

APPENDIX 1. Some physico-chemical properties.

SOLVENT	mw	d_4^{20} (g/ml)	mp (°C)	$vp^{+20^\circ C}$ (mm Hg)	$vp^{+37^\circ C}$ (mm Hg)	$vp^{-80^\circ C}$ (mm Hg)	conversion factors (at 25°C, 760 mm Hg)
benzene <chem>C6H6</chem>	78.11	0.8787	5.5	57.4	123.51	<0.14 (-58)	1 ppm = 3.19 mg/m ³ 1 mg/l = 313 ppm
toluene <chem>C6H5CH3</chem>	92.13	0.8669	-94.5	20.9	46.9	0.005	1 ppm = 3.76 mg/m ³ 1 mg/l = 226 ppm
m-xylene <chem>C6H4(CH3)2</chem>	106.16	0.8642	-54.2	6.0	15.4	<1.1 (-7)	1 ppm = 4.34 mg/m ³ 1 mg/l = 231 ppm
styrene <chem>C6H5CH=CH2</chem>	104.14	0.9060	-30.6	5.5	13.5	<1.0 (-7)	1 ppm = 4.26 mg/m ³ 1 mg/l = 235 ppm

(to be continued)

APPENDIX 1 (continued)

SOLVENT	mw	d_4^{20} (g/ml)	mp (°C)	vp ^{+20°C} (mm Hg)	vp ^{+37°C} (mm Hg)	vp ^{-80°C} (mm Hg)	conversion factors (at +25°C, 760 mm Hg)
methylene chloride CH ₂ Cl ₂	84.94	1.3266	-96.0	343.9	701.5	<1.1(-70)	1 ppm = 3.49 mg/m ³ 1 mg/l = 288 ppm
chloroform CHCl ₃	119.39	1.4832	-63.5	138.6	280.8	<1.3(-58)	1 ppm = 4.97 mg/m ³ 1 mg/l = 201 ppm
carbon tetra- chloride CCl ₄	153.82	1.5940	-22.6	78.9	161.8	<0.1(-70)	1 ppm = 6.29 mg/m ³ 1 mg/l = 159 ppm
trichloroethylene Cl ₂ C=CHCl	131.40	1.4642	-73.0	57.0	124.7	<1.1(-44)	1 ppm = 5.38 mg/m ³ 1 mg/l = 186 ppm

mw = molecular weight; d_4^{20} = density at +20°C relative to water at +4°C; mp = melting point; vp = vapor pressure

Vapor pressures were calculated according to the formula $\lg vp = (-0.2185 A/K) + B$, where vp = vapor pressure (mm Hg); A = molar heat of vaporization (cal/g mol); K = temperature (°K); B = constant. The figures within parentheses give the lowest temperatures for which the equation is applicable. (Handbook of Chemistry and Physics, 51st ed., published by the Chemical Rubber Company, Cleveland, Ohio 1970-1971, pp. D146-D165).

APPENDIX 2. Partition coefficients.

SOLVENT	blood/gas	oil/gas	fat/gas	oil/blood
benzene	7.8 (363) 7.5 (254) 6.5 (391)	461 (391)	406 (363) 424 (391)	406 (22)
toluene	14.6 (363) 12.4 (254) 15.6 (391)	1380 (391)	1296 (363) 1270 (391)	1269 (22)
xylene	29.0 (22) 42.1 (391)	4050 (391)	3760 (391)	
styrene	32.0 (463) 18.2 (254)	4100 (463)		130 (463)
methylene chloride	7.0 (281) 7.9 (254)	75 (282)		7 ⁽¹⁾ (282)
chloroform	12.0 (254) 8.2 (391) 10.3 (242)	130 (282) 265 (273) 365 (274)	500 (22)	9 ⁽¹⁾ (282)
carbon tetra- chloride	6.0 (282) 0.6 (281) 2.3 (326)	142 (282) 400 (274)		23 ⁽¹⁾ (282)
trichloro- ethylene	15.7 (254) 9.2 (327) 9.9 (364) 9.5 (281) 9.0 (391)	220 (282) 714 (391)	960 (263) 656 (391) 674 (364)	15 ⁽¹⁾ (282)

(1) oil/serum

The values were taken from the literature (references within parentheses). Determinations were made *in vitro* at 37°C, except reference 281 (40°C) and reference 282 (25°C).

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