**ELEMENTARY PRINCIPLES OF CHEMICAL PROCESSES**

**ERRATA – 4th EDITION TEXT**

**Updated 5-5-16**

**First printing:**

* **Front endsheet**:
* under “Selected Tables and Figures” and “Miscellaneous”, the page number for the Psychrometric chart (SI units) should be 433; and the page number for the Psychrometric chart (U.S. customary units) should be 434
* conversion factor table, under Pressure units: on the second line there should be “” before “dynes/cm2”
* conversion factor table, under Pressure units: on the fourth line, the factor should be “= 406.8 inches H2O (l) at 4oC”
* **p. vi:** The author-maintained website address (top of the second column) should be <http://epcp.wordpress.ncsu.edu>
* **p. 98:** in the italicized paragraph, line 1, change “kilograms” to “pounds”
* **p. 130:** in the second equation above the “Test Yourself” block, in the numerator of the third term, it should say “1 kmol O2 consumed” , not “1 kmol O3 consumed”
* **p. 133:** in both of the hydrogen balances at the bottom of the page (2 instances), it should read “300 mol H2/s”, not 300 mol N2/s
* **p. 141:** for the atomic C balance, the equation underneath the vertical arrow should read “200 kmol C/min = ”
* **p. 149:** In the line under equation (2), the end of the sentence should read “…yields the following five extent of reaction balances [(3) – (7)] in five….”. Equation (5) should read 8*n*CO **(=** *nCO2) =* (1 mol CO2)2
* **p. 179:** in problem 4.19, on the second line of part (a), replace the word “feed” with “aqueous serine solution”. The original wording of part (b) is correct: the second line should say “required feed rates of aqueous serine solution and methanol.”
* **p. 189:** in problem 4.43, part (c), the third line should say “65%” instead of “58%”.
* **p. 191:** in problem 4.46, second paragraph, line 6, it should say "20.0 kg" instead of "2.0 kg".
* **p. 206:** in problem 4.80, replace part (a) with the following: “Assume a methanol production rate of 100 kmol/h. Perform the DOF for the overall system and all subsystems to prove that there is insufficient information to solve for all unknowns.”
* **p. 211:** in problem 4.90, change the CO2 mole% to 24.5% and the CO mole % to 6.10%.
* **p. 227:** in the degree of freedom analysis, third line, it should say “(overall, C3H6O)”
* **p. 230:** In the line under equation 5.3-2, the equation should be , not 
* **pp. 231-232:**
	+ In the last bullet on p. 231, the equation numbers are off by one; Equation 5.3-3 should be 5.3-4; Equation 5.3-4 should be 5.3-5; and Equation 5.3-5 should be 5.3-6.
	+ On the last line of p. 231, the value should be -0.112 instead of -0.113. On page 232, third line, the denominator should be (1.50 + 0.112) instead of (1.50 – 0.133).
* **p. 252:** in problem 5.40 on line 5, the mole% water should be 8.1 instead of 0.81.
* **p. 259:** in problem 5.59, the first bullet under data, it should say “mass%” instead of “mole%”
* **p. 260:** In problem 5.64, the formula for citric acid in the chemical reaction should be C6H8O7. Also, the mass amounts for citric acid and sodium bicarbonate are reversed in the problem statement; it should read “citric acid (1.000 x 103 mg) and sodium bicarbonate (1.916 x103 mg).”
* **p. 282:** the expressions for “*c”* above equation 6.2-1 should read “*c* = number of independent chemical species”
* **p. 289:** On the line that says “*p*H2O=(0.3)(289 mm Hg) = 86.7 mg Hg”, it should say “mm Hg”, instead of “mg Hg”.
* **p. 337**: problem 6.70(f): change *x*B value from 0.5 to 0.55
* **p. 338:** problem 6.71: in part (a), the denominator in the equation should read “*y – x*F” where F is subscripted
* **p. 374:** in Example 7.6-2, under the line , replace the text “Since the process materials are all gases and were are assuming ideal gas behavior,” with “Since the components have similar chemical structures and we can assume the mixture is ideal,”
* **p. 394:**in the stream data at the bottom of the page, the circled number 3 should have “Reflux” as the label, and the circled number 4 should have “Distillate” as the label
* **p. 418:** on line 2, it should say “can be read directly from Table B.8” (instead of Table B.9)
* **p. 427**: in the calculation of ΔH for path D, the units of  should be kJ/mol, not kJ./kg.
* **p. 429:** in Example 8.4-3:
	+ part (a), in the calculation for Chen’s Equation, the last number in the denominator (Tc) should be 513.2, not 213.2
	+ part (b), first line, it should say “Using the Watson’s correlation estimate:”
	+ part (b): in both the first and second equations, the denominator of the ratio should be “513.2 – 337.9” (not “513.2 – 473”), and the ratio in parentheses (both equations) should be raised to the 0.38 power.
* **p. 501**:
	+ In section 9.3, underneath the first chemical reaction, replace 44.66 kJ/mol C6H6 with 48.66 kJ/mol C6H6
	+ In the second paragraph, last 3 lines, -65.15 should be replaced by -365.15 (two instances)
* **p. 566:** The equation for a0 in part (c) of problem 9.81 has the upper limit of the sum missing in the last term. The upper limit should be 6.
* **pp. 628, 630, 632, 634:** In Table B.1 beginning on pp. 628, the carats should be removed from the headings of the last two columns (standard heats of formation and combustion), making those headings  and .
* **p. 630**, entries for formic acid:
	+ - Change the heat of vaporization from 22.25 to 46.3
		- Change the heat of formation of the liquid from -409.2 to -425.5
		- Change the heat of formation of the gas from -362.6 to -379.2
* **p. 631**: change the entry for the heat of combustion for Methyl alcohol from 726.6 to -726.6.
* **p. 655:**the answers to the Test Yourself on p. 57 should be:

1.      68 x 10-6 kg creatinine/kg blood (or g/g or lbm/ lbm)

2.      68 mg creatinine

3.      0.0721 g creatinine/L blood (blood density = 1060 kg/m3)

* **p. 656:**
	+ TY for p. 240, Question 1: The expression for *T*r on p. 240 should be “*T*r = (-190 + 273.2)/(*T*c + 8)”.
	+ TY for p. 241: Replace “Example 5.3-4” with “Example 5.4-2”.
* **p. 663:**
	+ The answer to problem 4.90 should be “(a) 16.5% excess O2”.
	+ The answer to problem 4.96 should be “10.7% CO2”.
	+ The answer to problem 5.40 should be “111.3 m3/h air”.
	+ The answer to problem 5.50 should be “**(c)** 9.2105 angstroms”
* **p. 664:** the answer to problem 6.70 should be “**(b)** *x*B = 0.323, *y*B = 0.615”
* **p. 665**: the answer to problem 9.60 should be “**(b)** 986 kJ transferred from reactor”