$$x_{\mathrm{H2Oexhdry}} = \frac{1.8}{2}\left(0.0249 - \frac{47.6}{1000000}\right) + 0.018 \cdot 0.851 + 0.017 \cdot 0.172 - \frac{8.5}{1000000} = 0.0353\ mol/mol$$