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Erratum

Pharmacokinetics of ethylene in man; body burden with ethylene oxide and hydroxyethylation of hemoglobin due to endogenous and environmental ethylene

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Some formulas in table 2, column 2 and 4, became equivocal through the typesetting procedure. A correct version of table 2 is given below.

Table 2. Pharmacokinetic parameters of ethylene in man (70 kg)

Parameter[a] Name	Expression	Value mean ± SD[b]	Dimension
Thermodynamic equilibrium coefficient "body/air" (K_{eq})	$\frac{k_{12} \times V_1}{k_{21} \times V_2}$	0.53 ± 0.23[c]	$\frac{\text{nl gas/ml tissue}}{\text{ppm in atmosph.}}$
Bioaccumulation factor "body/air" at steady state (K_{st})	$\frac{k_{12} \times V_1}{(k_{el}+k_{21}) \times V_2}$	0.33 ± 0.13	$\frac{\text{nl gas/ml tissue}}{\text{ppm in atmosph.}}$
Clearance of exhalation (related to atmosph. concn.)	$k_{21} \times V_2 \times K_{st}$	16 ± 5.4	l/h
Clearance of metabolism (related to atmosph. concn.)	$k_{el} \times V_2 \times K_{st}$	9.3 ± 3.8	l/h
Clearance of metabolism (related to concn. in organism)	$k_{el} \times V_2$	27 ± 9.6	l/h
Half-life	$\frac{ln2}{k_{el}+k_{21}}$	0.65 ± 0.14	h
% metabolized (Amount taken up = 100%)	$\frac{k_{el} \times 100}{k_{el}+k_{21}}$	36 ± 11	%
% exhaled (Amount taken up = 100%)	$\frac{k_{21} \times 100}{k_{el}+k_{21}}$	64 ± 11	%
Alveolar retention	$\frac{k_{el} \times V_2 \times K_{st} \times 100}{\text{Alveol. Ventilation}}$	2 ± 0.8[d]	%
Body burden of ethylene due to endogenous production	$y_{2stEt\,end}$[e]	0.44 ± 0.19	pmol/ml tissue

[a] Valid for atmospheric concentrations below 50 ppm

[b] SD calculated from values of Table 1 by means of Monte Carlo Simulation (4500 runs)

[c] Values are independent of the atmospheric concentration

[d] Alveolar ventilation was set to be 450 l/h at rest (own measurements)

[e] Body burden with endogenous produced ethylene $y_{2stEt\,end}$ was calculated with the equation:

$y_{2stEt\,end} = (dN_{prEt}/dt)/[(k_{el}+k_{21}) \times V_2]$; $V_2 = 70$ l