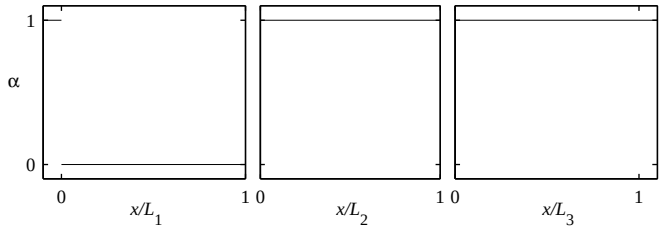
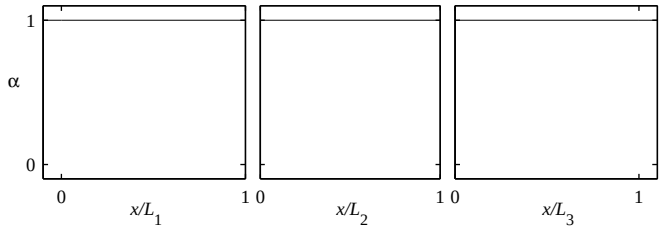
Isobutane, $d_1 = 10$ nm, $L_1 = 20$ µm, $d_2 = 100$ nm, $L_2 = 150$ µm, $d_3 = 6$ µm, $L_3 = 2$ mm. Vapor volume fraction α in the membrane layers.

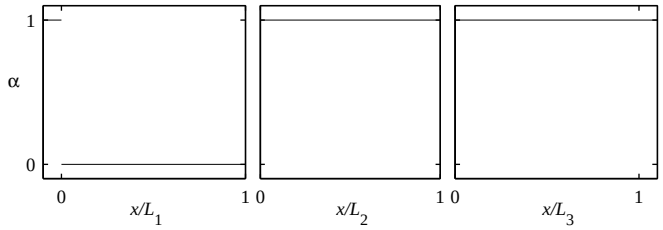
Pressure difference 0.1 bar.



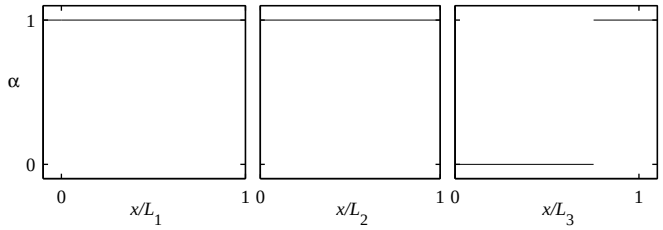
Flow direction A, $p_1 - p_2 = 0.1$ bar, $p_1/p_{\text{sat}} = 0.84$.



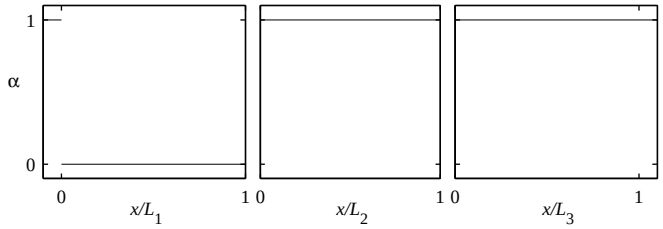
Flow direction B, $p_1 - p_2 = 0.1$ bar, $p_1/p_{\text{sat}} = 0.84$.



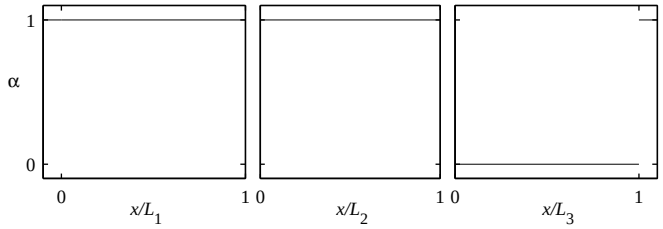
Flow direction A, $p_1 - p_2 = 0.1$ bar, $p_1/p_{\text{sat}} = 0.85$.



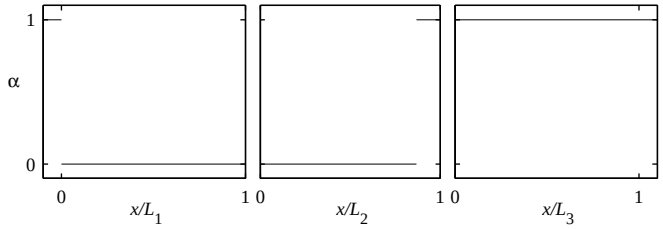
Flow direction B, $p_1 - p_2 = 0.1$ bar, $p_1/p_{\text{sat}} = 0.85$.



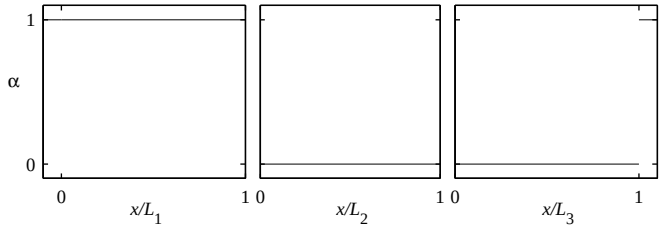
Flow direction A, $p_1 - p_2 = 0.1$ bar, $p_1/p_{\text{sat}} = 0.90$.



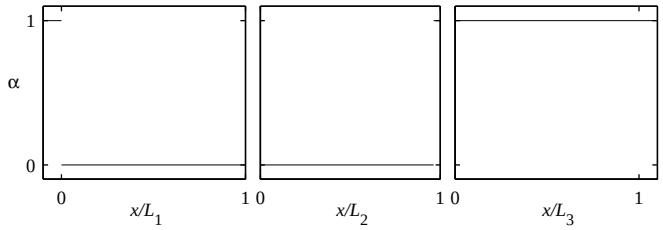
Flow direction B, $p_1 - p_2 = 0.1$ bar, $p_1/p_{\text{sat}} = 0.90$.



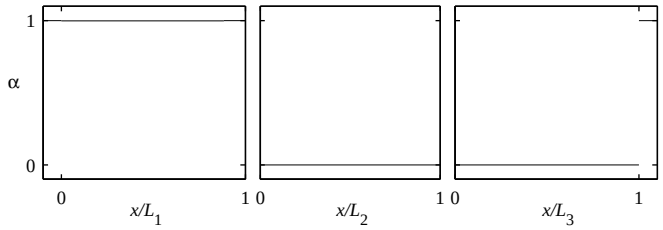
Flow direction A, $p_1 - p_2 = 0.1$ bar, $p_1/p_{\text{sat}} = 0.99$.



Flow direction B, $p_1 - p_2 = 0.1$ bar, $p_1/p_{\text{sat}} = 0.99$.

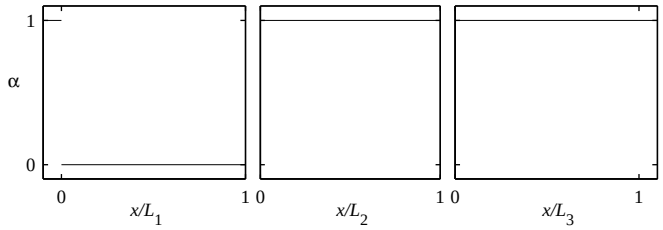


Flow direction A, $p_1 - p_2 = 0.1$ bar, $p_1/p_{\text{sat}} = 1.0$.

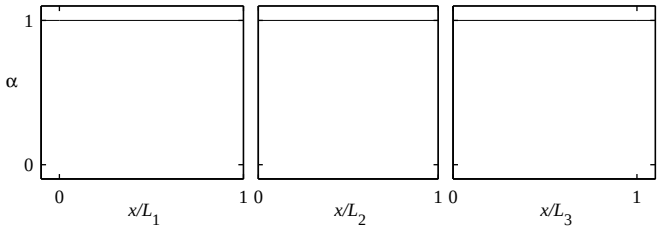


Flow direction B, $p_1 - p_2 = 0.1$ bar, $p_1/p_{\text{sat}} = 1.0$.

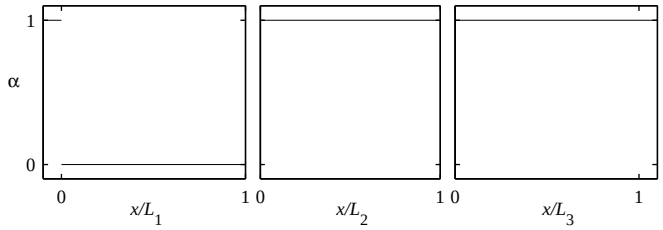
Pressure difference 0.5 bar.



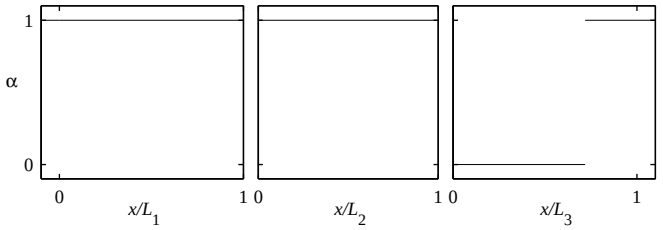
Flow direction A, $p_1 - p_2 = 0.5$ bar, $p_1/p_{\text{sat}} = 0.84$.



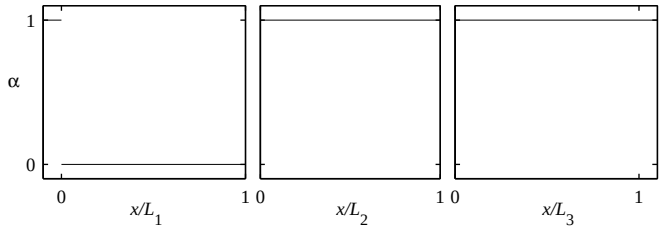
Flow direction B, $p_1 - p_2 = 0.5$ bar, $p_1/p_{\text{sat}} = 0.84$.



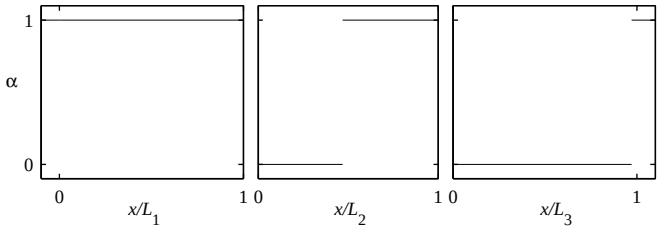
Flow direction A, $p_1 - p_2 = 0.5$ bar, $p_1/p_{\text{sat}} = 0.90$.



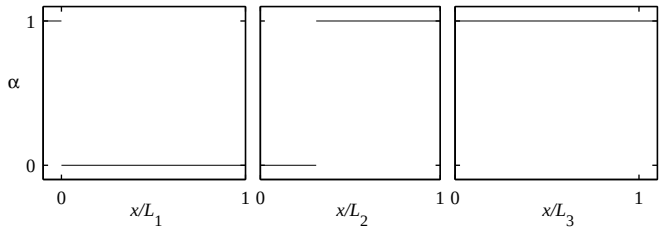
Flow direction B, $p_1 - p_2 = 0.5$ bar, $p_1/p_{\text{sat}} = 0.90$.



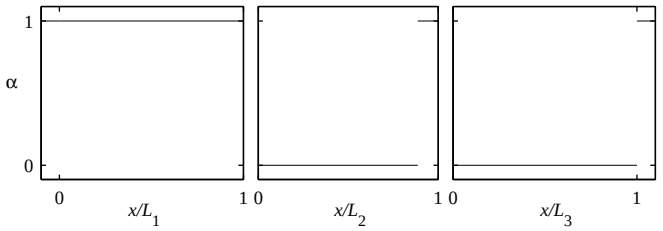
Flow direction A, $p_1 - p_2 = 0.5$ bar, $p_1/p_{\text{sat}} = 0.95$.



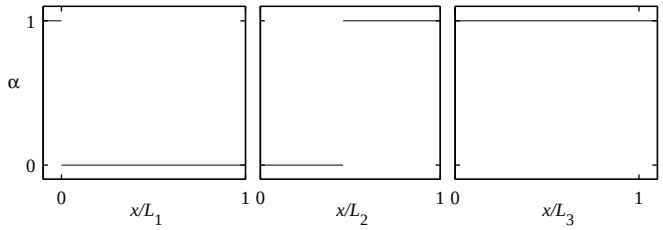
Flow direction B, $p_1 - p_2 = 0.5$ bar, $p_1/p_{\text{sat}} = 0.95$.



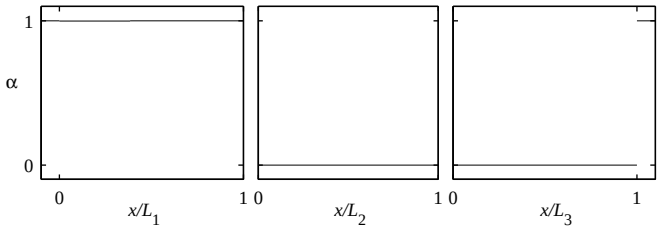
Flow direction A, $p_1 - p_2 = 0.5$ bar, $p_1/p_{\text{sat}} = 0.97$.



Flow direction B, $p_1 - p_2 = 0.5$ bar, $p_1/p_{\text{sat}} = 0.97$.

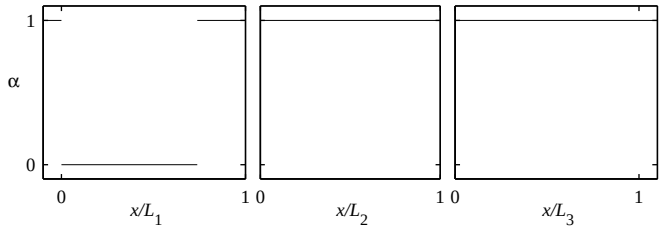


Flow direction A, $p_1 - p_2 = 0.5$ bar, $p_1/p_{\text{sat}} = 1.0$.

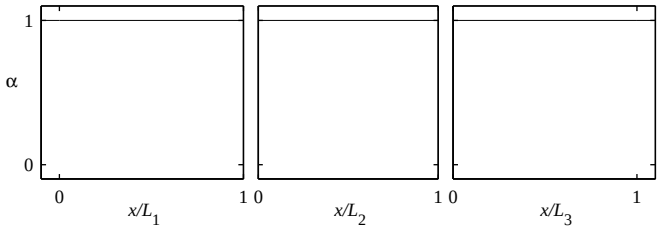


Flow direction B, $p_1 - p_2 = 0.5$ bar, $p_1/p_{\text{sat}} = 1.0$.

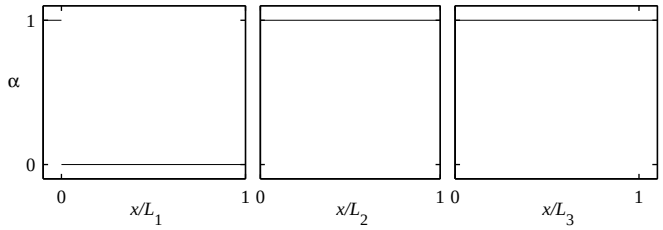
Pressure difference 1.0 bar.



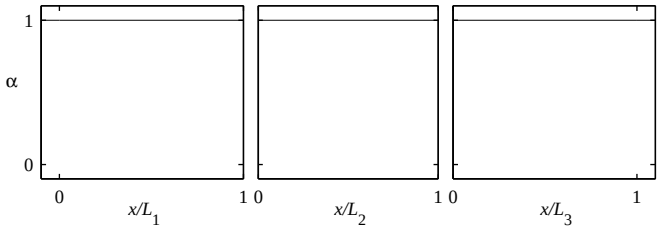
Flow direction A, $p_1 - p_2 = 1.0$ bar, $p_1/p_{\text{sat}} = 0.78$.



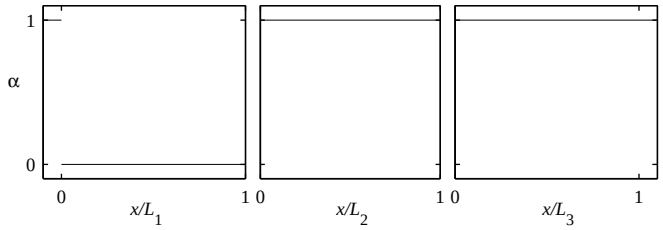
Flow direction B, $p_1 - p_2 = 1.0$ bar, $p_1/p_{\text{sat}} = 0.78$.



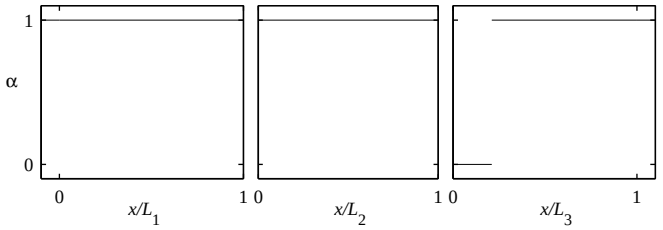
Flow direction A, $p_1 - p_2 = 1.0$ bar, $p_1/p_{\text{sat}} = 0.83$.



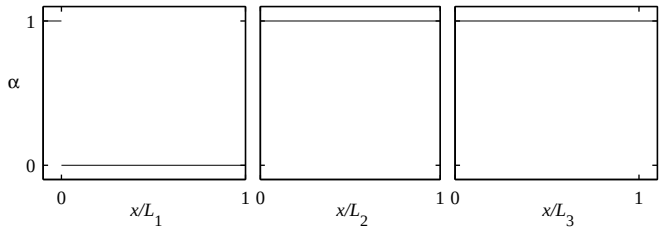
Flow direction B, $p_1 - p_2 = 1.0$ bar, $p_1/p_{\text{sat}} = 0.83$.



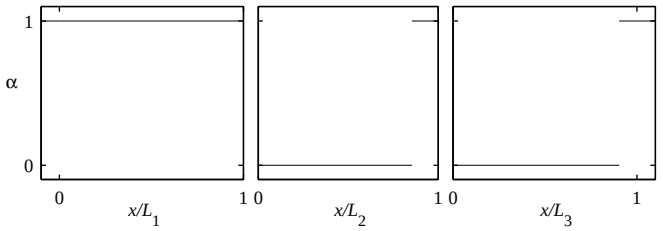
Flow direction A, $p_1 - p_2 = 1.0$ bar, $p_1/p_{\text{sat}} = 0.88$.



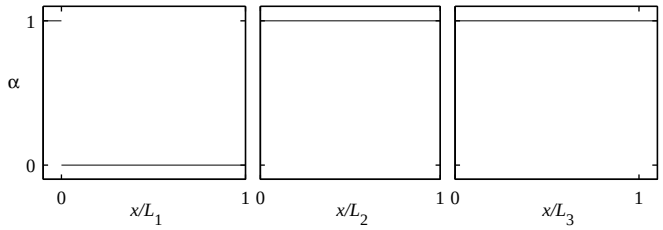
Flow direction B, $p_1 - p_2 = 1.0$ bar, $p_1/p_{\text{sat}} = 0.88$.



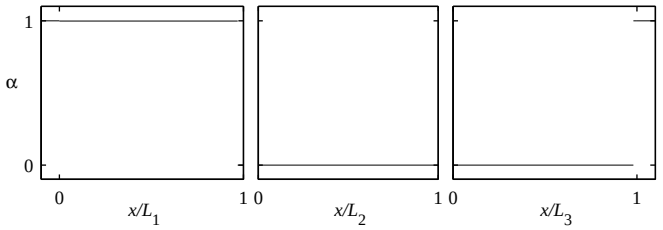
Flow direction A, $p_1 - p_2 = 1.0$ bar, $p_1/p_{\text{sat}} = 0.93$.



Flow direction B, $p_1 - p_2 = 1.0$ bar, $p_1/p_{\text{sat}} = 0.93$.



Flow direction A, $p_1 - p_2 = 1.0$ bar, $p_1/p_{\text{sat}} = 1.0$.



Flow direction B, $p_1 - p_2 = 1.0$ bar, $p_1/p_{\text{sat}} = 1.0$.