

TABLE 1 Major components of the outer membrane^a

Component	Molecules/cell (10 ³)	Fatty acyl chains/cell (10 ³)	Surface area ^b (μ ²)
LPS	34.6	242	4.9
Porins + OmpA	2		1.8
Lipoprotein	7	21	0.5
Phospholipids	87	174	4.1

^aThe data on LPS and phospholipids are from reference 176. However, the number of LPS molecules was corrected, because at the time each LPS was thought to exist as a trimer. Each LPS and phospholipid molecule contains 7 and 2 fatty acid chains, respectively, each of which in turn was assumed to occupy a cross-sectional area of 0.202 and 0.234 nm², respectively (89). For porins and OmpA, the surface area was calculated on the basis of 5-nm-long cylindrical shapes with the partial specific volume of 0.72. Note that the calculated values agree with the measured cell surface area, 6 μm² (176).

^bCalculated surface area: outer surface, 4.9 + 1.8 = 6.7 μm²; inner surface, 1.8 + 0.5 + 4.1 = 6.4 μm².