

CECBP Potential Priority Pesticides

Chemical Name ¹	Chemical Class	Use and Exposure	Laboratory Considerations				Handout
			Lab undertaking analysis	Biospecimen	Timeline for CECBP lab capability ²	Found in Humans ³	
DDT (DDE)	Organochlorine	Banned but persistent	DTSC	Blood	Now	NHANES	CDC 3rd Report p.324-330; Kannan et al. 2008
N,N-Diethyl-m-toluamide (DEET)	Unclassified	Personal use (insect repellent)	CDPH	Urine	Soon	NHANES	CDC 3rd Report p.419-420; Kasichayanula et al. 2007
para-Dichlorobenzene (1,4-DCB)	Halogenated organic	Insecticidal fumigant with household uses (moth repellent and space deodorant)	CDPH	Urine	Not planned	NHANES	CDC 3rd Report p.423-424
2,4-Dichlorophenoxy-acetic acid (2,4-D) salts and esters	Chlorophenoxy acid or ester	Herbicide, almost 400,000 lbs (dimethylamine salt) applied in 2007 mostly to almonds, wheat, and rights of way. Also used by consumers for landscape and yard maintenance.	CDPH	Urine	Not planned	NHANES	CDC 3rd Report p.390-394; CDPR PUR 2007

Notes:

¹ Target chemical for measurement may be parent chemical, metabolite, or related compound and may change as method development proceeds.

² Now = current capability; Soon = plan for near-term (< 12 month) capability; Not planned = not currently developing capability. This represents the anticipated timeline by which the labs will be technically capable of measuring the chemical, but does not take the resources required to routinely biomonitor the chemical into account.

³ NHANES = detected in NHANES participants.

References:

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

California Department of Pesticide Regulation (CDPR) (2008). Summary of Pesticide Use Report Data 2007 Indexed by Chemical: <http://www.cdpr.ca.gov/docs/pur/pur07rep/chm rpt07.pdf>

Kannan et al. (2008) Chlorinated, brominated, and perfluorinated compounds, polycyclic aromatic hydrocarbons and trace elements in livers of sea otters from California, Washington, and Alaska (USA), and Kamchatka (Russia). *J. Environ. Monit* 10:552-558. <http://www.ncbi.nlm.nih.gov/pubmed/18385877>

Kasichayanula et al. (2007). Percutaneous characterization of the insect repellent DEET and the sunscreen oxybenzone from topical skin application. *Toxicol. Appl. Pharm* 223:187-194. <http://www.ncbi.nlm.nih.gov/pubmed/17602720>