

# Division of Laboratory Sciences

## First Quarter 2021 Publications.

### National Biomonitoring Program.

[Gestational and childhood exposure to per- and polyfluoroalkyl substances and cardiometabolic risk at age 12 years.](#) Li N, Liu Y, Papandonatos GD, Calafat AM, Eaton CB, Kelsey KT, Cecil KM, Kalkwarf HJ, Yolton K, Lanphear BP, Chen A, Braun JM. Environ Int. 2021 Feb;147:106344. Epub 2021 Jan 6.

[Per- and polyfluoroalkyl substances and kidney function: Follow-up results from the Diabetes Prevention Program trial.](#) Lin PD, Cardenas A, Hauser R, Gold DR, Kleinman KP, Hivert M, Calafat AM, Webster TF, Horton ES, Oken E. Environ Int. 2021 Mar;148:106375. Epub 2021 Jan 19.

[Pyrethroid exposure among children residing in green versus non-green multi-family, low-income housing.](#) Werthmann DW, Rabito FA, Stout II DM, Tulve NS, Adamkiewicz G, Calafat AM, Ospina M, Chew GL. J Expo Sci Environ Epidemiol. 2021 May;31(3):549-559. Epub 2021 Mar 6.

[Prenatal exposure to per- and polyfluoroalkyl substances and cognitive development in infancy and toddlerhood.](#) Oh J, Schmidt RJ, Tancredi D, Calafat AM, Roa DL, Hertz-Picciotto I, Shin H. Environ Res. 2021 May;196:110939. Epub 2021 Feb 26.

[Per- and polyfluoroalkyl substances and calcifications of the coronary and aortic arteries in adults with prediabetes: Results from the diabetes prevention program outcomes study.](#) Osorio-Yáñez C, Sanchez-Guerra M, Cardenas A, Lin PD, Hauser R, Gold DR, Kleinman KP, Hivert M, Fleisch AF, Calafat AM, Webster TF, Horton ES, Oken E. Environ Int. 2021 Jun;151:106446. Epub 2021 Feb 22.

[Prenatal exposure to mixtures of persistent endocrine disrupting chemicals and early menarche in a population-based cohort of British girls.](#) Marks KJ, Howards PP, Smarr MM, Flanders WD, Northstone K, Daniel JH, Calafat AM, Sjödin A, Marcus M, Hartman TJ. Environ Pollut. 2021 May 1;276:116705. Epub 2021 Feb 9.

[Prenatal exposure to per- and polyfluoroalkyl substances \(PFAS\) and neurobehavior in US children through 8 years of age: The HOME study.](#) Vuong AM, Webster GM, Yolton K, Calafat AM, Muckle G, Lanphear BP, Chen A. Environ Res. 2021 Apr;195:110825. Epub 2021 Feb 2.

[Quantification of glyphosate and other organophosphorus compounds in human urine via ion chromatography isotope dilution tandem mass spectrometry.](#) Schütze A, Morales-Agudelo P, Vidal M, Calafat AM, Ospina M. Chemosphere. 2021 Jul;274:129427. Epub 2021 Jan 12.

[Dietary patterns and PFAS plasma concentrations in childhood: Project Viva, USA.](#) Seshasayee SM, Rifas-Shiman SL, Chavarro JE, Carwile JL, Lin PD, Calafat AM, Sagiv SK, Oken E, Fleisch AF. Environ Int. 2021 Jun;151:106415. Epub 2021 Mar 8.

[Indoor wood combustion, carcinogenic exposure and esophageal cancer in southwest Kenya.](#) Mwachiro MM, Pritchett N, Calafat AM, Parker RK, Lando JO, Murphy G, Chepkwony R, Burgert SL, Abnet CC, Topazian MD, White RE, Dawsey SM, Etemadi A. Environ Int. 2021 Jul;152:106485. Epub 2021 Mar 6.

[Parental preconception exposure to phenol and phthalate mixtures and the risk of preterm birth.](#)

Zhang Y, Mustieles V, Williams PL, Wylie BJ, Souter I, Calafat AM, Demokritou M, Lee A, Vagios S, Hauser R, Messerlian C. Environ Int. 2021 Jun;151:106440. Epub 2021 Feb 25.

[Brominated flame retardants and organochlorine pesticides and incidence of uterine leiomyomata: A prospective ultrasound study.](#) Orta OR, Wesselink AK, Bethea TN, Henn BC, Weuve J, Fruh V, McClean MD, Sjodin A, Baird DD, Wise LA. Environ Epidemiol. 2021 Jan 27;5(1):e127.

[Plasma Concentrations of Per- and Polyfluoroalkyl Substances and Body Composition From Mid-Childhood to Early Adolescence.](#) Janis JA, Rifas-Shiman SL, Seshasayee SM, Sagiv S, Calafat AM, Gold DR, Coull BA, Rosen CJ, Oken E, Fleisch AF. J Clin Endocrinol Metab. 2021 Aug 18;106(9):e3760-e3770. Epub 2021 Mar 19.

[Development and validation of a biomonitoring method to measure As, Cr, and Ni in human urine samples by ICP-UCT-MS.](#) Jones DR, Jarrett JM, Stukes D, Baer A, McMichael M, Wallon K, Xiao G, Jones RL. Int J Hyg Environ Health. 2021 May;234:113713. Epub 2021 Feb 20.

[Chemical mixture exposures during pregnancy and cognitive abilities in school-aged children.](#) Kalloo G, Wellenius GA, McCandless L, Calafat AM, Sjodin A, Sullivan AJ, Romano ME, Karagas MR, Chen A, Yolton K, Lanphear BP, Braun JM. Environ Res. 2021 Jun;197:111029. Epub 2021 Mar 18.

[Urinary Phthalate Biomarkers and Bone Mineral Density in Postmenopausal Women.](#) Reeves KW, Vieyra G, Grimes NP, Meliker J, Jackson RD, Wactawski-Wende J, Wallace R, Zoeller RT, Bigelow C, Hankinson SE, Manson JE, Cauley JA, Calafat AM. J Clin Endocrinol Metab. 2021 Jun 16;106(7):e2567-e2579. Epub 2021 Mar 23.

[Maternal Urinary Organophosphate Esters and Alterations in Maternal and Neonatal Thyroid Hormones.](#) Percy Z, Vuong AM, Xu Y, Xie C, Ospina M, Calafat AM, Hoofnagle A, Lanphear BP, Braun JM, Cecil KM, Dietrich KN, Yolton K, Chen A. Am J Epidemiol. 2021 Sep 1;190(9):1793-1802. Epub 2021 Mar 29.

## **Tobacco Laboratory.**

[Characterization of acrylonitrile exposure in the United States based on urinary n-acetyl-S-\(2-cyanoethyl\)-L-cysteine \(2CYEMA\): NHANES 2011-2016.](#) De Jesús VR, Zhang L, Bhandari D, Zhu W, Chang JT, Blount BC. J Expo Sci Environ Epidemiol. 2021 Mar;31(2):377-385. Epub 2021 Jan 11.

[Characterization of US population levels of urinary methylcarbamoyl mercapturic acid, a metabolite of N,N-dimethylcarbamoyl mercapturic acid and methyl isocyanate, in the National Health and Nutrition Examination Survey \(NHANES\) 20015-2006 and 2011-2016.](#) Kenwood BM, Bagchi P, Zhang L, Zhu W, Chambers DM, Blount BC, De Jesús VR. Environ Sci Pollut Res Int. 2021 Apr;28(13):16781-16791. Epub 2021 Jan 4.

[Acrolein and other toxicant exposures in relation to cardiovascular disease among marijuana and tobacco smokers in a longitudinal cohort of HIV-positive and negative adults.](#) Lorenz DR, Misra V, Chettimada S, Uno H, Wang L, Blount BC, De Jesús VR, Gelman BB, Morgello S, Wolinsky SM, Gabuzda D. Eclinicalmedicine. 2021 Jan 11;31:100697.

[Volatile Organic Compounds in Mainstream Smoke of Sixty Domestic Little Cigar Products.](#) Vu AT, Hassink MD, Taylor KM, McGuigan M, Blasiolo A, Valentin-Blasini L, Williams K, Watson CH. Chem Res Toxicol. 2021 Mar 15;34(3):704-712. Epub 2021 Jan 29.

[Exposure to Nicotine and Toxicants among Dual Users of Tobacco Cigarettes and E-Cigarettes: Population Assessment of Tobacco and Health \(PATH\) Study, 2013-2014.](#) Smith DM, Christensen C, van Bommel D, Borek N, Ambrose B, Erives G, Niaura R, Edwards KC, Stanton CA, Blount BC, Wang L, Feng J, Jarrett JM, Ward CD, Hatsukami D, Hecht SS, Kimmel HL, Travers M, Hyland A, Goniewicz ML. Nicotine Tob Res. 2021 May 4;23(5):790-797. Epub 2021 Feb 16.

[Tobacco-Specific Nitrosamines in the Tobacco and Mainstream Smoke of Commercial Little Cigars.](#) Edwards SH, Hassink MD, Taylor KM, Watson CH, Kuklenyik P, Kimbrell B, Wang L, Chen P, Valentín-Blasini L. Chem Res Toxicol. 2021 Apr 19;34(4):1034-1045. Epub 2021 Mar 5.

[Chemical Composition of JUUL Pods Collected From Students in California High Schools.](#) Shamout M, Wang P, Wong F, Chen W, Kumagai K, Pérez JJ, Watson CH, Valentín-Blasini L, Tanz L, Herzig C, Oakley LP, Peak CM, Heinzerling A, Williams RJ, Hess C, Wang C, Planche S, Al-Shawaf M, Melstrom P, Marynak K, Tynan MA, Agaku IT, King BA. J Adolesc Health. 2021 Aug;69(2):342-345. Epub 2021 Mar 9.

[Liquid chromatography-tandem mass spectrometry method for measuring vitamin E acetate in bronchoalveolar lavage fluid.](#) Espinosa MM, Blount BC, Valentin-Blasini L. J Chromatogr B Analyt Technol Biomed Life Sci. 2021 May 1;1171:122607. Epub 2021 Feb 27.

[Concentrations of Cotinine and 4-\(Methylnitrosamino\)-1-\(3-Pyridyl\)-1-Butanol \(NNAL\) in U.S. Non-Daily Cigarette Smokers.](#) Gutiérrez-Torres DS, Wang L, Blount BC, Xia B, Sosnoff CS, Shiels MS, Inoue-Choi M, Etemadi A, Freedman ND. Cancer Epidemiol Biomarkers Prev. 2021 Jun;30(6):1165-1174. Epub 2021 Mar 18.

## Nutrition, Chronic, and Infectious Disease Laboratories.

[The path to the standardization of PTH: Is this a realistic possibility?](#) A position paper of the IFCC C-BM. Cavalier E, Vasikaran S, Bhattoa HP, Heijboer AC, Makris K, Ulmer CZ. Clin Chim Acta. 2021 Apr;515:44-51. Epub 2021 Jan 4.

[Chemical Characterization and Quantification of Circulating Intact PTH and PTH Fragments by High-Resolution Mass Spectrometry in Chronic Renal Failure.](#) Kritmetapak K, Losbanos LA, Hines JM, O'Grady KL, Ulmer CZ, Vesper HW, Enders FT, Singh RJ, Kumar R. Clin Chem. 2021 Jun 1;67(6):843-853. Epub 2021 Mar 6.

[Recommendations on the measurement and the clinical use of vitamin D metabolites and vitamin D binding protein – A position paper from the IFCC Committee on bone metabolism.](#) Makris K, Bhattoa HP, Cavalier E, Phinney K, Sempos CT, Ulmer CZ, Vasikaran SD, Vesper H, Heijboer AC. Clin Chim Acta. 2021 Jun;517:171-197. Epub 2021 Mar 10.

[Analytical Performance Specifications for 25-Hydroxyvitamin D Examinations.](#) Cavalier E, Fraser CG, Bhattoa HP, Heijboer AC, Makris K, Ulmer CZ, Vesper HW, Vasikaran S, Lukas P, Delanaye P, Carobene A, on behalf of the IFCC Committee on bone metabolism. Nutrients. 2021 Jan 28;13(2):431.

[MALDI-TOF MS: An alternative approach for ribotyping Clostridioides difficile isolates in Brazil.](#)

Carneiro LG, Pinto TCA, Moura H, Barr J, Domingues RMCP, Ferreira EdO. Anaerobe. 2021 Jun;69:102351. Epub 2021 Feb 20.

## Chemical Threat Agents and Toxins Laboratories.

[Development of a clinical assay to measure chlorinated tyrosine in hair and tissue samples using a mouse chlorine inhalation exposure model.](#) Pantazides BG, Crow BS, Quiñones-González J, Perez JW, Harvilchuck JA, Wallery JJ, Hu TC, Thomas JD, Johnson RC, Blake TA. Anal Bioanal Chem. 2021 Mar;413(6):1765-1776. Epub 2021 Jan 28.

[Detection of Brevetoxin in Human Plasma by ELISA.](#) Cunningham BR, Coleman RM, Schaefer AM, Hamelin EI, Johnson RC. J Anal Toxicol. 2022 Mar 21;46(3):322-327. Epub 2021 Jan 30.

[Detection of 30 Fentanyl Analogs by Commercial Immunoassay Kits.](#) Wharton RE, Casbohm J, Hoffmaster R, Brewer BM, Finn MG, Johnson RC. J Anal Toxicol. 2021 Feb 13;45(2):111-116.

## Radiologic Threat Agents Laboratory.

[The effect of Sr resin cartridge age on stable Sr recovery methods used in Sr-90 analysis.](#) Piraner O, Jones RL. J Radioanal Nucl Chem. 2021 Feb 25;328:369-375.

[Urine gross alpha/beta bioassay method development using liquid scintillation counting techniques.](#) Piraner O, Jones RL. J Radioanal Nucl Chem. 2021 Jan 3;327(1):513-523.

[Universal use of alpha/beta mode in liquid scintillation counting analysis for both alpha/beta and single nuclide determination.](#) Piraner O, Jones RL. J Radioanal Nucl Chem. 2021 Jan 28;327:975-983.

[Determination of Pu-239 in Urine by Sector Field Inductively Coupled Plasma Mass Spectrometry \(SF-ICP-MS\) Using an Automated Offline Sample Preparation Technique.](#) Xiao G, Jones RL. J Radioanal Nucl Chem. 2021 Feb;328(1):277-287.

# Second Quarter 2021 Publications.

## National Biomonitoring Program.

[Harmonization of acronyms for volatile organic compound metabolites using a standardized naming system.](#) Tevis DS, Flores SR, Kenwood BM, Bhandari D, Jacob 3rd P, Liu J, Lorkiewicz PK, Conklin DJ, Hecht SS, Goniewicz ML, Blount BC, De Jesús VR. Int J Hyg Environ Health. 2021 Jun;235:113749. Epub 2021 May 4.

[Perfluoroalkyl and polyfluoroalkyl substances and body size and composition trajectories in midlife women: the study of women's health across the nation 1999-2018.](#) Ding N, Karvonen-Gutierrez CA, Herman WH, Calafat AM, Mukherjee B, Park SK. Int J Obes (Lond). 2021 Sep;45(9):1937-1948. Epub 2021 May 13.

[The associations of phthalate biomarkers during pregnancy with later glycemia and lipid profiles.](#) Wu H, Just AC, Colicino E, Calafat AM, Oken E, Braun JM, McRae N, Cantoral A, Pantic I, Pizano-Zárate ML, Tolentino MC, Wright RO, Téllez-Rojo MM, Baccarelli AA, Deierlein AL. Environ Int. 2021 Oct;155:106612. Epub 2021 May 6.

[Cord blood acrylamide levels and birth size, and interactions with genetic variants in acrylamide-metabolising genes.](#) Hogervorst J, Vesper HW, Madhloum N, Gyselaers W, Nawrot T. Environ Health. 2021 Apr 1;20(1):35.

[Associations of perfluoroalkyl and polyfluoroalkyl substances \(PFAS\) and PFAS mixtures with adipokines in midlife women.](#) Ding N, Karvonen-Gutierrez CA, Herman WH, Calafat AM, Mukherjee B, Park SK. Int J Hyg Environ Health. 2021 Jun;235:113777. Epub 2021 Jun 2.

[Prenatal urinary concentrations of phthalate metabolites and behavioral problems in Mexican children: The Programming Research in Obesity, Growth Environment and Social Stress \(PROGRESS\) study.](#) Colicino E, de Water E, Just AC, Navarro E, Pedretti NF, McRae N, Braun JM, Schnaas L, Rodríguez-Carmona Y, Hernández C, Tamayo-Ortiz M, Téllez-Rojo MM, Deierlein AL, Calafat AM, Baccarelli A, Wright RO, Horton MK. Environ Res. 2021 Oct;201:111338. Epub 2021 May 26.

[Biomonitoring of volatile organic compounds \(VOCs\) among hairdressers in salons primarily serving women of color: A pilot study.](#) Louis LM, Kavi LK, Boyle M, Pool W, Bhandari D, De Jesús VR, Thomas S, Pollack AZ, Sun A, McLean S, Rule AM, Quirós-Alcalá L. Environ Int. 2021 Sep;154:106655. Epub 2021 Jun 3.

[Per- and Polyfluoroalkyl Substances and Hormone Levels During the Menopausal Transition.](#) Harlow SD, Hood MM, Ding N, Mukherjee B, Calafat AM, Randolph JF, Gold EB, Park SK. J Clin Endocrinol Metab. 2021 Oct 21;106(11):e4427-e4437. Epub 2021 Jun 28.

[Prenatal exposure to organophosphate and pyrethroid insecticides and the herbicide 2,4-dichlorophenoxyacetic acid and size at birth in urban pregnant women.](#) Balalian AA, Liu X, Herbstman JB, Daniel S, Whyatt R, Rauh V, Calafat AM, Wapner R, Factor-Litvak P. Environ Res. 2021 Oct;201:111539. Epub 2021 Jun 24.

[Prospective associations of mid-childhood plasma per- and polyfluoroalkyl substances and pubertal timing.](#) Carwile JL, Seshasayee SM, Aris IM, Rifas-Shiman SL, Henn BC, Calafat AM, Sagiv SK, Oken E, Fleisch AF. Environ Int. 2021 Nov;156:106729. Epub 2021 Jun 23.

[Maternal phthalate and phthalate alternative metabolites and urinary biomarkers of estrogens and testosterone across pregnancy.](#) Pacyga DC, Gardiner JC, Flaws JA, Li Z, Calafat AM, Korrick SA, Schantz SL, Strakovsky RS. Environ Int. 2021 Oct;155:106676. Epub 2021 Jun 8.

## Tobacco Laboratory.

[Urinary Cotinine and Cotinine + Trans-3'-Hydroxycotinine \(TNE-2\) Cut-points for Distinguishing Tobacco Use from Nonuse in the United States: PATH Study \(2013-2014\).](#) Edwards KC, Naz T, Stanton CA, Goniewicz ML, Hatsukami DK, Smith DM, Wang L, Villanti A, Pearson J, Blount BC, Bansal-Travers M, Feng J, Niaura R, Manderski MTB, Sosnoff CS, Delnevo CD, Duffy K, Del Valle-Pinero AY, Rostron BL, Everard C, Kimmel HL, van Bemmelen DM, Hyland A. Cancer Epidemiol Biomarkers Prev. 2021 Jun;30(6):1175-1184. Epub 2021 Apr 7.

[Assessment of Serum Concentrations of 12 Aldehydes in the U.S. Population from the 2013-2014 National Health and Nutrition Examination Survey.](#) Silva LK, Espenship MF, Newman CA, Zhang L, Zhu W, Blount BC, De Jesús VR. Environ Sci Technol. 2021 Apr 20;55(8):5076-5083. Epub 2021 Apr 1.

[Exposure to 1,3-Butadiene in the U.S. Population: National Health and Nutrition Examination Survey 2011-2016.](#) Nieto A, Zhang L, Bhandari D, Zhu W, Blount BC, De Jesús VR. Biomarkers. 2021 Jun;26(4):371-383. Epub 2021 Apr 8.

[Determination of Free Solanesol Levels in Cigarette Filters by Liquid Chromatography-Mass Spectrometry.](#) Cardenas RB, Ngac P, Watson C, Valentin-Blasini. J Anal Toxicol. 2021 Apr 16;bkab041.

[Biomarkers of Potential harm among Adult Cigarette and Smokeless Tobacco Users in the PATH Study Wave 1 \(2013-2014\): A Cross-sectional Analysis.](#) Chang JT, Vivar JC, Tam J, Hammad HT, Christensen CH, van Bemmelen DM, Das B, Danilenko U, Chang CM. Cancer Epidemiol Biomarkers Prev. 2021 Jul;30(7):1320-1327. Epub 2021 May 4.

[Characterization of Total and Unprotonated \(Free\) Nicotine Content of Nicotine Pouch Products.](#) Stanfill S, Tran H, Tyx R, Fernandez C, Zhu W, Marynak K, King B, Valentin-Blasini L, Blount BC, Watson C. Nicotine Tob Res. 2021 Aug 18;23(9):1590-1596. Epub 2021 May 26.

[Sensitive Quantification of Nicotine in Bronchoalveolar Lavage Fluid by Acetone Precipitation Combined With Isotope-Dilution Liquid Chromatography-Tandem Mass Spectrometry.](#) Xia B, Blount BC, Wang L. ACS Omega. 2021 May 25;6(22):13962-13969.

[Method for Accurate Quantitation of Volatile Organic Compounds in Urine Using Point of Collection Internal Standard Addition.](#) Chambers DM, Edwards KC, Sanchez E, Reese CM, Fernandez AT, Blount BC, De Jesús VR. ACS Omega. 2021 May 4;6(19):12684-12690.

[Microbiology of the American Smokeless Tobacco.](#) Rivera AJ, Tyx RE. Appl Microbiol Biotechnol. 2021 Jun;105(12):4843-4853.

## Nutrition, Chronic, and Infectious Disease Laboratories.

[Fewer US adults had low or transitional vitamin B12 status based on the novel combined indicator of vitamin B12 status compared with individual, conventional markers, NHANES 1999-2004.](#) Mineva EM, Sternberg MR, Bailey RL, Storandt RJ, Pfeiffer CM. Am J Clin Nutr. 2021 Sep 1;114(3):1070-1079. Epub 2021 May 8.

[Folate Forms in RBC and Whole-Blood Lysates Appear Stable When Stored Frozen for 2 Years.](#) Fazili Z, Paladugula N, Zhang M, Pfeiffer CM. J Nutr. 2021 Sep 4;151(9):2852-2860. Epub 2021 Jun 5.

[Supplemental Vitamin D Increased Serum Total 25-Hydroxyvitamin D in the US Adult Population During 2007-2014.](#) Schleicher RL, Sternberg MR, Potischman N, Gahche JJ, Storandt RJ, Maw KL, Pfeiffer CM. J Nutr. 2021 Aug 7;151(8):2446-2454. Epub 2021 May 24.

[Implementing reference systems for thyroid function tests – A collaborative effort.](#) Vesper HW, Van Uytvanghe K, Hishinuma A, Raverot V, Patru MM, Danilenko U, van Herwaarden AE, Shimizu E. Clin Chim Acta. 2021 Aug;519:183-186. Epub 2021 Apr 30.

## Chemical Threat Agents and Toxins Laboratories.

[A Cluster of tetrodotoxin poisoning in Oman.](#) Alhatali B, Lawatia SA, Khamis F, Kantur S, Al-Abri S, Kapil V, Thomas J, Johnson R, Hamelin EI, Coleman RM, Kazzi Z. Clin Toxicol (Phil). 2022 Feb;60(2):262-266. Epub 2021 Apr 29.

## Radiologic Threat Agents Laboratory.

[Rapid HPGe well detector gamma bioassay of <sup>137</sup>Cs, <sup>60</sup>Co, and <sup>192</sup>Ir method.](#) Button J, Jones RL. Appl Radiat Isot. 2021 Sep;175:109824. Epub 2021 Jun 11.



# Third Quarter 2021 Publications.

## National Biomonitoring Program.

[Prenatal urinary concentrations of phenols and risk of preterm birth: exploring windows of vulnerability.](#) Zhang Y, Mustieles V, Williams PL, Yland J, Souter I, Braun JM, Calafat AM, Hauser R, Messerlian C. Fertil Steril. 2021 Sep;116(3):820-832.

[Prenatal and childhood exposure to per- and polyfluoroalkyl substances \(PFAS\) and child executive function and behavioral problems.](#) Harris MH, Oken E, Rifas-Shiman, SL, Calafat AM, Bellinger DC, Webster TF, White RF, Sagiv SK. Environ Res. 2021 Nov;202:111621. Epub 2021 Jul 6.

[Correlates of plasma concentrations of per- and poly-fluoroalkyl substances among reproductive-aged Black women.](#) Wise LA, Wesselink AK, Schildroth S, Calafat AM, Bethea TN, Geller RJ, Coleman CM, Fruh V, Henn BC, Botelho JC, Harmon QE, Thirkill M, Wegienka GR, Baird DD. Environ Res. 2022 Jan;203:111860. Epub 2021 Aug 14.

[Urinary concentrations of phenols, parabens, and triclocarban in relation to uterine leiomyomata incidence and growth.](#) Wesselink AK, Weuve J, Fruh V, Bethea TN, Henn BC, Harmon QE, Hauser R, Williams PL, Calafat AM, McClean M, Baird DD, Wise LA. Fertil Steril. 2021 Dec;116(6):1590-1600. Epub 2021 Aug 5.

[Temporal trends of concentrations of per- and polyfluoroalkyl substances among adults with overweight and obesity in the United States: Results from the Diabetes Prevention Program and NHANES.](#) Lin PK, Cardenas A, Hauser R, Gold DR, Kleinman KP, Hivert M, Calafat AM, Webster, TF, Horton ES, Oken E. Environ Int. 2021 Dec;157:106789. Epub 2021 Jul 29.

[Exposure to endocrine disrupting chemicals \(EDCs\) and cardiometabolic indices during pregnancy: The HOME Study.](#) Vuong AM, Braun JM, Sjödin A, Calafat AM, Yolton K, Lanphear BP, Chen A. Environ Int. 2021 Nov;156:106747. Epub 2021 Jul 19.

[The U.S. national biomonitoring network – Enhancing capability and capacity to assess human chemical exposures.](#) Nassif J, Calafat AM, Aldous KM. Int J Hyg Environ Health. 2021 Aug;237:113828.

[Childhood exposure to per- and polyfluoroalkyl substances \(PFAS\) and neurobehavioral domains in children at age 8 years.](#) Vuong AM, Yolton K, Xie C, Dietrich KN, Braun JM, Webster GM, Calafat AM, Lanphear BP, Chen. Neurotoxicol Teratol. Nov-Dec 2021;88:107022. Epub 2021 Aug 24.

[Prenatal exposure to mixtures of persistent endocrine disrupting chemicals and postnatal body size in British girls.](#) Marks KJ, Howards PP, Smarr MM, Flanders WD, Northstone K, Daniel JH, Sjödin A, Calafat AM, Hartman TJ. Early Hum Dev. 2021 Oct;161:105450. Epub 2021 Aug 14.

[Prenatal maternal phthalate exposures and trajectories of childhood adiposity from four to twelve years.](#) Kupsco A, Wu H, Calafat AM, Kioumourtzoglou M, Cantoral A, Tamayo-Ortiz M, Pantic I, Pizano-Zárate ML, Oken E, Braun JM, Deierlein AL, Wright RO, Téllez-Rojo MM, Baccarelli AA, Just AC. Environ Res. 2022 Mar;204(Pt B):112111. Epub 2021 Sep 23.

[Correlates of Persistent Endocrine-Disrupting Chemical Mixtures among Reproductive-Aged Black Women.](#) Schildroth S, Wise LA, Wesselink AK, De La Cruz P, Bethea TN, Weuve J, Fruh V, Botelho JC,



Sjodin A, Calafat AM, Baird DD, Henn BC. Environ Sci Technol. 2021 Oct 19;55(20):14000-14014. Epub 2021 Sep 30.

[Associations of Maternal Serum Perfluoroalkyl Substances Concentrations with Early Adolescent Bone Mineral Content and Density: The Health Outcomes and Measures of the Environment \(HOME\) Study.](#) Buckley JP, Kuiper JR, Lanphear BP, Calafat AM, Cecil KM, Chen A, Xu Y, Yolton K, Kalkwarf, Braun JM. Environ Health Perspect. 2021 Sep;129(9):97011.

[Prenatal exposure to a mixture of organophosphate esters and intelligence among 8-year-old children of the HOME Study.](#) Percy Z, Vuong AM, Xu Y, Xie C, Ospina M, Calafat AM, Lanphear BP, Braun JM, Cecil KM, Dietrich KN, Chen A, Yolton K. Neurotoxicology. 2021 Dec;87:149-155. Epub 2021 Sep 25.

[Pregnancy exposure to synthetic phenols and placental DNA methylation – An epigenome-wide association study in male infants from the EDEN cohort.](#) Jedynak P, Tost J, Calafat AM, Bourova-Flin E, Busato F, Forhan A, Beude B, Jakobi M, Rousseaux, Schwartz J, Slama R, Vaiman D, Philippat C, Lepeule J. Environ Pollut. 2021 Dec 1;290:118024. Epub 2021 Aug 21.

## Tobacco Laboratory.

[Comparison of Mainstream Smoke Yields between Linear and Rotary Smoking Machines and Evaluation of “Super Pad” Extraction for Linear Smoking Machines.](#) Liu Y, Taylor KM, Watson CH, Valnetin-Blasini L. Chem Res Toxicol. 2021 Jul 19;34(7):1713-1717.

[Biomarkers of Inflammation and Oxidative Stress among Adult Former Smoker, Current E-Cigarette Users—Results from Wave 1 PATH Study.](#) Christensen CH, Chang JT, Rostron BL, Hammad HT, van Bommel DM, Del Valle-Pinerao AY, Wang B, Mishina EV, Faulcon LM, DePina A, Brown-Baker L, Kimmel HL, Lambert E, Blount BC, Vesper HV, Wang L, Goniewicz ML, Hyland A, Travers MJ, Hatsukami DK, Niaura R, Cummings KM, Taylor KA, Edwards KC, Borek N, Ambrose BK, Chang CM. Cancer Epidemiol Biomarkers Prev. 2021 Oct;30(10):1947-1955. Epub 2021 Jul 21.

[Associations between Biomarkers of Exposure and Lung Cancer Risk among Exclusive Cigarette Smokers in the Golestan Cohort Study.](#) Rostron BL, Wang J, Etemadi A, Thakur S, Chang JT, Bhandari D, Botelho JC, De Jesús VR, Feng J, Gail MH, Inoue-Choi M, Malekzadeh R, Pourshams A, Poustchi H, Roshandel G, Shiels MS, Wang Q, Wang Y, Xia B, Boffetta P, Brennan P, Abnet CC, Calafat AM, Wang L, Blount BC, Freedman ND, Chang CC. Int J Environ Res Public Health. 2021 Jul 9;18(14):7349.

[Development, Validation, and Application of a Novel Method for the Analysis of Vitamin E Acetate and Other Tocopherols in Aerosol Emissions of E-Cigarettes, or Vaping Products Associated With Lung Injur.](#) Puetz A, Espinosa MM, Watson C, Blount BC, Valentín-Blasini L. Front Chem. 2021 Aug 5;9:730954.

[A Novel UHPLC-MS/MS Method for Measuring 8-iso-Prostaglandin F2a in Bronchoalveolar Lavage Fluid.](#) Holder C, Adams A, Allison C, Cote O, Lippens R, Blount BC, Wang L. Front Chem. 2021 Aug 12;9:695940.

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