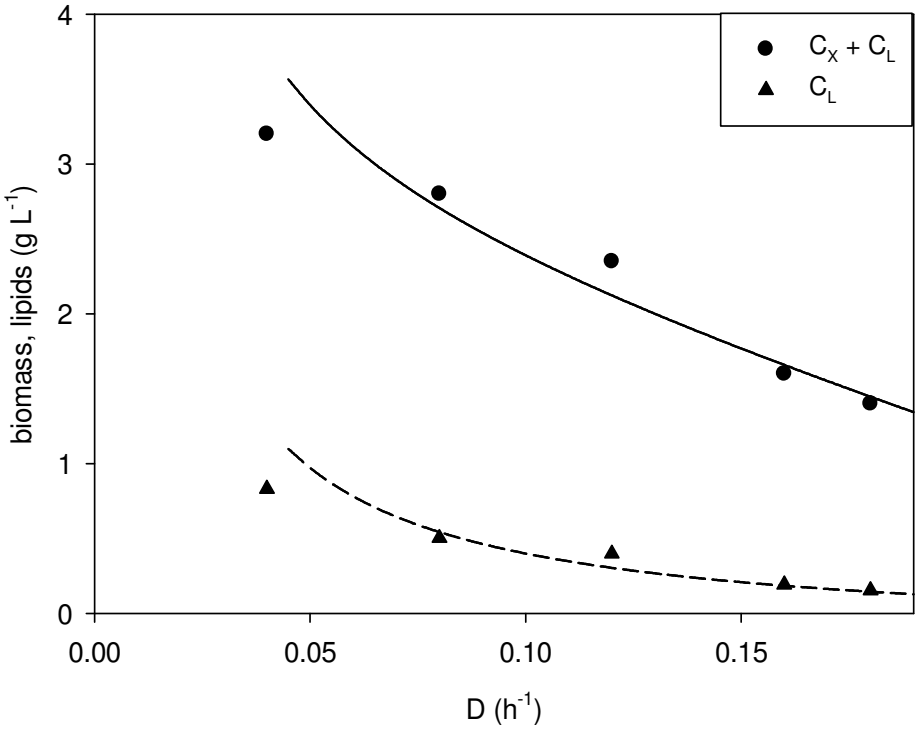
Graphs for all modeled datasets from literature

Data set no.	Reference	Data points from:
3	Song YD, Wynn JP, Li YH, Grantham D, Ratledge C (2001) A pre-genetic study of the isoforms of malic enzyme associated with lipid accumulation in Mucor circinelloides. Microbiology 147:1507-1515	Figure 2
4	Alvarez RM, Rodriguez B, Romano JM, Diaz AO, Gomez E, Miro D, Navarro L, Saura G, Garcia JL (1992) Lipid accumulation in *Rhodotorula glutinis* on sugar cane molasses in single-stage continuous culture. World J Microbiol Biotechnol 8:214-215	Table 1
5	Brown BD, Hsu KH, Hammond EG, Glatz BA (1989) A relationship between growth and lipid accumulation in *Candida curvata* D. J Ferment Bioeng 68:344-352	Figure 9
6	Choi SY, Ryu DDY, Rhee JS (1982) Production of microbial lipid - Effects of growth rate and oxygen on lipid synthesis and fatty acid composition of *Rhodotorula gracilis*. Biotechnol Bioeng 24:1165-1172	Table 1
7	Evans CT, Ratledge C (1983) A comparison of the oleaginous yeast, Candida curvata, grown on different carbon sources in continuous and batch culture. Lipids 18:623-629	Figure 1f-i Figure 1k-n
8	Gill CO, Hall MJ, Ratledge C (1977) Lipid accumulation in an oleaginous yeast (*Candida* 107) growing on glucose in single-stage continuous culture. Appl Environ Microbiol 33:231-239	Table 2 Table 3
9	Hansson L, Dostalek M (1986) Lipid formation by *Cryptococcus albidus* in nitrogen limited and in carbon limited chemostat cultures. Appl Microbiol Biotechnol 24:187-192	Figure 1
10	Hassan M, Blanc PJ, Granger LM, Pareilleux A, Goma G (1993) Lipid production by an unsaturated fatty acid auxotroph of the oleaginous yeast *Apiotrichum curvatum* grown in single-stage continuous culture. Appl Microbiol Biotechnol 40:483-488	Table 2
11	Papanikolaou S, Aggelis G (2002) Lipid production by *Yarrowia lipolytica* growing on industrial glycerol in a single-stage continuous culture. Bioresour Technol 82:43-49	Table 1
12	Ratledge C, Hall MJ (1979) Accumulation of lipid by *Rhodotorula glutinis* in continuous culture. Biotechnol Lett 1:115-120	Figure 1
14	Yoon SH, Rhee JA (1983) Quantitative physiology of *Rhodotorula glutinis* for microbial lipid production. Process Biochem 18:2-4	Figure 5

Data set 3

Not enough information is available to model the whole range of dilution rates.



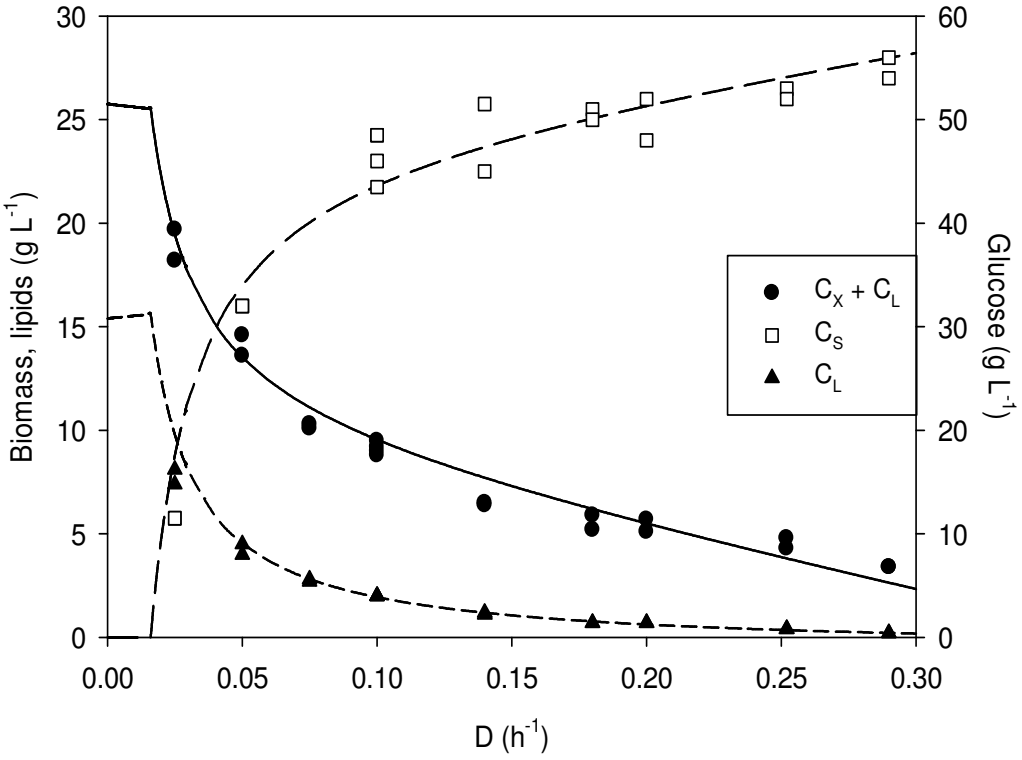
Total biomass (C_X+C_L)	r^2 = 0.94 (n=5)
Lipids (C_L)	r^2 = 0.94 (n=5)

Data set 4

Because in this dataset both the dilution rate and the C/N-ratio was different for each data point, it is not possible to display these data in a 2D-graph.

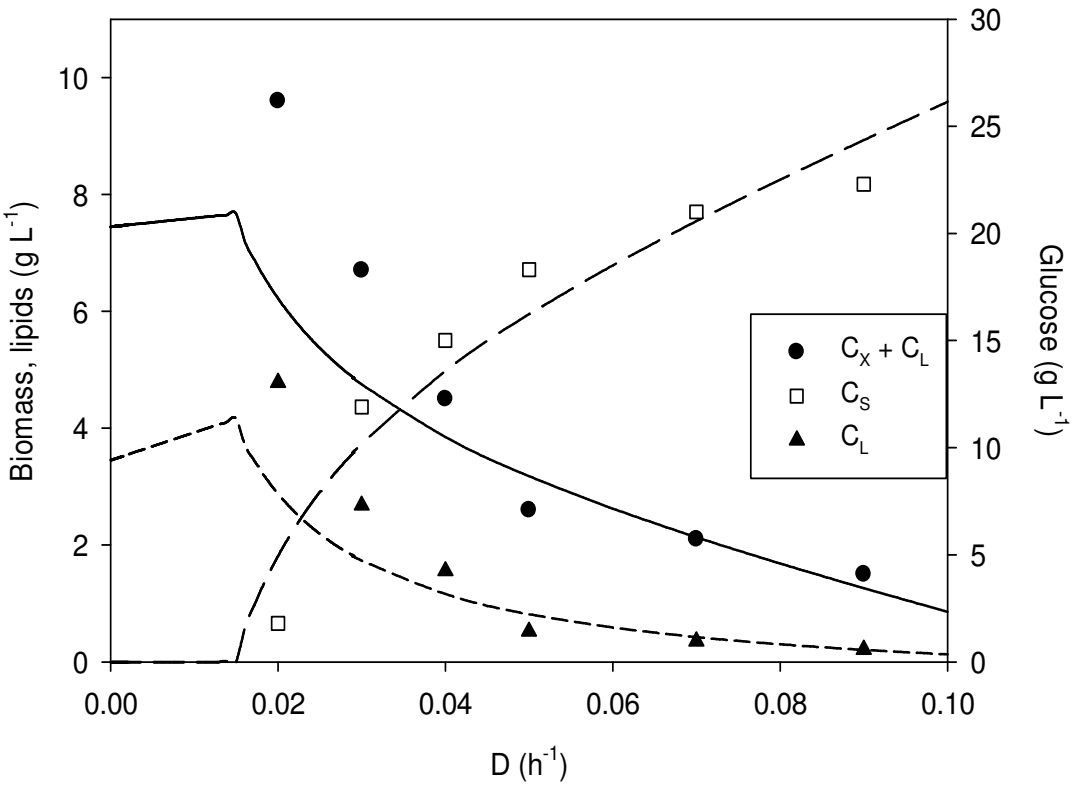
Total biomass (C_X+C_L)	r^2 = 0.93 (n=7)
Lipids (C_L)	r^2 = 0.90 (n=7)
C-source concentration (C_S)	r^2 = 0.48 (n=7)

Data set 5



Total biomass (C_X+C_L)	r^2 = 0.85 (n=20)
Lipids (C_L)	r^2 = 0.99 (n=20)
C-source concentration (C_S)	r^2 = 0.91 (n=18)

Data set 6

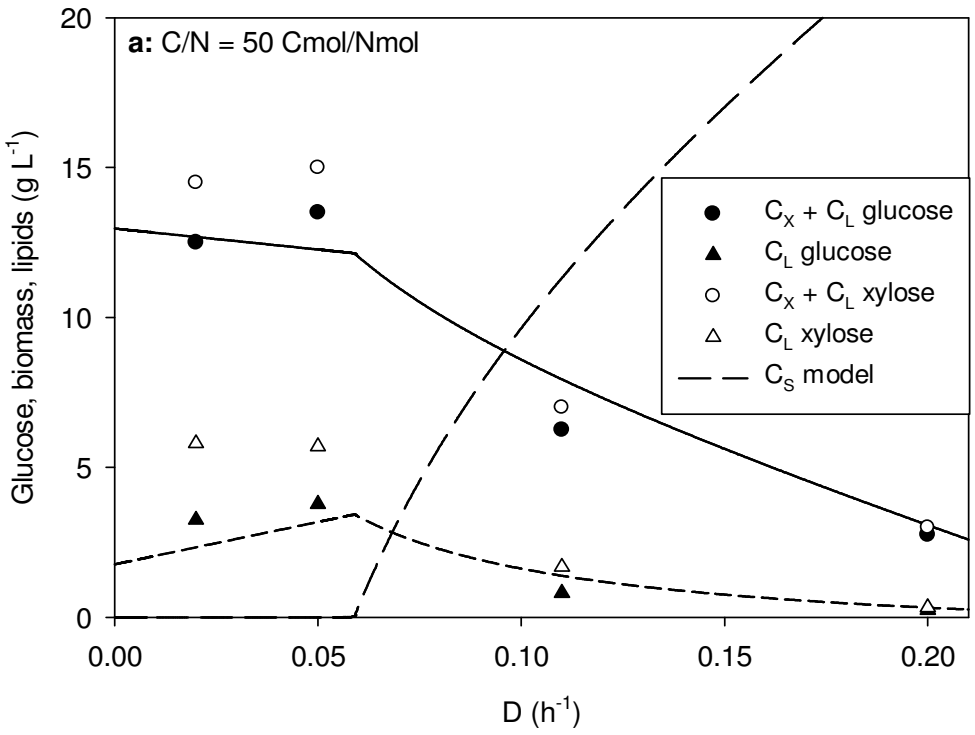


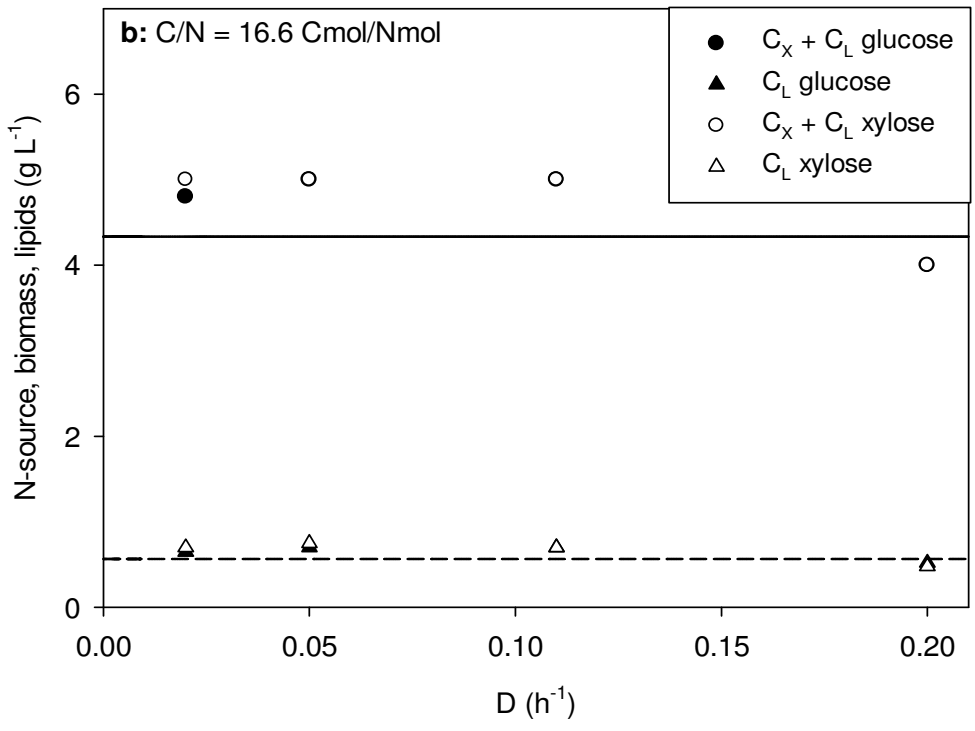
Total biomass (C_X+C_L)	r^2 = 0.88 (n=6)
Lipids (C_L)	r^2 = 0.93 (n=6)
C-source concentration (C_S)	r^2 = 0.96 (n=6)

Data set 7

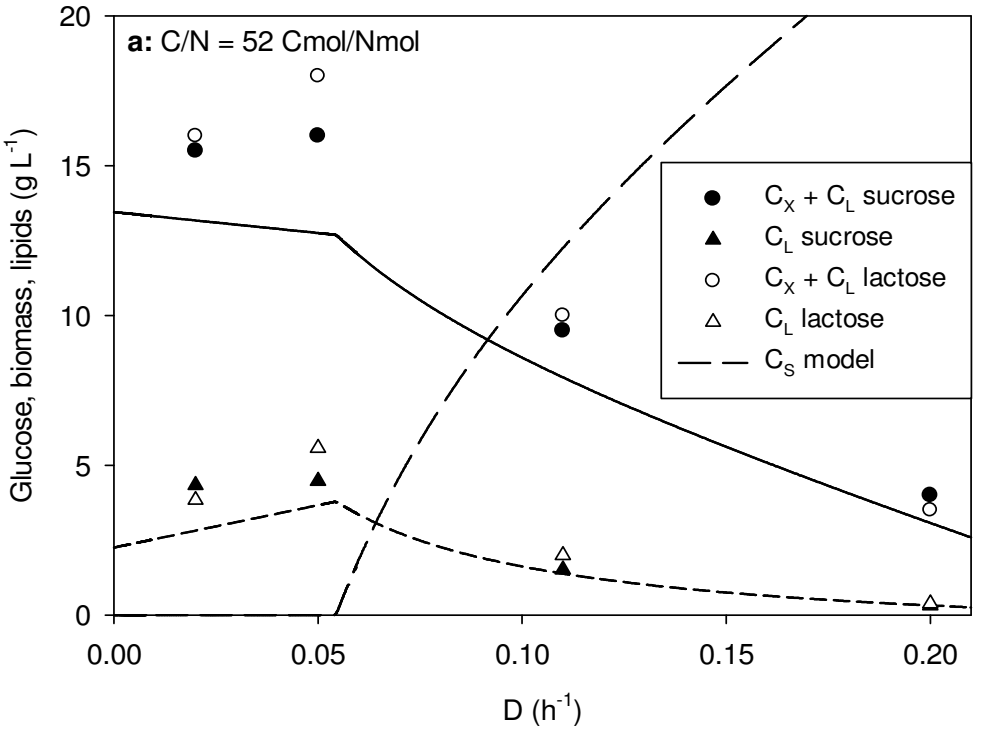
Results for all four sugars were fitted together with the same parameter values in moles, but because of different molar weights of the sugars, modeling results are slightly different and shown in separate graphs.

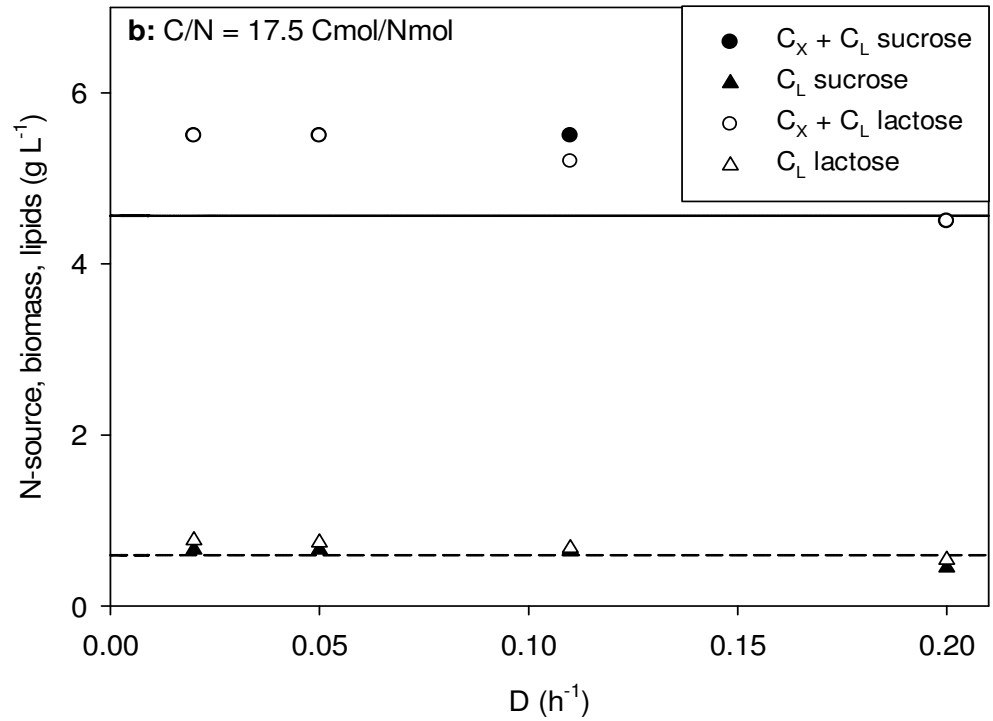
Glucose and xylose (30 g/Cmol)





Sucrose and lactose (28.5 g/Cmol)

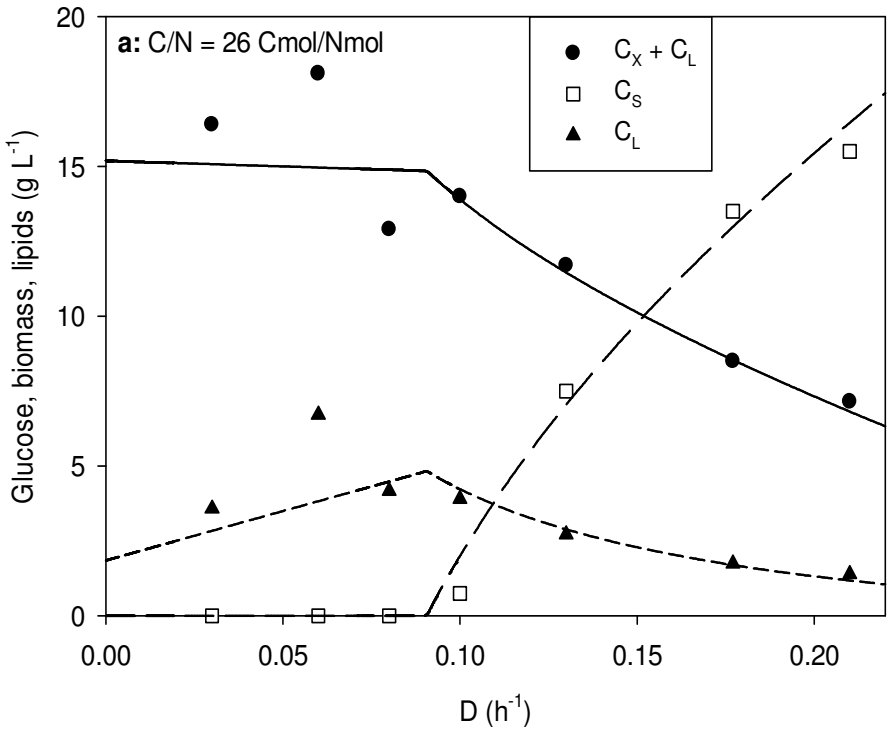


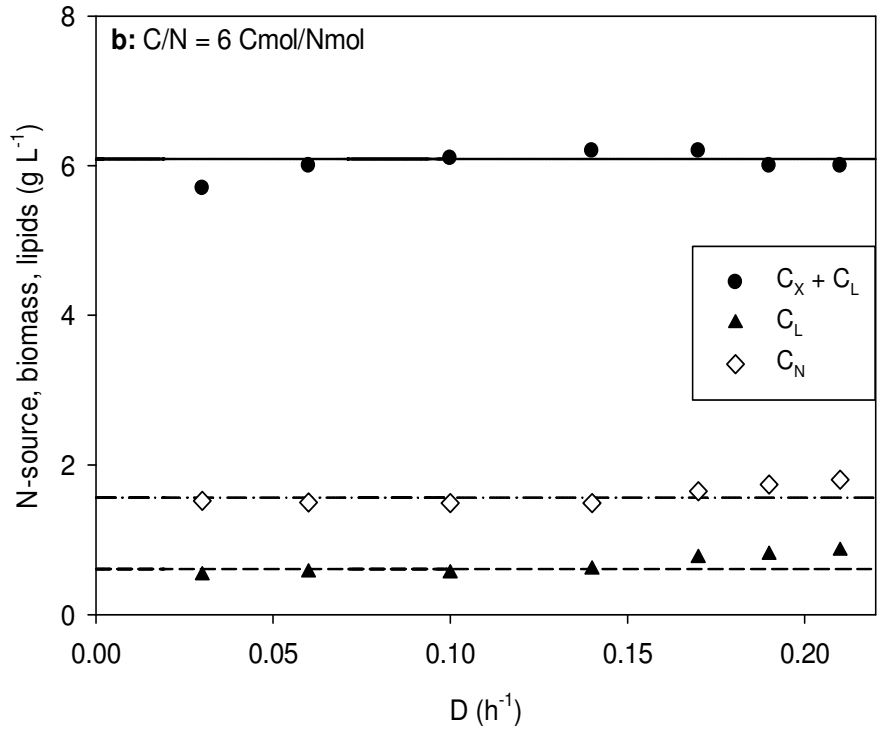


Total biomass (C_X+C_L) r^2 = 0.95 (n=32)

Lipids (C_L) r^2 = 0.90 (n=32)

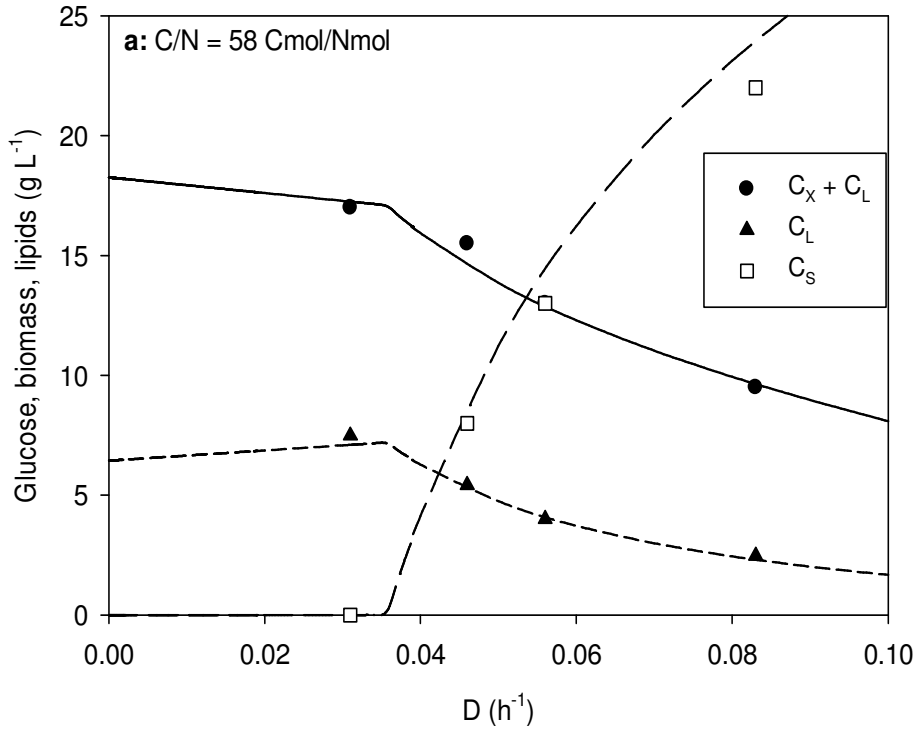
Data set 8

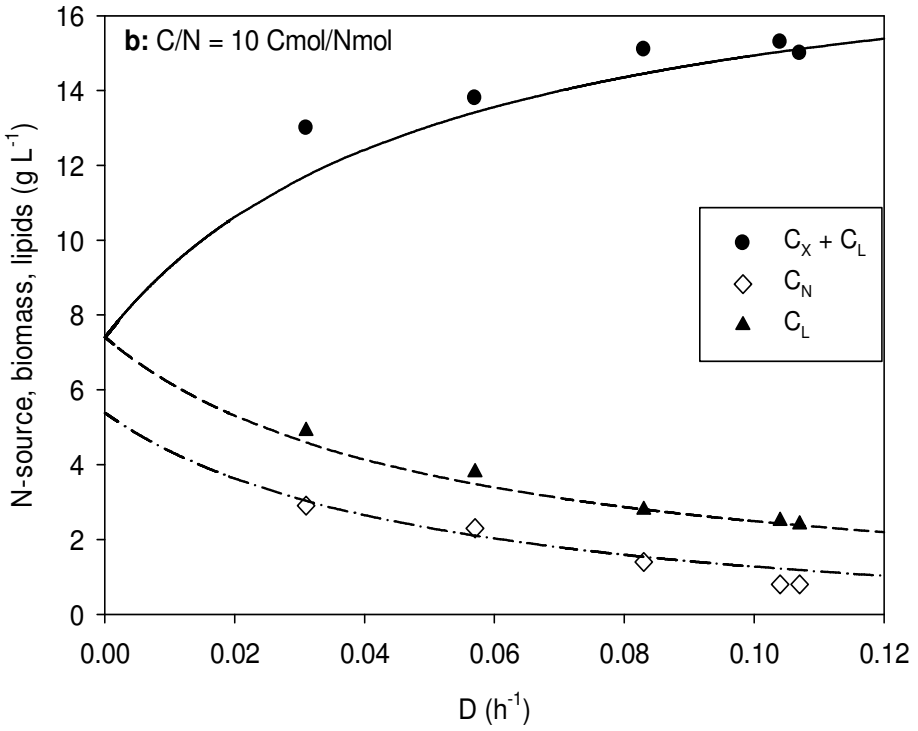




Total biomass (C_X+C_L)	r^2 = 0.94 (n=14)
Lipids (C_L)	r^2 = 0.83 (n=14)
C-source concentration (C_S)	r^2 = 0.99 (n=7)
N-source concentration (C_N)	r^2 = 0.23 (n=7)

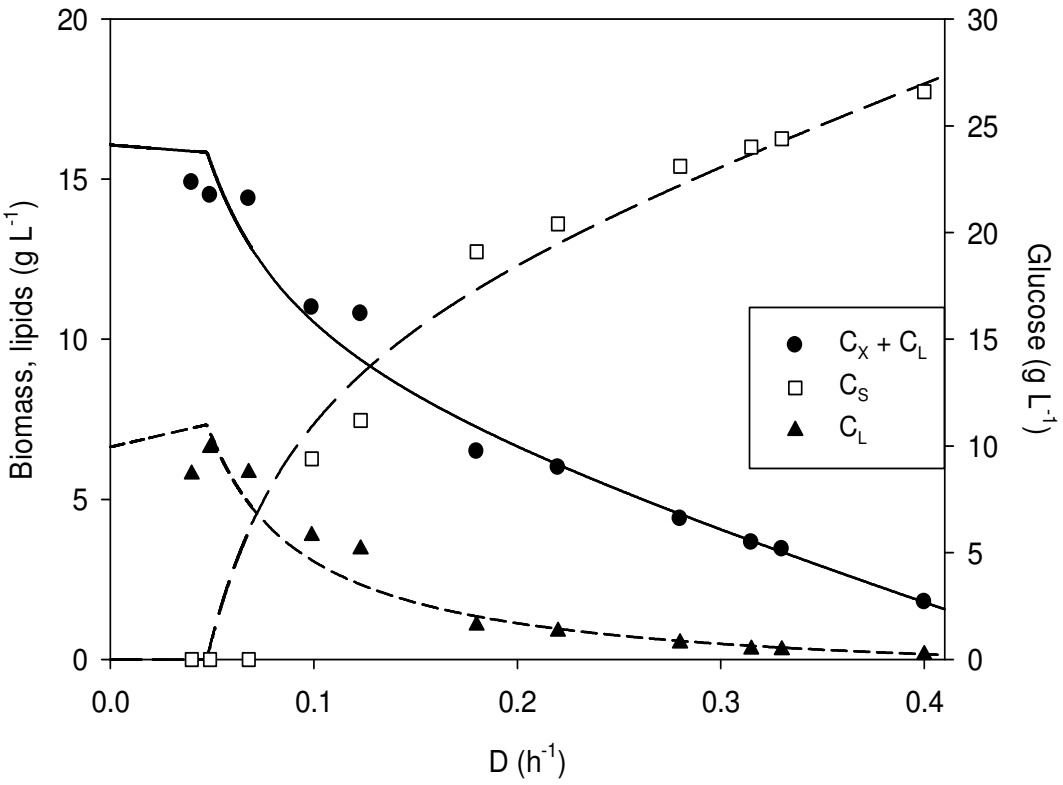
Data set 9





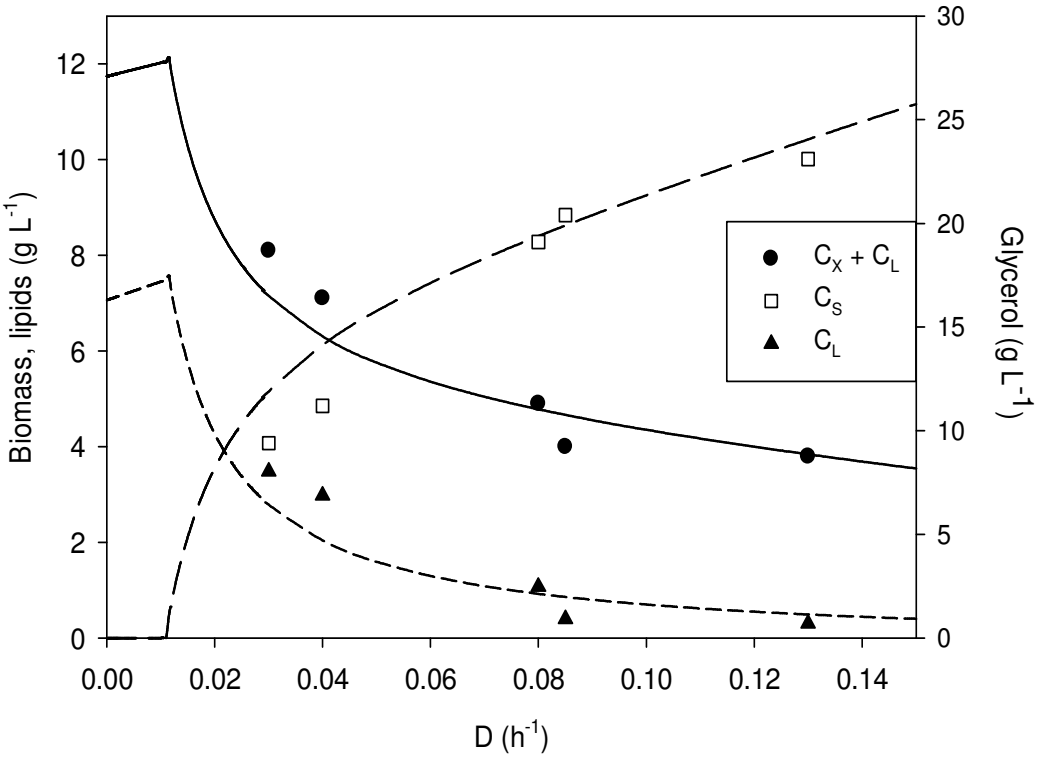
Total biomass (C_X+C_L)	r^2 = 0.95 (n=9)
Lipids (C_L)	r^2 = 0.99 (n=9)
C-source concentration (C_S)	r^2 = 0.99 (n=4)
N-source concentration (C_N)	r^2 = 0.95 (n=5)

Data set 10



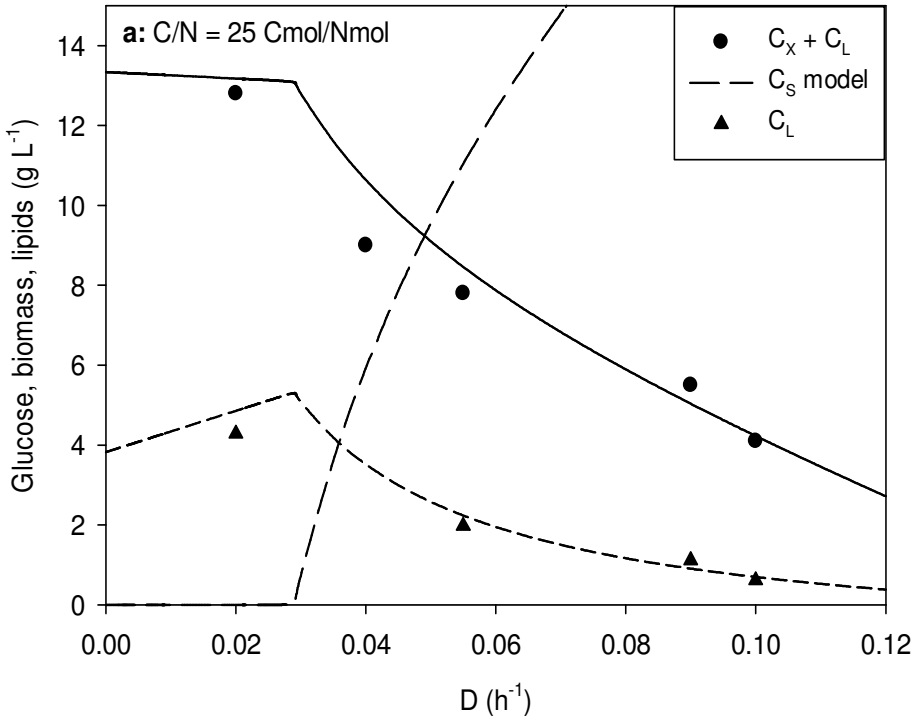
Total biomass (C_X+C_L)	r^2 = 0.97 (n=11)
Lipids (C_L)	r^2 = 0.93 (n=11)
C-source concentration (C_S)	r^2 = 0.97 (n=11)

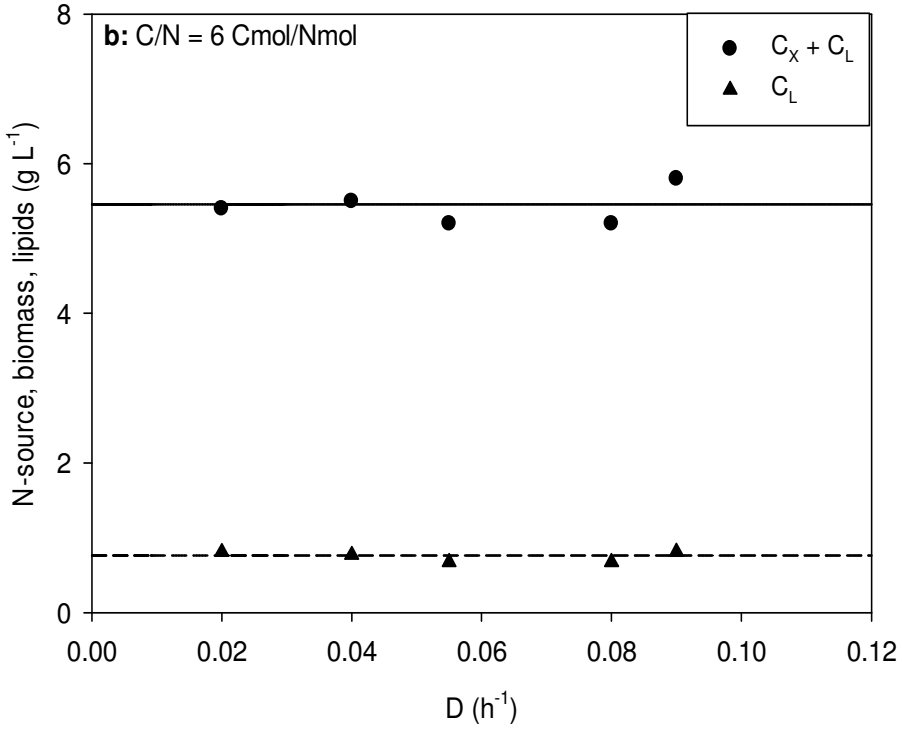
Data set 11



Total biomass (C_X+C_L)	r^2 = 0.96 (n=5)
Lipids (C_L)	r^2 = 0.95 (n=5)
C-source concentration (C_S)	r^2 = 0.97 (n=5)

Data set 12

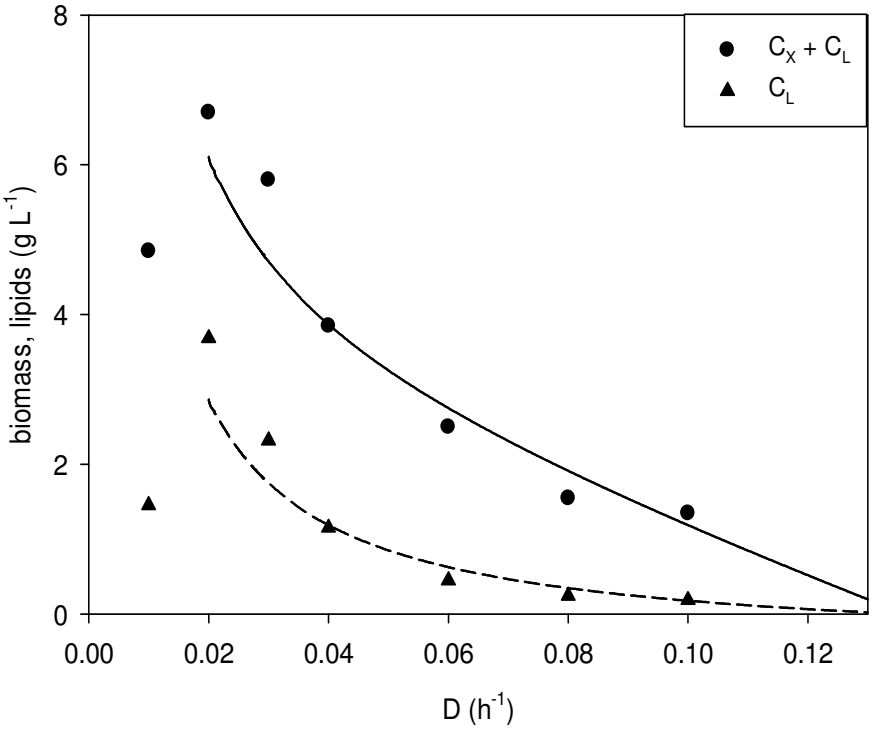




Total biomass (C_X+C_L)	r^2 = 0.97 (n=10)
Lipids (C_L)	r^2 = 0.99 (n=9)

Dataset 14

Not enough information is available to fit all data points.



Total biomass (C_X+C_L)	r^2 = 0.97 (n=6, $D \geq 0.02$)
Lipids (C_L)	r^2 = 0.99 (n=6, $D \geq 0.02$)