

**TABLE 7.3** Date on Elemental Composition of Several Microorganisms

Microorganism	Limiting Nutrient	$\mu$ (h <sup>-1</sup> )	Composition (% by wt)					Empirical Chemical Formula	Formula "Molecular" Weight
			C	H	N	O	P		
Bacteria			53.0	7.3	12.0	19.0		CH <sub>1.666</sub> N <sub>0.20</sub> O <sub>0.27</sub>	20.7
Bacteria			47.1	7.8	13.7	31.3		CH <sub>2</sub> N <sub>0.25</sub> O <sub>0.5</sub>	25.5
<i>Aerobacter aerogenes</i>			48.7	7.3	13.9	21.1		CH <sub>1.78</sub> N <sub>0.24</sub> O <sub>0.33</sub>	22.5
<i>Klebsiella aerogenes</i>	Glycerol	0.1	50.6	7.3	13.0	29.0		CH <sub>1.74</sub> N <sub>0.22</sub> O <sub>0.43</sub>	23.7
<i>K aerogenes</i>	Glycerol	0.85	50.1	7.3	14.0	28.7		CH <sub>1.73</sub> N <sub>0.24</sub> O <sub>0.43</sub>	24.0
Yeast			47.0	6.5	7.5	31.0		CH <sub>1.66</sub> N <sub>0.13</sub> O <sub>0.40</sub>	23.5
Yeast			50.3	7.4	8.8	33.5		CH <sub>1.75</sub> N <sub>0.15</sub> O <sub>0.5</sub>	23.9
Yeast			44.7	6.2	8.5	31.2	1.08	CH <sub>1.64</sub> N <sub>0.16</sub> O <sub>0.52</sub> P <sub>0.01</sub> S <sub>0.005</sub>	26.9
<i>Candida utilis</i>	Glucose	0.08	50.0	7.6	11.1	31.3		CH <sub>1.82</sub> N <sub>0.19</sub> O <sub>0.47</sub>	24.0
<i>C. utilis</i>	Glucose	0.45	46.9	7.2	10.9	35.0		CH <sub>1.84</sub> N <sub>0.2</sub> O <sub>0.56</sub>	25.6
<i>C. utilis</i>	Ethanol	0.06	50.3	7.7	11.0	30.8		CH <sub>1.82</sub> N <sub>0.19</sub> O <sub>0.46</sub>	23.9
<i>C. utilis</i>	Ethanol	0.43	47.2	7.3	11.0	34.6		CH <sub>1.84</sub> N <sub>0.2</sub> O <sub>0.55</sub>	25.5

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