

Table 3. Experimentally calculated values for the different layers of the cellular envelope of *E. coli*. For the simulation of the passage of a solute into out of the cell, spherocylinders with the same R/h ratio as the one determined for the cell volume, and with the thickness described here, should be added to the model

Parameter	Experimental values (nm)	References
Inner membrane thickness	3.75 ± 0.05	[36]
Outer membrane thickness	13 ± 1.0	[37]
Peptidoglycan thickness	6.35 ± 0.53	[38]
Periplasm thickness ^a	11–15	[39]
Capsule thickness	2–8	[40]

Note. ^aIncludes the peptidoglycan thickness in-between.

36. Mitra K, Ubarretxena-Belandia I, Taguchi T, et al. Modulation of the bilayer thickness of exocytic pathway membranes by membrane proteins rather than cholesterol. *Proc Natl Acad Sci USA* 2004;**101**:4083–8.
37. Bayer ME. Zones of membrane adhesion in the cryofixed envelope of *Escherichia coli*. *J Struct Biol* 1991;**107**:268–80.
38. Vollmer W, Seligman SJ. Architecture of peptidoglycan: more data and more models. *Trends Microbiol* 2010;**18**:59–66.
39. Graham LL, Beveridge TJ, Nanninga N. Periplasmic space and the concept of the periplasm. *Trends Biochem Sci* 1991;**16**:328–9.
40. *Escherichia coli and Salmonella cellular and molecular biology*. *Escherichia coli Salmonella*. 2nd edn, 1996, ASM Press: Washington, D.C.