CORRECTION

Correction to: Truncation effect on estimation of transport parameters for slug-injection tracer tests

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Correction to: Environmental Earth Sciences (2022) 81:185
https://doi.org/10.1007/s12665-022-10309-9

The original article has been published inadvertently with some errors in figures (Figs. 1, 2, 3, 4, 5, 6, 7, 8, 10, 12 and 13), in which some symbols and characters ("=", "×", "/", "≥", "<", "‾", "," and "0") were missing. All the corrected versions of figures are given below.
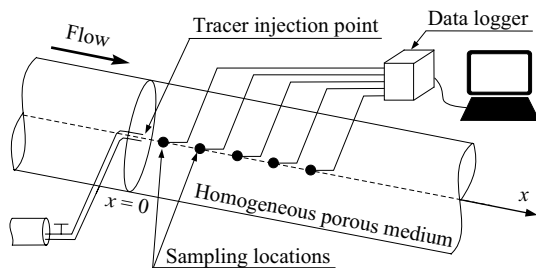

Fig. 1 Illustration of a slug-injection tracer test. A slug of conservative tracer is instantaneously injected at $x=0$ into a system governed by one-dimensional uniform flow along the x-axis
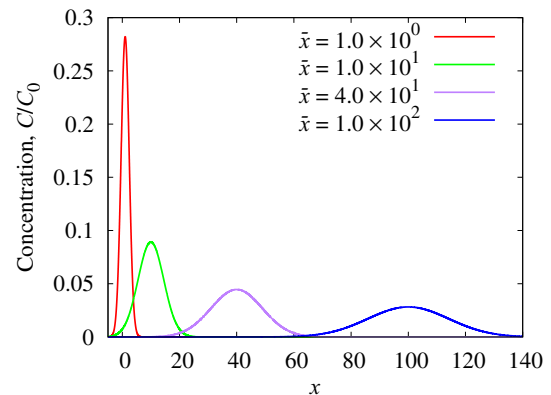
The original article can be found online at https://doi.org/10.1007/s12665-022-10309-9.

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Fig. 2 Spatial concentration distributions of the solute plume at various travel distances ($\bar{x}=1.0\times10^0$, 1.0×10^1, 4.0×10^1, 1.0×10^2) according to Eq. (1)
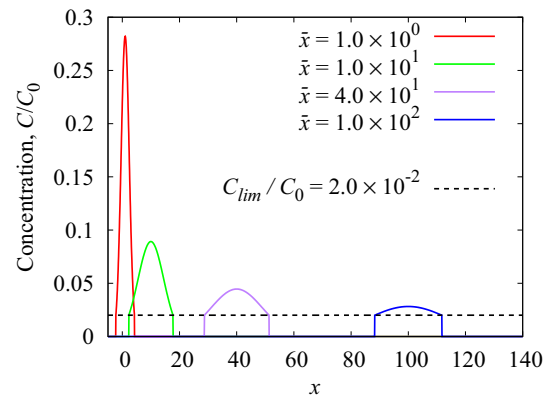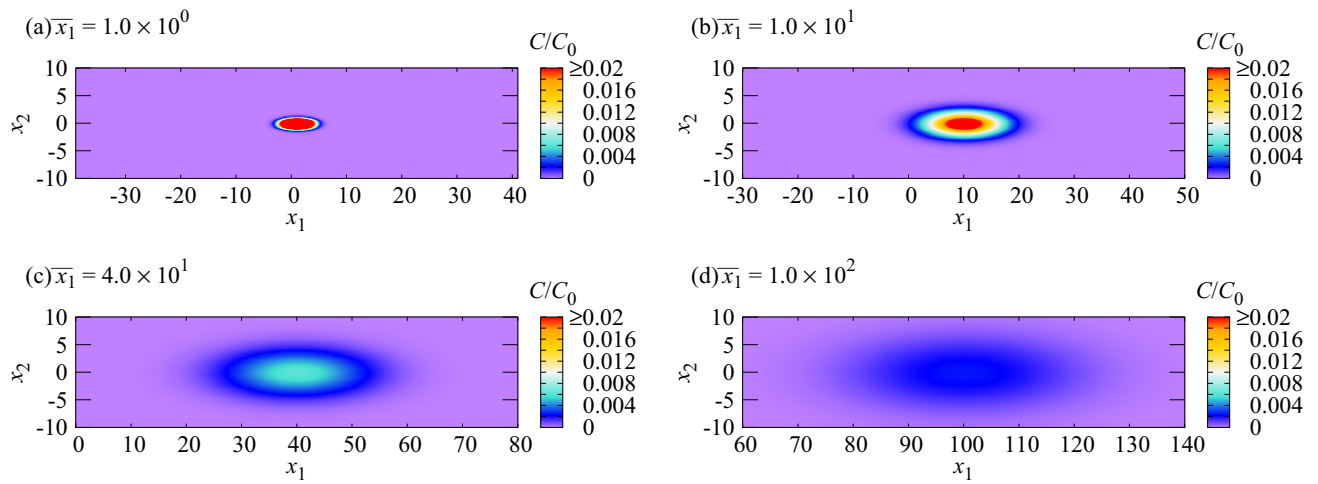

Fig. 3 Truncated concentration distributions of the solute plume at various travel distances ($\bar{x}=1.0\times10^0$, 1.0×10^1, 4.0×10^1, 1.0×10^2) for the detection limit $C_{lim}/C_0=2.0\times10^{-2}$ (dash line)

Fig. 4 Two-dimensional concentration maps of a tracer slug at various travel distances according to Eq. (3): **a** $\bar{x}_1 = 1.0 \times 10^0$, **b** $\bar{x}_1 = 1.0 \times 10^1$, **c** $\bar{x}_1 = 4.0 \times 10^1$, and **d** $\bar{x}_1 = 1.0 \times 10^2$
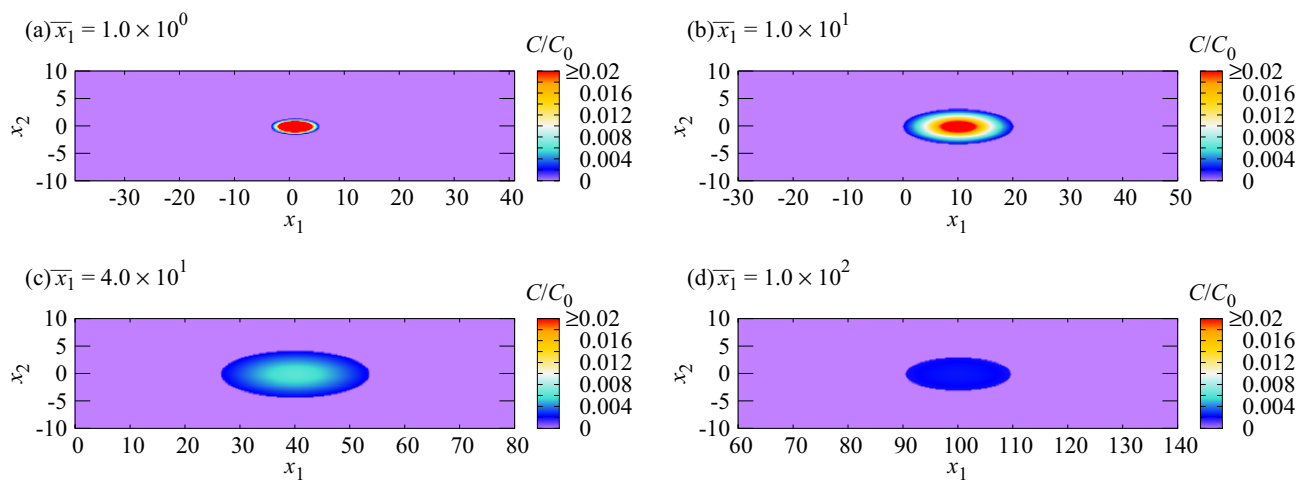

Fig. 5 Two-dimensional concentration maps of a tracer slug truncated by the detection limit $C_{lim}/C_0 = 2.0 \times 10^{-3}$ at various travel distances: **a** $\bar{x}_1 = 1.0 \times 10^0$, **b** $\bar{x}_1 = 1.0 \times 10^1$, **c** $\bar{x}_1 = 4.0 \times 10^1$, and **d** $\bar{x}_1 = 1.0 \times 10^2$
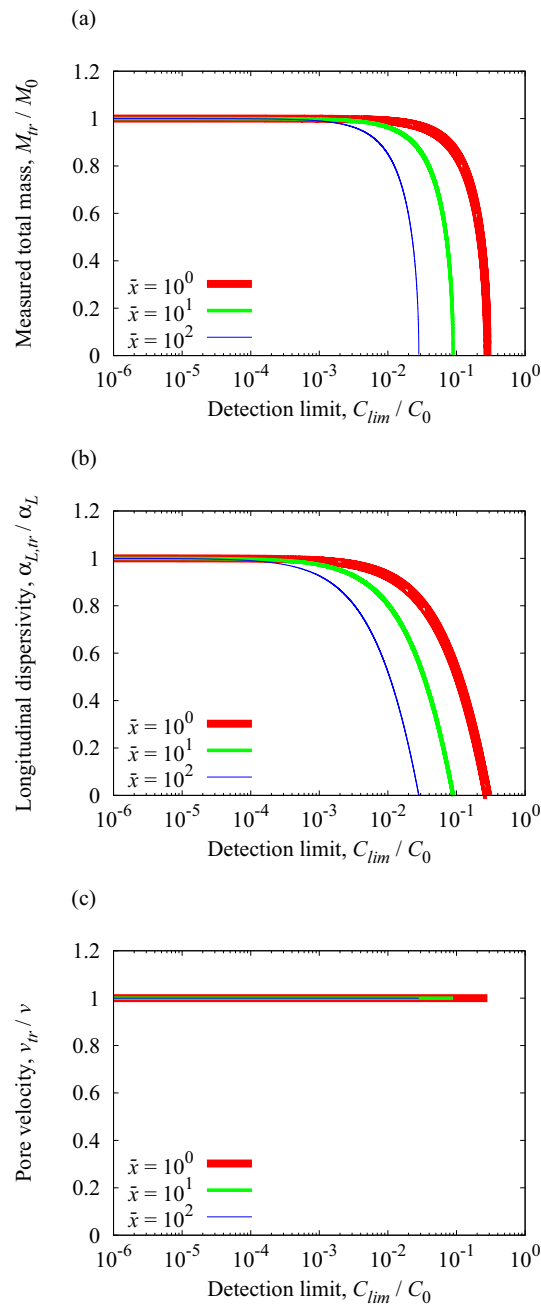
(a)

(b)

(c)

Fig. 6 Dimensionless measured total mass and transport parameters for the one-dimensional case calculated at several travel distances ($\bar{x} = 10^0$, 10^1, 10^2) as a function of the dimensionless detection limit: **a** measured total mass, **b** longitudinal dispersivity, and **c** pore velocity
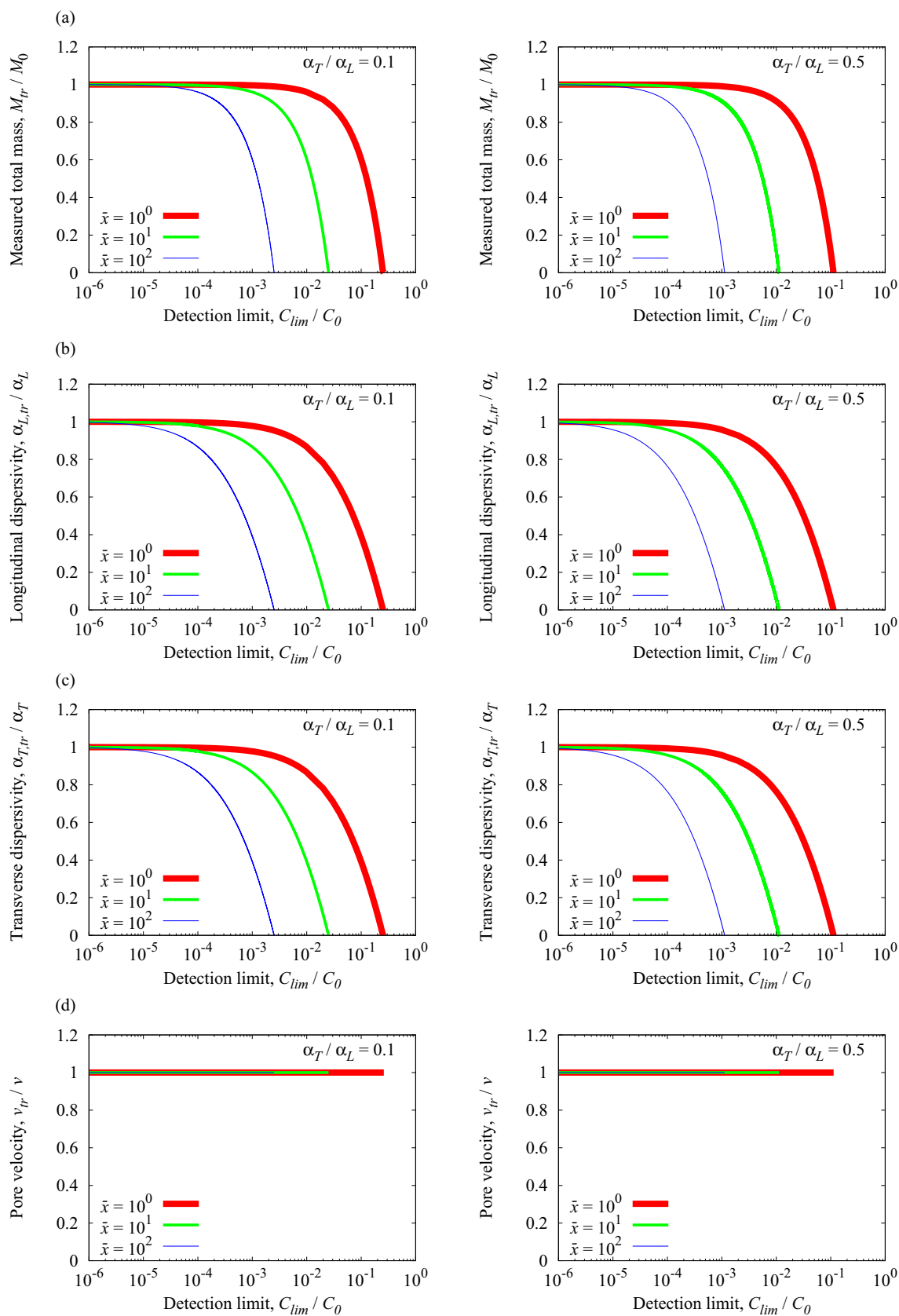
Fig. 7 Dimensionless measured total mass and transport parameters for the two-dimensional case calculated at several travel distances ($\bar{x}_1 = 10^0$, 10^1, 10^2) as a function of the dimensionless detection limit: **a** measured total mass, **b** longitudinal dispersivity, **c** transverse dispersivity, and **d** pore velocity
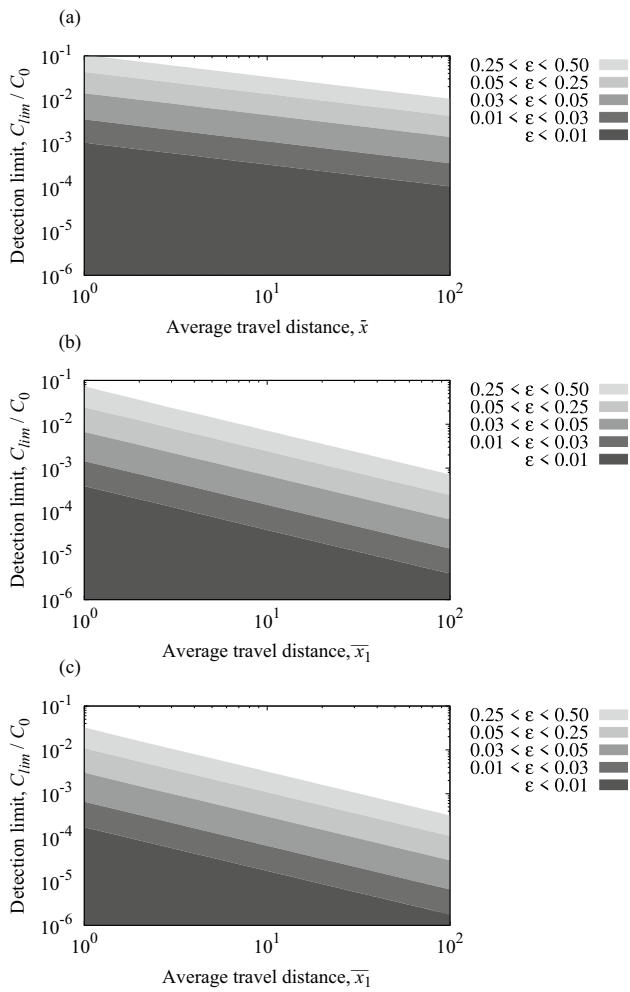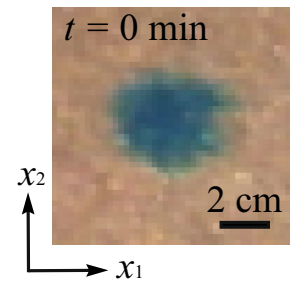
(a)

(b)

(c)

Fig. 8 Relative error ε of the longitudinal dispersivity as a function of the average travel distance and detection limit for the one- and two-dimensional cases: **a** one-dimensional case, **b** two-dimensional case ($\alpha_T/\alpha_L = 0.1$), and **c** two-dimensional case ($\alpha_T/\alpha_L = 0.5$)

Fig. 10 Image of the initial solute plume that exhibited a nearly circular shape with a radius of about 2 cm
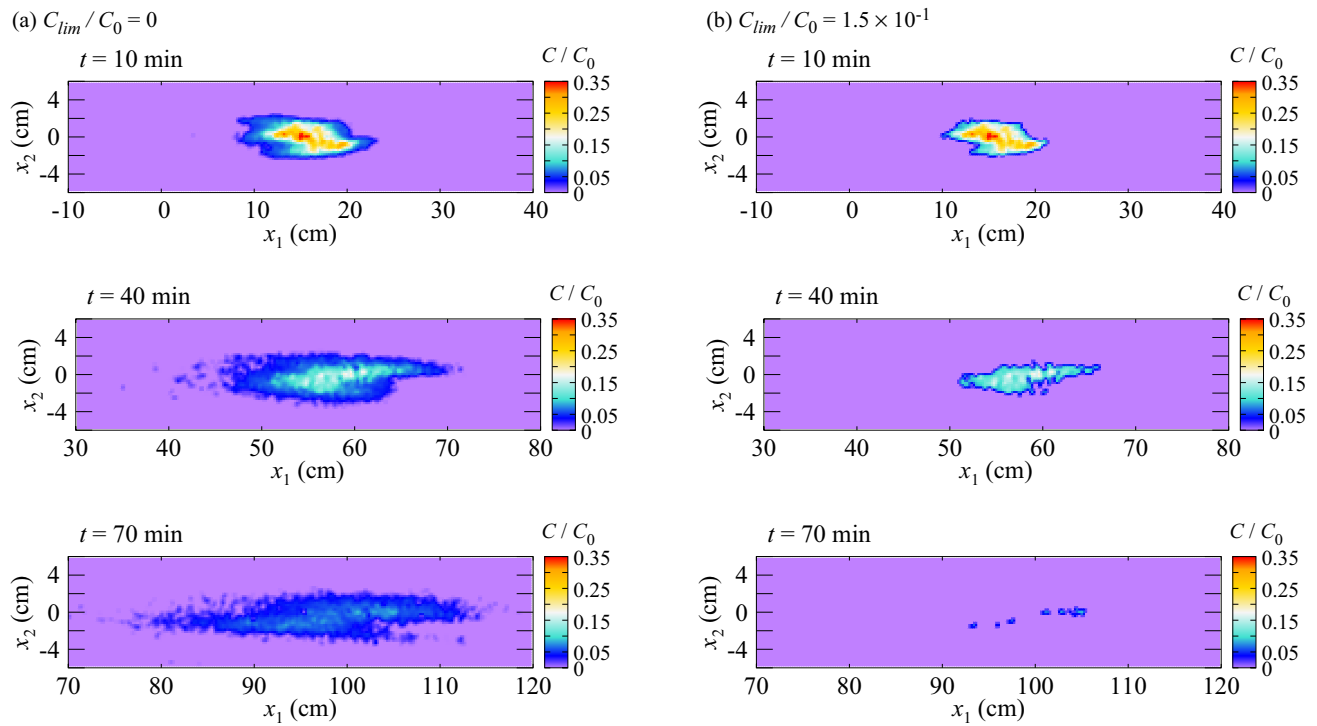
(a) $C_{lim}/C_0 = 0$

(b) $C_{lim}/C_0 = 1.5 \times 10^{-1}$

Fig. 12 Observed concentration maps at several times in the experiment: **a** $C_{lim}/C_0 = 0$; **b** $C_{lim}/C_0 = 1.5 \times 10^{-1}$
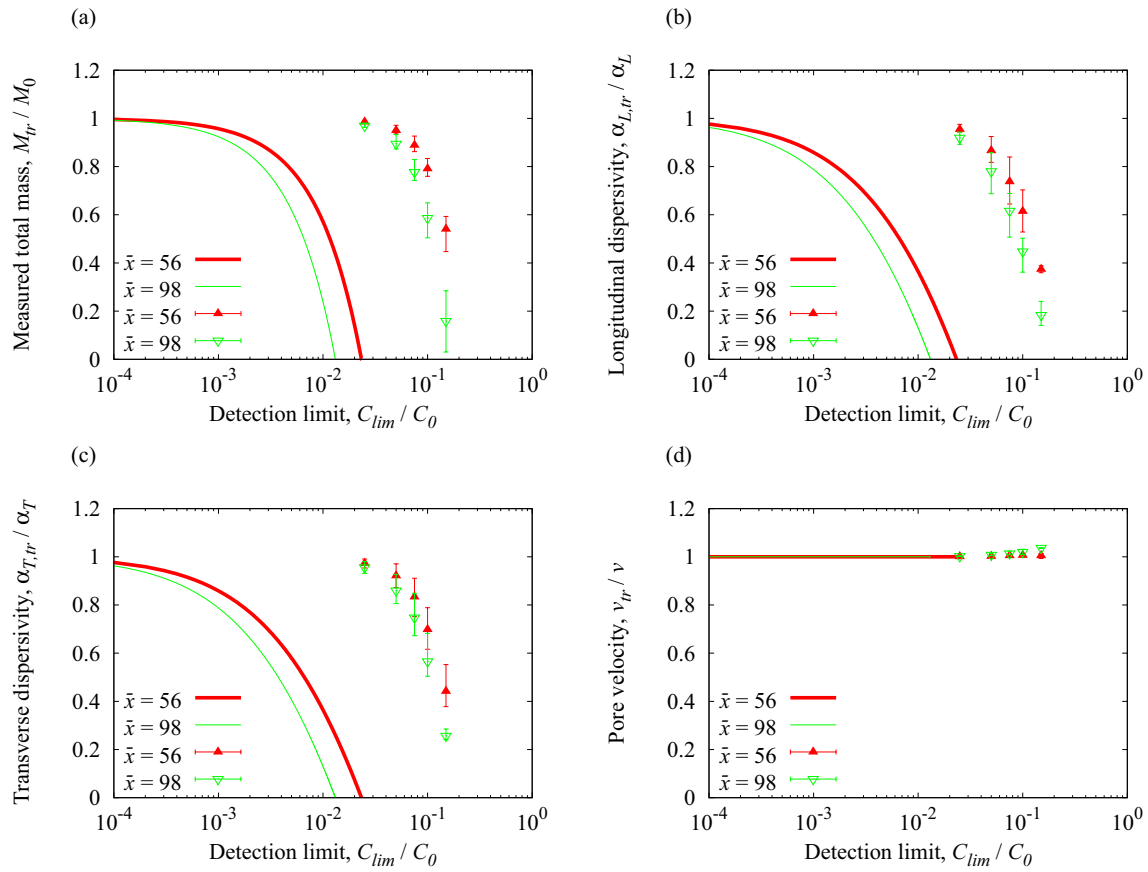
(a)

(b)

(c)

(d)

Fig. 13 Parameters observed at different travel distances ($\bar{x}=56$, 98 cm) as a function of the dimensionless detection limit: **a** measured total mass, **b** longitudinal dispersivity, **c** transverse dispersivity, and **d** pore velocity. The symbols represent the average value of three experimentally estimated parameters. The vertical bars correspond to maximal and minimal values. The lines denote the values estimated from the analytical solution

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