

Chemicals of interest to the Scientific Guidance Panel based on discussion at the December SGP meeting CORRECTED 2/27/09

Parent Chemicals*	Lab undertaking analysis	Biospecimen	Timeline for CECBP lab capability [€]	Found in humans [£]	Handout
Metals					
Cadmium	CDPH	Whole Blood	Now	NHANES	CDC 3rd Report p.26-30
Lead	CDPH	Whole Blood	Now	NHANES	CDC 3rd Report p.38-44
Mercury	CDPH	Whole Blood	Now	NHANES	CDC 3rd Report p.45-51
Mercury (speciated)	CDPH	Whole Blood	Soon	NHANES	
Arsenic (speciated)	CDPH	Urine	Soon	NHANES	CDC: Caldwell et al. 2008
Metal Panel, <i>multiple metals possible</i>	CDPH	Urine	Not Developed	NHANES	CDC 3rd Report p.13-70
Diesel Exhaust					
	CDPH	Urine	Later	Other	CECBP Document
Pyrethroid pesticides					
					CDC 3rd Report p.405-415
Allethrin*	CDPH	Urine	Later	NHANES	
Cyfluthrin*	CDPH	Urine	Later	NHANES	
Cypermethrin*	CDPH	Urine	Later	NHANES	
Deltamethrin*	CDPH	Urine	Later	NHANES	
Permethrin*	CDPH	Urine	Later	NHANES	
Natural Pyrethrin 1*	CDPH	Urine	Later	NHANES	
Resmethrin*	CDPH	Urine	Later	NHANES	
Environmental phenols					
2-Hydroxy-4-methoxybenzophenone (Benzophenone-3)	CDPH	Urine	Soon	NHANES	CDC: Calafat et al. 2008
2,4,4'-Trichloro-2'-hydroxyphenyl ether (Triclosan)	CDPH	Urine	Soon	NHANES	CDC: Calafat et al. 2008a
4- <i>tertiary</i> -Octylphenol	CDPH	Urine	Later	NHANES	CDC: Calafat et al. 2008b
Bisphenol A	CDPH	Urine	Soon	NHANES	CDC: Calafat et al. 2008b
Brominated and Chlorinated Organic Chemical Compounds used as Flame Retardants					
<u>Polybrominated Diphenyl Ethers (PBDEs)</u>					
					CDC: Sjödin et al. 2008
2,2',4'-Tribromodiphenyl ether (BDE 17)	DTSC	Serum	Now	NHANES	
2,4,4'-Tribromodiphenyl ether (BDE 28)	DTSC	Serum	Now	NHANES	
2,2',4,4'-Tetrabromodiphenyl ether (BDE 47)	DTSC	Serum	Now	NHANES	
2,3',4,4'-Tetrabromodiphenyl ether (BDE 66)	DTSC	Serum	Now	NHANES	
2,2',3,4,4'-Pentabromodiphenyl ether (BDE 85)	DTSC	Serum	Now	NHANES	
2,2',4,4',5'-Pentabromodiphenyl ether (BDE 99)	DTSC	Serum	Now	NHANES	
2,2',4,4',6'-Pentabromodiphenyl ether (BDE 100)	DTSC	Serum	Now	NHANES	

2,2',4,4',5,5'-Hexabromodiphenyl ether (BDE 153)	DTSC	Serum	Now	NHANES	
2,2',4,4',5,6'-Hexabromodiphenyl ether (BDE 154)	DTSC	Serum	Now	NHANES	
2,2',3,4,4',5',6-Heptabromodiphenyl ether (BDE 183)	DTSC	Serum	Now	NHANES	
2,2',3,3',4,4',5,5',6,6'-Decabromodiphenyl ether (BDE 209)	DTSC	Serum	Now	NHANES	

Other

CECBP Document

Bis(2-ethyl-1-hexyl) tetrabromophthalate (TBPH)	DTSC	Serum	Soon	Not yet known	
Bis(hexachlorocyclopentadieno)cyclooctane (Dechlorane Plus)	DTSC	Serum	Not Developed	Not yet known	
1,2-Bis(2,4,6-tribromophenoxy)ethane (BTBPE)	DTSC	Serum	Soon	Not yet known	
Decabromodiphenylethane (DBDPE)	DTSC	Serum	Soon	Not yet known	
1,2-Dibromo-4-(1,2-dibromoethyl)cyclohexane (TBECH)	DTSC	Serum	Soon	Not yet known	
2-Ethyl-1-hexyl-2,3,4,5-tetrabromobenzoate (TBB)	DTSC	Serum	Soon	Not yet known	
Hexabromocyclododecane (HBCD)	DTSC	Serum	Soon	Not yet known	
Hexachlorocyclopentadienyl-dibromocyclooctane	DTSC	Serum	Not Developed	Not yet known	
Pentabromoethylbenzene (PBEB)	DTSC	Serum	Soon	Not yet known	
Short-chain chlorinated paraffins			Not Developed	Not yet known	
Tetrabromobisphenol A (TBBPA)	DTSC	Serum	Soon	Not yet known	
Tris(1,3-dichloro-2-propyl)phosphate			Not Developed	Not yet known	
Tris(2-chloroethyl)phosphate			Not Developed	Not yet known	
2,3-Dibromopropyl-2,4,6-tribromophenyl ether (DPTE)	DTSC	Serum	Soon	Not yet known	
Hexabromobenzene (HBB)	DTSC	Serum	Soon	Not yet known	
Pentabromotoluene (PBT)	DTSC	Serum	Soon	Not yet known	
Tris(1-chloro-2-propyl)phosphate	DTSC	Serum	Not Developed	Not yet known	

Perchlorate	CDPH	Urine	Later	NHANES	CDC: Blount et al. 2006, 2006a
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Perfluorinated compounds

CDC: Calafat et al. 2007, 2007a

Perfluorooctanoic acid	DTSC	Serum	Soon	NHANES	
Perfluorooctane sulfonamide	DTSC	Serum	Soon		
Perfluorooctane sulfonic acid	DTSC	Serum	Soon	NHANES	
Perfluorohexane sulfonic acid	DTSC	Serum	Soon	NHANES	
2-(N-ethyl-perfluorooctane sulfonamido) acetic acid	DTSC	Serum	Soon	NHANES	
2-(N-Methyl-perfluorooctane sulfonamido) acetic acid	DTSC	Serum	Soon	NHANES	
Perfluorodecanoic acid	DTSC	Serum	Soon	NHANES	
Perfluorobutane sulfonic acid	DTSC	Serum	Soon	NHANES	
Perfluoroheptanoic acid	DTSC	Serum	Soon	NHANES	
Perfluorononanoic acid	DTSC	Serum	Soon	NHANES	
Perfluoroundecanoic acid	DTSC	Serum	Soon	NHANES	
Perfluorododecanoic acid	DTSC	Serum	Soon	NHANES	

Phthalates

CDC 3rd Report p.253-282

Dimethyl phthalate (DMP)*	CDPH	Urine	Not developed	NHANES	
Diethyl phthalate (DEP)*	CDPH	Urine	Soon	NHANES	
Dibutyl phthalate*	CDPH	Urine	Soon	NHANES	
Benzylbutyl phthalate (BzBP)*	CDPH	Urine	Soon	NHANES	
Dicyclohexyl phthalate (DCHP)*	CDPH	Urine	Not developed	NHANES	
Di-2-ethylhexyl phthalate (DEHP)*	CDPH	Urine	Soon	NHANES	
Di-n-octyl phthalate (DOP)*	CDPH	Urine	Soon	NHANES	
Di-isononyl phthalate (DiNP)*	CDPH	Urine	Later	NHANES	
Di-2-ethylhexyl phthalate*	CDPH	Urine	Soon	NHANES	

Notes:

*: These parent chemicals are measured via their metabolites.

€: Now = currently being measured; Soon = plan for near-term (< 12 month) measurement; Later = plan for long-term (>12 month) measurement; Not planned = no current plan for measurement]. This represents the anticipated timeline for when the labs will be technically capable of measuring these chemicals but does not take resource limitations into account.

£: NHANES = detected in NHANES participants; Other = detected in a biomonitoring study other than NHANES

References:

CDC 3rd Report: <http://www.cdc.gov/exposurereport/pdf/thirdreport.pdf>

CECBP Document Diesel Exhaust: <http://oehha.ca.gov/multimedia/biomon/pdf/1208diesel.pdf>

CECBP Document Flame Retardants: <http://oehha.ca.gov/multimedia/biomon/pdf/120408flamedoc.pdf>

Caldwell et al. 2008: <http://www.cdc.gov/exposurereport/metals1.htm>

Calafat et al. 2008: http://www.cdc.gov/exposurereport/environmental_phenols3.htm

Calafat et al. 2008a: http://www.cdc.gov/exposurereport/environmental_phenols2.htm

Calafat et al. 2008b: http://www.cdc.gov/exposurereport/environmental_phenols1.htm

Sjödin et. al 2008: http://www.cdc.gov/exposurereport/brominated_flame_retardants1.htm

Blount et al. 2006: <http://www.cdc.gov/exposurereport/perchlorate2.htm>

Blount et al. 2006a: <http://www.cdc.gov/exposurereport/perchlorate1.htm>

Calafat et al. 2007: http://www.cdc.gov/exposurereport/perfluorinated_compounds2.htm

Calafat et al. 2007a: http://www.cdc.gov/exposurereport/perfluorinated_compounds1.htm