

Errata to
Understanding Psychrometrics, third edition
(2013)

February 23, 2019

Page 316:

In the third line of Equation A5-31, within the brackets, the term p should be inside the brackets after the superscripted 2. This line formerly read:

$$-2(1 - \psi_{w,s})2pB_{aw} - [p - p_{w,s} - (1 - \psi_{w,s})^2]pB_{ww}\}$$

and should be

$$-2(1 - \psi_{w,s})2pB_{aw} - [p - p_{w,s} - (1 - \psi_{w,s})^2p]B_{ww}\}$$

The correct equation in its entirety is:

$$\begin{aligned} \ln(f) = & (RT)^{-1}[(1 + \kappa_T p_{w,s})(p - p_{w,s}) - 0.5\kappa_T(p^2 - p_{w,s}^2)]\bar{v}_{w,s} \\ & + \ln[1 - \beta_H(1 - \psi_{w,s})p] + (RT)^{-1}\{(1 - \psi_{w,s})^2 p B_{aa} \\ & - 2(1 - \psi_{w,s})^2 p B_{aw} - [p - p_{w,s} - (1 - \psi_{w,s})^2 p]B_{ww}\} \\ & + (RT)^{-2}\{(1 - \psi_{w,s})^3 p^2 C_{aaa} + 3[0.5 - (1 - \psi_{w,s})](1 - \psi_{w,s})^2 p^2 C_{aaw} \\ & - 3\psi_{w,s}(1 - \psi_{w,s})^2 p^2 C_{aww} - 0.5[(3 - 2\psi_{w,s})\psi_{w,s}^2 p^2 - p_{w,s}^2]C_{www} \\ & - \psi_{w,s}(-2 + 3\psi_{w,s})(1 - \psi_{w,s})^2 p^2 B_{aa}B_{ww} \\ & - 2(-1 + 3\psi_{w,s})(1 - \psi_{w,s})^3 p^2 B_{aa}B_{aw} \\ & + 6\psi_{w,s}^2(1 - \psi_{w,s})^2 p^2 B_{aw}B_{ww} - 1.5(1 - \psi_{w,s})^4 p^2 B_{aa}^2 \\ & - 2\psi_{w,s}(-2 + 3\psi_{w,s})(1 - \psi_{w,s})^2 p^2 B_{aw}^2 \\ & - 0.5[p_{w,s}^2 - (4 - 3\psi_{w,s})\psi_{w,s}^3 p^2]B_{ww}^2\} \end{aligned}$$