

Reference values

for chlorphenole in urine and pentachlorophenol in serum

Parameter [bibliographical data]	Population group / period of life	Year of study	Reference value ^a
2-monochlorophenol in urine [2009]	Children (3 to 14 years) ¹	2003/06	7.0 µg/l
4-monochlorophenol in urine [2009]	Children (3 to 14 years) ¹ Adults (18 to 69 years) ²	2003/06 1998	15 µg/l
2,4-dichlorophenol in urin [2009]	Children (3 to 14 years) ¹ Adults (18 to 69 years) ²	2003/06 1997/99	2 µg/l 3 µg/l
2,5-dichlorophenol in urine [2009]	Children (3 to 14 years) ¹ Adults (18 to 69 years) ²	2003/06 1997/99	6 µg/l 20 µg/l
2,6-dichlorophenol in urine [2009]	Children (3 to 14 years) ¹ Adults (18 to 69 years) ²	2003/06 1997/99	<0.3 µg/l^b
2,3,4-trichlorophenol in urine [2009]	Children (3 to 14 years) ¹ Adults (18 to 69 years) ²	2003/06 1997/99	<0,3 µg/l^b
2,4,5-trichlorophenol in urine [2009]	Children (3 to 14 years) ¹ Adults (18 to 69 years) ²	2003/06 1997/99	0.5 µg/l 1 µg/l
2,4,6-trichlorophenol in urine [2009]	Children (3 to 14 years) ¹ Adults (18 to 69 years) ²	2003/06 1997/99	0.7 µg/l 1.5 µg/l
2,3,4,6-tetrachlorophenol in urine [2009]	Children (3 to 14 years) ¹ Adults (18 to 69 years) ²	2003/06 1997/99	<0.3 µg/l^b 1.0 µg/l
Pentachlorophenol (PCP) in urine [1997, 1999, 2009]	Children (3 to 14 years) ¹ Adults (18 to 69 years) living in homes where no wood preservatives had been used ²	2003/06 1997/99	2.0 µg/l^b 5 µg/l
PCP in serum [1997, 1999]	Adults (but not a strictly representative reference sample) ³	1995/96	12 µg/l

[xy] bibliographical data see [publication: http://www.uba.de/gesundheits-e/publikationen/index.htm#knb](http://www.uba.de/gesundheits-e/publikationen/index.htm#knb)

^a: when applying reference values the analytical uncertainty must be taken into account;

^b: no reference value, but should there be analytically reliable and confirmed concentrations above the mentioned value a special exposure must be expected;

¹ Source: German Environmental Survey on Children 2003-2006 (GerES IV);

² Source: German Environmental Survey 1998 (GerES III);

³ Source: Umwelttoxikologische Studie im Landkreis Pinneberg des Landes Schleswig-Holstein