



Joint Research Centre

Certified reference materials for metal speciation



Methylmercury in fish and sediment

Code	Certified values	
BCR-463 Tuna fish 15 g powder	total Hg [mg/kg]	2.85 ± 0.16
	CH ₃ Hg ⁺ [mg/kg]	3.04 ± 0.16
ERM-CE464 Tuna fish 15 g powder	total Hg [mg/kg]	5.24 ± 0.10
	CH ₃ Hg ⁺ [mg/kg]	5.50 ± 0.17
ERM-CC580 Estuarine sediment 40 g powder	total Hg [mg/kg]	132 ± 3
	CH ₃ Hg ⁺ [μg/kg]	75 ± 4

Lead, chromium and arsenic species

Code	Certified values		
BCR-605 Urban dust 15 g powder	Trimethyllead	[μg/kg]	7.9 ± 1.2
BCR-545 Welding dust loaded on a filter	Cr(VI)	[g/kg]	40.2 ± 0.6
	total leachable Cr	[g/kg]	39.5 ± 1.3
ERM-BC211 Rice 10 g powder	Total As	[μg/kg]	260 ± 13
	Dimethylarsinic acid	[μg/kg]	119 ± 13
	Arsenite + arsenate	[μg/kg]	124 ± 11
BCR-627 Tuna fish tissue 10 g powder	Arsenobetaine	[μmol/kg]	52 ± 3
	Dimethylarsinic acid	[μmol/kg]	2.0 ± 0.3
	Total As	[mg/kg]	4.8 ± 0.3

Confidence in measurements

All certificates and detailed production information can be found at <https://crm.irmm.jrc.ec.europa.eu>

<https://ec.europa.eu/jrc/>





European
Commission

Organotin species in sediment and mussel tissue

	BCR-462 Coastal sediment [$\mu\text{g}/\text{kg}$]	BCR-646 Freshwater sediment [$\mu\text{g}/\text{kg}$]	ERM-CE477 Mussel tissue [mg/kg]
Tributyltin (TBT)	54 \pm 15	480 \pm 80	2.20 \pm 0.19
Dibutyltin (DBT)	68 \pm 12	770 \pm 90	1.54 \pm 0.12
Monobutyltin (MBT)		610 \pm 120	1.50 \pm 0.28
Triphenyltin (TPhT)		29 \pm 11	
Diphenyltin (DPhT)		36 \pm 8	
Monophenyltin (MPhT)		69 \pm 18	

How to order reference materials

From JRC in Geel

Tel.: +32 14 571 705 • Fax: +32 14 590 406 • <https://ec.europa.eu/jrc/en/reference-materials> • E-mail: jrc-irmm-rm-distribution@ec.europa.eu

From authorised distributors

LGC Standards GmbH (DE)
<http://www.lgcstandards.com/>
E-mail: de@lgcstandards.com

Sigma-Aldrich RTC Inc. (USA)
<http://www.RT-Corp.com>
E-mail: RTCSalesgroup@sial.com

Industrial Analytical (RSA)
<http://www.industrialanalytical.co.za>
E-mail: info@industrialanalytical.co.za

Sigma-Aldrich Chemie GmbH (CH)
<http://www.sigmaaldrich.com/irmm>
E-mail: flukatec@sial.com

ARMI (USA)
<http://www.armi.com>
E-mail: Info@ARMI.com