Human-Biomonitoring (HBM) values, derived by the Human Biomonitoring Commission of the German Environment Agency, date march 2020

| Analyt und Probenmaterial  | Personengruppen  | HBM-I-Wert                         | HBM-II-Wert                |   |
|--|--|------------------------------------|----------------------------|---|
| Lead in whole blood [1996, 2002, 2009]   |  | suspended                          | suspended                  |   |
| Cadmium in urine [1998, 2011]  | children and adolescents; adults   | 0.5 μg/l;<br>1 μg/l                | 2 μg/l;<br>4 μg/l          |   |
| Mercury in urine [1999]  | children and adults  | 7 μg/l;<br>5 μg/g crea.            | 25 μg/l;<br>20 μg/g Crea.  |   |
| Mercury in whole blood [1999]  | children and adults  | 5 μg/l                             | 15 μg/l                    |   |
| Thallium in urine [2011]   | general population   | 5 μg/l                             | /                          |   |
| Pentachlorophenol (PCP) in serum [1997]  | general population   | 40 µg/l                            | 70 µg/l                    |   |
| Pentachlorophenol (PCP) in urine [1997]  | general population   | 25 μg/l;<br>20 μg/g crea.          | 40 μg/l;<br>30 μg/g crea.  |   |
| Σ of DEHP-metabolites 5 oxo- and<br>5 OH-MEHP in urine [2007]  | children aged 6-13 years;<br>women of child-bearing age;<br>men aged 14 years and older,<br>remaining general population | 500 μg/l;<br>300 μg/l;<br>750 μg/l | /                          |   |
| Bisphenol A in urine<br>[2012, updated 2015]   | children;<br>adults  | 0.1 mg/l;<br>0.2 mg/l              | /                          |   |
| Σ PCB (138 + 153 + 180) in serum x 2 [2012]  | infants, toddlers and<br>women of child-bearing age  | 3.5 μg/l                           | 7 μg/l                     |   |
| Glycolether which are metabolized to 2-<br>methoxyacetic acid (MAA), urine [2014]                                    | general population   | 0.4 mg MAA/g<br>creatinine         | 1.6 mg MAA/g<br>creatinine |   |
| Glycolether which are metabolized to 2-<br>ethoxyacetic acid (EAA), urine [2016]                                     | adults   | 5 mg EAA/l                         | /                          |   |
| Σ DINCH®-metabolites OH-MINCH and<br>cx-MINCH in urine [2014]  | children;<br>adults  | 3 mg/l;<br>4.5 mg/l                | /                          |   |
| ∑ DPHP-metabolites OH-MPHP and   | children;  | 1 mg/l;                            | 1                          |   |
| oxo-MPHP in urine [2015]   | adults   | 1.5 mg/l                           | /                          |   |
| Hexabromocyclododecane (HBCD(D)) [2015]  | general population   | 0.3 μg/g Fett<br>(1.6 μg/l plasma) | /                          |   |
| Triclosan in urine [2015]  | children;<br>adults  | 2 mg/l;<br>3 mg/l                  | /                          |   |
| 2-Mercaptobenzothiazole<br>(2-MBT) in urine [2015]   | children;<br>adults  | 4.5 mg/l;<br>7 mg/l                | /                          | possible<br>sensitization not<br>considered |
| Σ N-Methyl-2-pyrrolidone (NMP)-<br>metabolites 5-Hydroxy-NMP and<br>2-Hydroxy-N-methylsuccinimide in urine<br>[2015] | children;<br>adults  | 10 mg/l;<br>15 mg/l                | 30 mg/l;<br>50 mg/l        |   |
| Σ N-Ethyl-2-pyrrolidone (NEP)- metabolites<br>5-HNEP and 2-HESI in urine [2015]                                      | children;<br>adults  | 10 mg/l;<br>15 mg/l                | 25 mg/l;<br>40 mg/l        |   |
| Σ 3-(4-Methylbenzylidene)-camphor (4-<br>MBC)-metabolites 3-4CBHC and 3-4CBC in<br>urine [2016]                      | children;<br>adults  | 0.3 mg/l;<br>0.5 mg/l              | /                          |   |
| PFOA in blood plasma [2016, 2020]  | general population   | 2 µg/l                             | 10µg/l                     |   |
|  | women of child-bearing age   |                                    | 5 µg/l                     |   |
| PFOS in blodd plasma [2016, 2020]  | general population   | 5 µg/l                             | 20 µg/l                    |   |
|  | women of child-bearing age   |                                    | 10 µg/l                    |   |
| 7-Hydroxycitronellal, metabolite 7-<br>Hydroxycitronellyl acid in urine  | children;<br>adults  | 9 mg/l;<br>14 mg/l                 |                            | possible<br>sensitization not<br>considered |
| DEHTP metabolite 5cx-MEPTP in urine<br>(publication in preparation)  | children;<br>adults  | 1.8 mg/l;<br>2.8 mg/l              |                            |   |