

MIGRATEv10

Version 10.00
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Case 3: Pure Diffusion - constant source and base concentrations.

Layer Properties

Layer	Thickness	Sublayers	Dry Density	Porosity	Distribution Coefficient	Half-Life
Layer 1	4 m	8	1.5 g/cm ³	0.4	0 m ³ /kg	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	0 m/a	0 m/a	0 m/a	0 mg/L

Boundary Conditions

Constant Concentration Top Boundary

	Cell 1
Offset	0 m
Surface Width	200 m
Base Width	200 m
Initial Concentration	1 mg/L

Zero Concentration Bottom Boundary

Laplace Transform Parameters

TAU	7
N	11
SIG	0
RNU	1

Gauss Integration Parameters

Integration Level	Normal
Subinterval Size	0.1
Number of Subintervals	12
Number of Sample Points per Step	0
Total Width of Integration	1.2
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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10	0	0.00000E+00	9.95656E-01	2.84736E+01	0.00000E+00
		5.00000E-01	2.62495E-01		
		1.00000E+00	2.52487E-02		
		1.50000E+00	7.93174E-04		
		2.00000E+00	7.71470E-06		
		2.50000E+00	2.25993E-08		
		3.00000E+00	1.90486E-11		
		3.50000E+00	4.58065E-14		
		4.00000E+00	0.00000E+00		

Time year	Distance m	Depth m	Concentration mg/L	Mass into Soil	Mass into Base
50	0	0.00000E+00	9.95656E-01	6.37004E+01	0.00000E+00
		5.00000E-01	6.14910E-01		
		1.00000E+00	3.16348E-01		
		1.50000E+00	1.33247E-01		
		2.00000E+00	4.53832E-02		
		2.50000E+00	1.23887E-02		
		3.00000E+00	2.69279E-03		
		3.50000E+00	4.57395E-04		
		4.00000E+00	0.00000E+00		

Time year	Distance m	Depth m	Concentration mg/L	Mass into Soil	Mass into Base
100	0	0.00000E+00	9.95656E-01	9.01396E+01	0.00000E+00
		5.00000E-01	7.21336E-01		
		1.00000E+00	4.78278E-01		
		1.50000E+00	2.88229E-01		
		2.00000E+00	1.56989E-01		
		2.50000E+00	7.68728E-02		
		3.00000E+00	3.34373E-02		
		3.50000E+00	1.18487E-02		
		4.00000E+00	0.00000E+00		

Time year	Distance m	Depth m	Concentration mg/L	Mass into Soil	Mass into Base
150	0	0.00000E+00	9.95656E-01	1.10462E+02	0.00000E+00
		5.00000E-01	7.70441E-01		
		1.00000E+00	5.62364E-01		
		1.50000E+00	3.85616E-01		
		2.00000E+00	2.47324E-01		
		2.50000E+00	1.47239E-01		
		3.00000E+00	7.92872E-02		

		3.50000E+00	3.39001E-02		
		4.00000E+00	0.00000E+00		

Time year	Distance m	Depth m	Concentration mg/L	Mass into Soil	Mass into Base
200	0	0.00000E+00	9.95656E-01	1.27625E+02	0.00000E+00
		5.00000E-01	8.00046E-01		
		1.00000E+00	6.15310E-01		
		1.50000E+00	4.51392E-01		
		2.00000E+00	3.14229E-01		
		2.50000E+00	2.05139E-01		
		3.00000E+00	1.21095E-01		
		3.50000E+00	5.56281E-02		
		4.00000E+00	0.00000E+00		

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