Health and Sanitation	Leonard W. Kariuki	Kenya
Central Laboratory of Residue Analysis of Pesticides and Heavy Metals in Food	Emad Attallah	Egypt.
Ceres Locustox	Anna Ndiaye Traoré	Senegal
Analytical Services Laboratory	Mr. Chipo Syabbamba	Zambia
Laboratoire d'Essais Physico-Chimiques et Microbiologiques de l'Occ/KIN	Jean Romain Kintaba; Antho Kabama; Jérôme Bamba	Congo, RD
Kephis Analytical Chemistry Laboratory	Head - analytical chemistry laboratory	Kenya
Department Of Chemistry , Uon	Prof. Shem O. Wandiga	Kenya
Organic Laboratory of Nuclear Research Institute	Crentsil Kofi Bempah	Ghana
Chemiphar (U) Ltd.	Kepher Kuchana KATEU	Uganda
Pesticide Residue Lab.	Paul Osei-Fosu	Ghana
Boulevard du Leader	Amel Jrad / Ramzi Ben Fredi	Tunesia
Central Veterinary Laboratory	Boubacar Madio dit Aladiogo Maiga	Mali
Ministry of Health	Eric Karikari Boateng	Ghana
Directorate of Government Analytical Laboratory	Mutambuze Innocent Louis	Uganda
Toxicology Laboratory	Prof. G. Elzorgani	Sudan
Government Analyst Division	Vishal Goury / Mr. N. Subratty	Mauritius
POPT research lab, North-West University	Rialet Pieters	South Africa
Analytical & Environmental Chemistry Lab (UNILAG)	Kehinde Olayinka	Nigeria
Government Analyst Division	Vishal Goury	Mauritius
National Metrology Institute of South Africa	Laura Quinn	South Africa
Environmental Chemistry laboratory, Department of Environmental, Water & Earth Sciences	OJ Okonkwo	South Africa
University of Ibadan, BCCC	Adebola A. Adeyi	Nigeria
Tshwane University of Technology	Adegbenro Peter Daso	South Africa
University of Nigeria, POP Reference Lab	Christian N Madu	Nigeria
ENSAI Université de Ngaoundéré	Ngassoum Martin Benoit	Cameroon
Department of Water and Sanitaion (RQIS)	Esna Portwig	South Africa
ONEE	Nassima LAMBARKI EL ALLIOUI	Morocco
CSIR Water Research Institute	Kwadwo Asante	Ghana
Environmental Public Health	Mesaye Getachew Woldegabriel	Ethiopia
Laboratoire de Contrôle des Pesticides		Madagascar
Government Chemist Laboratory Agency	Benny Mallya	Tanzania
<b>Total 31</b>	<b>Registrations</b>	<b>16</b>



# Labs registered for Interlab 3

Name Laboratorium	Contact person	Country
ENSAI Université de Ngaoundéré	Ngassoum Martin Benoit	Cameroon
Central Laboratory of Residue Analysis of Pesticides and Heavy Metals in Food	Emad Attallah	Egypt
Environmental Public Health	Mesaye Getachew Woldegabriel	Ethiopia
Organic Laboratory of Nuclear Research Institute	Crentsil Kofi Bempah	Ghana
CSIR Water Research Institute	Kwadwo Asante	Ghana
Laboratoire de Contrôle des Pesticides		Madagascar
Central Veterinary Laboratory	Boubacar Madio dit Aladiogo Maiga	Mali
ONEE	Nassima LAMBARKI EL ALLIOUI	Morocco
Analytical & Environmental Chemistry Lab (UNILAG)	Kehinde Olayinka	Nigeria
University of Ibadan, BCCC	Adebola A. Adeyi	Nigeria
University of Nigeria, POP Reference Lab	Christian N Madu	Nigeria
National Metrology Institute of South Africa	Laura Quinn	South Africa
Environmental Chemistry Lab, Department of Environmental, Water & Earth Sciences	OJ Okonkwo	South Africa
Tshwane University of Technology	Adegbenro Peter Daso	South Africa
Department of Water and Sanitation (RQIS)	Esna Portwig	South Africa
Directorate of Government Analytical Laboratory	Mutambuze Innocent Louis	Uganda
<b>Total</b>		<b>16</b>

# Test samples registered – Standard solutions

Test matrix		Standard solution								
Name Laboratorium	Country	OCP	PCB	PCDD/F	dI-PCB	PBDE	HxBB	Toxaph	HBCD	PFAS
ENSAI Université de Ngaoundéré	Cameroon	1	1	1	1	1	1	1	1	1
Central Laboratory of Residue Analysis of Pesticides and Heavy Metals in Food	Egypt	1	1	1	1					
Environmental Public Health	Ethiopia	1	1	1	1					
Organic Laboratory of Nuclear Research Institute	Ghana	1	1							
CSIR Water Research Institute	Ghana	1	1							
Laboratoire de Contrôle des Pesticides	Madagascar	1	1		1					
Central Veterinary Laboratory	Mali	1	1							
ONEE	Morocco	1								
Analytical & Environmental Chemistry Lab (UNILAG)	Nigeria	1	1	1	1	1		1		
University of Ibadan, BCCC	Nigeria	1	1		1	1	1			
Univiersity of Nigeria, POP Reference Lab	Nigeria	1	1	1	1	1	1	1	1	1
National Metrology Institute of South Africa	South Africa	1	1	1		1	1			1
Environmental Chemistry laboratory, Department of Environmental, Water & Earth Sciences	South Africa					1			1	1
Tshwane University of Technology	South Africa	1				1	1		1	1
Department of Water and Sanittaion (RQIS)	South Africa	1								
Directorate of Government Analytical Laboratory	Uganda	1	1		1					
<b>Total</b>		<b>15</b>	<b>12</b>	<b>6</b>	<b>8</b>	<b>7</b>	<b>5</b>	<b>3</b>	<b>4</b>	<b>5</b>

Countries not in the UNEP/GEF GMP2 project

# Schedule

- Registration closed on 1 May 2016; result submission: (before) **16 September 2016**;
- June 2016: IVM VU University (Jacob de Boer/Ike van der Veen) and MTM Örebro University (Heidi Fiedler/Sofie Bjöklund) verify registration of test samples and address information;
- From 18 July 2016: Test samples will be shipped as follows:
  - From IVM VU University:  
Test standard solutions: OCPs, PCB(6), HxBB, toxaphene  
Test samples: Sediment, fish, water
  - From MTM Örebro University, Sweden:  
Test standard solutions: PCDD/PCDF, dl-PCB, HBCD, PFAS  
Test samples: Human milk, human serum, air extract
- Note: Samples will only be shipped if contact person, shipment address and phone number were received.