

MIGRATEv10

Version 10.00
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Case 9: Comparison with an analytical solution - $D = 0.01$

Layer Properties

Layer	Thickness	Sublayers	Dry Density	Porosity	Distribution Coefficient	Half-Life
Layer 1	10 m	20	0 g/cm ³	1	0 mL/g	0 year

Layer	Vertical Diffusion	Horizontal Diffusion	Vertical Velocity	Horizontal Velocity	Sink Removal	Concentration
Layer 1	0.01 m ² /a	0.01 m ² /a	1 m/a	0 m/a	0 m/a	0 mg/L

Boundary Conditions

Constant Concentration Top Boundary

	Cell 1
Offset	0 m
Surface Width	1 m
Base Width	1 m
Initial Concentration	1 mg/L

Impermeable Bottom Boundary

Laplace Transform Parameters

TAU	7
N	11
SIG	0
RNU	1

Gauss Integration Parameters

Integration Level	Normal
Subinterval Size	20
Number of Subintervals	12
Number of Sample Points per Step	0
Total Width of Integration	240
Total Number of Integration Points	480

Calculated Concentrations at Selected Depths, Lateral Distances and Times

Time year	Distance m	Depth m	Concentration mg/L	Mass into Soil	Mass into Base
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4	0	0.00000E+00	9.95656E-01	4.03630E+00	0.00000E+00
		5.00000E-01	9.99996E-01		
		1.00000E+00	9.99460E-01		
		1.50000E+00	9.95795E-01		
		2.00000E+00	9.87231E-01		
		2.50000E+00	9.74364E-01		
		3.00000E+00	9.58855E-01		
		3.50000E+00	-9.87801E-02		
		4.00000E+00	-2.88262E+05		
		4.50000E+00	8.12614E+09		
		5.00000E+00	1.17673E+13		
		5.50000E+00	-6.49226E+18		
		6.00000E+00	1.56628E+23		
		6.50000E+00	9.75004E+26		
		7.00000E+00	-1.45098E+32		
		7.50000E+00	2.95467E+36		
		8.00000E+00	3.63683E+40		
		8.50000E+00	-3.21118E+45		
		9.00000E+00	5.39595E+49		
		9.50000E+00	1.10843E+54		
		1.00000E+01	1.49861E+59		

NOTICE

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