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What's New and Different?

The *Updated Tables, January 2019*, include chemicals that have results available from the NHANES survey periods 1999-2000 through 2015-2016. New chemicals measured for the first time include mono-oxoisobutyl phthalate (MONP), a metabolite of di-isobutyl phthalate (DiNP); mono-2-ethyl-5-carboxypentyl terephthalate and mono-2-ethyl-5-hydroxyhexyl terephthalate which are metabolites of di-2-ethylhexyl terephthalate (DEHTP); cyclohexane-1,2-dicarboxylic acid mono carboxyisooctyl ester (MCOCH), a metabolite of DINCH; and two blood volatile organic compounds: benzonitrile and isobutyronitrile.

Chemicals with updated data in this release are

- blood disinfection by-products;
- blood mercury species (inorganic, ethyl, and methyl mercury);
- urinary metals in the general population and in a special sample of adult smokers and nonsmokers;
- urinary arsenic and arsenic species in the general population and in a special sample of adult smokers and nonsmokers;
- serum per- and polyfluoroalkyl substances (PFAS);
- urinary phthalate and phthalate alternative metabolites;
- blood VOCs in the general population and in a special sample of adult smokers and nonsmokers;
- urinary VOC metabolites in the general population and in a special sample of adult smokers and nonsmokers;
- serum PBDEs and PBB 153 (pooled);
- serum organochlorine pesticides and metabolites (pooled);
- serum PCBs and mono-ortho-substituted PCBs (pooled).

Change in the Population Sampled for Urinary Chemicals: NHANES 2015-2016

Beginning with the NHANES 2015-2016 survey period, the age for urine collection was lowered from age 6 to age 3 years. This change was made to obtain data for younger children, a vulnerable population with limited urinary data. The urinary environmental chemicals are measured in a full sample (i.e., all children able to provide a urine specimen) of children 3 to 5 years old. For ages 6 years and older, the urinary environmental chemicals continue to be measured in a representative one-third sample of participants.

The addition of ages 3 to 5 years to the survey population will mean that descriptive statistics (geometric mean, selected percentiles) for the total population and non-age related demographic groups in NHANES 2015-2016 will not be directly comparable to descriptive statistics in earlier NHANES survey periods. This is because the populations sampled are not the same.

Updated Tables in Two Volumes

Continuing with this release, the *Updated Tables* are presented in **two volumes**, each a separate PDF. This change was made because the file size of the single PDF had become so large that it could not easily be shared or sent as an attachment. The format of each PDF has been modified to comply with 508 requirements, making them accessible to visually-impaired users. **Volume One** contains data tables for most of the chemicals measured in the U.S. general population. **Volume Two** contains data tables for the persistent organic pollutants and pesticides previously measured in individual samples and are currently measured in pooled samples. **Volume Two** also contains data tables for the special sample of

adult cigarette smokers and nonsmokers, including recently released data from NHANES 2015-2016. We anticipate that future *Updated Tables* will continue to be presented in two volumes.

PFOS and PFOA Results for NHANES 2013-2014 and 2015-2016

Starting in 2013, we began measuring linear and branched isomers of both PFOS and PFOA and no longer measuring total PFOS or PFOA. The isomers of each chemical represent more than 95% of what was previously reported as PFOS and PFOA. PFOS and PFOA were calculated by summing the linear and branched isomers for each participant before applying the appropriate sample weight. Because the 2013-2014 and 2015-2016 values are a calculated sum, there is no limit of detection (LOD) for PFOS and PFOA. Data tables for each of the four isomers also are presented. See [Calculation of PFOS and PFOA as the Sum of Isomers](#) for more details. The calculated PFOS and PFOA results can be used to compare with previous measurements and to examine trends in the general U.S. population.

The “What’s New and Different” sections in previous releases of *Updated Tables* is available in the Archives from *Updated Tables* at: <https://www.cdc.gov/exposurereport/>.